

Funds MPS Portfolio Review

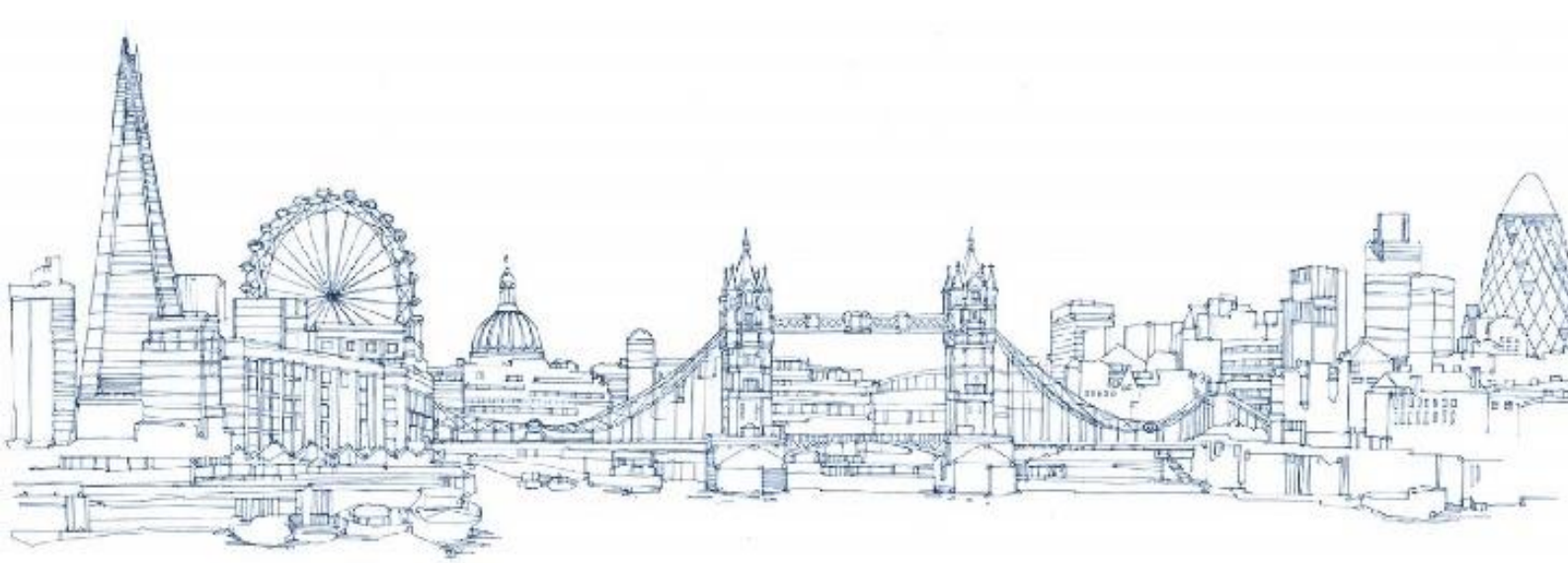


2020

An ethical review of your Model
Portfolio with King & Shaxson Ethical
Investing

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Welcome

Firstly, we hope you and your families are well.

The last year has been challenging for so many people across the globe, and whilst noise of a vaccine suggests there is some light at the end of the tunnel, the wounds created from the pandemic, financially and mentally, may take years to heal.

Despite the virus, we have been able to continue to provide an important and useful economic activity, at the same time adhering to government guidelines and ensuring staff welfare was a number one priority. We were even able to make a small contribution to the UK's PPE efforts, funding the supply of hundreds of high-quality face visors.

We now look to 2021 and beyond with some optimism, as we hope to return to some normality. The way we work has changed, but one of our core values is to 'be more human', and because of this, we hope to see many of our colleagues and clients face to face sooner rather than later.

One positive that can be taken from 2020 is the acceleration in the sustainable mandate of many of the world's governments and regulators, with the phrase 'build back better' now a common saying in our investment circle. On top of this, clients are increasingly wanting to go beyond ESG, and look to the sustainable and impact merits of investments.

Electric Vehicle's continue to take share from internal combustion engines, and I am sure you welcomed the news that the UK has brought forward their ban on petrol and diesel cars to 2030. Battery technology continues to advance, assisting with the intermittency of renewables, whilst green hydrogen has sky rocketed up the political agenda across Europe.

Whilst the above points are favourable to the environment, the pandemic has also put social causes under the spotlight, and we continue to see new investments address societal issues. You will see in this report a new investment in housing for the homeless, just one example of how social issues can be addressed through publicly listed investments.

The virus will continue to grab the headlines in 2021, but the march of the ethical investor bounds on, stronger than ever. We look forward to another year ahead and thank you for entrusting us with your portfolio.

Warmest regards

Wayne, Harry, Craig & Peter – The King & Shaxson Ethical Team

Spectrum of Capital

It is possible to breakdown the investment fund universe into the Spectrum of Capital, whereby the funds held within your portfolio will align to the following labels:



Sectors or companies are excluded if their activities are deemed to be harmful to society or the environment, such as tobacco or gambling companies.

Investor's criteria has evolved over time to now exclude fossil fuels/banks etc. as well as inclusion of other positive sectors.



Environmental, Social & Governance (ESG) factors are considered, to mitigate risk or to enhance value.

This ensures the company considers all stakeholders. Laggards are excluded, or some investors may engage with companies to try and change their behaviour.



Sustainable investing incorporates ESG but also aims to identify companies whose products or services are addressing any of the sustainability issues we face.

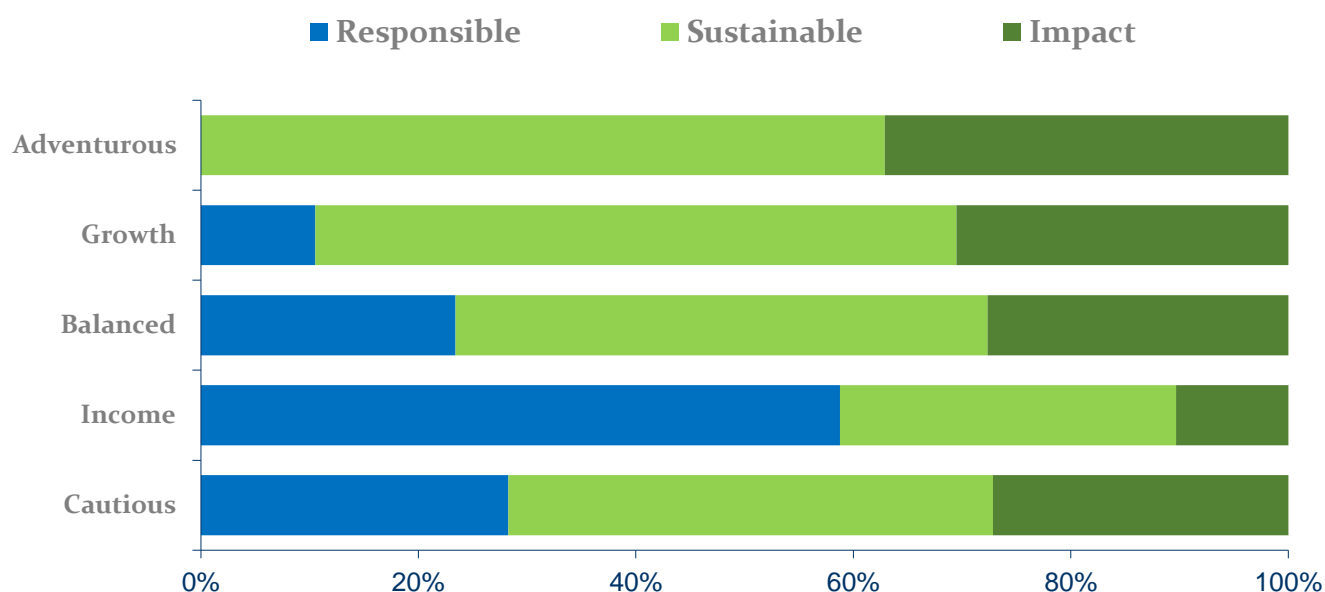
Sustainability themes, include climate change, water management or resource efficiency etc.



