



THE TELEFÓNICA UK
PENSION PLAN
CLIMATE CHANGE REPORT
YEAR ENDING
30 SEPTEMBER 2021



Introduction from Anthony Soothill, Chair, Telefónica UK Pension Plan Trustee

Climate change is a real and present issue affecting our lives. I am sure it is a topic of concern for many of the Plan's members, so I am pleased to publish this report which provides detailed information about the Trustee's activities in this area.

The Trustee has made ensuring that the Plan acts in a responsible way one of its strategic priorities. As a result, we consider environmental, social and governance factors when taking decisions on the management of the Plan, and this includes consideration of climate change and the impact it could have on the smooth-running of the Plan. Climate change will have significant effects on our society, economy and financial system over the coming years and decades. It is important that we take appropriate steps to protect the Plan from these effects, as far as we can.

Climate change reporting soon to be a legal requirement

Following a change in the law in 2021, the Trustee will be required to publish annual climate change reports from 2024. We have chosen to publish our first report two years early, so our members are better informed and to show leadership to other pension schemes. This year's report focuses on the Plan's main DB section, which now represents over 95% of the Plan's assets following the transfer of most of the DC section assets to the Legal & General Mastertrust in May 2021. We will aim to include information on the remaining DC section assets next year.

Understanding the risks and opportunities posed by climate change

The Trustee has been especially busy over the past 18 months, working to increase our understanding of how climate change might affect the Plan and make sure that we are managing the risks and opportunities, with the aim of achieving better financial outcomes for our members. We have been supported in this by the Plan's advisers, as well as the investment managers who look after the Plan's assets on our behalf. One of the first things we did was to set out clear roles and responsibilities, so that climate change is considered appropriately whenever decisions about the Plan are taken. We are also enhancing our reporting systems to help us monitor climate change risks and opportunities more effectively.

The risks and opportunities faced by the Plan

The Plan faces risks and opportunities from both the physical effects of changes in the climate itself – for example, more frequent storms, rising temperatures and changing rainfall patterns – and from the effects of transitioning to a lower carbon economy to limit the extent of climate change – for example, government policies to restrict or discourage the use of fossil fuels, technological advances in renewable energy, and increased customer demand for “green” products.

We have carried out some modelling to understand how the Plan might be affected by these issues. The Plan's DB section invests in fairly low risk assets – we lend money to companies and the UK government, rather than buy company shares – which should help to increase its resilience to climate change. Nonetheless, the Trustee has identified lower investment returns and higher volatility in investment markets as important risks to the Plan's finances from climate change. This highlights the importance of appointing investment managers who have the right skills and processes to allow for climate change properly in their decisions.

Managing our investment risk

Our investment adviser has assessed the Plan's investment managers in this area and found that they are all taking action to address the potential impact of climate-related risks on our investments, although all have room to improve. This is unsurprising because this is a relatively new and challenging area for most investors. We are encouraging our investment managers to address the weaknesses we identified and are setting ambitious expectations for them to improve. One area of focus in our conversations with the managers is improving the quality of climate-related data for the Plan's assets, to give us more visibility of the risks and ensure the managers have the information they need to manage those risks. We also expect our managers to use their influence to encourage the companies they invest in to operate in a way that supports the transition to a low carbon economy.

If the Plan's managers fall behind their peers and do not improve as quickly as we want, the Trustee is willing to act. We recently decided to move some of the Plan's assets to a



new investment manager because we were not satisfied with the progress the old manager was making to improve the way it addressed environmental, social and governance matters, including climate change, in that mandate.

Understanding the implications for our corporate sponsor

The Trustee has also considered how the Plan's sponsor might be impacted by climate-related issues and how this might affect its ability to support the Plan. All companies will be affected to some extent and the economy will suffer significant damage in the long term if temperatures continue to rise. However, in the shorter term, telecoms companies are not thought to be particularly at risk and Telefónica UK is making good progress against the climate targets it has set itself. In addition, the Plan's reliance on the sponsor is expected to reduce over time.

In summary

Overall, the Trustee believes the Plan is relatively well positioned for the risks arising from climate change and to benefit from investment opportunities that the transition to a lower carbon economy might bring, but there is more for us to do to align our portfolio to a target of net zero by 2050. Climate change continues to be a focus for us and I look forward to providing a further update next year.

Anthony Soothill,
Chair, Telefónica UK Pension Plan Trustee

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Executive Summary

This report describes the activities and approach taken by the Trustee to understand and reduce the risks to the Plan related to climate change. The following points are a summary of the detailed report that follows:

- The Trustee has made environmental, social and governance (ESG) factors, including climate change, a strategic priority, with the ambition to be a leader in this regard.
- For transparency and to demonstrate leadership, we are publishing our first climate change report two years earlier than required by law.
- We have identified risks and opportunities to the Plan arising from physical changes to the climate itself and from steps being taken to limit climate change.
- We have carried out scenario analysis to consider how these risks and opportunities might affect the funding strategy, investment strategy and the sponsoring employer's covenant.
- We have assessed our investment managers' ability to protect the Plan's assets from climate change and are encouraging them to enhance their approach where appropriate.
- We have applied a market-leading screen to one of the Plan's investment mandates, allowed for investments in "green" gilts, and decided to switch our entire corporate bond portfolio to a new investment manager with explicit ESG and climate change targets.
- We are updating the Plan's risk management processes to include more explicit consideration of risks related to climate change.
- We have collected some initial data on the Plan's assets, including their carbon footprint, to help us understand and monitor these risks, although we found it difficult to obtain consistent data of good quality.
- Prompted by our difficulties, our investment advisers led an Investment Consultants Sustainability Working Group (ICSWG) project to agree a standard list of metrics, first published in November 2021, that all UK investment managers should be able to provide to their investors.
- We are setting targets for our investment managers to improve the quality of the data they provide to us, to provide a sound basis for then encouraging them to better align the Plan's assets with a target of net zero emissions by 2050.



1. Context for the report

Telefónica UK Pension Trustee Limited (the “Trustee”) is the Trustee of the Telefónica UK Pension Plan (the “Plan”). Identifying, assessing and managing climate-related risks and opportunities to the Plan is a strategic priority and therefore this is done by the Trustee Board, with support from the Trustee Secretary and the Trustee’s external advisers:

- Actuarial and climate change adviser – LCP
- Investment adviser – Isio
- Covenant adviser – Penfida
- Legal adviser – Sackers

The Trustee’s focus on climate change risk mitigation, adaptation to the physical effects of climate change, and the successful transition to a low-carbon economy plays an important role in how investments are managed across all asset classes, in both the Defined Benefit (DB) and Defined Contribution (DC) sections of the Plan. At a policy level, the Trustee is supportive of initiatives that contribute towards mitigating climate change risk on its members’ investments. Where appropriate, the Trustee engages with its appointed investment managers to support such initiatives.

In 2020 the Trustee became a supporter of the Taskforce on Climate-related Financial Disclosures (TCFD) and its recommendations, as it believes greater disclosure will lead to better investment decisions. The Taskforce was established by the international Financial Stability Board in 2015 to develop a set of recommendations for climate-related financial risk disclosures for use by companies, financial institutions and other organisations. The recommendations aim to encourage routine consideration of the effects of climate change in business and investment decisions, helping smooth the transition to a more sustainable, low-carbon economy. This is the Trustee’s first report that seeks, on a voluntary basis, to address the TCFD’s recommendations on climate-related financial disclosures.

New regulations will apply to the Plan from 1 October 2022 which will require the Trustee to prepare a statutory climate change report in 2024 (covering the Scheme’s activities between 1 October 2022 and 30 September 2023), based on the TCFD’s recommendations. The Trustee has sought to

cover many of these requirements now on a voluntary basis, but this report is not intended to cover all the matters which will be required under the statutory reporting from 2024.¹

The Trustee continues to enhance its approach to managing climate-related risks and/or opportunities, including in relation to the Plan’s DC section, on which it aims to provide an update in its second TCFD report.

This report covers the TCFD’s four thematic areas, with additional detail in appendices:

- **Governance:** The Plan’s governance around climate-related risks and opportunities.
- **Strategy:** The actual and potential impacts of climate-related risks and opportunities on the Plan and its investment and funding strategy.
- **Risk Management:** The processes used by the Plan to identify, assess, and manage climate-related risks.
- **Metrics and Targets:** The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

Governance is covered in section 2 and Appendix 2. Strategy and risk management are covered in sections 3-7 and Appendix 3. Metrics and targets are covered in section 8 and Appendix 4.

Appendix 1 is a glossary that explains some of the climate-related terminology used in this report.

¹Aspects that are not covered by this report, but would be required to be addressed when the new laws apply to the Plan, include the following: (i) this report covers the DB section only (which comprises over 95% of the Plan’s assets following the transfer of most DC section assets to a master trust in 2021); (ii) the Trustee has not yet set a formal target against which to manage climate-related risks and/or opportunities; (iii) although this report primarily relates to the year ending 30 September 2021, some of the activities described were completed after the year-end.

2. Climate-related governance activities and arrangements

Climate change is a strategic priority for the trustee

The Trustee started tackling the Environmental, Social and Governance (ESG) agenda over three years ago and received training on climate change as part of its Strategy Away Day in October 2018. The Trustee believes that climate change is a financially material factor for the Plan. It represents a systemic risk to society, the economy and the financial system, although the transition to a low carbon economy also presents opportunities. These climate-related risks and opportunities have the potential to impact the Plan's investments, sponsoring employer (Telefónica UK) and funding position. Better integration of these factors should lead to better risk-adjusted outcomes for the Plan.

The Trustee has therefore made climate change a strategic priority and has an ambition for the Plan to be one of the top quartile performers with regards to ESG practices. Consistent with this, ESG and climate change featured strongly on the Board's agenda throughout the Plan year to 30 September 2021.

