

Core infrastructure

Sustainability update 2024 Investing for the long term

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Introduction



Sustainability factors are at the heart of creating long-term value

Dear stakeholders

Since our update last year, 2023 was confirmed as the warmest year on record, edging ever closer to breaching the 1.5°C level set by the Paris Agreement. This coincided with an increase in extreme weather events globally, including unprecedented heatwaves and rainfall in Europe.

As the physical effects of climate change are being more acutely felt, global emissions also nudged upwards. This masked a record decrease from advanced economies, whose policies on the energy transition are bearing fruit. Europe generated 43% of its electricity from renewables in 2023 and it saw record new capacity installed.

While the transition in Europe continues, there has been a noticeable shift in tone. Persistent cost-of-living difficulties and geopolitical challenges have re-focused attention on the need to ensure energy security and affordability while the economy decarbonises; the transition will not happen at any cost.

Against this backdrop, our strategy and conviction have not changed. We can't resolve society's challenges without investment in new and existing infrastructure. Since 2015, we have provided investors with access to small- to mid-market infrastructure in Europe; a strategy that we believe offers a compelling opportunity for creating long-term value.

Identifying and assessing environmental and social risks and opportunities is a crucial component of our approach. As part of this, we look for ways that our assets can reduce their impact and support sustainability outcomes.

Over the last 12 months, our focus has been deploying our third fund. We have added several new investments to the portfolio – from district heating to new electric rolling stock and additional biogas plants. We're pleased that, in all cases, these investments have the potential to deliver significant sustainability outcomes alongside strong returns.

This report provides an insight into why and how we think about sustainability – our philosophy, our processes and the contribution that our assets make – as well as an update on our main activities over the past 12 months.

We hope you find it useful, and we look forward to continuing to engage with you on this topic throughout the year.



Dominic Helmsley

Head of Core Infrastructure

Who we are

We are long-term investors in essential smallto mid-market European infrastructure. We take a hands-on, proactive approach to asset management to drive long-term value for our clients.

Our strategy provides essential services for the functioning of society across four main sectors: energy, utilities, transport and digital.

Seasoned leadership and experienced team



Investment and asset management professionals with 10 nationalities represented



Dedicated infrastructure finance, legal and tax experts



Years' average experience across the investment team



Senior industry advisers across Europe



Additional staff from the wider abrdn business across risk, regulatory, marketing and sustainability functions

Long-term trusted partner

- 10+ year investment horizon means we take a long-term view
- Successful partnership with Rock Rail, with six deals completed over eight years
- Preferred partner for Finnish municipalities to divest utilities and heat network assets

Sector expertise

Internal sector specialists and senior advisers in Europe, supporting origination and asset management across our four target sectors:



Utilities



Transport



Energy



Digital

Our portfolio

A pan-European reach

€2.7bn

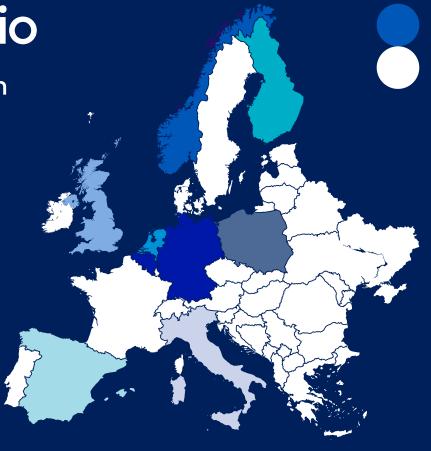
assets under management

22

direct investments to date (over 20 add-ons) across Europe

>370

opportunities reviewed since 2015



UK

2016

Rock Rail East Anglia Rolling stock

Rock Rail Moorgate Rolling stock

2017

Rock Rail South Western Rolling stock

2019

Rock Rail West Coast Rolling stock

Oikos Storage Liquid bulk storage

2020

Airband Rural fibre broadband

2022

Wessex Internet Rural fibre broadband

Netherlands

2017

Noordgastransport Natural gas transport

Germany/Belgium

2019

Unitank Liquid bulk storage

2022

Rock Rail Main-Weser Rolling stock

2024

Rock Rail Forest Rolling stock

Poland

2019

Central European Renewables Investments Solar electricity generation

Norway

2015

aventron Norway
Hydroelectric power generation

Finland

2015

Auris Energia Gas distribution

2019

Riihimäen Kaukolämpö Oy District heating Loimua Oy District heating

2020

Outokummun Energia Oy District heating

2024

Etelä-Savon Energia Oy District heating

Spain

2023

DIGI Andalucía Fibre network

Italy

2023

Italian Biomethane Platform Renewable gas production

2024

Greenaero Ground Support Equipment

Industry engagement



abrdn are members of a wide range of industry groups and committees on sustainability, and we participate in several voluntary benchmarks. abrdn looks to proactively collaborate with industry stakeholders to improve how sustainability performance is measured and benchmarked.