Investments are included if they are deemed to be addressing societal and/or environmental issues.

The positive outcome must be additional, identifiable and measurable, so investors can see the impact of their invested capital.

Over the course of the year, funds within the portfolio will change from time to time, for financial or ethical rationale. As at December 2020, the breakdown of your King & Shaxson portfolios is:



Over the last couple of years, it has become clear clients would like to go ‘beyond ESG’, and directly address a number of social and environmental issues. You will see the portfolios have greater exposure to sustainable and impact investments, which has been a purposeful shift to ensure your money is being put to good work.

Within this report, we will highlight the positive impact themes to which you have exposure to, including third party mapping to United Nation’s Sustainable Development Goals. We will also provide data to showcase these positive outcomes, as well as highlighting some of the underlying companies within your portfolio.



Positive Investment Themes

When investing into a portfolio of funds, there can at times be hundreds of underlying companies. Whilst this is positive for diversification, it doesn't necessarily make it easy for investors to understand the themes their invested capital is supporting.

Whilst we have access to all the underlying holdings held within each collective, it would be unrealistic to detail each individual company and their own specific positive outcomes within this report. We will cover some company specific holdings later in this document, but for now, we will look to the portfolios holistically, and map their exposure to a number of positive investment themes, such as alternative energy, sustainable water, or green buildings, to name but a few.

We have taken third party data from MSCI and used their thirteen 'Sustainable Impact Metrics', which cover environmental and social impact. The four themes and thirteen categories are below:

| Impact | Theme | Category |
|-------------|-----------------|--|
| Environment | Climate Change | Alternative Energy, Energy Efficiency, Green Building |
| | Natural Capital | Sustainable Water, Pollution prevention & control, Sustainable agriculture |
| Social | Basic Needs | Nutrition, Major Disease Treatment, Sanitation, Affordable Housing |
| | Empowerment | SME Finance, Education, Connectivity |

Important points to note on the data used:

MSCI's analysis focuses on the underlying company's revenue from products of services that align to the above categories. It is important to note that MSCI's coverage of the funds underlying companies within your portfolio was an average of 78%, meaning not all companies have been analysed. It is therefore possible that there could be some upside in the exposure to the positive investment themes. We do expect the coverage to expand over time, as the quality and depth of reporting widens through the universe of investable stocks.

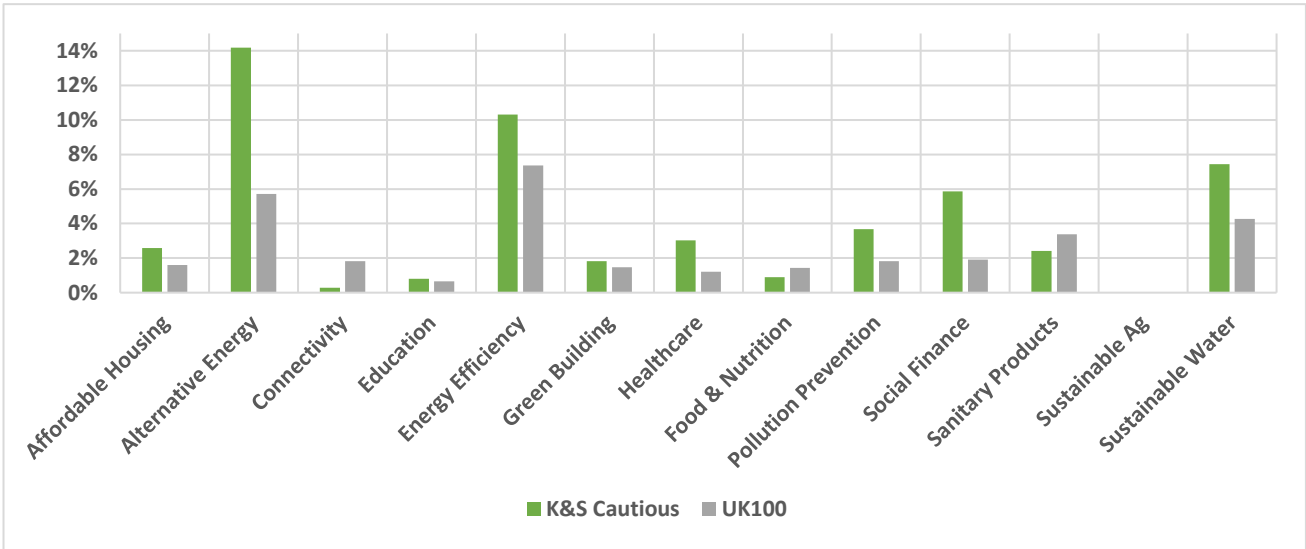
Two funds held in portfolios, the Gravis Clean Energy Income fund and the Foresight UK Infrastructure fund, had an underlying company coverage below 35%. Therefore, for these two funds only, we inferred the alternative energy data from the fund house's own material, as this has a clear revenue link to this theme.

The next few pages will show the breakdown of each portfolio based on MSCI's thirteen themes. We have also included the UK's main equity index, the UK's largest 100 companies, to allow for comparison.

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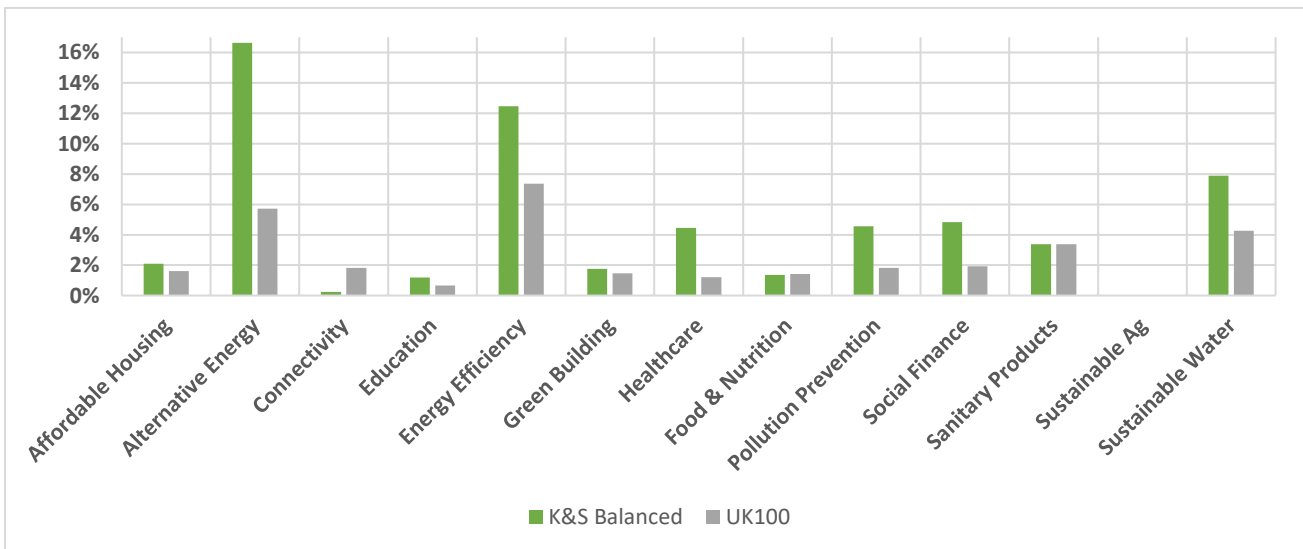
King & Shaxson Cautious Portfolio Positive Theme Exposure (source MSCI)

The top three categories within this portfolio fall under the ‘Climate Change’ theme. The largest category is ‘Alternative Energy’ at 14%, which includes biofuels, batteries, energy storage, solar, wind, hydro etc. The second highest category is ‘Energy Efficiency’ at 10%, this includes smart grids, electric/hybrid vehicles, clean transport infrastructure, insulation, LED lighting etc. Whilst the third largest category is ‘Sustainable Water’ at 7%, which includes exposure to products or services which tackle issues such as water scarcity and water quality.