The Trustee dedicated a full day of its Strategy Away Day in October 2020 to ESG training and policy discussions, including training on the TCFD requirements. Following discussions that day, the Trustee decided to become a signatory to the UN-backed Principles for Responsible Investment (PRI) and an official TCFD supporter, with the aim of publishing its first TCFD report for the Plan year to 30 September 2021 (i.e this report). It asked its actuarial and

investment advisers to prepare an ESG and Climate Change Project Plan for calendar year 2021, which it agreed at the November 2020 Board meeting after a robust discussion about the value of the activities proposed.

Climate change was a focus during the plan year

The Trustee Chair is responsible, with support from the Trustee Secretary, for ensuring that sufficient time is allocated for consideration and discussion of climate matters by the Trustee and its advisers. He allocated over 1.5 hours on average to ESG and climate-related topics at the February, May and September 2021 Board meetings, with additional discussion of proposed climate-related changes to the Plan's risk management documents at the DB Governance Committee meeting in September 2021. This time allocation allowed plenty of time for discussion by the Trustee while balancing climate change with other Plan priorities such as the implications of the sponsor entering into a new Joint Venture and the pandemic.

The actuarial and investment advisers attended all ESG and climate change agenda items, with the legal and covenant advisers also present for some items, to ensure that the Trustee was fully informed in its discussions and decision making in all aspects of investment, funding, legal and covenant issues. On occasion, the Trustee encouraged its advisers to be more ambitious. It stressed the importance of taking action that would make a difference and benefit members, such as encouraging genuine improvements in the

ways its investment managers integrate ESG and climate change factors into their investment processes.

As ESG and climate change are relatively new areas for the Trustee, and ones where the external landscape and market practice is evolving rapidly, many of the agenda items contained an element of training. Over three hours of formal training was provided at the October 2020 Strategy Away Day, with a further hour on climate scenario analysis in February 2021. Training on climate-related metrics took place at the October 2021 Strategy Away Day. The Trustee Secretary attends the same training as the Trustee Directors and this is considered sufficient to enable him to fulfil his climate-related responsibilities.

Roles and responsibilities are set out in a climate governance statement

In February 2021, the Trustee agreed a Climate Governance Statement which clearly lays out the division of responsibilities between Trustee, actuarial adviser, investment adviser, covenant adviser, legal adviser and investment managers in order to ensure appropriate consideration of the climate-related risks and opportunities relevant to the Plan and so that the Trustee can be confident that its statutory and fiduciary obligations are being met. The Trustee made minor updates to its Climate Governance Statement in December 2021 in light of experience and to more closely reflect DWP's climate change governance and reporting requirements. The information in this section and Appendix 2 is based on the updated Statement.

The Trustee has ultimate responsibility for ensuring effective governance of climate change risks and opportunities in relation to the Plan. This is done by the Trustee Board, with support from the Trustee's advisers and the Trustee Secretary. The Trustee has decided not to delegate any climate-related matters to subcommittees as climate change is a strategic priority for the Plan. The Plan does not have any employees who assist on climate-related matters.

The Trustee is supported by advisers in incorporating climate change throughout the Plan's activities as appropriate. The Plan's actuarial adviser leads on climate-related matters. All advisers are expected to work with the other advisers as appropriate to ensure a joined-up approach.

Appendix 2 outlines the Trustee's and advisers' responsibilities in relation to climate change.

The trustee ensures climate change is addressed throughout the plan's activities

The Trustee's primary role is to oversee the identification, assessment and management of climate-related risks and opportunities that are relevant to the Plan. It does this by reviewing, discussing and, where appropriate, challenging the information and advice it receives (see box on next page).



Regular climate-related activities carried out by the Trustee

On a quarterly basis, the Trustee receives and reviews the Plan's risk register, contingency planning and monitoring framework, and updates on the Plan's investments and funding position. These documents incorporate climate-related risks and opportunities as appropriate (see section 7).

At least annually, the Trustee reviews and (where appropriate) revises its governance arrangements, investment beliefs and policies in relation to climate change. The Trustee also reviews assessment reports on its investment managers' climate practices, typically twice a year (see section 5.2) and, from 2021 onwards, data on climate-related metrics for the Plan's assets (see section 8). These reports include information about climate risks and opportunities faced by the Plan.

At least once every three years, the Trustee will review the results of scenario analysis that illustrates how the Plan's assets and liabilities might be affected under various climate change scenarios, along with commentary on the potential impacts for the sponsoring employer and the implications for the resilience of the scheme's funding and investment strategies. It did this for the first time in 2021 (see section 5.1). The Trustee will in future consider climate-related risks and opportunities whenever there is an actuarial valuation of the Plan's DB section, a review of the Plan's investment strategy or an assessment of the sponsoring employer's covenant.

The Trustee is reliant on its investment, actuarial, covenant and legal advisers to ensure that they are able to identify, assess and manage climate risks and opportunities. As part of its Business Plan, the Trustee sets strategic objectives for its investment advisers on an annual basis, in partnership with them, including in relation to ESG and climate change. The Trustee also undertakes an annual review of its advisers at its Strategy Away Day, which typically takes place in October, to review their performance including climate change activities. For example, working with the Trustee to identify climate-related metrics to monitor, as well as working with the Trustee and underlying investment managers on the implementation of ESG ideas with existing mandates, with a strong focus on climate change.

In future, whenever the Trustee reviews its agreements with external advisers or appoints new advisers, the Trustee will consider including climate-related responsibilities in the agreements and any adviser objectives set.





3. Climate-related risks and opportunities for the Plan – introduction

Time horizons

The Trustee has selected the periods to 2024, 2028 and 2041 as suitable short, medium, and long term time horizons for considering the climate-related risks and opportunities faced by the Plan:

Time Period	Range	Rationale
Short Term	3 years (to 2024)	Consistent with one valuation cycle (2020-2023). Includes period expected to reach self-sufficiency.
Medium Term	7 years (to 2028)	Expected period to potentially reach fully funded on buyout basis on best estimate asset returns. Plan projected to mature to over 75% pensioner liabilities in seven years time.
Long Term	20 years (to 2041)	Longer-term exposure to climate related risks and opportunities if Plan is maintained for longer-term (for example if buyout is not feasible or best estimate returns not achieved.) Reflects approximate duration of Plan liabilities.

Processes for identifying and assessing climate-related risks and opportunities

The Trustee has identified and assessed climate-related risks and opportunities to the Plan through discussions with its advisers, along with:

- Attending climate change training to understand how climate-related risks might affect pension schemes and their investments in general terms (see section 2);
- Commissioning scenario analysis which shows how the Plan's assets and liabilities might be affected by under a range of different climate scenarios, and advice on the implications for the Plan's funding strategy, investment strategy and journey plan (see section 6.1);
- Receiving advice on how the sponsor might be affected by climate-related factors, including under the Trustee's chosen climate scenarios, and the implications for its ability to provide financial support for the Plan (see sections 5.2 and 6.1);
- Reviewing its investment advisers' assessments of the Plan's current and prospective investment managers' climate practices, including how they incorporate climate-related factors into their investment process and how effectively they manage climate-related risks (see section 6.2); and
- Monitoring a range of climate-related metrics in relation to the Plan's assets (see section 9).

In addition, the Trustee expects its investment managers to identify, assess and manage climate-related risks to the Plan's assets on a day-to-day basis. It discusses climate change when it meets managers, in order to increase its understanding of the Plan's climate-related risks and test the adequacy of the steps being taken to manage them.

Climate-related risks and opportunities identified – overview

The Plan faces risks and opportunities from both the physical effects of changes in the climate itself – for example, more frequent storms, rising temperatures and changing rainfall patterns – and from the effects of transitioning to a lower carbon economy to limit the extent of climate change – for example, government policies to restrict or discourage the use of fossil fuels, technological advances in renewable energy, and shifts in consumer demand towards “greener” products.

Many of these climate-related risks and opportunities could affect the value of the Plan’s assets. Others could affect the sponsor and its ability to provide financial support to the Plan. And some may affect the DB section’s liabilities to pay

pensions, for example through affecting members’ life expectancy or the inflationary increases made to pensions each year. Taken together, and if not sufficiently managed, these risks and opportunities may affect the adequacy of the DB section’s assets to pay the promised benefits, changing the extent to which the Plan needs the sponsor’s financial support. The Trustee has the Long Term Funding Objective of reaching a state where the Plan does not expect to need further sponsor support (“self-sufficiency”), after which it may seek to fully secure the DB section benefits through an insurance company “buy-out” contract. Climate change could throw this plan off track, or potentially accelerate it.

The risks and opportunities that the Trustee has identified are described in more detail in the next section.



4. Climate-related risks and opportunities identified for the Plan – more detail

The Trustee has considered four main areas of risk to the DB section's financial position:

1. The funding position may deteriorate due to a fall in the value of the DB section's assets which is not matched by a fall in the value of the corresponding liabilities. This may result in the need for additional contributions from the sponsor or it may delay the Plan's move towards self-sufficiency and the option of securing benefits with an insurance company.
2. The sponsor may be weakened by climate-related impacts, meaning that it is less able to provide any additional financial support needed by the Plan in future.
3. Members' life expectancy may change due to climate-related factors, affecting the cost of paying the DB pensions promised.
4. The cost of insuring the Plan's DB benefits may be affected, should the Trustee decide to pursue that option.

These areas are considered in turn below.

4.1 Climate-related risks and opportunities for the Plan's investments

Economy-wide risks and opportunities from climate change

Through climate scenario analysis (see section 5.1), the Trustee identified that the physical impacts of the changing climate and the transition to a low carbon economy could both result in lower real investment returns, linked to lower economic growth. Some of these effects may be felt gradually as the economic impacts occur and others may occur more suddenly as investment markets anticipate the impacts and asset prices adjust accordingly, for example a market shock in reaction to a specific weather-related disaster or an unexpected international policy development.

