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# REPORTING IMPACT

ANNUAL REPORT 2014



WHEB



# WHEB

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### COVER PHOTO

WHEB is a supporter of the BlueMarine Foundation which is working with fishermen and conservationists in Lyme Bay (pictured) and elsewhere to develop and implement a framework for sustainable fishing ([www.bluemarinefoundation.com](http://www.bluemarinefoundation.com)).

## INTRODUCTION



### Message from Rob Wylie and Ben Goldsmith

Two decades on from WHEB's original founding, the market for sustainable investing could not be more different. The range of technologies and the variety of private as well as public businesses that are focused on solving some of the world's most pressing challenges has increased dramatically. Over 20% of the world's 9,000 largest listed companies now derive some proportion of their revenue from low carbon goods and services<sup>1</sup>, and the 360 largest of these now account for over US\$472bn of annual revenues<sup>2</sup>.

There is no question that issues around resource scarcity and climate change, as well as demographic change and urbanisation, are very much on the agenda of business leaders around the world. The financial community has been relatively slow to acknowledge these trends, but is now beginning to allocate significant resources to those parts of the economy providing solutions to these challenges.

It is our strong conviction that the global economy is in the early stages of a fundamental reorientation driven by burgeoning demand for natural resources, in turn caused by growing and ageing populations and increasing levels of material consumption. Significant improvements in the efficiency of supply and utilisation of these resources will clearly be required to ensure their continued availability and to meet future demand. Our core investment belief is that businesses that see opportunity in these challenges will access faster growing markets and gain a long-term competitive advantage.

Sustainable investing is finally coming of age, and WHEB is positioned at the heart of these trends. Each of our three businesses share a common philosophy and culture focused on creating long-term value for our clients through investments in sustainable assets. In this, our first impact report, we briefly describe the three businesses that make up WHEB as well as the positive impact that each is having.

We hope that this report provides useful insights for WHEB clients and partners and a modest contribution to the wider community interested in the rapidly evolving practice of impact investment.

#### Rob Wylie

Chairman and Co-Founder

#### Ben Goldsmith

Partner and Co-Founder

<sup>1</sup> FTSE Low Carbon Economy

<sup>2</sup> HSBC Climate Change Index

## PURPOSE OF THIS REPORT

This report is WHEB's first public impact report. Our ambition is that it should provide a useful record of the positive impact of the WHEB businesses. A growing number of our clients are interested in assessing and understanding the impact that their investment in our products is providing. This report is first and foremost for them.

We also hope that the report will make a useful contribution to the still nascent practice of impact reporting. Much of the methodology behind the data in this report is relatively new and still offers only a partial picture. We acknowledge these weaknesses, but nonetheless hope that this report will help foster discussion and critique to make impact reporting more robust and complete in future.

### A NOTE ON DATA

The data in this report relates to the period 1 January – 31 December 2014 with the exception of the data relating to the CLEAN™ reporting framework detailed on page 24. Furthermore the content and data in this report was correct as at 31 December 2014 and has not been updated since then.





## WHEB AT A GLANCE

WHEB is a diversified investment management business covering the major macroeconomic themes of the future - resource efficiency, technology improvements and a growing global population. Our ambition is to be the world's leading sustainable investment management business by deploying capital via strategies best placed to deliver outstanding risk-adjusted returns from the emerging green industrial revolution and related global sustainability trends.