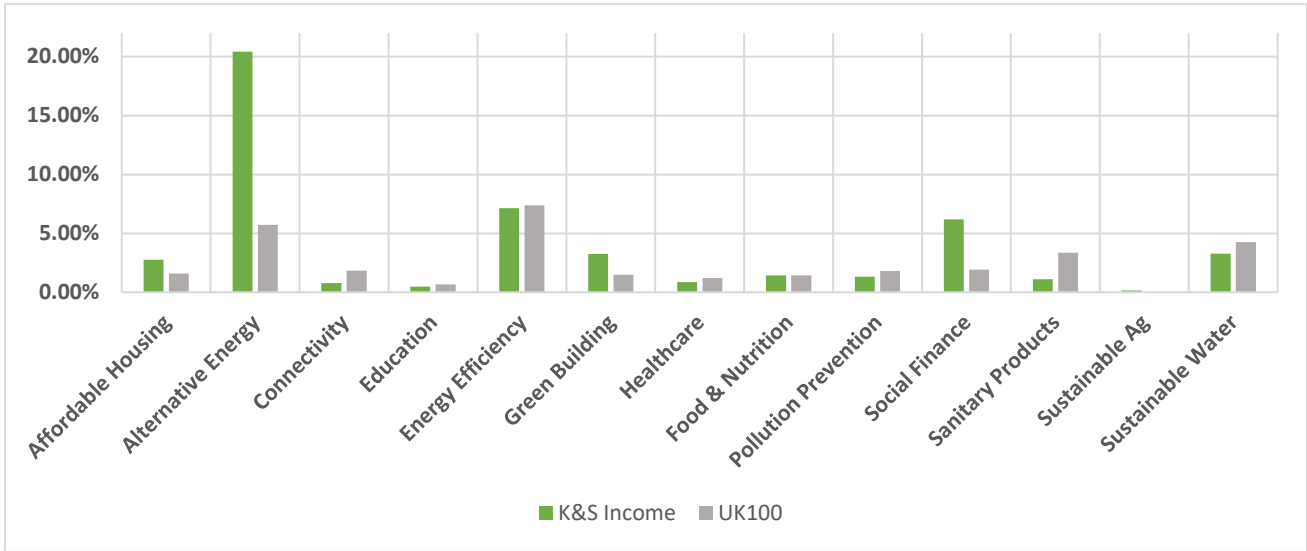
King & Shaxson Balanced Portfolio Positive Theme Exposure (source MSCI)

The top three categories within this portfolio fall under the ‘Climate Change’ theme. The largest category is ‘Alternative Energy’ at 16.5%, which includes biofuels, batteries, energy storage, solar, wind, hydro etc. The second highest category is ‘Energy Efficiency’ at 12.5%, this includes smart grids, electric/hybrid vehicles, clean transport infrastructure, insulation, LED lighting etc. Whilst the third largest category is ‘Sustainable Water’ at 8%, which includes exposure to products or services which tackle issues such as water scarcity and water quality.



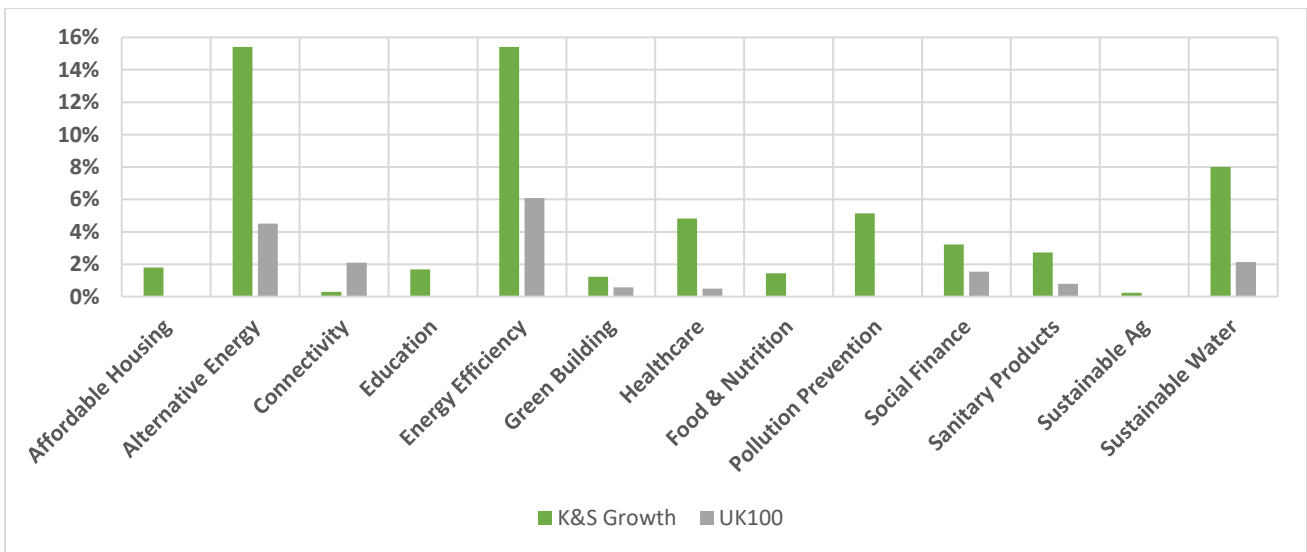
King & Shaxson Income Portfolio Positive Theme Exposure (source MSCI)

The top two categories within this portfolio fall under the ‘Climate Change’ theme, whilst the third largest category falls under ‘Empowerment’. The largest category is ‘Alternative Energy’ at 20.5%, which includes biofuels, batteries, energy storage, solar, wind, hydro etc. The second largest category is ‘Energy Efficiency’ at 7%, this includes smart grids, electric/hybrid vehicles, clean transport infrastructure, insulation, LED lighting etc. Whilst the third largest category is ‘Social Finance’ at just over 6%, which includes revenue exposure to empowering underserved people in society.



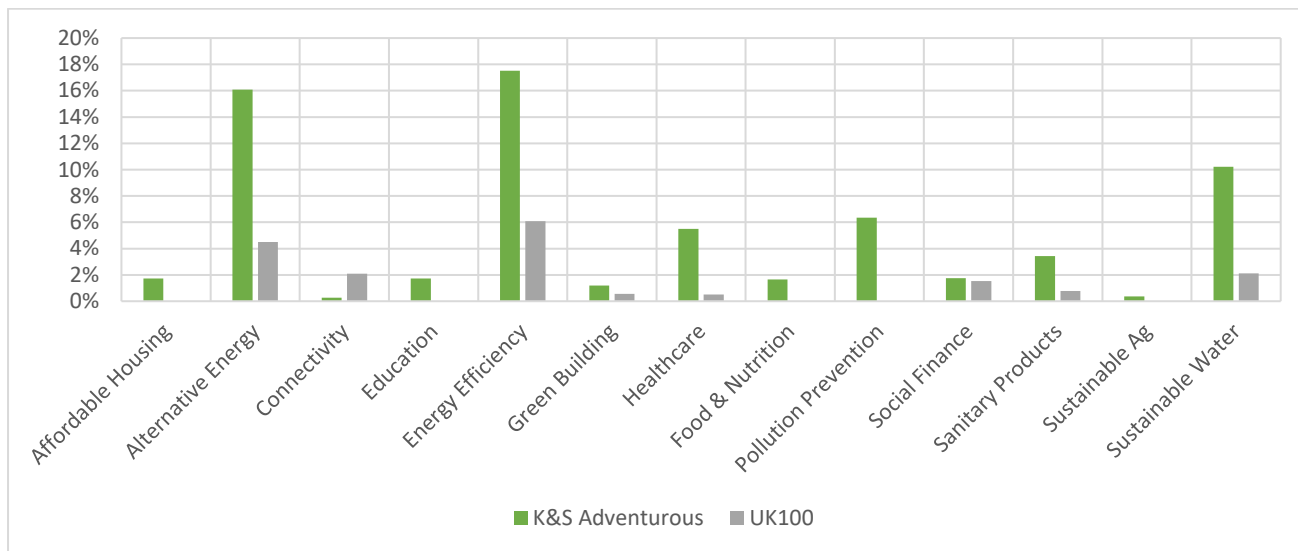
King & Shaxson Growth Portfolio Positive Theme Exposure (source MSCI)

The top three categories within this portfolio fall under the ‘Climate Change’ theme. The joint largest category is ‘Alternative Energy’ at 15.5%, which includes biofuels, batteries, energy storage, solar, wind, hydro etc. This comes alongside ‘Energy Efficiency’ at 15.5%, which includes smart grids, electric/hybrid vehicles, clean transport infrastructure, insulation, LED lighting etc. Whilst the third largest category is ‘Sustainable Water’ at 8%, which includes exposure to products or services which tackle issues such as water scarcity and water quality.