Physical impacts are expected to have a greater negative economic effect, particularly over the medium to long term. Even if temperature rises are limited to 1.5°C in line with the Paris Agreement, quite significant physical impacts are likely. In higher temperature scenarios, the long term impacts on the economy could be very severe, although the Plan follows a relatively low risk investment strategy where

the value of the DB section's assets is expected to move broadly in line with the value of its liabilities under the climate scenarios considered.

Transition risks in particular could cause volatility in investment markets as the economy undergoes a significant shift in the way energy is generated and consumed and financial markets adjust to these changes. The current decade will be critical in determining whether the Paris Agreement goals will be met, and investment market volatility may be heightened over this period as governments introduce policies to achieve the Agreement's decarbonisation and adaptation goals, and investors continually update their assessments of the likelihood of different climate outcomes.

All investment portfolios will be affected by physical and transition impacts to some extent due to their economy-wide nature. However, the extent of the impacts will depend on how the individual assets in the investment portfolio are affected.



Climate-related risks and opportunities for individual investments

The investment managers appointed by the Trustee invest in the debt of a range of companies, whose products and services each have varying levels of exposure to climate-related factors, as well as investing in government debt issues. Investments may be made in companies that are highly exposed to the effects of the transition to a low carbon economy, for example those whose business model is reliant on fossil fuels, and do not have good strategies to deal with those effects. One specific risk is that assets become “stranded”, i.e. they suffer an unanticipated loss of value before the end of their expected useful economic life.

For example, companies in the coal, oil and gas sectors may find their fossil fuel reserves are less valuable than expected due to falling demand during the low carbon transition, causing financial difficulties for the companies. Similarly, utility companies may lose value if thermal coal power stations are shut down earlier than expected.

There are also opportunities to invest in companies whose products and services enable emissions reductions, improve physical resilience or ensure the more efficient use of resources, or are simply managing the low carbon transition well. These companies also have various levels of exposure to climate-related physical risks. For example, companies in the food and textile sector are likely to be affected by changing weather patterns’ effect on crop yields, and all companies may experience weather-related disruption to their supply chain. The Plan also invests in real estate debt (loans secured on properties) which may be particularly exposed to physical risks.

The balance of risks and opportunities to the Plan’s assets will depend on the specific assets selected by the investment managers, which in turn will depend on the effectiveness of the managers’ processes to identify, assess and manage climate-related risks and opportunities. Assessing the managers’ climate-related processes and expertise is therefore critical – see section 5.2.

Risks relating to lack of data

There is a risk that the Plan’s investment managers do not have adequate data to identify, assess and manage climate factors. Moreover, any missing or incomplete data leaves the Trustee without the information it requires to properly monitor climate risks the Plan is exposed to.

In relation to carbon emissions, lower quality data is less likely to accurately reflect the company’s actual emissions and so may give a misleading impression of the climate risk exposure. If the data available for a company improves and reveals very different emissions figures from those previously used, the price of the company’s bonds may change, impacting on the value of the Plan’s assets. This repricing could happen quickly and remains a risk while data quality is poor.

The Trustee found that inadequate data was a particular problem for the Plan’s private market assets, but there were gaps in the data coverage in the public market exposures too. More information on the data that the Trustee has collected for its assets, and the steps it is taking to improve the data, is given in section 8.

4.2 Climate-related risks and opportunities for the Plan's sponsor

In May 2021, the covenant adviser gave advice covering:

- an introduction to the potential impact of climate change on the telecoms sector in general and the mobile telecoms sector in particular;
- a description of the steps that Telefónica is already taking in this regard; and
- an assessment of the potential impact on the covenant of three scenarios over the medium to longer term (the same scenarios that were used to assess the potential impact on the Plan's assets and liabilities – see section 5.1).

The advice was based on the sponsor's position before it entered into the joint venture (JV) with Virgin Media in June 2021 and will be updated in 2022 as the implications of the JV become clearer.

At a sector-level, the telecommunications industry is not particularly exposed to climate change but, like all sectors, it is nonetheless likely to face material impacts. In some areas it may benefit, for example, if people travel less and connect more often using telecommunications.

The covenant adviser noted that, from a covenant perspective, a failure to adapt to the issues posed by climate change could result in a material loss of long-term value. On the other hand, opportunities were noted for leaders in the telecommunications sector – through helping both the investor proposition and customer confidence, and through marketing opportunities with sustainability-conscious customers.

4.3 Potential impact of climate change on life expectancy

The Trustee considered the potential impacts of climate change on members' life expectancy qualitatively under its three chosen scenarios – see section 5.1. If a member lives longer, the Plan pays the member's pension for longer and therefore needs more assets to make the payments.

Like the economic impacts, the impact of climate change on life expectancy is highly uncertain. The Trustee considered the various possible drivers for changes in mortality rates and identified that both positive and negative impacts were expected in each of the scenarios considered. For example, in the Paris Transition scenarios, the reduced use of fossil fuels should lead to lower air pollution, increasing life expectancy. However, this effect could be countered by economic prosperity generally being

lower in these scenarios, which may limit the funding available for healthcare and reduce life expectancy. The overall impact could be either positive or negative.

The Trustee does not explicitly allow for the possible effects of climate change when making assumptions about life expectancy for the Plan's actuarial valuation. However, it does consider uncertainties associated with life expectancy and the sensitivity of the valuation results to the assumptions made. The Trustee believes that the uncertainties arising from climate-related factors are within the range of outcomes it already considers. It will keep this area under review and consider it further at the next actuarial valuation in 2023.

4.4 Implications for insuring the Plan's DB benefits

In the medium to long term, the Trustee may seek to transfer responsibility for paying the DB benefits to an insurance company through a buy-out contract. This would remove the longer term potential climate impacts from the Plan and pass these risks to an insurer, meaning that the Plan was no longer reliant on the sponsor for financial support.

The climate scenario analysis highlighted that the sooner the Plan insures members' benefits, the less likely it is that climate change risks would result in members not receiving their full benefits. This is because of the additional regulatory protections and reserving requirements that apply to insurance policies. The Trustee noted that climate change increases the chance that these regulatory protections are insufficient, although it believes this possibility is still very unlikely.

In contrast, if the Plan continues to provide the benefits, it remains reliant on the sponsor for longer and potential climate impacts to the sponsoring employer (particularly through lower GDP) are of greater concern.

The Trustee discussed how climate change could affect insurer pricing for securing pension benefits. A change in insurer pricing levels could have a significant impact on when it will be feasible to secure benefits with an insurer. Insurers are increasingly considering climate risks, with encouragement from their regulator. Climate change is a major source of tail risks for financial markets and insurers are required to hold capital to protect against most risks, so (all else being equal) this could increase the cost of insurance. The Trustee will keep this in mind when deciding whether and when to insure the Plan's DB benefits.



5. Assessing the climate-related risks and opportunities identified

The Trustee assessed the risks and opportunities it had identified using three main tools: climate scenario analysis; investment manager assessments; and climate-related metrics. The first two are covered in this section and the last in section 8.

5.1 Climate scenario analysis

Scenario analysis is a tool for examining and evaluating different ways in which the future may unfold. At its February and May 2021 Board meetings, the Trustee used scenario analysis to consider how climate change might affect the funding strategy, investment strategy and the sponsoring employer's covenant. For information about the modelling approach, see Appendix 3.

Overview Of The Scenarios Considered

The three climate scenarios considered were as follows:

- **Failed Transition:** Paris Agreement goal to limit temperature rises to well below 2°C not met; only existing climate policies are implemented
- **Paris Orderly Transition:** temperature rises limited to well below 2°C; rapid and effective climate action to reduce greenhouse gas emissions, with smooth reaction by financial markets
- **Paris Disorderly Transition:** same policy, climate and emissions outcomes as the Paris Orderly Transition, but financial markets are initially slow to react and then over-react.

To provide further insight, the Trustee compared the outputs under each scenario to a “climate uninformed base case”, that makes no allowance for either changing physical or transition risks in future.

The scenarios' key features are summarised in the table on following page. The three climate scenarios chosen are intended to be plausible, not “worst case”. The Trustee acknowledges that many alternative plausible scenarios exist and that other scenarios could indicate better or worse outcomes for the Plan.



Scenarios	Failed Transition	Paris Orderly Transition	Paris Disorderly Transition
Low carbon policies	Continuation of current low carbon policies and technology trends	Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel	
Paris Agreement outcome	Paris Agreement goals not met	Paris Agreement goals met	
Global warming	Average global warming is about 2°C by 2050 and 4°C by 2100, compared to pre-industrial levels	Average global warming stabilises at around 1.5°C above pre-industrial levels	
Physical impacts	Severe physical impacts	Moderate physical impacts	
Impact on GDP	Global GDP is significantly lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be 55% lower than in the climate uninformed scenario	Global GDP is lower than the climate-uninformed scenario in 2100. For example, UK GDP in 2100 predicted to be about 10% lower than in the climate-uninformed scenario	In the long term, global GDP is slightly worse than in the Paris Orderly scenario due to the impacts of financial markets volatility
Financial market impacts	Physical risks priced in over the period 2025-2029. A second repricing occurs in the period 2035-2039 as investors factor in the severe physical risks	Transition and physical risks priced in smoothly over the period of 2020-2024	Abrupt repricing of assets in 2024 causes financial market volatility in 2025

Source: Ortec Finance

Reasons for the Trustee's choice of scenarios

- The Trustee considered the Failed Transition scenario to explore what could happen to the Plan's finances if carbon emissions continue at current levels and this results in significant physical risks from changes in the global climate that disrupt economic activity.
- The Trustee considered the Paris Orderly Transition to see how the Plan's finances could play out if the Paris Agreement goals are achieved, meaning that the economy makes a material shift towards low carbon by 2030.
- The Trustee considered the Paris Disorderly Transition to look at the risks and opportunities for the Plan if the Paris Agreement goals are met, but financial markets are volatile as they adjust to a low carbon economy.