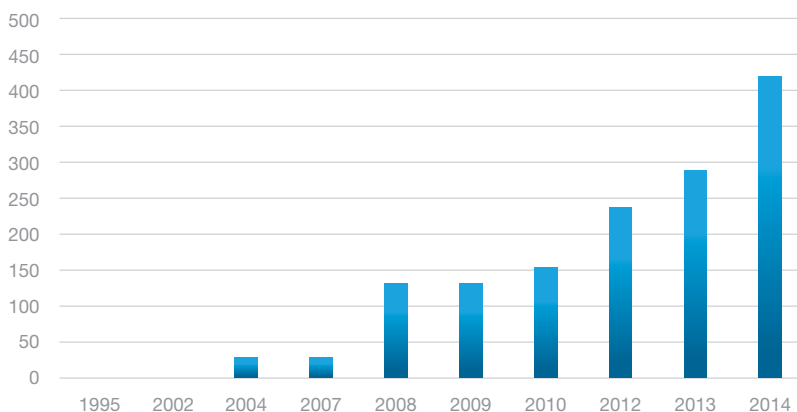
WHEB encompasses a range of investment management businesses, including private equity, infrastructure and listed equity. All of our businesses share a common philosophy and culture focused on:

- identifying and investing in solutions to society's pressing environmental and social challenges;
- applying a long-term, research-based investment approach to uncover areas of value;
- being transparent about our policies and systems and prepared to challenge the status-quo of the investment world; and
- providing clients with the best possible service and support.

### History

WHEB was originally founded in the mid-1990s as an environmental corporate finance boutique by Rob Wylie and Kim Heyworth (**W**ylie **H**eyworth **E**nvironment **B**usiness). Ben Goldsmith then joined as a partner in 2003, and we launched our first private equity fund in 2004. Since then, we have built the private equity business and have added two additional strategies: listed equities (founded in 2009) and infrastructure (founded in 2010). WHEB as a whole had approximately €420m under management as of 31 December 2014.

**Figure 1: Assets under Management (€M)**



## Philosophy

As well as being focused on the investment opportunities created by the progressive shift to more sustainable economies, we also believe that companies that are invested for the long-term are best-placed to deliver outperformance. Consequently, across WHEB's range of investment activities, our approach is to:

- integrate environmental, social and governance (ESG) issues into our investment analysis and decision-making;
- be active owners and integrate ESG issues into our ownership policies and practices; and,
- encourage appropriate disclosure on ESG issues by entities in which we invest.

We are a business that is independent, and independently minded, and seeks to build a relationship of trust with our clients, co-investors and other partners based on open and honest communication. This report is one aspect of this communication, but we also provide detailed reporting to clients and partners as well as providing stakeholders and third parties access to investment insight and portfolio holdings through our website. Each of our three businesses interprets and applies this commitment to open and honest communication in ways that best suit it and its clients. Further details are provided in each of the sections below.

WHEB also aims to be innovative and transparent in our approach, and we work collaboratively in promoting more responsible investment practices by the financial community.

We are an active signatory of the UN Principles for Responsible Investment and received the highest grading in the inaugural 2014 assessment of investment managers. We are also members or signatories of other progressive groupings in the industry including the Institutional Investors Group on Climate Change, the CDP<sup>3</sup> and the UK Sustainable Investment and Finance Association (UKSIF). A full list of our affiliations is available on our website.<sup>4</sup>



As a business, WHEB aims to be innovative and transparent in our approach, and we work collaboratively in promoting more responsible investment practices by the financial community.



<sup>3</sup> 'CDP' formerly known as the Carbon Disclosure Project (<https://www.cdp.net/>)

<sup>4</sup> <http://www.whebgroup.com/about-us/thought-leadership/>

## WHEB Listed Equity

WHEB Listed Equity manages a single long-only global equity strategy, accessible through the FP WHEB Sustainability Fund. It has:

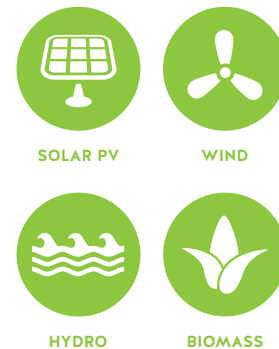
- one of the most experienced teams in the sector with over nine years track record in the strategy;
- a focus on mid-sized companies in nine investment themes that are benefiting from strong and sustainable growth trends;
- a fund with c.70 holdings rated Bronze by Morningstar OBSR, and with institutional consultant ratings; and,
- aiming to deliver risk-adjusted returns ahead of the MSCI World Index.