Signatory of:







abrdn is a founding member of the Principles for Responsible Investment (PRI). We achieved a five-star rating and a score of 92/100 for direct infrastructure in the latest 2023 assessment. We are members of the Institutional Investors Group on Climate Change (IIGCC). We have been active participants in the development of the Net Zero Investment Framework (NZIF) guidance for the infrastructure sector. We have also been closely involved in other industry initiatives on climate resilience, including the development of the Physical Climate Risk Assessment Methodology (PCRAM).

We are participating members of GRESB and have submitted a number of assets and funds since 2020. Our Head of Sustainability, Ruairi Revell, sits on GRESB's global Infrastructure Standards Committee, which sets the direction of the GRESB standards.

All our submitted funds and assets achieved improved scores in the most recent assessment, with Loimua Oy recognised as Sector Leader and our Rock Rail Moorgate and East Anglia assets achieving the highest five-star rating.

Sustainability highlights 2023

From our portfolio companies



of renewable electricity generated in 2023

equivalent to the annual demand of around 220,000 european households

avoiding around 279,000 tonnes of CO₂e



provided 1.3 million m³ of critical fuel storage, supporting the reslience of the transport sector

of installed renewable electricity generation capacity

million

homes passed by our DIGI Andalucía highspeed fibre network, helping to reduce the rural/urban digital divide in Spain

heat delivered to over

customers by our heat network assets

from renewable or low-carbon sources

million

train journeys, which covered more than

million kilometres





Our third fund has made seven investments to date, all of which promote sustainability characteristics. These include decarbonisation, enhancing public transport capacity, and digital inclusion







GWh = Gigawatt hours MW = Megawatt dioxide eauivalent





Our approach to sustainability



As long-term infrastructure investors, we need to understand and assess the risks and opportunities presented by a dynamic and changing world. This has many dimensions, including markets, policy, politics, technology, demographics and the physical environment. These factors can be material to creating long-term value. Having the tools and expertise at our disposal to analyse and price assets, and to drive change during ownership, are key to delivering the best outcomes for our clients.

Investment in new and existing infrastructure assets is vital to address many societal and policy imperatives. These include energy security and affordability, decarbonisation, mobility and digital connectivity. Sustainability factors can be highly material to the performance of the infrastructure assets providing these services. We therefore aim to mitigate material sustainability risks and to promote positive sustainability outcomes in support of our investment objectives.

Our approach is underpinned by two fundamental principles.

Materiality



Environmental and social factors can be material to long-term value for infrastructure investments. We therefore assess them alongside all other relevant risks and opportunities.

Active ownership



Board representation and our handson approach give us direct influence during ownership. We always appoint an independent, nonexecutive director; and we work proactively with management teams and partners.



We aim to create long-term value for our investors and stakeholders.
We focus on sustainable factors and megatrends that are affecting the operating and investment environment. These are key elements of our decisionmaking process.

Maciej Tarasiuk
Head of Investment

Our journey so far



At the forefront of sustainability in infrastructure investment

From the team's inception in 2014, and the launch of our first fund in 2015, assessing environmental, social and governance principles, have been part of our approach for each investment. Since then, how we do this has evolved and matured. We've formalised our policies and decision-making tools, added specialist resource, and engaged in industry sustainability initiatives.

· Launch of our first fund 2015 • Investments in Norwegian run-ofthe-river hydro power and Finnish utility Auris Energia. • First of six investments in partnership 2016 with Rock Rail in electric and bi-mode trains. • Investments in mid-stream transport 2017 and storage, supporting security of 2019 energy supply. • First investment in Polish solar power, which we have built into a 385 MW 2019 portfolio. • Three investments in Finnish · Launch of our second fund. heat networks fed by sustainable biomass. First investment in the digital sector, 2020 supporting rural digital connectivity. • First submission to the GRESB 2021 Infrastructure Assessment. Launch of our third fund, classified as 2022 Article 8 under SFDR. • Strong deployment of our third fund, including investments in biomethane, 2023 district heat and low-carbon transport. Successful launch of a co-investment 2024 strategy alongside our third fund.