Potential impacts on the Plan's financial position under each scenario

The scenarios show that equity markets could be significantly impacted by climate change, with lesser but still noticeable impacts in bond markets. However, the DB section has zero equity exposure which the modelling showed to be beneficial in that it provided considerable protection from climate-related shocks.

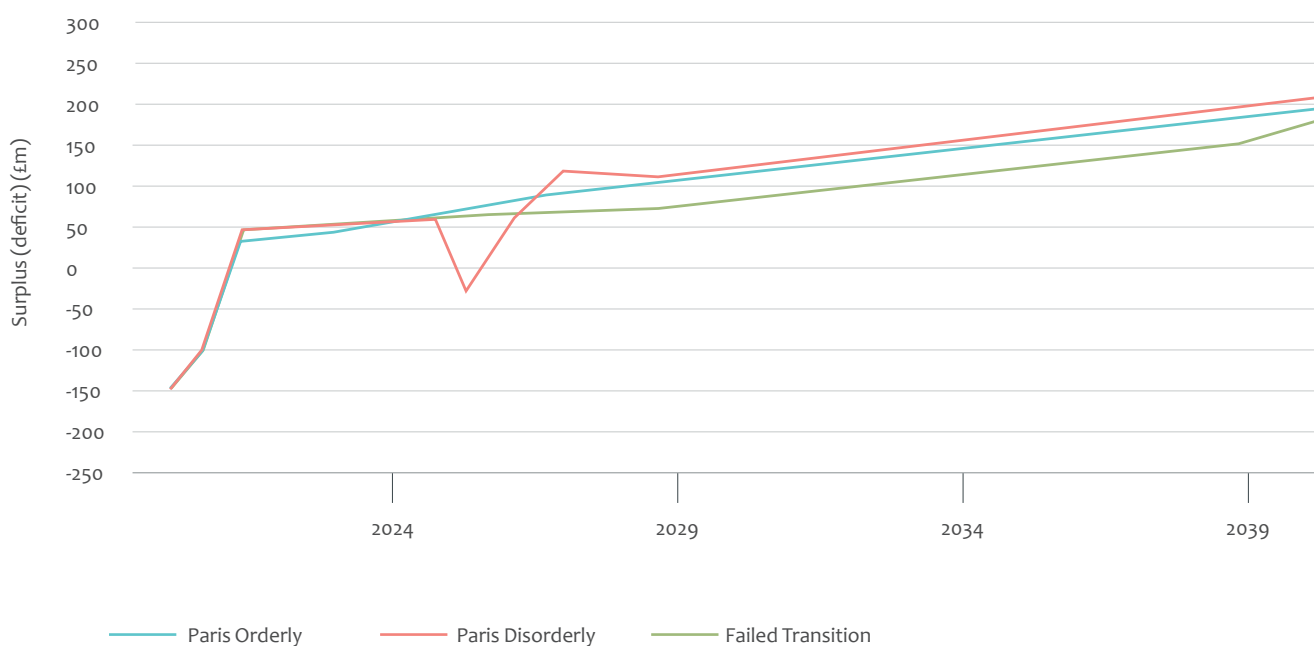
The chart on the next page illustrates the projected funding position of the DB section (surplus/deficit against the technical provisions) in each of the three scenarios considered, on the basis described above.

- Under the Paris Orderly Transition, there is minimal impact to the funding position as the costs and benefits of the transition are modelled as broadly cancelling out.
- Under the Paris Disorderly Transition, a sharp market repricing in the mid-2020s reduces the funding position

immediately, but this is fully recovered and ends up putting the Plan in a better position after market prices have settled than if there is an orderly transition.

- Under the Failed Transition, market re-pricing in the 2020s and late-2030s to reflect the physical impacts of a Failed Transition result in small detrimental impact to the funding position over time relative to the climate-uninformed base case.

Projected funding position of the DB section under different climate scenarios



The scenario analysis highlighted a number of potential financial impacts for the Plan, including:

- All three scenarios envisage, on average, lower economic growth and lower investment returns but, due to the positioning of the Plan's assets, only the Failed Transition scenario results in a worse funding position. Under the two scenarios where the Paris Agreement goals are met, the funding position of the Plan is projected to be higher than for the base case.
- Over the next 5 years, climate impacts are expected to be fairly limited, but the current investment strategy could result in detrimental funding impacts under a Paris Disorderly Transition. The Paris Disorderly scenario sees the Scheme's funding position reduce sharply relative to the base case, resulting in additional cash requirements from the sponsoring employer if the long term journey plan is to be kept on course.
- In the long term, continuing to invest in lower risk assets should help to avoid significant negative impacts on the Plan's funding position.
- The future de-risking of the investment strategy will be an important mitigation tool to reduce the level of climate change exposure, and this may help to reduce the shorter-term impacts under a Paris Disorderly Transition.

Potential impacts on the Plan's sponsor

The biggest risks to the covenant of the sponsoring employer are expected to come from wider macroeconomic impacts. Under each of the three scenarios analysed, UK GDP was modelled as being lower than in the climate-uninformed projections. The scenario with the most significant impacts on the employer was a plausible scenario of a failed transition with severe physical climate impacts and UK GDP 55% lower by 2100 than in a situation without climate change.

With lower GDP there would likely be lower customer demand for the sponsor's products, consistent with a material reduction in economic activity. There could also be supply chain impacts leading to higher input costs. Such scenarios and pressures on the sponsoring employer could put a strain on the funding strategy if the Plan's funding level is in deficit at the same time. However, the steps taken by the sponsor to decarbonise were felt to be encouraging and to increase the chances that it is seen as acting to address climate change (taking advantage of the opportunities outlined by the covenant adviser).

Conclusions from the scenario analysis

Although financial markets face significant climate change risks over the coming decades, the DB section's investment strategy is expected to provide a good degree of protection. The Plan's funding strategy is therefore

thought to be reasonably resilient under the types of climate scenario considered. Moreover, the modelling showed that, if the Plan is able to switch to a lower-risk investment portfolio in the short term (i.e. several years earlier than assumed), it may be possible to further reduce the negative impacts of a Paris Disorderly or Failed Transition.

The Trustee noted that its reliance on the sponsor is expected to reduce over time and may cease before the more severe macro-economic impacts of climate change that may affect the sponsor, like materially lower GDP, materialise (see section 4.1). Given the uncertainties surrounding climate-related outcomes, the analysis confirmed the importance of reducing reliance on the sponsor as quickly as possible.

The Trustee recognises that there are many reasons why the outcome might differ from those modelled, including:

- There is a wide ‘funnel of doubt’ around the median outcome under each scenario due to the usual investment market uncertainties and additional uncertainties arising from climate-related variables.
- A Disorderly Transition could play out differently to the scenario modelled (there could be a series of mini shocks and/or different timing).
- Other scenarios are possible, e.g. delayed and/or disorderly policy action to limit climate change.
- The timing and amount of benefit payments is uncertain, and cashflows from the Plan’s assets may not match the benefits as closely as assumed.



5.2 Investment manager assessments

Given the risks identified in section 4.1, the assessment and monitoring of the investment managers' climate competence and practices by the investment adviser is critical.

The investment adviser presented its first climate impact assessment of the Plan's investment managers at the May 2021 Board meeting, to complement its previous assessment of the managers' approach to ESG factors. A second climate impact assessment was completed in December 2021 and will be reported in the Trustee's next TCFD report. In future, climate change will be an integral part of the Trustee's regular ESG impact assessments.

The first assessment used a "traffic light" system to capture the investment managers' climate capabilities against five criteria which are summarised below:

Topic	Assessment criteria
Risk Management	Climate factors are integrated holistically in the manager's risk management framework
Approach/Framework	There is a clear approach/framework for integrating climate factors
Voting & Engagement	There is evidence of exercising voting rights (where applicable) and ongoing engagement with companies on climate issues to help initiate change
Reporting	The manager provides meaningful and regular reporting on climate issues, including voting and engagement activities
Collaboration	There is evidence of engagement with other stakeholders and market participants to encourage best practice on various climate change issues

Conclusions from the manager assessments

Traffic lights were awarded for each of the five criteria, as well as an overall rating, for each of the DB section's six investment mandates. (The DB section's assets are invested with four managers, two of which manage two separate portfolios which invest in different asset classes.) One mandate was awarded a green rating overall and five

mandates were rated amber overall. Areas for improvement were identified for each mandate and the investment adviser is conducting engagement with the managers, reporting back to the Trustee periodically. In addition, some changes have been made to two mandates, as described in the next section.





6. Managing climate-related risks and opportunities for the Plan

Changes to investment mandates

If the Trustee identifies any concerns with the way one of its managers is addressing climate-related risks and opportunities, it will initially engage with the manager – either directly or through its investment adviser – to raise the concerns and seek improvements. If the manager does not improve sufficiently, the Trustee may switch to a different manager.