King & Shaxson Adventurous Portfolio Positive Theme Exposure (source MSCI)

The top three categories within this portfolio fall under the 'Climate Change' theme. The largest category is 'Energy Efficiency' at 17.5%, this includes smart grids, electric/hybrid vehicles, clean transport infrastructure, insulation, LED lighting etc. The second highest category is 'Alternative Energy' at 16%, which includes biofuels, batteries, energy storage, solar, wind, hydro etc. Whilst the third largest category is 'Sustainable Water' at just over 10%, which includes exposure to products or services which tackle issues such as water scarcity and water quality.



United Nations Sustainable Development Goals

The United Nation's Sustainable Development Goals (SDGs) have provided an important framework to deliver a number of sustainable outcomes for people and the planet, with the aim to achieve overall prosperity for all.

Set up under the 2030 agenda for sustainable development, we now have less than a decade to achieve the seventeen goals and their 169 underlying targets. As a reminder the graphical framework is below:



Source: United Nations

Many of the funds, within your portfolio, predominantly the sustainable and impact funds, will support one or a number of the development goals above.

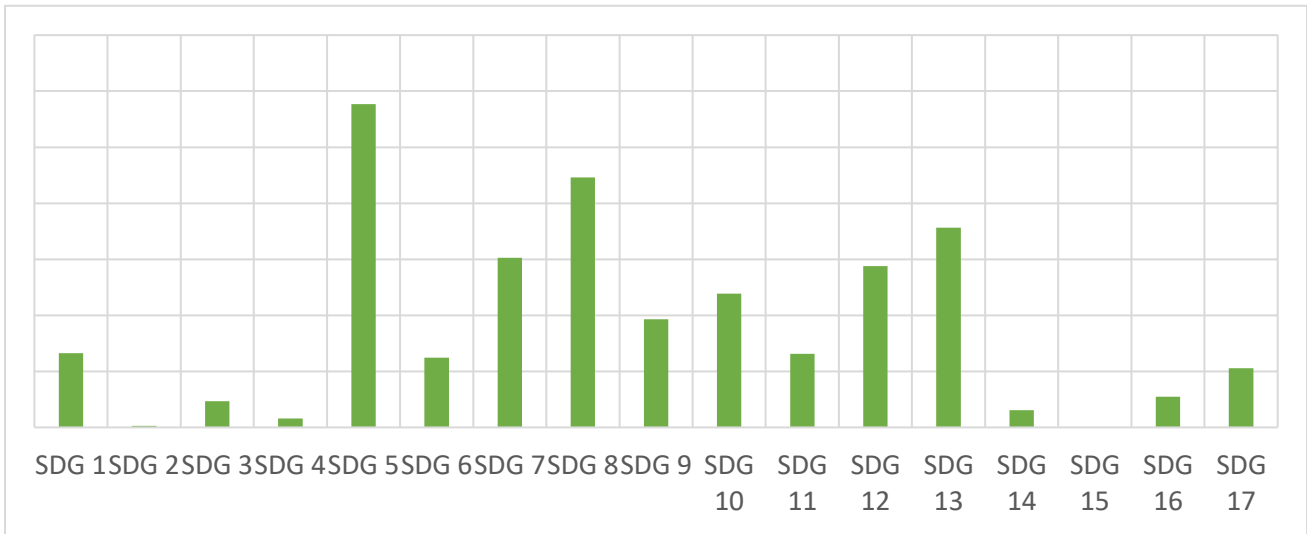
We tend to see each fund house map to their own framework or pillars, where the support towards these goals are clear. For example, a fund with a 'Climate action' theme could encompass SDG 7 'Affordable and Clean Energy' & SDG 13 'Climate Action'. When multiple goals are obvious, some fund houses will report on the Prime SDG on an individual company basis, whilst others may take on a more holistic approach and report on the funds overall support to certain SDGs.

Due to the different approaches, we can instead use MSCI data once again to showcase how the funds within your portfolio support the UN SDGs. The positive investment themes already covered above have obvious similarities with many of the UN SDGs.

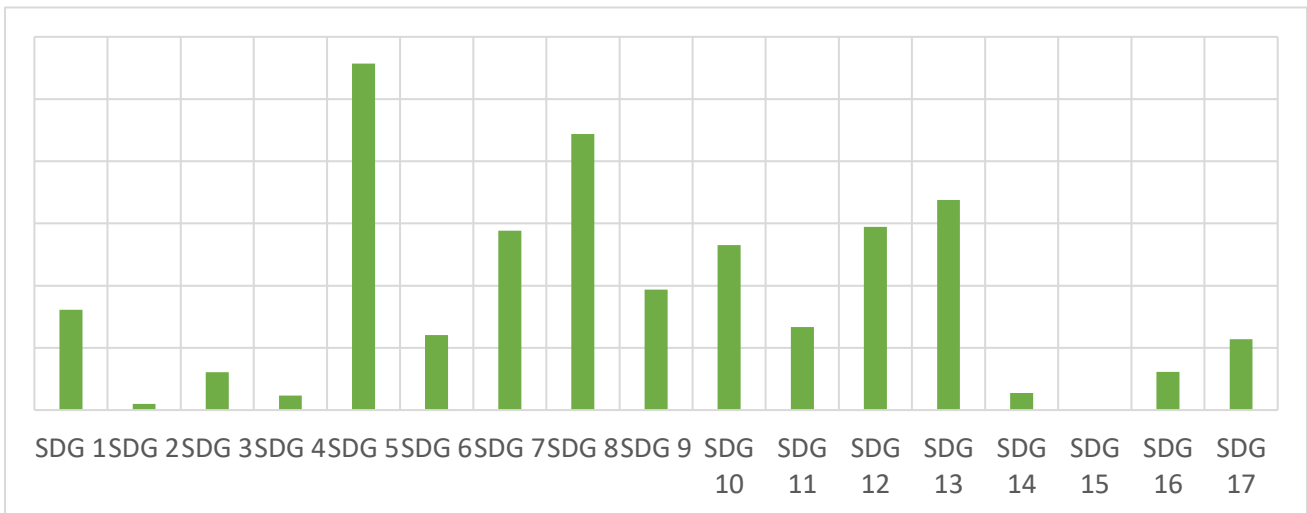
MSCI's UN SDG alignment is based upon analysis of the underlying company's product and operational alignment, and provides a percentage of the funds market value. Exposure in each portfolio can be over 100%, due to alignment to more than one goal (as per the climate example above). Their research into SDG alignment builds upon MSCI's Sustainable Impact Metrics (observed in the previous section), as well as other analysis, such as their Business Involvement Screening, ESG Metrics and MSCI ESG Controversy reports.

The next section will detail the exposure of the portfolios towards the UN SDG's based on MSCI's analysis. Certain Information ©2021 MSCI ESG Research LLC. Reproduced by Permission.