Sustainability throughout the investment lifecycle

Our investment and asset management process integrates the analysis of environmental and social factors, alongside all other material considerations.

Pre-investment

Research, insight and industry engagement

We work with our advisers to monitor sector and policy trends in our key markets. We engage with industry groups and track wider sustainable finance and policy developments.

Investment screening

Our screening tool guides us through a list of indicators to efficiently identify any dealbreakers. It informs our view on risks and opportunities, and highlights any areas for detailed due diligence.

Due diligence

We define a transaction-specific scope of work as required and engage expert consultants to support and refine our understanding of risks and opportunities.

Approval and completion

Prior to review by the investment committee, the team ensures that material risks and opportunities are addressed and mitigated if necessary. Where applicable, we set objectives with management as part of the business plan.

Active ownership

Governance

At the outset, we review governance, management structures and remuneration to ensure alignment. We also assign responsibility for sustainability to management and the board.

Monitoring and action planning

Throughout ownership, we collect data on material environmental and social issues to monitor performance and to identify opportunities to create value. This process forms part of the remit of our Asset Management Committee.

Reporting and disclosure

Performance against agreed sustainability key performance indicators is reported to the board of each portfolio company. At the fund level, we report in line with international standards where applicable.

Exit

Our active asset management aims to deliver our business plan and to position assets on a sustainable long-term pathway to maximise value at point of exit.



Some of our most detailed discussions in the investment committee are about sustainability-related factors. Understanding how these trends will develop in years to come is key. We have made decisions not to pursue several opportunities over the past 12 months due to sustainability risks.

Graeme Dunbar, Senior Investment Director

Active ownership and strong governance

Strong and effective governance structures help us to create value during ownership.
We take a majority or significant minority position in all investments. We are always represented on the boards of our portfolio companies and we appoint an experienced, external non-executive director in each case.

We employ several key levers to create value across the portfolio during ownership. We have been highly successful in completing accretive bolt-on acquisitions – over 20 completed to date, representing over EUR 250 million of value. We undertake regular management reviews, optimise cost and capital structures, and employ a conservative approach to debt financing.

We use a range of operating models to ensure appropriate governance. Some investments have a local management team on the ground (e.g. our heat network and utilities businesses) and others employ an operating or development partner (e.g. our operational renewables and rolling-stock assets). Across each operating model, we establish a clear strategy at acquisition, with early non-executive expertise. We then work closely with the management team and/or operational providers to implement the plan.

Our Asset Management Committee (AMC), is responsible for overseeing all asset management activities. The AMC is chaired by Graeme Dunbar (Senior Investment Director) and our Head of Sustainability, Ruairi Revell, is a member.







Optimised cost structure



Optimised management



Accretive bolt-ons



Optimised capital structure



Enhanced market position for exit

Infrastructure and sustainability policy

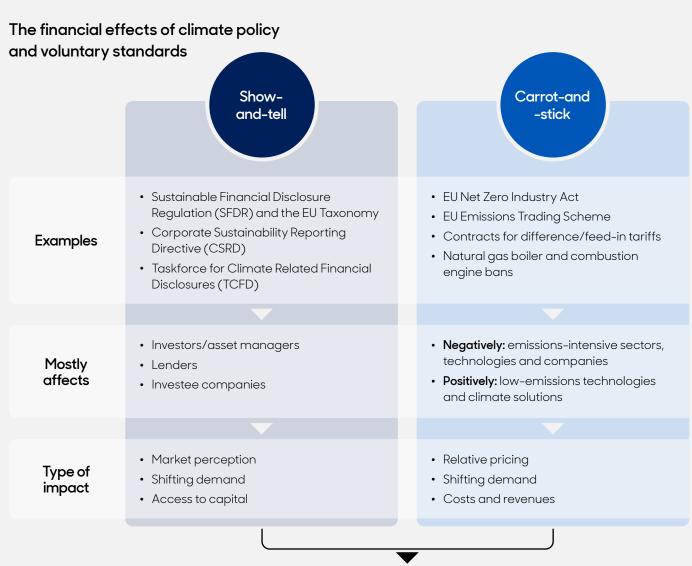


Untangling the acronyms

The infrastructure sector is directly affected by many climate and sustainability standards and regulations. Given the central role that infrastructure must play in supporting sustainability outcomes, these measures present risks and opportunities for assets. This can affect capital expenditure, operating expenses, revenues, and ultimately valuations and liquidity. Some sectors, technologies and companies will benefit from these measures, while others will suffer.