CDS and LDI mandate

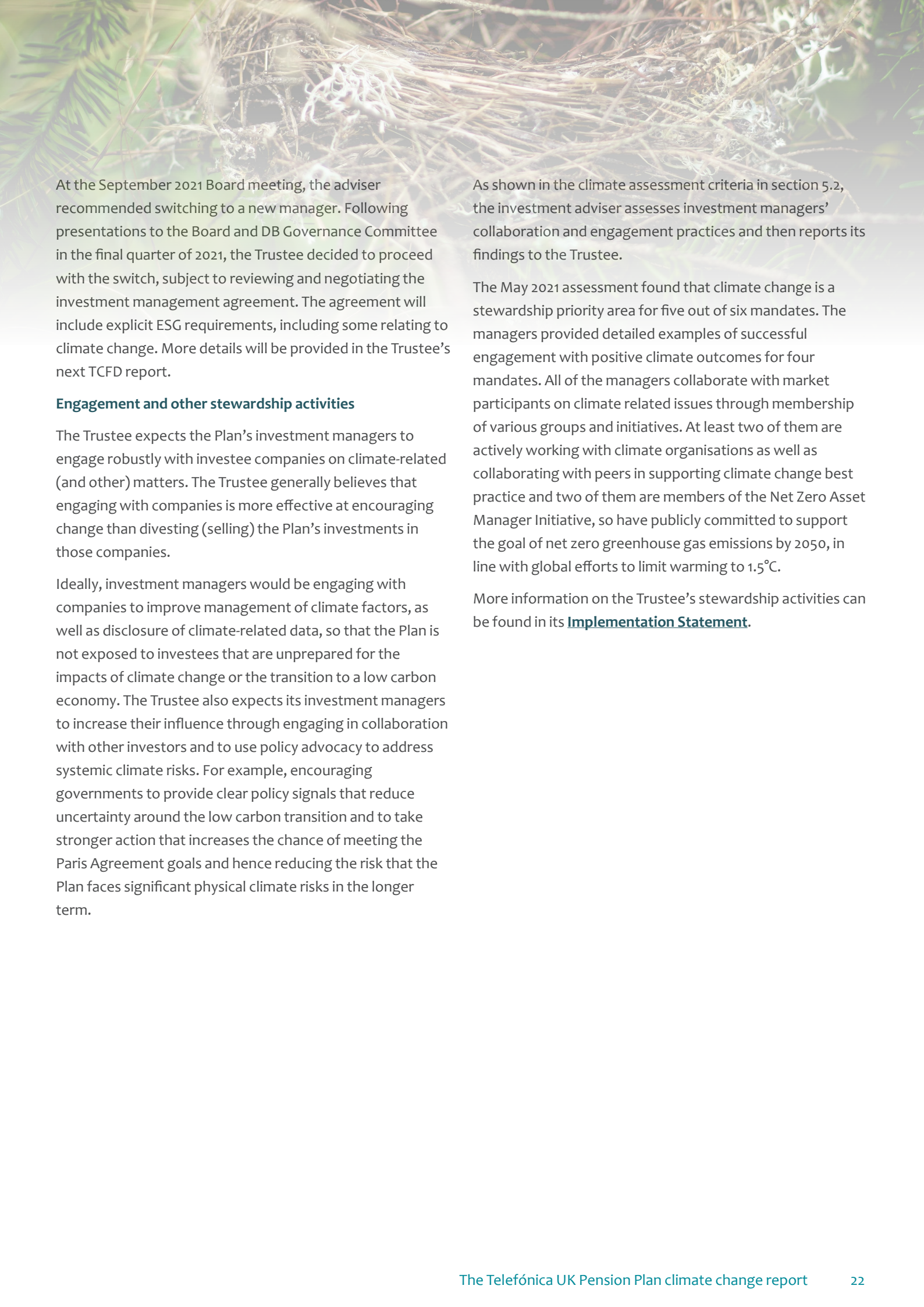
The investment adviser had previously started discussions with the manager of the Plan's credit default swap (CDS) mandate to explore ways in which the ESG risk exposure might be improved. In September 2021, the Trustee implemented a screen to remove companies from the portfolio based on certain ESG criteria. This includes removing companies which generate more than 5% of their revenue from thermal coal production, thermal coal power generation or producing oil through tar sands. This screen reduces the risk to the Plan from stranded fossil fuel assets. The Trustee recognises that this screen only mitigates climate change risk to a limited extent as companies that are poorly positioned for the low carbon transition may still appear in the CDS mandate.

The same mandate also invests in UK government bonds and associated financial instruments (so-called Liability Driven Investment or LDI). The Trustee amended the investment management agreement in September 2021 to allow investment in the “green gilts” that the UK government started to issue in September 2021. These are bonds sold by the government to finance public spending on climate change and other environmental objectives.

Corporate bond mandate

The Trustee had been concerned since the third quarter of 2020 that the Plan's corporate bond manager's ESG approach was weaker than that of its peers. The Trustee clearly communicated to the manager that improvements were required and the investment adviser kept in close contact with the manager to discuss and assess the actions taken as a result. Although the manager improved its approach, the Trustee was not satisfied with the speed of progress and asked its investment adviser to start investigating alternatives. The adviser conducted a market wide search to find corporate bond managers with the required capabilities to fully integrate a broad range of ESG factors into asset allocation and portfolio management, with a strong focus on climate change.





At the September 2021 Board meeting, the adviser recommended switching to a new manager. Following presentations to the Board and DB Governance Committee in the final quarter of 2021, the Trustee decided to proceed with the switch, subject to reviewing and negotiating the investment management agreement. The agreement will include explicit ESG requirements, including some relating to climate change. More details will be provided in the Trustee's next TCFD report.

Engagement and other stewardship activities

The Trustee expects the Plan's investment managers to engage robustly with investee companies on climate-related (and other) matters. The Trustee generally believes that engaging with companies is more effective at encouraging change than divesting (selling) the Plan's investments in those companies.

Ideally, investment managers would be engaging with companies to improve management of climate factors, as well as disclosure of climate-related data, so that the Plan is not exposed to investees that are unprepared for the impacts of climate change or the transition to a low carbon economy. The Trustee also expects its investment managers to increase their influence through engaging in collaboration with other investors and to use policy advocacy to address systemic climate risks. For example, encouraging governments to provide clear policy signals that reduce uncertainty around the low carbon transition and to take stronger action that increases the chance of meeting the Paris Agreement goals and hence reducing the risk that the Plan faces significant physical climate risks in the longer term.

As shown in the climate assessment criteria in section 5.2, the investment adviser assesses investment managers' collaboration and engagement practices and then reports its findings to the Trustee.

The May 2021 assessment found that climate change is a stewardship priority area for five out of six mandates. The managers provided detailed examples of successful engagement with positive climate outcomes for four mandates. All of the managers collaborate with market participants on climate related issues through membership of various groups and initiatives. At least two of them are actively working with climate organisations as well as collaborating with peers in supporting climate change best practice and two of them are members of the Net Zero Asset Manager Initiative, so have publicly committed to support the goal of net zero greenhouse gas emissions by 2050, in line with global efforts to limit warming to 1.5°C.

More information on the Trustee's stewardship activities can be found in its [**Implementation Statement**](#).

7. Monitoring climate-related risks to the Plan

The Trustee has started to integrate climate change into the Plan's risk management processes, including the risk register, covenant monitoring, and contingency planning and monitoring framework.

Risk register

The Trustee maintains a risk register which spans all aspects of the Plan's activities. It is reviewed in detail by the DB Governance Committee and at a high-level by the Trustee Board each quarter. The register has included explicit reference to climate change for a number of years and these references were expanded in 2021. Each risk is rated in terms of its likelihood and impact, both on a one-to-three scale, and these figures are multiplied together to give an overall score out of nine (corresponding to high likelihood and high impact). The Trustee sets a target score for each risk which reflects any reduction in likelihood and impact that it aims to achieve through its risk control and mitigation measures. The Trustee introduced enhanced monitoring of risks rated four or above in November 2021.

As at 30 September 2021, climate change was reflected in the DB sections of the risk register as follows:

- **Funding** – Climate change risk was rated four (likelihood two, impact two), with a target score of four (given that the Trustee has limited scope to influence funding-related climate risks). The Trustee has received training and advice on potential funding impacts using climate scenario analysis, as described in section 5.1. It plans to introduce monitoring of external climate developments to inform its risk appetite (see below) and monitor how climate change informs the actuarial advice it receives.
- **Investment** – ESG risks are considered under the “inappropriate investment strategy” risk which was rated three (likelihood one, impact three), with a target score of three. ESG and climate risks are considered in the investment advice received by the Trustee (see section 4.1), in accordance with an annual ESG and Climate Change Project Plan. There is ongoing monitoring of investments against the Trustee's ESG policy.
- **Covenant** – Climate change risk was rated three (likelihood three, impact one), with a target score of three². The Trustee received initial advice on climate change covenant considerations in May 2021 (see section 4.2) and its covenant adviser is introducing regular monitoring and reporting (see below).
- **Integrated risk management** – Climate change risk was rated four (likelihood two, impact two), with a target score of two. It has the potential to affect the Plan's journey plan through climate-related impacts on the strength of the employer covenant and/or actual or expected performance of the Plan's investments. The mitigating actions are those described for funding, investment and covenant.

Following its more detailed identification and assessment of climate-related risks in the first half of 2021, the Trustee is considering expanding the coverage of these risks in this risk register. Initial discussions have taken place about whether the more detailed risks should form a separate section of the risk register and whether coverage of other ESG risks should also be expanded. The DB Governance Committee considered a draft new section in September 2021 and agreed to consider it further in 2022, following finalisation of the Pension Regulator's TCFD guidance and as part of a more thorough review of the risk register in preparation for the new requirements due to be introduced through the Regulator's single Code of Practice.

² It was changed to a rating of four (likelihood two, impact two), with a target score of two, in December 2021.

Contingency Planning and Monitoring Framework

The Trustee and sponsor have agreed a Contingency Planning and Monitoring Framework which includes a number of monitoring metrics spanning funding, investment and covenant – each of which is rated red, amber or green according to its level – and sets out the steps to be taken to monitor the metrics and act upon any changes in rating. The levels of the monitoring metrics are reviewed in detail by the DB Governance Committee and at a high-level by the Trustee Board each quarter.

The framework will be revised in 2022 to reflect the post-JV position. In September 2021, the DB Governance Committee started to consider changes it may propose to the sponsor. The proposals will include explicit monitoring of climate-related metrics. These might include:

- metrics in relation to the Plan's assets (see section 8);
- progress against any climate-related targets the sponsor has set for itself (see below);

- third-party climate-related ratings of the sponsor or relevant group entities; and
- metrics relating to external climate developments that indicate how the overall level of transition and physical risks to the economy is evolving.