## WHEB Infrastructure

WHEB Infrastructure seeks to generate stable, resilient cash yields with a low correlation to traditional asset classes. It has:

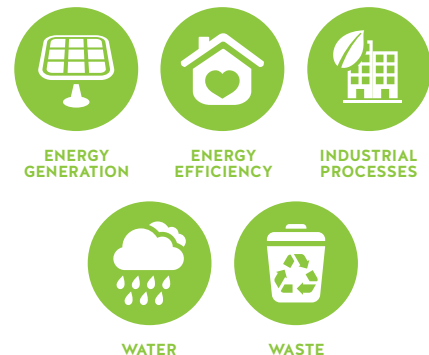
- investments in clean energy infrastructure assets with commercially proven technologies and long-term contracted or regulated revenues; and,
- a team with a track record covering over 1,000MW of European renewable energy generation infrastructure during the last eight years.



## WHEB Capital Partners

WHEB Capital Partners aims to generate returns for investors by partnering fast growing SMEs serving energy and resource efficiency markets. It has:

- a team of nine with experience in sustainability, energy and resource efficiency and blue chip private equity, including growth capital; and,
- funds providing growth capital to 21 companies across Europe.



## WHAT IMPACT INVESTING MEANS AT WHEB

WHEB is a specialist investment business focusing on the opportunities created by the global transition to more sustainable, resource and energy efficient economies. We target superior risk-adjusted financial returns by investing in businesses and projects that are helping to solve critical environmental and social challenges facing the world.

At its core, WHEB is an impact investor. All the investments made by our funds have positive social and/or environmental impact. By this we mean that they invest 'into companies, organisations and funds with the intention to generate social and environmental impact alongside financial return'<sup>5</sup>. We subscribe to this definition of impact investing and believe, like others, that there are four core characteristics to impact investing. These are detailed in the table below, with WHEB's approach in each of these areas also highlighted.

Core Characteristic of Impact Investing <sup>6</sup>	WHEB's Approach
<b>Intentionality:</b> The intent of the investor to generate social and/or environmental impact through investments is an essential component of impact investing.	Our intention is to deliver superior financial returns by investing in companies or projects that deliver social and/or environmental value as a core part of their business operations.
<b>Investment with return expectations:</b> Impact investments are expected to generate a financial return on capital and, at a minimum, to safeguard capital.	Our focus is on maximising financial returns for our investors.
<b>Range of return expectations and asset classes:</b> Impact investments generate returns that range from below market to risk-adjusted market rate.	All our investments are intended to deliver superior risk-adjusted market rates of return.
<b>Impact measurement:</b> A core tenet of impact investing is the commitment of the investor to measure and report the social and environmental performance and progress of underlying investments.	We are committed to measuring and reporting the positive social and/or environmental impact of our investment funds. In this report, we document our progress on this commitment.

### Impact and listed equity investing

Impact investing originally started in private markets with investors taking direct stakes in businesses with clear and measurable social impacts. However, more recently commentators have argued that 'impact investing should not be seen as an asset class per se, but rather a discipline of applying intent to achieve outcomes in the world... that can and should cross multiple asset classes including public stock and bond strategies'<sup>6</sup>. We strongly support this view that secondary

<sup>5</sup> <http://www.thegiin.org/cgi-bin/iowa/resources/about/index.html#2>

<sup>6</sup> Increasing impact and enhancing returns: Integrating public traded water and agribusiness equities into impact investor portfolios, Steve Falcì and Jed Emerson (<http://impactassets.org/files/Issue%20Brief%207.pdf>)



markets such as listed equities should be seen as part of the impact investing universe. We are therefore pleased that the FP WHEB Sustainability Fund is one of only two listed equity funds to be formally registered as impact funds on the Global Impact Investing Network database ([www.impactbase.org](http://www.impactbase.org)).