The number of initiatives and regulations (and the acronyms that come with them) can be bewildering, but we can simplify them into two main categories: the important 'show-and-tell' initiatives to increase the disclosure of standardised sustainability data; and the government-led 'carrot-and-stick' measures that are designed to directly influence technology and investment decisions.

We continually monitor this policy landscape. Assessing the implications of current and future policy measures are an important part of how we consider climate transition risk throughout the investment process.



Measuring sustainability

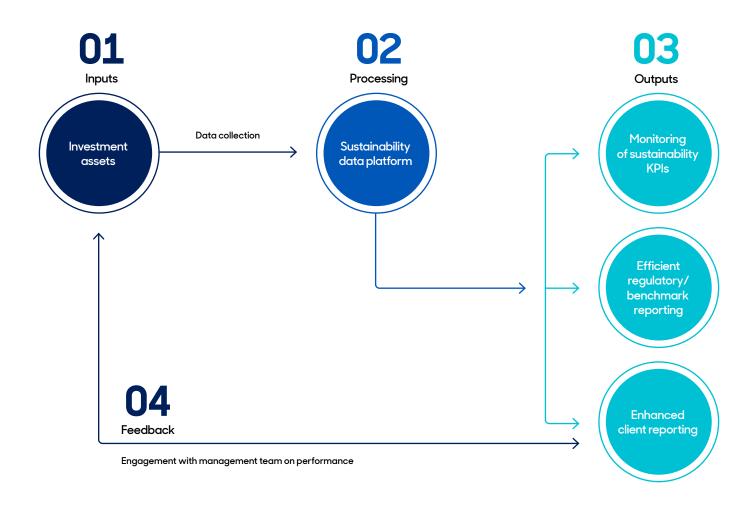


Risks, opportunities and outcomes – the importance of good data

Understanding and measuring sustainability-related indicators is important, especially in the context of the increasing number of sustainability disclosure regulations.

We have established a sustainability data platform to support the collection and monitoring of data from portfolio companies. So far, our focus has been on the accurate and efficient accounting of greenhouse gas emissions. In the last year, we have made substantial progress, particularly on Scope 3 emissions.

This is in line with the requirements of the TCFD and the Partnership for Carbon Accounting Financials (PCAF), to enable disclosure and risk management activities. This also allows us to improve our work with management teams and to monitor material, sustainability-focused key performance indicators (KPIs) for each asset.





Sustainability in action

Sector focus: Energy

Summary

The energy sector in Europe is in the middle of an unprecedented low-carbon transition, while also balancing security of supply and affordability.

Around 70 gigawatts¹ of renewable generation capacity was added in 2023 – a 17% increase on 2022 – and the bloc is well on the way to exceeding its target of 42.5% of energy consumption from renewables by 2030. There have been impressive reductions in the cost of renewable technologies with solar energy now 90% lower than in 2010². But since Russia's invasion of Ukraine, there's been a noticeable rebalancing of attention towards resilience and affordability, alongside decarbonisation which has become more pronounced over the last 12 months.

We have investments in renewable generation assets in Poland and Norway, and bulk liquid energy storage assets in the UK, Germany and Belgium. These provide strategic resilience and play a key role in enabling the decarbonisation of the downstream sectors they serve.

The energy transition is at a crucial point.
The direction of travel is clear but maintaining security of supply and affordability is key.
This creates complexity for infrastructure investors. However, there are also significant opportunities that support decarbonsation but don't compromise other outcomes, as exemplified by our recent investment in Italy, described overleaf.





Supporting decarbonisation and energy security in Italy.

Italy is aiming to produce 30% of its energy needs from renewables by 2030 and, in line with overall EU ambitions, to fully decarbonise by 2050.