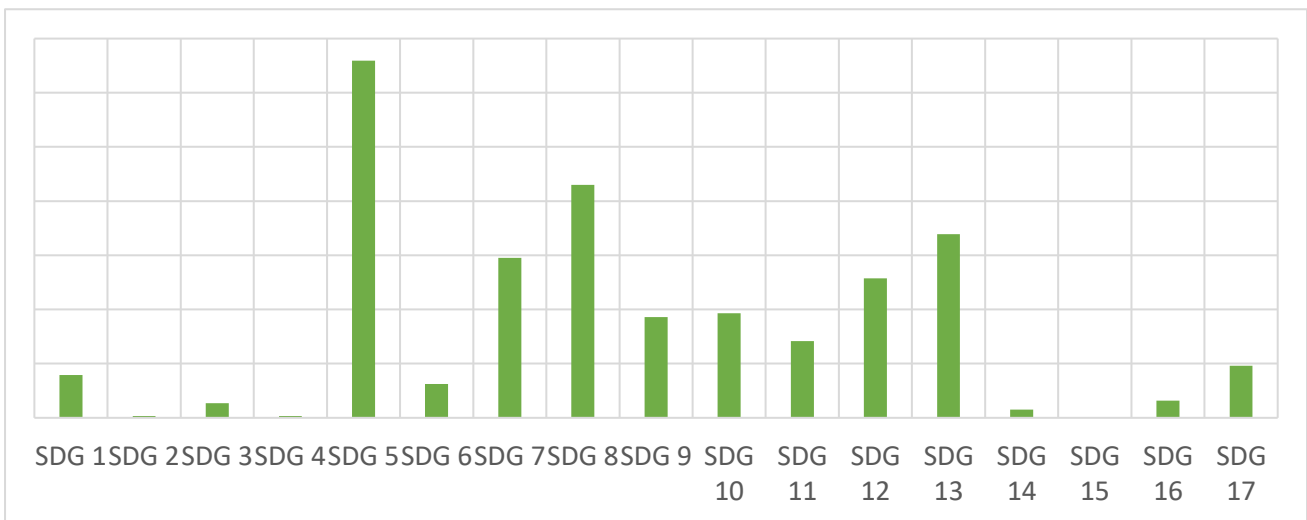
King & Shaxson Cautious Portfolio UN SDG's Exposure (source MSCI)



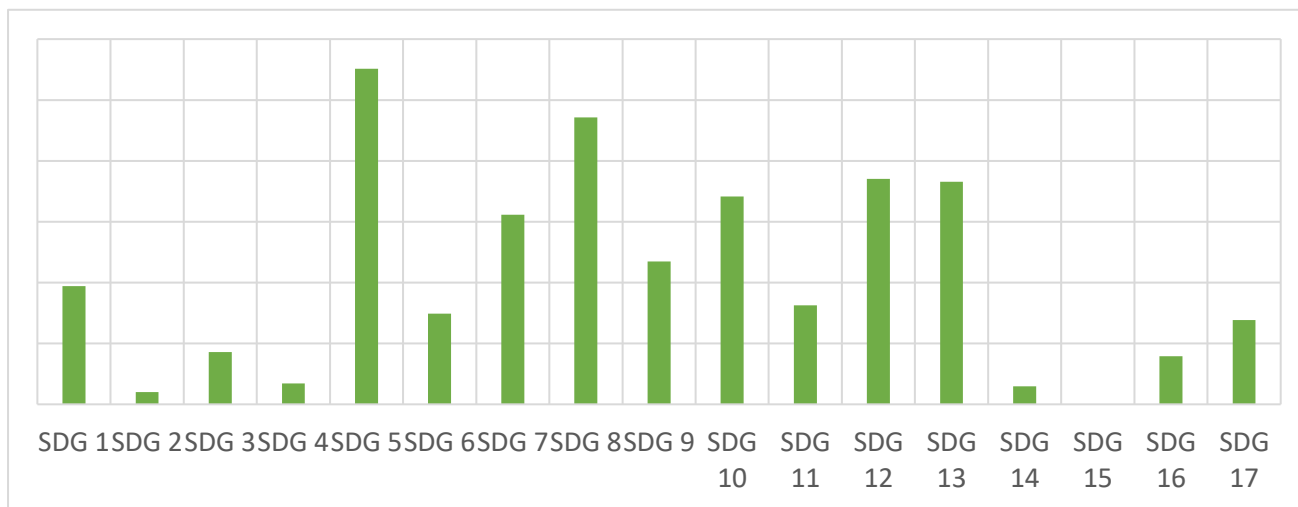
King & Shaxson Balanced Portfolio UN SDG's Exposure (source MSCI)



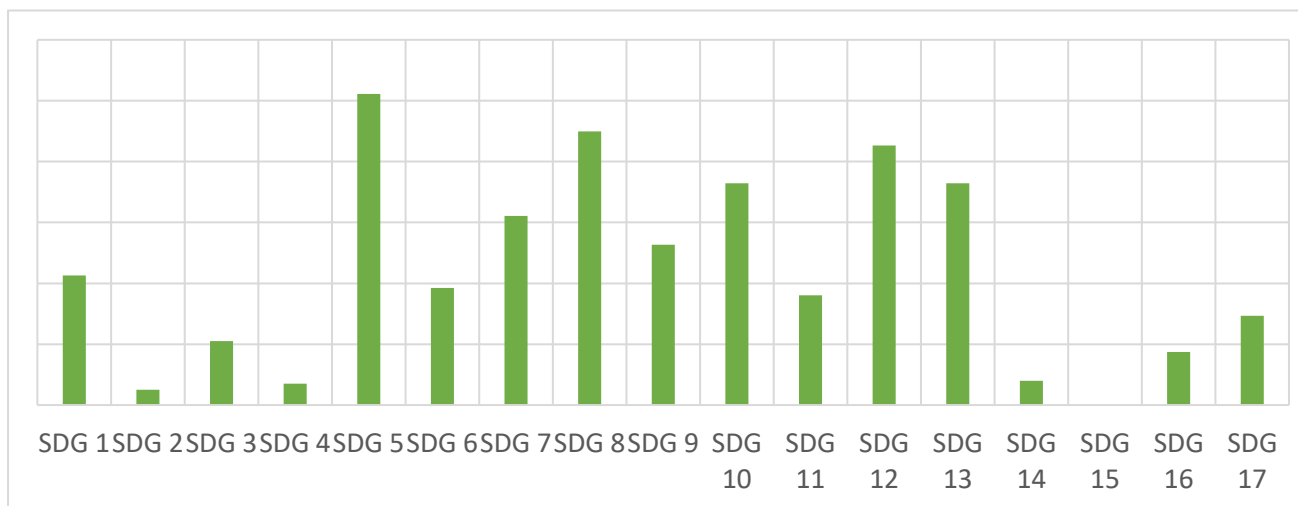
King & Shaxson Income Portfolio UN SDG's Exposure (source MSCI)



King & Shaxson Growth Portfolio UN SDG's Exposure (source MSCI)



King & Shaxson Adventurous Portfolio UN SDG's Exposure (source MSCI)



Core Fund Review - UN SDG Exposure






As previously mentioned, each fund has a slightly different approach in reporting their support towards the UN SDGs. The information supplied above gives you a holistic understanding of exposure for each portfolio based on MSCI's research and themes. On the next few pages we will outline examples of the core equity funds held within your portfolio, and detail what UN SDGs they support, based on the fund house's own reporting.

Montanaro Better World Fund

This fund stands at over £600 million in assets, and has six themes which support the majority of the UN SDGs (2 through to 15). Based on Montanaro's 2020 impact report, some of the positive outcomes from a £1 million investment into the fund are:








600 tonnes of CO₂ emissions avoided, 90,000 MWh of renewable energy generated, 700 patients treated for illness and disease, 7,000 sensors helping to reduce car emissions, 3,000 people given access to healthier foods each day, and 50 homes and businesses protected by smart systems.