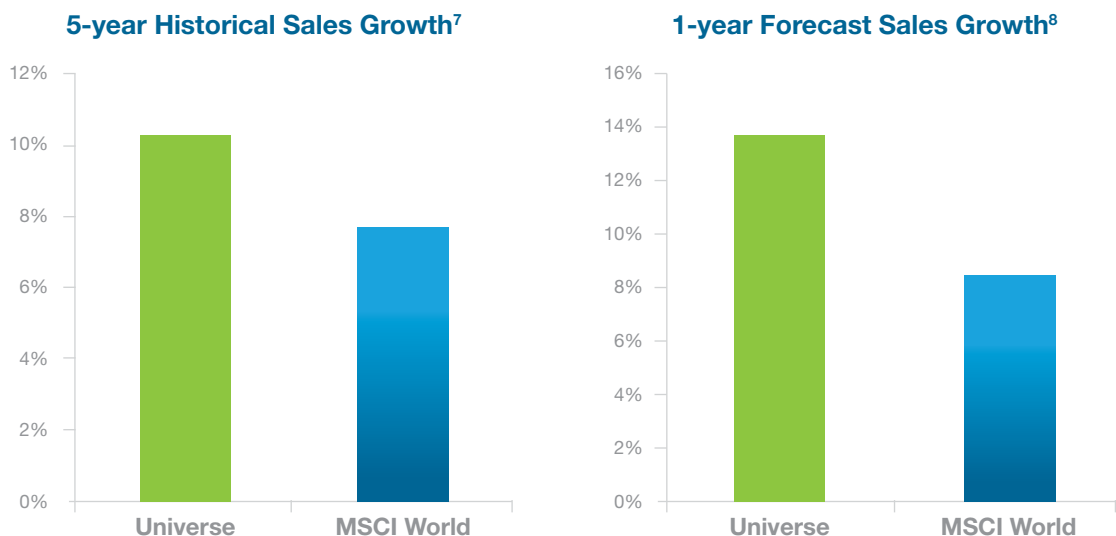
Ultimately, for impact investors to have impact at a scale that is commensurate with the challenges that they seek to address, it is critical that the practice engages the leverage, reach and capacity of the large companies that are typically publicly listed. Excluding listed markets would make achieving this scale a much more difficult task.

### Sustainability themes are growth themes

Critically, our belief is that not only is positive social and environmental impact not at odds with attractive financial return, but that the two are increasingly positively correlated. It is because of their positive environmental or societal impact that WHEB portfolio companies are able to deliver strong commercial returns. Strong commercial returns in turn allow these companies to increase their positive impact.

Evidence of this comes from our listed equities business where we have calculated both the five year historical sales growth and the one year forecast sales growth enjoyed by the group of companies that fit the investment themes (the investment 'universe'). We have also calculated the equivalent figure for the wider market as a whole, using the MSCI World Index as a proxy. The data clearly demonstrate that the growth enjoyed by companies in our investment universe is significantly higher than the wider market, both on the basis of five year historical sales growth and one year forecast sales growth.

**Figure 2: Companies providing 'sustainability solutions' enjoy higher sales growth**



<sup>7</sup> The growth rates of the universe are weighted average growth rates of the individual stocks based on their current market capitalisations. The growth rates of MSCI World are weighted average growth rates of the constituents based on their weightings in the index. The 5-year historical sales growth of individual stocks is calculated as:  $\left[ \left( \frac{\text{Most recent sales growth}}{\text{Sales growth five years earlier}} \right)^{0.2} - 1 \right] \times 100$ .

<sup>8</sup> The 1-year forecast sales growth of individual stocks is calculated as:  $\left[ \frac{\text{Sales estimate for current financial year}}{\text{Comparable sales a year earlier}} - 1 \right] \times 100$ . Source: Bloomberg. (5-year and 1-year data are the latest available from Bloomberg as at 31/12/2014.)