In the event of an amber or red trigger being breached in relation to one of the agreed metrics, the Trustee would expect to consult with its advisers to help the Board understand whether this results in additional risk factors within the Plan's funding and investment strategy, and would consult with the sponsor as to whether it is expected to have any impact on the sponsor's strategy. If additional risk is identified, mitigating actions would be considered and, if appropriate, implemented.

Covenant monitoring

Telefónica UK's key climate-related targets are set out in the table below³.

	Renewable energy	Energy efficiency	Emissions reduction
Targets	Continue to use 100% of electricity from renewable sources, promoting its development with long-term contracts and self-generation	Reduce energy consumption by 90% per unit of mobile data traffic by 2025 compared to 2015	Achieve net zero emissions by 2025 (Scope 1 and 2)
2020 progress:	100% (where within Telefónica UK's operational control)	82% reduction compared to 2015	29% reduction from baseline (2015) Scope 1 emissions: 3,007 tCO ₂ e Scope 2 emissions: 42,333 tCO ₂ e

³ Telefónica UK reported that the emissions data shown in the table includes company-owned stores, corporate sites, switch/datacentres and cell sites (mast/antennae sites), but does not include franchise stores. The calculation approach is based on invoicing (where applicable) and estimation where the scope includes emission sources outside Telefónica UK's operational control (for example landlord supplied sites). 31% of the emissions data is based on estimates where actual data is not available.

8. Climate-related metrics and targets for the Plan's assets

Collecting climate-related metrics

In early 2021, the Plan's investment adviser issued a data request to collect a range of ESG and climate metrics from the investment managers, in relation to the Plan's DB assets. The initial responses were disappointing, with the managers able to provide only a small proportion of the data requested. It also highlighted the inefficiencies of investment managers providing a range of differing information with differing calculation methodologies in response to requests from different investment advisers who required similar information.

Recognising that this was an industry-wide issue, the investment adviser proposed and led an Investment Consultants Sustainability Working Group project to agree a standard list of 12 ESG-related metrics, informed by their work for the Plan. The first edition of the list was published in November 2021. The 18 investment consultancies in the Group expect all public equity and public credit investment managers to be able to report on or be working towards being able to report on this list as soon as possible.

The investment adviser collected data from the Plan's investment managers for these 12 metrics and presented them to the Trustee at its October 2021 Away Day, along with training on each of the metrics. The Trustee agreed to monitor these 12 metrics on a six-monthly basis. The list includes various climate-related metrics.

Selection of metrics for reporting purposes

The investment adviser presented the data it had collected on the Plan's DB assets for the ESG metrics at the Trustee's October 2021 Away Day. The Trustee reviewed the climate-related metrics further at its December 2021 meeting and received advice from its actuarial adviser on the legal requirements that will apply to the Plan in this area from October 2022. It decided to present three of the metrics in this report, along with an additional data quality metric, as follows:

Metric	Detail
Total greenhouse gas emissions ¹	This measures a portfolio's absolute emissions . It represents the Plan's share of its portfolio companies' emissions if emissions are split between equity and debt investors in proportion to the value of their investment in the company.
Carbon footprint	This is an emissions intensity metric, expressed as emissions per million pounds (£m) invested. It is equal to total greenhouse gas emissions divided by the value of the portfolio. As the metric adjusts for the value of the portfolio, it allows emissions exposure of different portfolios to be compared.
Emissions reduction targets	This is a portfolio alignment metric, which measures the extent to which the Plan's investments are aligned to the Paris Agreement goal of limiting global average temperature rises to 1.5°C. It is calculated as the proportion of companies with SBTi-accredited ² targets to reduce their greenhouse gas emissions. The Trustee chose this "binary target" measure because it is the simplest and most robust of the various portfolio alignment metrics available.
Data quality	A measure of the proportion of the portfolio for which the Trustee has high quality data. This is reported using four categories: emissions reported by companies and verified by third parties (the highest quality), emissions reported by companies but not verified; and indirectly estimated or modelled emissions (the lowest quality); and data unavailable.

The Trustee chose to report these metrics for the DB section as they are consistent with those which it expects to be required to report from 2024 under the new legislative requirements. It may choose to report different metrics for the DC section's assets in future reports which cover both sections of the Plan.

¹ More information about greenhouse gas emissions is provided in Appendix 4. ² Science-Based Targets initiative (see Appendix 1).

The Plan's metrics

The Plan's investment managers were asked to calculate the metrics using the methodologies in the [Investment Consultants Sustainability Working Group](#) guidance to the extent applicable for the asset class. For emissions metrics, they were only asked to provide Scope 1 and Scope 2 emissions due to poor data availability and coverage for Scope 3 emissions⁴. The Trustee will start to collect Scope 3 emissions as far as it is able at least in time for its TCFD report for the year ending 30 September 2024, the first year when it will be required to report them.

The metrics for the Plan's DB portfolio are shown below, based on the assets held at 30 June 2021. The colour coding relates to the proportion of the portfolio for which metrics are available (i.e. the coverage), rather than whether the values of the metrics themselves are considered good or bad.

Emissions-related metrics

Metric	BlackRock Corporate Bonds	BlackRock LDI/ CDS (gilts only) ³	M&G Liquid Credit	Apollo Semi-Liquid Credit	M&G Real Estate Debt	Partners Private Credit	Portfolio coverage
Strategic asset allocation (% of DB assets)	20	30	15	10	12.5	12.5	N/A
Total greenhouse gas emissions (Scope 1+2) in tCO ₂ e	17,270 ¹ (85%)	361,661 (100%)	20,736 ¹ (52%)	6,511 ² (17%)	-		56% ⁶
Carbon footprint (Scope 1+2) in tCO ₂ e per £m invested	45.4 ¹ (85%)	299.6 ⁴ (100%)	62.5 ¹ (52%)	268.7 ² (17%)	-		56% ⁶
Emission reduction targets	41.0% (91%)	N/A ⁵	7.1% (54%)	0.6% (100%)	N/A ⁵	-	36%

					
Strong coverage (>70%)	Acceptable coverage (>50%)	Poor coverage (<50%)	No data coverage	Manager plans to report in future	Individual metric coverage provided in brackets

Notes

- The asset managers have provided emissions figures which include adjustments for missing data, so that the Total greenhouse gas emissions shown are an estimate of the emissions for the whole portfolio. The Trustee understands that these adjustments are based on assumptions that the missing data is in line with the average for the rest of the portfolio. This is not the approach recommended in the guidance that will apply once the Plan is subject to statutory climate reporting, but these are currently the only emissions figures available to the Trustee.
- The Total greenhouse gas emissions figure shown relates only to the part of the portfolio for which data is available. The asset manager has focused its data collection on the securities expected to have the highest emissions. Therefore, whilst the Total greenhouse gas emissions for the whole portfolio would be higher than the figure shown, the carbon footprint for the whole portfolio is likely to be less than that shown.
- Metrics have been calculated for the Plan's gilts exposure only, not the derivatives held within this mandate. Gilts metrics are calculated on a different basis, so cannot be compared with the other mandates shown. Total greenhouse gas emissions have been calculated as {"value of the Plan's investment in gilts" divided by "value of the UK's public debt"} multiplied by "total greenhouse gas emissions produced in the UK". The carbon footprint has been calculated as "total greenhouse gas emissions" divided by "value of the Plan's investment in gilts". There can be issues of double counting across the portfolio where UK country emissions double count UK company emissions already accounted for within the credit portfolio.
- BlackRock provided absolute emissions data and investment values as at June 2021, namely £605m for the market value of the mandate and £1,207m for the Plan's leveraged exposure to gilts. Based on the calculation 361,661 tCO₂e / £1,207m, you obtain the carbon footprint shown.
- This metric applies only to portfolios invested in the debt of corporate entities. The UK government sets emissions reduction targets based on advice from the independent Committee on Climate Change. This could be regarded as equivalent to an SBTi target for the Plan's gilts investments.
- Despite gilts metrics being calculated on a different basis, these figures have been included within total portfolio coverage numbers. Coverage is based on strategic asset allocation rather than actual asset values.

⁴ More information about greenhouse gas emissions, including the classification between Scope 1, Scope 2 and Scope 3, is provided in Appendix 4.

Data quality metrics

Metric	BlackRock Corporate Bonds	BlackRock LDI/ CDS (gilts only)	M&G Liquid Credit	Apollo Semi-Liquid Credit	M&G Real Estate Debt	Partners Private Credit
Strategic asset allocation (% of DB assets)	20	30	15	10	12.5	12.5
Greenhouse gas emissions and carbon footprint data coverage (%) Scope 1+2 only	Total data coverage	84.5%	100.0%	52.3%	17.2%	
	Direct reporting	63.7%	N/A ³	44.4%	17.2%	
	Indirectly estimated or modelled	20.8%	N/A ³	7.9%	0.0%	N/A
	Verified	N/A ¹	N/A ³	N/A ²	17.2%	N/A
	Unavailable	15.5%	0%	47.7%	82.8%	

Notes

- BlackRock notes that data is provided by MSCI (for most carbon metrics), as well as Trucost, and Sustainalytics, and believes these data providers should be verifying/auditing these numbers themselves, therefore no verification data has been provided.
- M&G has not provided verification numbers. They note they are at an early stage in the measurement of emissions and quality of data (reported or estimated) may differ significantly from actual figures and are subject to change.
- BlackRock uses data provided by MSCI which is drawn from two databases, one of which uses estimated data. The other database uses both reported and estimated data, and does not provide information on the split or whether the reported data is verified.

Climate change data gaps and data quality

The tables show that data is not yet available for all the Plan's DB assets: there is no data for two mandates (M&G real estate debt and Partners Group private credit portfolios) or the Plan's credit default swaps; emissions coverage is very low for the Apollo portfolio and moderate for the M&G liquid credit portfolio. The lack of data for the M&G real estate debt and Partners Group private credit portfolios at this stage is not surprising - data availability is currently low for many illiquid mandates like these. Improvements in climate data are taking place rapidly across various asset classes and it is expected that gaps in data will become much smaller over the short to medium term.