We have provided some specific examples below:

| SDG | Company Example |
|---|---|
|  | <p>Novozymes produce enzymes and natural ingredients, for use in food, to replace chemicals or lower resource intensity of food production and waste. Their enzymes are used to develop protein rich food products for African markets. In 2019 the company saw 87 million tonnes of CO₂ emissions avoided; 262,000 tonnes of clean water treated; and 5,555 MWh of energy saved.</p> |
|  | <p>Tristel provides infection and contamination control and hygiene products, with over 265 patents granted in 37 countries.</p> |
|  | <p>Middlesex Water, services over 100,000 clients, who in 2019 provided 14 billion gallons of water whilst investing \$200 million in new water infrastructure.</p> |
|  | <p>Solaredge provides power optimisers, solar inverters and monitoring solutions for solar panels, selling over 41 million products since 2010.</p> |
|  | <p>Polypipe supply environmentally friendly pipeing systems, and have recycled 44,000 tonnes of plastics since 2017. Recycled plastic makes up 75% of the raw material that goes into their own products.</p> |

WHEB Sustainability Fund

WHEB's investment strategy is focussed on companies providing solutions to critical sustainability challenges. They have nine investment themes, from clean energy to well-being and education. These themes support 7 of the United Nations SDGs: 3, 4, 6, 7, 9, 11 and 12. Within their 2019 impact report, they highlight that their strategy was associated with the following positive impact:

|  |  |  |  |  |  |  |
|---|---|---|---|--|---|---|
| 26,600 people benefited from preventative care and/or healthy living programmes | 71,000 days of tertiary education | 4bn litres of waste water treated | 300,000 MWh of renewable energy | | | 59,000 tons of waste recovered or recycled |
| 61,000 people received healthcare treatment £29 million of healthcare costs saved | | 7.5bn litres of water cleaned for reuse | | | | |




CPR Education Impact Fund

Being an impact fund focussed on education, the underlying holdings support SDG 4, 'Quality Education'. Within their 2020 impact report, the fund is associated with the following impact through its underlying investments:

|  | | |
|--|--|--|
| 43% - the weight of the portfolio directly invested in education (schools, universities, lifelong learning) | 13,600 – pupils and students with access to education | 4.2m – hours of education delivered worldwide |

M&G Positive Impact Fund

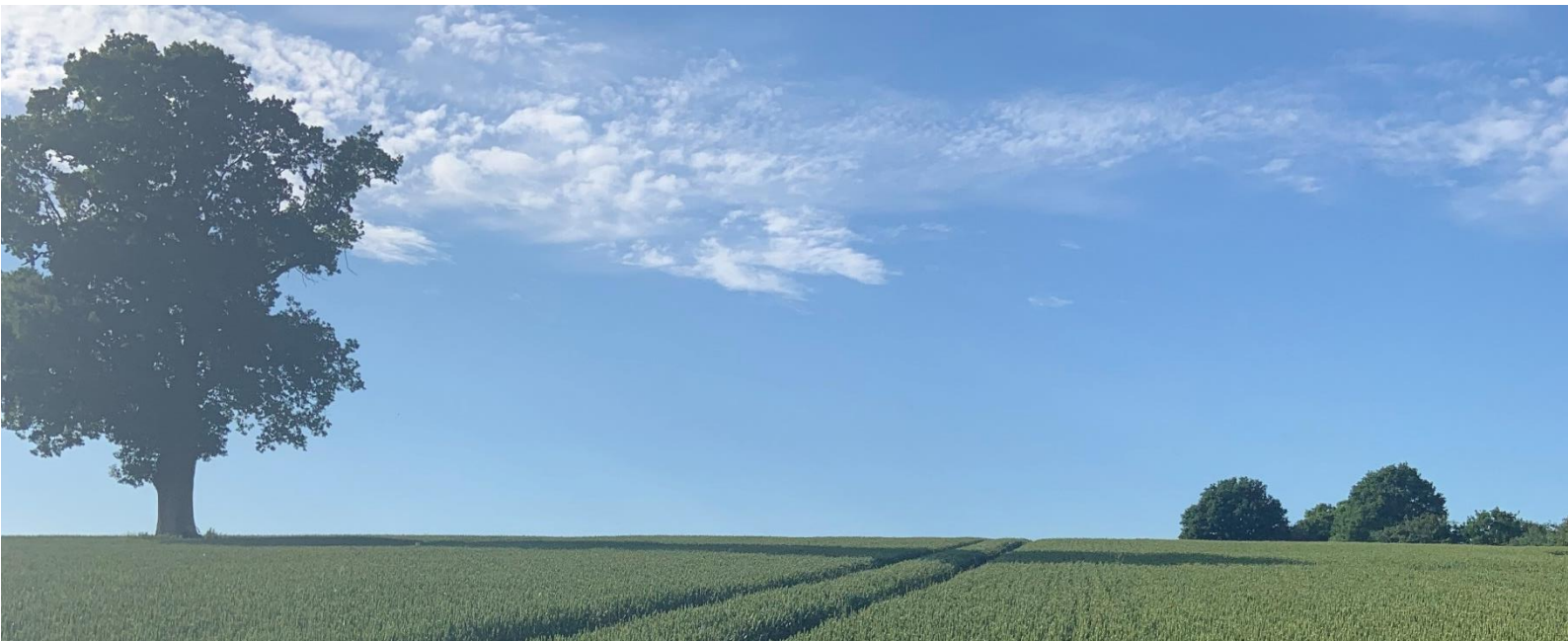
This impact fund takes on a triple ‘I’ approach, ensuring intention and impact on top of the traditional investment process. M&G map exposure to the specific UN SDGs in their reporting, with the November 2020 breakdown highlighted below:

| | | | | | | | |
|--|--|--|--|--|---|--|--|
|  <p>3 GOOD HEALTH AND WELL-BEING</p> |  <p>4 QUALITY EDUCATION</p> |  <p>5 GENDER EQUALITY</p> |  <p>7 AFFORDABLE AND CLEAN ENERGY</p> |  <p>8 DECENT WORK AND ECONOMIC GROWTH</p> |  <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> |  <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> |  <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> |
| 34.8% | 0.40% | 2.70% | 10.70% | 10.50% | 22.80% | 6.10% | 6.20% |

One of the largest holdings within this fund is Orsted, the largest offshore wind farm operator. Whilst we have mentioned this holding in our previous report, its achievements and positive impact is well worth including for an update. They increased their renewable energy capacity by 24% in the first nine months of 2020 to over 10GW, over a third of the way to their 2030 target of reaching +30GW. Due to their renewable capacity, they have avoided an accumulated 54.2 million tonnes of carbon emissions since 2006! The company has exposure to SDG 7 and 13.

54.2m
tonnes of CO₂
emissions
saved by
Orsted since
2006

Meanwhile, held under the education theme, Cogna Educao educates 2 million under-served students across Brazil, through their associated schools and distance learning centres. The company is the largest private provider of education in Brazil, bridging the gap left by the public sector. This company therefore has 100% revenue exposure to the SDG 4 ‘Quality Education’.



Company Specific Holdings (through collectives and direct equity)

Food, health and wellbeing

The United Nations have warned that global hunger levels are rising because of the Covid-19 crisis.* The simple reason is, as people get poorer, they get hungry. Even before the crisis, food security in general remains an area of concern as the global population continues to grow.

Weather related shocks are set to rise because of climate change, affecting yields in the years ahead, particularly in less economically developed countries. Current food consumption has long-term sustainability questions, with deforestation and greenhouse emissions from rearing animals all having a detrimental impact on the world we live in.

Better farming practices and changes in consumer behaviour are just two ways we can improve the health of humans and our planet, whilst changes in energy consumption will be vital in meeting our climate targets to avoid future catastrophic climate shocks.

Beyond this, across the globe, obesity is actually more common than under-nutrition, with the world health organisation estimating that there are over 650 million obese people across the globe†. Notably there has been a huge rise in the number of children classified as obese. This can lead to low quality of life, and psychological issues such as depression. Human wellbeing is therefore a critical issue, addressed through healthier foods and regular exercise.



CHR Hansen

Chr Hansen is one of the world's most sustainable ingredients companies. The natural 'good bacteria' they create has a number of positive uses, such as improving food taste and tackling food waste. On top of this, farmers use their ingredients to improve animal health, protect crops against disease and increase yields; this has huge importance against a backdrop of increased strain on our natural resources. Finally, their probiotics and infant formulas have obvious health benefits, particularly in gut and immune support. Chr Hansen partner with thousands of company's across the globe who are embracing their bacteria and natural ingredients, accelerating progress on the UN Sustainable Development Goals 2 (end hunger), 3 (strengthen global health) and 12 (ensure sustainable production and consumption).