# WHEB LISTED EQUITY

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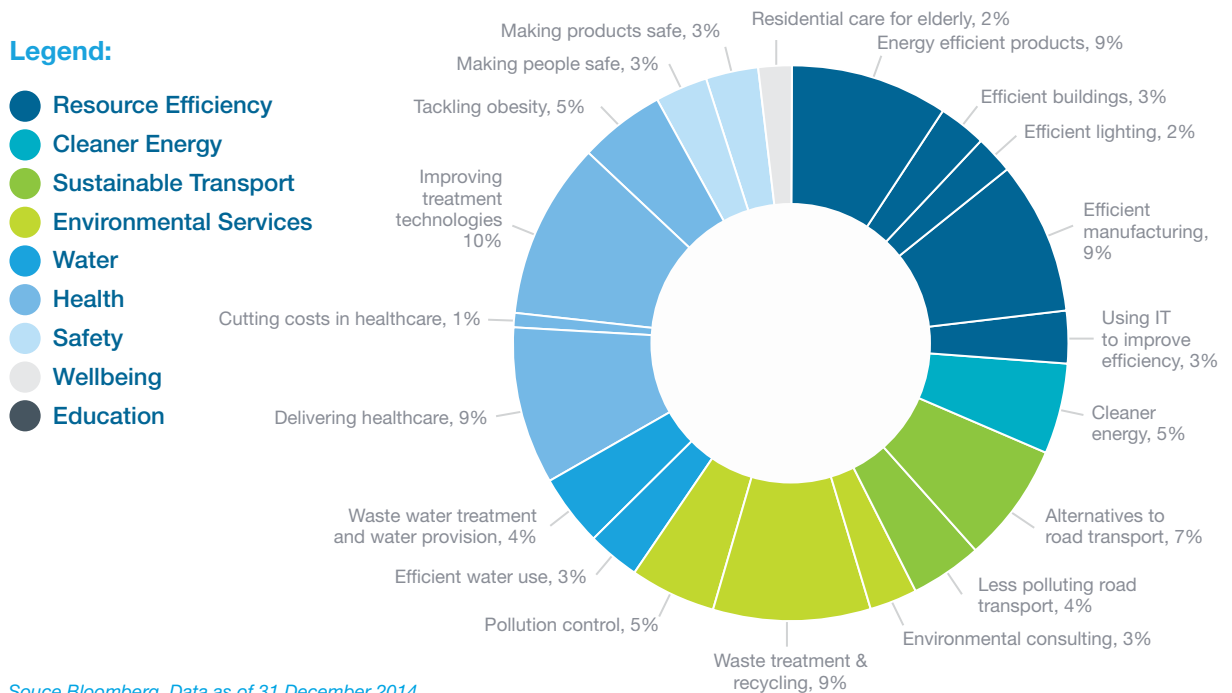
The WHEB Listed Equity business runs a single global equity strategy that is accessible through the FP WHEB Sustainability Fund

The strategy is entirely focused on investing in companies we believe are providing solutions to key sustainability challenges. Each company held in the Fund is chosen first and foremost because of its exposure to one or more of the Fund's five environmental and four social investment themes.

It is our belief, that these themes will provide strong underlying growth and that companies with exposure to them will enjoy higher growth than the market as whole. In effect, it is because of their positive social or environmental impact that we believe these companies represent promising investment opportunities.

Many of these companies derive 100% of their revenues from products or services that have positive social/environmental impact. However, in some cases, we invest in companies that have a range of different businesses, only some of which fit our investment themes. Across the portfolio as a whole during the past three years, we estimate that 80% of revenues come from business activities directly connected to the social and environmental themes. We also set a minimum threshold that at least one third of revenues or profits come from business lines within our investment themes<sup>9</sup>. The pie-chart below illustrates the composition of the Fund as at 31 December 2014, illustrating the proportions of the Fund delivering different positive social and environmental impacts.