The Trustee and its investment adviser have set engagement priorities relating to data collection. This is particularly important for the mandates without any reported data since currently the Trustee has no visibility of its climate exposures, although the Trustee notes that there is no consensus yet on methodologies for reporting climate data for credit default swaps. The investment adviser will also engage with the managers for mandates where data coverage is low, i.e. the Apollo semi-liquid credit portfolio and the M&G liquid credit portfolio. The Trustee has decided to move its corporate bond portfolio from BlackRock (see section 6).

Where data coverage was less than 100%, the Trustee decided not to use other methods to estimate the missing data at this stage. The investment managers are in a better

position to do any estimation of data than the Trustee and the investment managers are being encouraged to rapidly improve coverage of their portfolios. M&G and Apollo appear to make little and no use of estimation techniques respectively, so there may be scope for them to improve coverage in this way until reported data can be obtained. The Trustee will reassess data gaps in mid-2022 and consider whether to use any estimation for its second TCFD report.

In terms of data quality for emissions metrics, only Apollo's investee companies are known to have verified emissions data. The Trustee expects investment managers and data providers to encourage investee companies to have their emissions verified to ensure the data is high quality and for third party data providers to disclose the proportion of data that has been verified.

The Trustee's investment adviser will be engaging with investment managers to encourage companies to set science-based emissions reduction targets – at present the values are low for the M&G and Apollo mandates.

Targets to improve metrics

The Trustee considered setting a target to improve one or more of its climate-related metrics at its December 2021 meeting. It decided to engage with its managers about improving data coverage before setting a formal target. The Trustee will consider targets further in 2022 in light of its investment adviser's discussions with the managers about what level of improvements in the various metrics would be ambitious yet achievable.



Appendix 1 – Glossary

Carbon emissions – These refer to the release of carbon dioxide, or greenhouse gases more generally, into the atmosphere, for example from the burning of fossil fuels for power or transport purposes.

Carbon footprint – In an investment context, the total carbon dioxide or greenhouse gas emissions generated per amount invested (e.g. in £m) by an investment fund. Related definitions are used to apply the term to organisations, countries and individuals.

Climate change adaptation – steps taken to adapt to the physical effects of climate change such as improving flood defences and installing air conditioning.

Climate change mitigation – steps taken to limit climate change by reducing greenhouse gas emissions, for example by shifting to renewable sources of energy – such as solar and wind – and by using less energy and using it more efficiently.

Environmental, social and governance (ESG) – an umbrella term that encompasses a wide range of factors that may have been overlooked in traditional investment approaches. Environmental considerations might include physical resource management, pollution prevention and greenhouse gas emissions. Social factors are likely to include workplace diversity, health and safety, and the company's impact on its local community. Governance-related matters include executive compensation, board accountability and shareholder rights.

Greenhouse gas (GHG) emissions – gases that have been and continue to be released into the Earth's atmosphere. Greenhouse gases trap radiation from the sun which subsequently heats the planet's surface (giving rise to the "greenhouse effect"). Carbon dioxide and methane are two of the most important greenhouse gases. See also Appendix 4.

Net zero – this describes the situation in which total greenhouse gas emissions released into the atmosphere are equal to those removed for example via man-made technologies (to capture carbon and store it) or nature-based solutions (such as the planting of trees). This can be considered at different levels, e.g. company, investor, country or global.

Paris Agreement – the Paris Agreement is an international treaty on climate change, adopted by global governments in 2015. It covers climate change mitigation, adaptation and finance. Its primary goal is to limit global warming to well below 2°C, with ambitions towards 1.5°C, compared to pre-industrial levels.

Physical risk – these are climate-related risks that arise from changes in the climate itself. They include risks from more extreme storms and flooding, as well as rising temperatures and changing rainfall patterns.

Science-Based Targets initiative (SBTi) – an organisation that sets standards and provides accreditation for science-based targets set by companies and investors.

Scenario analysis – a tool for examining and evaluating different ways in which the future may unfold.

Scope 1, 2 and 3 – a classification of greenhouse gas emissions. See Appendix 4 for an explanation.

Stewardship – stewardship is defined by the Financial Reporting Council as the responsible allocation, management and oversight of capital to create long-term value for clients and beneficiaries leading to sustainable benefits for the economy, the environment and society. It is often implemented via engagement with investee companies and exercising voting rights.

Stranded assets – assets that have suffered an unanticipated loss of value before the end of their expected useful economic life. The term is most often applied to fossil fuel investments in the context of climate policy, where legislative and market developments may result in assets being worth less than the value recorded on company balance sheets.

Taskforce on Climate-related Financial Disclosures (TCFD) – a group of senior preparers and users of financial disclosures from G20 countries, established by the international Financial Stability Board in 2015. The TCFD has developed a set of recommendations for climate-related financial risk disclosures for use by companies, financial institutions and other organisations to inform investors and other parties about the climate-related risks they face.

Transition risk – these are climate-related risks that arise from the transition to a low-carbon economy and can include changes in regulation, technology and consumer demand.

Appendix 2 – Roles and responsibilities

This appendix outlines, in broad terms, who is responsible for what in relation to climate-related matters for the Plan.

Trustee

- ensuring the Trustee Directors have sufficient knowledge and understanding of climate change to fulfil their statutory and fiduciary obligations, and are keeping this knowledge and understanding up to date;
- putting effective climate governance arrangements in place;
- determining short-, medium- and long-term periods, and identifying and assessing the main climate-related risks and opportunities for the Plan over these time periods;
- incorporating climate-related considerations into strategic decisions relating to the Plan's investments and funding arrangements;
- incorporating climate-related considerations into the Plan's investment beliefs, investment policies, risk register and contingency planning and monitoring framework;
- allowing for climate-related considerations when assessing and monitoring the strength of the sponsoring employer's covenant;
- selecting and regularly reviewing metrics to inform its identification, assessment and management of climate-related risks and opportunities, and setting and monitoring targets to improve these metrics over time where appropriate;
- ensuring that the Plan's advisers have clearly defined responsibilities in respect of climate change, that they have adequate expertise and resources to carry these out, that they are taking adequate steps to identify and assess any relevant climate-related risks and opportunities, and that they are adequately prioritising climate-related risks;
- considering and documenting the extent to which the advisers' responsibilities are included in any agreements, such as investment consultants' strategic objectives and service agreements;
- ensuring that the Plan's investment managers are managing climate-related risks and opportunities in relation to the Plan's investments, and have appropriate processes, expertise and resources to do this effectively; and
- communicating with Plan members and other stakeholders on climate change where appropriate, including public TCFD reporting and reporting required as a signatory to the Principles for Responsible Investment (PRI).

Actuarial adviser

- providing training and other updates to the Trustee on relevant climate-related matters;
- advising how climate-related risks and opportunities might affect the Plan's funding and the implications for the Plan's funding strategy, long-term objective and roadmap;
- advising on the inclusion of climate change in the Plan's governance arrangements, risk register and contingency planning and monitoring framework;
- assisting the Trustee in identifying, monitoring and using suitable climate-related metrics and targets in relation to the Plan's investments; and
- leading on the preparation of the Trustee's TCFD reporting and climate-related PRI reporting and assisting with the Trustee's climate-related communication with stakeholders.



Investment adviser

- helping the Trustee to formulate its investment beliefs in relation to climate change and reflecting these in the Plan's investment policies and strategy;
- advising how climate-related risks and opportunities might affect the different asset classes the Plan is invested in and the implications for the Plan's investment strategy and roadmap;
- advising the Trustee on the appropriateness and effectiveness of the Plan's investment managers' processes, expertise and resources for managing climate-related risks and opportunities, and engaging with the managers to improve their climate-related integration;
- assisting the Trustee in monitoring and using suitable climate-related metrics and targets; and
- assisting the Trustee in incorporating climate change in its governance arrangements, risk register, contingency planning and monitoring framework and communication with stakeholders.

Covenant adviser

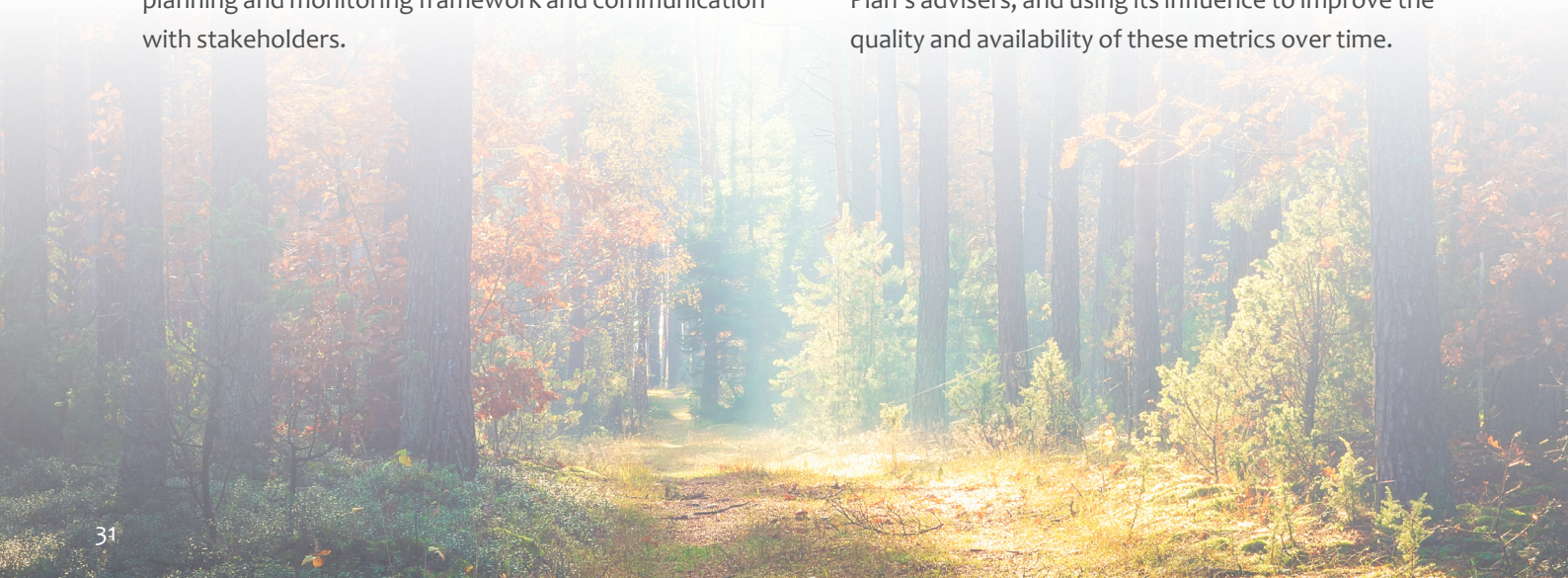
- periodically considering how climate-related risks and opportunities might affect the Plan's sponsoring employer and the implications for the Plan's roadmap;
- noting in the Plan's covenant monitoring any changes in the policies and practices of the sponsoring employer relating to climate change, and the employer's progress against any climate-related targets; and
- assisting the Trustee in incorporating climate change in its governance arrangements, risk register, contingency planning and monitoring framework and communication with stakeholders.