The Gym Group

Gym group operate over 175 low-cost gyms in the UK, with their no contract proposition a key driver for first time users, but also for multiple return visits. They report that 43% of their members classify as financially stretched whilst 30% of their members in 2019 were first time joiners. We favour the

* World Economic forum

† Worldobesity.org

company for their commitment to breaking down the barriers to fitness, but also their commitment to their employees and the wider community. For example, during exam periods in 2019, they offered 16-18 year olds a 6 week off peak free membership to cope with exam stress. Their structure of employing personal trainers for 12 hours a week gives them financial support whilst they build their own business. Fitness and wellbeing will be vital coming out of the crisis, especially against a backdrop of growing obesity levels and mental health concerns in the UK.

Mobility

The vast majority of transport across the globe is run by fossil fuels, contributing around a fifth of global CO₂ emissions. Three quarters of this comes from road transport, making the adoption of cleaner road vehicles a vital part of our transition to a low carbon society.

One of the biggest changes in the last 18 months is the rapid adoption of Electric Vehicles (EVs). Despite penetration levels remaining low (circa 5%), there has been clear progress, with UK registrations of pure-electric, plug-in hybrid, hybrid and mild-hybrid cars up 144% on the year in October 2020. This was a similar story across Europe, whilst electric vehicle sales continue to sky rocket in China.

5%
Estimated
electric vehicle
penetration

Many manufacturers have been racing to launch hybrid or electric vehicles to meet regulatory emissions targets, and we have seen pledges, such as those by Ford, who are hoping to become net-zero by 2050. However, it is important to go beyond the headlines, as Fords mix of circa 75% internal combustion engine sales earlier in the summer in their top five EU markets is less than welcoming.

Beyond e-mobility, mass transport will play a vital role in tackling climate change. As the global population rises, and urbanisation continues to play out, demand for environmentally friendly mobility solutions will grow. We look at this from two perspectives: Firstly, mass transport will shift people from individual polluting vehicles in the near term. Longer term, it will provide low carbon options as buses and trains continue to upgrade, especially as new technologies such as green hydrogen continue to advance.



TESLA

Tesla

Tesla offer the products of a low carbon society: Electric vehicles, battery storage and solar solutions. They have played a fundamental role in disrupting the markets they operate in, especially the auto sector. Their ambitions to cut the cost of battery packs by 56% will allow them to achieve cost parity with internal combustion engines, paving the way for greater penetration of electric vehicles over time. On top of their impact in mobility, they also offer low cost solar and battery storage solutions, and they expect this part of the business to be as large as their EV business operations one day.



National Express

National Express has had a tough year. However, it remains a key part of the portfolios as the world returns to some normality. National Express predominantly offer bus and coach services, with their main markets being the US, Spain and the UK. They are a service provider of student transportation in the United States (the iconic yellow buses), as well as urban, long haul and charter coach services in Europe and Africa. The company has committed not to buy another diesel bus in the UK, with ambitions for their UK bus and coach businesses to have net-zero emissions by 2030 and 2035, respectively. Their sound financial position will see them through the crisis and they will benefit where others falter. This summer, National Express replaced all the buses on its number 6 route - between Birmingham and Solihull - and the route 9 in Coventry with fully electric vehicles. So far, this has prevented over 700 tonnes of carbon dioxide going out into the atmosphere.

Water and Waste

Historically, global consumption has been built upon a one-way street of extract, use and waste. This has led to huge amounts of discarded items over time, eating away at the finite resources of our planet. A shift to the circular economy will entail “decoupling economic activity from the consumption of finite resources, and designing waste out of the system”[‡]. The underlying principal here is to do more with less.

3bn
**Live in water-
scarce
conditions**

This is also true of our water resources, where global supply has remained constant over time, but demand has increased by six times in the last hundred years[§]. Billions of people live in water-scarce conditions, whilst water leakage remains a huge problem across the globe, with the World Bank estimating a cost of \$14 billion per annum to consumers. Tackling these problems will require investment and innovation, whilst education will shift people’s attitudes to become more precious with these resources.



Biffa

Biffa collect 2.1 million tonnes of waste per year, with a focus on re-use and recycling in order to build a circular economy. They have two automated sites that are capable of processing 400k tonnes of recycling per year, whilst they are a leader in the UK for recycling plastics, opening a new leading PET recycling facility earlier in 2020. They pioneered capturing landfill gas (methane) for energy production

[‡] <https://www.ellenmacarthurfoundation.org/circular-economy/concept>

[§] <https://www.waterintelligence.co.uk/water-facts/>

25 years ago, whilst more recently expanding anaerobic digestion facilities to process food waste; Biffa can power 117,000 homes, whilst their energy from waste plants will see this rise by another 170,000. Their operations align to a number of the United Nations SDGs, and evidence of their commitment is seen in their actions, such as reducing their CO₂ emissions by 65% since 2002, or reprocessing over three billion milk bottles in the last decade.



Severn Trent

Severn Trent is the UK's second largest water utility company, serving around 4.6 million homes. They supply 2 billion litres of drinking water each day, whilst treating 3.2 billion litres of wastewater. Over the next five years, they will be investing £1.2 billion to tackle climate and biodiversity issues, as well as providing support to their customers who struggle to pay their bills. Their triple carbon pledge will see them operate as a net-zero carbon company by 2030, with all vehicles electric and all energy consumed renewable. Whilst UK focused, Severn Trent are part of the World Water Innovation fund, which 'aims to find, develop and accelerate, new technologies that will make a real difference to people's lives'. ** We have met the company on a few occasions over the last couple of years, and have provided feedback regarding their sustainability credentials. Whilst they have an essential focus on the environment, they have extremely strong credentials when it comes to employee welfare, with support on areas such as mental health.

Clean Energy

The vast majority of global emissions come from energy, to power homes, offices or industrial facilities. The virus pandemic massively impacted energy usage as the global economy went into forced shutdown. It is expected that energy demand will fall 6% this year, more than seven times the impact of the 2008 financial crisis.†† Despite this decline, renewable energy usage is expected to rise for the year, partly due to its low operating costs, but also because of its preferential usage in many power systems.

The global shift away from fossil fuels has been slowly rising over the last few years, but penetration levels for renewables is only around 13%. There are also large disparities amongst countries; in the UK it is around 40% of the energy mix, whilst in China it is around 25%, and the US at 18%.

Countries such as China and India, despite renewable advancements, have coal as a large part of the energy mix in order to meet their rapidly growing requirements. It is therefore anticipated that natural gas will play a transitional role, which is obviously cleaner than other fossil fuels, but still detrimental in terms of its level of emissions.

Expensive technology such as carbon capture may assist, however advancements in other technologies such as hydrogen will also play a key role. The obvious benefit of Hydrogen as a fuel, is water being the

** <https://www.waterinnovationfund.com/our-work>

†† <https://www.iea.org/reports/global-energy-review-2020/global-energy-and-co2-emissions-in-2020>

only waste product, but this technology is still in its infancy, although governments across the globe are putting huge weight behind it (please see Hydrogen note below).

On top of this, there is the obvious requirement to upgrade global power grids and provide utility scale storage solutions to be able to deal with vast amounts of clean energy from intermittent sources. We continue to be on the lookout for investments in this space, but some of the key holdings are highlighted below.



Vestas

Vestas is a leading wind turbine manufacturer, installer and service provider. They have a circa 23% share of the total installed capacity, placing them as number two in the world. It is estimated that a single wind turbine produces 30-50 times more energy than it uses over its entire life. Vestas offering includes leading data analysis of turbines in order to exploit resources and improve efficiency. As a company, they internally source almost all of their power from renewable electricity. At the end of Q3 2020, Vestas' installed fleet displaces 165 million tonnes of CO₂ on an annual basis. Their turbine order backlog amounts to 20,399 MW, which corresponds to €14.6 billion in sales!