**Figure 3: The FP WHEB Sustainability Fund - Measuring positive impact**



<sup>9</sup> The decision to pick one third of revenues as a minimum threshold was based on a desire to ensure that larger companies that are adapting their business to a more sustainability-oriented economy are eligible for the fund. A third of a company's sales is deemed an appropriate level to indicate genuine exposure to the themes, while still enabling the managers to capture revaluation from a company during a transitional phase. In practice the majority of holdings in the Fund are 100% exposed to the themes, and the average across the Fund is closer to 80% exposure.

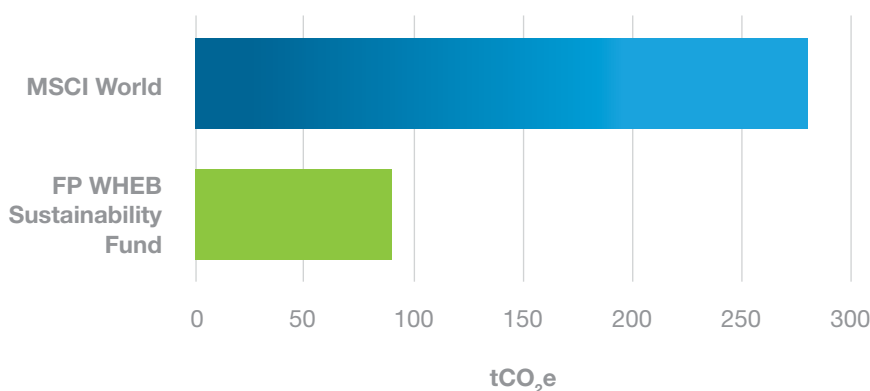
## Carbon footprinting

In addition to assessing the proportion of company revenues linked with sustainability themes, we also measure the footprint of the Fund as a whole. One way of doing this is to look at the carbon emissions from companies in our portfolio compared with the carbon ‘footprint’ of our benchmark index.

Carbon footprinting is a methodology used to assess the total greenhouse gas emissions associated with individual investment funds.<sup>10</sup> Using data on the percentage of shares owned by a Fund, the analysis calculates what proportion of each company’s total emissions the Fund is ‘responsible’ for and then aggregates these to give the total ‘footprint’ of the Fund. This total is then divided by the size of the fund to give the tonnes of CO<sub>2</sub>e<sup>11</sup> produced per £1million invested. We compare this with the benchmark figure which gives an ‘average’ figure for the market as a whole.

As of 31 December 2014, the carbon footprint of the FP WHEB Sustainability Fund was approximately 92 tonnes of CO<sub>2</sub>e per £1million invested compared with 282 tonnes of CO<sub>2</sub>e per £1million invested for the benchmark MSCI World and demonstrating that the Fund has a carbon footprint that is less than one third of the benchmark and among the top 20% of funds globally on this measure.<sup>12</sup>

**Figure 4: The carbon footprint of the FP WHEB Sustainability Fund vs. MSCI World**



## Thematic analysis

The final tool that we use to assess the social/environmental impact of the portfolio is at the individual company level. We analyse the impact of the products and services as well as the quality of the company’s own ESG policies and performance.

<sup>10</sup> Carbon footprinting was originally developed to measure the carbon emissions associated with products. It was first applied to investment funds by the team at WHEB in 2005.

<sup>11</sup> tCO<sub>2</sub>e (tonnes of carbon dioxide equivalents)

<sup>12</sup> For further discussion on the results of this analysis, please see <http://www.whebgroup.com/wheb-fund-70-lower-carbon-footprint-than-benchmark/>

## Measuring the impact of products and services

For each of the nine different themes in the Fund, we use different metrics to assess the positive impact of the products/services supplied by the companies. The positive impact of our cleaner energy theme, for example, is measured in terms of kilogrammes of carbon dioxide generated per MWh of power produced. In sustainable transport, the impact is assessed in terms of how much the product reduces harmful air emissions and, in resource efficiency, how much the product/service increases resource or energy efficiency.

Because companies are typically supplying a range of products with differing levels of positive impact, we have grouped the companies into one of four bands ranging from 'degenerative' at one extreme through to 'breakthrough' at the other. We define these terms in more detail in the table below.