With the support of the EU, the Italian government has decided to move away from using biogas for electricity generation. Instead, it's upgrading to biomethane to directly displace fossil gas in the grid. There's now a £4.5 billion incentive programme in place for biomethane in Italy, as part of the EU's wider strategy to increase domestic production to 35 billion cubic metres by 2030. The strategy can support new biomethane plants, or the upgrading of existing biogas plants to produce biomethane, to reduce greenhouse gas emissions by at least 80% compared with conventional fossil gas. Importantly, the shift to incentivising more green molecules also reduces the country's reliance on imported fossil fuels.

We made our first investment in this sector in late-2023, following several years of research and building relationships in the sector.

We established a partnership with Blu-H Energy, which has unrivalled knowledge of the market. It is helping us to identify small-scale opportunities and build to our platform. But not all sites are equal. There are several crucial criteria we consider when selecting appropriate sites. First and foremost is the control of feedstock. These plants need large quantities of inputs like manure and other agricultural waste. Securing this at the right price and quality is a key determinant of success.

At the time of writing, our portfolio consists of seven plants across northern Italy. We have a pipeline of around 15 more and plan to grow the platform significantly over the rest of 2024 and into 2025.





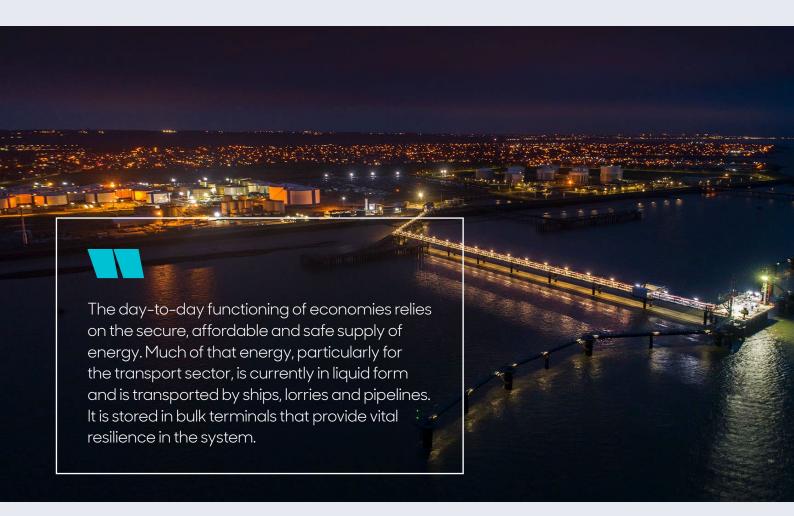


Supporting resilience with strategic bulk storage

The day-to-day functioning of economies relies on the secure, affordable and safe supply of energy. Much of that energy, particularly for the transport sector, is currently in liquid form and is transported by ships, lorries and pipelines. It is stored in bulk terminals that provide vital resilience in the system. These terminals currently handle a range of products, depending on their location and customers: diesel, aviation fuel, gasoline, ethanol and other biofuels, for example.

Our bulk-storage investment in the Thames Estuary, Oikos Storage, is a critical infrastructure asset that ensures the secure supply of aviation and road fuels in the southeast of England. It benefits from a deep-water jetty and connections to the UK's major pipeline networks, resulting in a highly efficient and competitive operation.

Oikos has a vital role in enabling security of supply for its customers and ultimately the resilience of road and air travel in the UK. It also works closely with its customers as the sectors they serve move to lower carbon and renewable fuels. This is particularly the case for the aviation sector, with UK government mandates on sustainable aviation fuels due to increase steeply in the coming years. The management team is actively assessing a wide range of opportunities to ensure the asset is best placed to support the transition, including the blending and storage of renewable and low-carbon fuels at the site.





Sustainability in action

Sector focus: Transport

Summary

In contrast to the energy sector, emissions from transport in Europe have risen substantially and are only projected to drop below 1990 levels in 2032³.

However, there is a strong policy response emerging, which includes regulations on electric vehicles, renewable fuels and the inclusion of transport sub-sectors in emissions-trading schemes. Several transport sectors are among the hardest to decarbonise – including shipping and aviation – and there are technological and economic challenges to overcome.

Alongside decarbonisation, public transport assets play a vital role in addressing other

challenges, including placemaking, local air quality, and productivity (through efficient and affordable mobility).

The accelerated focus on decarbonisation and mobility will continue to create new investment opportunities to replace older, less environmentally friendly forms of transport. Alongside opportunities to fund the electrification of rail, bus fleets, and the charging network for vehicles, we see potential for attractive opportunities in other sectors. These include shipping, port infrastructure, and specialist areas, such as the electrification of ground support equipment at airports which is described overleaf.