Greencoat UK Wind

Greencoat UK wind own or part own UK wind farms, supplying electricity to utilities under long-term contracts. Their energy assets powered nearly 800,000 homes in 2019, and they continue to invest into new wind farms, with an update in the summer of 2020 highlighting that the pipeline of investable assets remains healthy.

Hydrogen Focus

Whilst the technology has been around for many years, and has caused some heartache for investors in the past, Hydrogen has certainly gained traction in recent months.

Grey, Blue, Green

Hydrogen is not primary, meaning there are costs to production. 'Grey' hydrogen can be made via steam reforming but that doesn't help in our transition to a low carbon society due to emissions production. 'Blue hydrogen' is where the carbon emissions from reforming are captured and stored. But most interestingly to our investors, is 'Green' hydrogen, the electrolysis of water from renewables.

However, at present, more energy goes into the process than comes out – so it is only worthwhile if the process is done using excess renewable capacity. As a result, it is more expensive, although electrolysis equipment has fallen and is expected to continue to decline.

Fuel cell technology

Many car companies are committed to battery powered vehicles. However, the likes of Hyundai, the South Korean car manufacturer, are really trying to press ahead with fuel-cell technology. Fuel cell technology generates a current from a chemical reaction, in this case between hydrogen and oxygen, with the emissions being the result of the reaction, or in simple terms, water.

Elsewhere, Toyota has announced joint ventures with several Chinese carmakers to develop hydrogen fuel-cell technology. And it is already used in vehicles, such as buses in London.

Its greater energy density means it could have greater uses in long distance travel, especially if you react the hydrogen with nitrogen to produce ammonia, a chemical that takes up less room and can still be used in fuel cells. A potential solution for the shipping industry.

Cleaning the grid

Because the UK electricity grid is years away from being able to take on the UK's full demand, natural gas is essential for now for powering a number of our homes, but hydrogen could have a part to play here, by blending the gas to our current mix, helping to reduce emissions.

The cost

Bloomberg Energy expects subsidies to play a big role in making hydrogen competitive, where they say \$150bn is required over the next ten years, but in 2018, just \$724m was invested into the technology. The EU, and more specifically Germany look to be spearheading efforts to subsidise the technology, so this recent move into the limelight, looks to be more than a fad.

Infrastructure

Underlying infrastructure underpins most activities that takes place in the global economy. Whether that is commercial life, vital social services, or supporting human interaction.

The McKinsey Global Institute estimates that \$3.3 trillion in economic infrastructure is required annually in order to maintain projected economic growth.^{‡‡} With investment into power, roads, telecoms, water and rail required.

\$3.3tr
Required
infrastructure
investment per year

Fiscal restraints mean there is inadequate investment into public infrastructure projects, which without funding will be detrimental to achieving the economic growth numbers expected. As a result, private investment into infrastructure provides the necessary capital for the projects to go ahead, in turn providing social and economic benefits, such as future proofing communities, improving resilience to climate change, and creating jobs.

The infrastructure investments within the portfolio have a positive focus around society and the environment. Investment into energy infrastructure is covered above, but there are two other investments within the portfolio with a diverse range of infrastructure projects:



Triple Point Energy Efficiency

This is a new investment to market in October 2020, and we took the opportunity to get involved in the company's initial public offering. The infrastructure company has a focus on reducing carbon emissions by investing into projects that improve the efficiency of energy use. There are three main areas: Low carbon heat such as CHP projects, Social housing retrofit/industrial energy efficiency, and finally distributed renewable generation (hydro and solar).

Combined Heat and Power (CHP) is an energy efficient technology that generates electricity and captures the heat that would otherwise be wasted to provide useful thermal energy.



INPP

This infrastructure investment provides exposure to a number of socially and environmentally positive projects such as construction of care centres, schools, and libraries. Other sectors include transport and a number of energy transmission assets for offshore renewable windfarms to connect to the grid.

^{‡‡} <https://www.mckinsey.com/business-functions/operations/our-insights/bridging-global-infrastructure-gaps#>

Impax Environmental Markets

Impax invest in a number of environmental solutions that promote a cleaner and more efficient world. Areas they focus on include alternative energy, energy efficiency, water treatment, pollution control, waste technology and resource management. With positive outcomes such as emissions savings, clean energy, water provisions, and waste recycling. Their latest annual report details a number of the positive outcomes that are associated with every £10 million invested: including 7,000 net CO₂ emissions saved (the equivalent to taking 3,810 cars off the road for a year), 2,800 mega litres of water treated (equivalent to 17,860 households annual water consumption), saved or provided, 2,410 MWh of renewable energy generated (equivalent to 630 households annual electricity consumption), and 1,590 tonnes of materials recovered or waste treated (equivalent to 1,640 households annual waste).

Smart Technology

The fourth industrial revolution is just beginning to play out, and adoption of technologies around this will improve countries ability to achieve sustainable growth.^{ss} Artificial intelligence has uses beyond healthcare, whilst automation will play an increasingly bigger part in manufacturing and distribution. The Internet of Things (IoT), will be built on improved connectivity, with other traditional ways of life becoming digitalised. We have sought companies who will benefit from this shift:

trainline

Trainline

This is a new investment into the portfolio and provides some technology exposure with a positive environmental and social outcome. Trainline's technology provides a ticket aggregator for trains and buses to allow individuals to achieve the cheapest possible price on their journey. Their technology focuses on paperless tickets and promotes mass transit, which as previously mentioned is inevitably better for the environment. Covering over 160 train companies and over 110 coach operators, the company continues to show strong demand, with 2019/20 visits reaching 90 million a month across 45 countries.



Smart Metering Systems

Smart Metering Systems is pushing ahead with the smart energy revolution, aiding with the push to achieve net-zero by 2050. The company installs, operates and manages smart meters and carbon reduction assets, including EV chargers and battery storage systems. On top of this, their smart energy services provide bespoke solutions for customers to adopt low carbon opportunities.

^{ss} <https://www.weforum.org/agenda/2019/01/why-companies-should-strive-for-industry-4-0/>

Property

We have avoided conventional property for some years, favouring instead affordable housing, social housing, and medical property. There are obvious positive social outcomes from these sectors, especially as the social care exposure focusses on those with disabilities or care requirements. Whilst these investments have been the foundation of property exposure within the portfolio, recent investments have allowed us to expand further into positive sub sectors of the property market. As a result, this section will focus on a new investment into homeless property through the Home REIT:



Home REIT

Homelessness comes at a huge cost, both financially and mentally, with public finances used for NHS and mental health services, all of which could be avoided. A report in 2016 highlighted that £370 million, of public spending could be saved if 40,000 people were prevented from experiencing one year of homelessness.***

As a result, the end goal is to completely eradicate people sleeping on our streets, and charities such as Crisis are working towards this goal.

One thing that was clear was the lack of stable and suitable accommodation for use by housing charities or similar associations for accommodation purposes. Many have to turn to local B&Bs or hotels, meaning temporary accommodation is costly, and in some cases for durations inadequate to be provide genuine stability. Recent figures show that homelessness crisis cost councils over £1bn between 2018/19.

£1.1bn
**Spent on temporary
accommodation in
18/19 by councils**

As a result, there is a clear mandate to provide available, affordable, and high quality housing, which provides housing associations, local authorities or charities a cost efficient alternative. By being designated for this purpose, the outcome on the individual is improved as it provides longer-term housing stability.

Home REIT will therefore be investing in a diversified portfolio of homeless accommodation properties, which it will let on very long term leases of 20 to 30 years. Whilst focused on homelessness, the company will focus on a number of sub-sectors including women fleeing domestic violence, ex-convicts, mental health sufferers, foster care leavers, or those suffering from drug or alcohol abuse.

Whilst a new investment within the portfolio in October 20 this year, they have already spent £50 million on high quality accommodation, providing homes to approximately 800 vulnerable, homeless people across 135 properties. We look forward to updating you on further progress in the year ahead.

*** <https://www.crisis.org.uk/ending-homelessness/homelessness-knowledge-hub/cost-of-homelessness/better-than-cure-2016/>

Additional Information

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