Legal adviser

- providing training and other updates to the Trustee on relevant climate-related legal matters;
- ensuring the Trustee is aware of its statutory and fiduciary obligations in relation to climate change and working with the Trustee's other advisers to ensure alignment between these obligations and:
 - any Trustee formulation of its investment beliefs related to climate change; and
 - the identification and monitoring of climate-related metrics and targets;
- assisting the Trustee in incorporating climate change in its governance arrangements, risk register, contingency planning and monitoring framework and communication with stakeholders; and
- assisting in the documentation of any contractual requirements to be included in the arrangements with the Plan's investment managers with respect to the governance, management and reporting of climate-related matters.

Investment managers

- identifying, assessing and managing climate-related risks and opportunities in relation to the Plan's investments;
- undertaking engagement and exercising rights related to the Plan's investments in relation to climate-related risks and opportunities in a way that seeks to improve long-term financial outcomes for Plan members;
- reporting on stewardship activities and outcomes; and
- providing information on climate-related metrics to the Plan's advisers, and using its influence to improve the quality and availability of these metrics over time.



Appendix 3 – Climate scenario analysis: the modelling approach

Overview of the scenario modelling approach

The scenario analysis described in section 5.1 is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics. It used the version of the model which is based on macro-economic data as at 30 June 2020, calibrated to market conditions at 30 September 2020 (the date of the Plan's most recent actuarial valuation), and used the original technical provisions basis and contributions proposed for the actuarial valuation before they were adjusted to reflect the completion of the JV between the Plan's sponsor and Virgin Media.

The three climate scenarios were projected year by year, over the next 40 years. The model outputs were applied to the Plan's assets and liabilities by the Plan's actuarial adviser, LCP, assuming that the current investment strategy is maintained until 2029 and then investment risk is reduced further through a switch to a lower-risk portfolio. The model output was supported by in-depth narratives that brought the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities. The results helped the Trustee to consider how resilient the funding and investment strategies are to climate-related risks.

More details of the modelling

ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is a relatively comprehensive model of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.

Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate-related impacts that may be possible, under each scenario's climate pathway. LCP takes the median (i.e. the middle outcome) of this range of impacts, for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions.

LCP then uses these adjusted median impacts to project the assets and liabilities of the Plan to illustrate how the different scenarios could affect its funding level. No allowance was

made for changes to the investment strategy or contributions in response to the climate impacts modelled.

The model uses a "top-down" approach that consistently models climate impacts on both assets and liabilities. The investment market impacts were modelled as the average projected impacts for each asset class, i.e. assuming that the Plan's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the Plan's investment portfolio. As such, the modelling does not require extensive Plan-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Plan's assets.

Limitations of the modelling

In practice, the Plan's investment portfolio may not experience climate impacts in line with the market average. The Trustee uses climate-related metrics and its investment advisers' manager assessments to understand how the Plan's investment portfolio differs from a typical market average portfolio.

The Trustee notes that the three climate scenarios chosen are intended to be plausible, not "worst case", and the modelling is based on median outcomes. It therefore illustrates how the centre of the "funnel of doubt" surrounding the Plan's funding projection might be affected by climate change. It does not consider tail risks within that funnel, nor does it consider how the funnel might be widened by the additional uncertainties arising from climate change. In addition, only three scenarios out of infinitely many have been considered. Other scenarios could give better or worse outcomes for the Plan.

Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts include how climate change might affect interest rates and inflation, and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the Failed Transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.

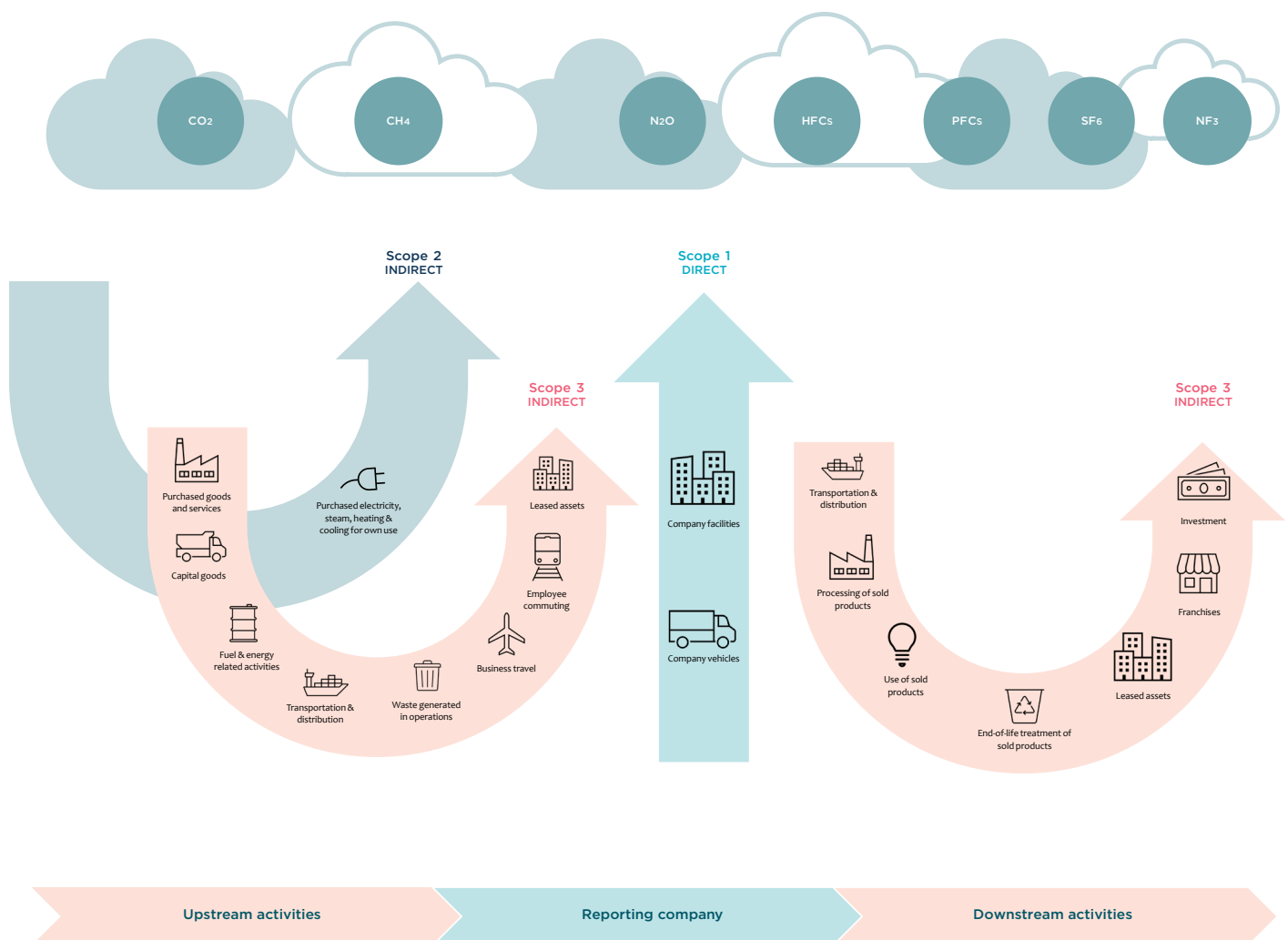
Appendix 4 – Greenhouse gas emissions explained

In section 8 of the report, the emissions metrics relate to seven greenhouse gases – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). The figures are shown as “CO₂ equivalent” (CO₂e) which is the amount of carbon dioxide that would be equivalent to the excess energy being stored by, and heating, the earth due to the presence in the atmosphere of these seven greenhouse gases.

The metrics related to greenhouse gas emissions are split into the following three categories: Scope 1, 2 and 3. These categories describe how directly the emissions are related to an entity’s operations, with Scope 1 emissions being most directly related to an entity’s everyday activities and Scope 3 referring to indirect emissions in an entity’s value chain. Scope

3 emissions often form the largest share of an entity’s total emissions, but are also the ones that the entity has least control over.

- Scope 1 greenhouse gas emissions are all direct emissions from the activities of an entity or activities under its control.
- Scope 2 greenhouse gas emissions are indirect emissions from electricity purchased and used by an entity which are created during the production of energy which the entity uses.
- Scope 3 greenhouse gas emissions are all indirect emissions from activities of the entity, other than scope 2 emissions, which occur from sources that the entity does not directly control.



Source: GHG Protocol