³ EEA, 2024.





Supporting the decarbonisation of airport operations

The aviation sector is among the hardest to decarbonise. While emissions from aircraft make up by far the largest portion and will take longer to abate, those from airport operations can be tackled now.

The operation of ground support equipment (GSE) – including buses, ground power units (GPUs), air starter units, baggage handlers, stairs and de-icers – can account for around 10% of an airport's emissions. New technologies are enabling fuel efficiency improvements and electrification.

Many airports have set ambitious targets to reduce operational emissions. Significant investment is required to transition GSE fleets over the next decade, while catering for forecast passenger and traffic growth.

The operation of GSE is generally outsourced by airports to specialist operators, who either own or lease the equipment.

Working with our senior advisers in Italy, we identified the opportunity to enter this market. We provide rental/ management solutions to European GSE operators, with flexible options to grow their fleet and support decarbonisation.

At time of writing, our GSE platform, Greenaero, has made its first two investments. It has provided new buses, stairs and GPUs for Rome Fiumicino airport; and a fleet of new GPUs, which will be used across Italy. The portfolio to date is comprised of both electric and best-in-class diesel units, which represent a substantial efficiency improvement on what they replace and can use drop-in biofuels. Airport capacity constraints mean that there are practical limitations to electrification, but this will improve in the future.

We're excited about this platform and look forward to growing it substantially across Europe over the coming year.





Sustainability in action

Sector focus: Utilities

Summary

The utilities sector provides a wide range of essential services, including energy transmission and distribution, water management, and district heating. Utilities companies will often manage and maintain the infrastructure between the producer and the consumer, operating in a quasi-regulated or regulated environment and ensuring security of supply.

Trends like decarbonisation, electrification, the protection of biodiversity and water resources, and the circular economy are key for the utilities sector. Utilities are well-placed to offer solutions to these challenges. We focus on the small- to mid-cap segment of the market, where assets are best able to react quickly to changes in customer demand.

We have made several investments in the utilities sector. We have a strong presence in Finland, where we own a gas distribution operator, electricity distribution operator, and four municipal heat networks that supply renewable and low-carbon heat to residential, commercial and industrial consumers.

All of our Finnish district heating assets are substantially less emissions intensive than the national average. They supply more than 90% of their heat from renewable sources or energy from waste facilities.

Our most recent acquisition, Etelä-Savon Energia Oy is featured overleaf.







Towards zero-carbon heat in Finland

District heating plays an important role in Finland. It has an overall 45% market share for heating and hot water, which is much higher in densely populated urban areas and for new buildings. Across the sector in Finland, fossil fuels and peat still make up nearly 50% of the heat production fuel mix. This sits in the context of a national target for Finland to be net zero by 2035.

We currently hold four district heating network assets in Finland, all of which are substantially less emissions intensive than the national average. They use heat predominantly from renewable sources or energy from waste facilities, and all have strategies to fully decarbonise heat production by 2030.

We closed our most recent investment in this sector in the first quarter of 2024, acquiring a 49% interest in Etelä-Savon Energia Oy (ESE), a regional energy business based in the City of Mikkeli in Eastern Finland.

ESE was formed in 1900, and produces, sells and distributes, heat and electricity to its customers in the Mikkeli region, ensuring reliability. Its district heating network extends to over 210 kilometres (km) and serves over 2,500 domestic and industrial customers. Its 1,000km electricity distribution network has more than 25,000 connections.

The company currently generates around 575 GWh of heat and power annually from renewable biomass (85%) and peat (15%). As part of our business plan, we have underwritten a decarbonisation plan to remove the remaining peat fraction ahead of 2030 through a new electric boiler, air-to-water heat pump, and flue gas condenser. Increasing electrification and heat storage also provides opportunities to generate heat when power prices are lower at times of excess renewable generation on the grid.

We are looking forward to working with the company to build on its strong foundations and to support further decarbonisation in Mikkeli.





Sustainability in action

Sector focus: Digital

Summary

The digital segment covers broadcast/ mobile towers, national/regional/subsea fibre networks, meters, data centres, and other technologies like 5G. These assets can present attractive infrastructure characteristics, given long-term confidence in revenues and, in some cases, subsid backing, which is available for fibre network roll-out in some countries.

From a sustainability perspective, digital assets are a key driver of productivity in economies. They can contribute to improved connectivity

and digital inclusion, particularly for those living in rural locations. High-speed fibre broadband can also enable productive home and remote working in these areas, which reduces the need for commuting.

While some digital sub-sectors are subject to challenges at present, we continue to see a strong pipeline of opportunities in the fibre, towers and data centre segments, in particular.







Connecting rural communities

We acquired a majority stake in Wessex Internet in late-2022. The company provides rural connectivity services in the south-west of England, historically through fixed wireless networks. The business has successfully pivoted towards providing 'fibre to the premises', driven by UK government-led initiatives, including subsidies. The company is promoting significant investment in fibre infrastructure for rural areas and it's targeting around 127,000 homes by 2026.

Wessex Internet has a strong local presence and identity and directly employs 134 people. It supports communities through discounted gigabit connectivity for community centres, and supports a wide range of local charities and organisations. Customer satisfaction is industry leading, with the company achieving 4.6 out of 5 in the most recent survey.

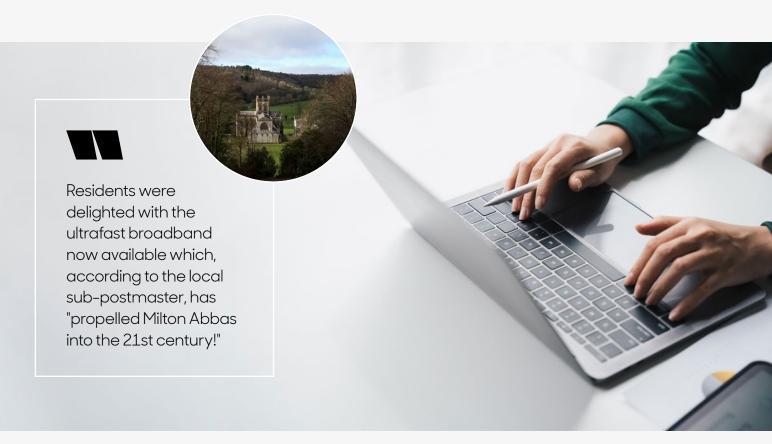
Wessex Internet has long recognised the need to bring full fibre broadband to rural communities, which are often overlooked by other providers given the significant challenges and costs involved.

This strategy is exemplified by the company's recent work in Milton Abbas, an historic and picturesque village in Dorset. Existing infrastructure in the village was very dated and there was a need to maintain the possessive visual attraction, known for its lack of visible wires and modern lighting.

The company worked closely with the community to develop an innovative solution, making use of property frontages. A key tool in this bespoke approach was the purchase of an electric drill – one of only three in the world – providing a low-impact alternative to conventional equipment. The project combined hand-digging and tunnelling beneath driveways to connect the entire street.

Residents were delighted with the ultrafast broadband now available which, according to the local subpostmaster, has "propelled Milton Abbas into the 21st century!".

This important impact on the rural economy was recognised recently when the company was crowned as the Best Rural Enterprise in the UK at the Countryside Alliance Awards.



What's next?

This brief update has summarised why and how we think about sustainability in infrastructure investment. It also highlights several examples of the contribution that our assets have made in the last year.

The physical, economic, technological and political environment that directly affects the infrastructure sector will continue to evolve. In 2024 so far, we have seen the regulatory regime affecting infrastructure investment develop further. This includes the gradual evolution of the EU's Sustainable Finance Package and the UK's equivalent coming into force, and new incentives for electrification and sustainable fuel production.

Against a backdrop of significant fiscal constraints, the need for increased private investment in infrastructure to support society's goals is clearer than ever.

While the context we operate in will continue to change (and we respond and adapt accordingly), the principles that underpin our approach remain the same. We invest to deliver long-term value for our clients. Environmental and social factors can be material to this objective, alongside all other considerations. Strong governance structures and active asset management enable us to directly effect change and to make decisions in the interests of long-term value.

This time last year, I referred to the strength of our investment pipeline for our third fund. We're particularly proud of the investments we have achieved since then, with assets contributing to sustainability outcomes as part of their value proposition. Over the next 12 months, we look forward to finalising our third fund, and we are excited about coming to market with new strategies for our clients.

We hope this update has provided a useful summary of our activities and we look forward to updating you throughout the year on our progress.



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(entities as at 14 June 2024)

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