### Categories of impact<sup>13</sup>

<b>Degenerative</b>	Degenerative activity covers business activity that creates economic value but which is overwhelmed by related negative environmental/social externalities.
<b>Depleting</b>	Depleting businesses create economic value that also undermines environmental/social systems but, in the short term, may be needed to reach lower impact activities.
<b>Mitigating</b>	Described as 'change as usual', this covers business activities that create economic value by incrementally reducing environmental/social damage.
<b>Breakthrough</b>	'Breakthrough' businesses replace or transform established systems to deliver radically higher economic value alongside positive environmental/social impact.

Establishing a company's category is mainly based on the scale of its products' performance relative to current average performance of the relevant sector. For example, companies in our cleaner energy theme are assessed relative to the CO<sub>2</sub>/MWh performance of a typical combined cycle gas turbine ("CCGT") power station (see page 12).

Our thematic focus means we will only invest in companies that qualify in either the 'mitigating' or 'breakthrough' categories and never in companies with products or services that have an overall 'degenerative' or 'depleting' impact.

<sup>13</sup> We acknowledge in particular the work of John Elkington (<http://www.breakthroughcapitalism.com/index.html>) in the framing of these categories.

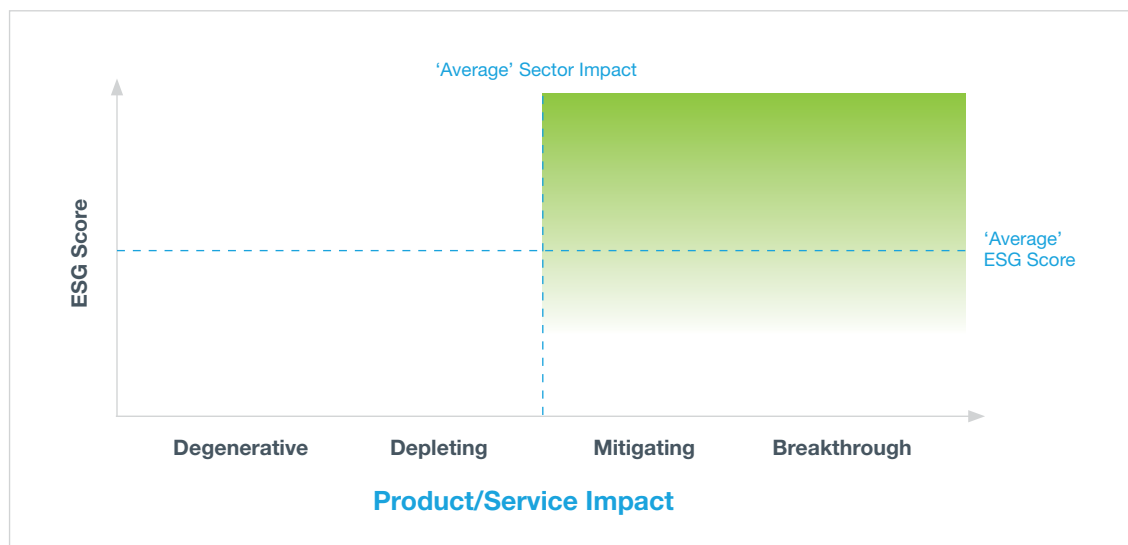


## Measuring the impact of ESG policies and practices

In addition to the impact of the products/services provided by the companies we invest in, we also assess the quality of the policies and performance relating to ESG issues at portfolio companies. We believe companies with leading ESG practices that maximise the positive impacts of their own operations and that also have products delivering positive impact, are best-placed to thrive over the coming years. We assess ESG quality as part of our proprietary integrated analysis of individual stocks. For the purposes of this impact report, we have instead used third-party ESG ratings as a proxy for overall ESG quality at portfolio companies<sup>14</sup>.

Our preference for high quality ESG performance combined with positive product/service impact means that the Fund will concentrate on companies in the top right quadrant (see figure below). Companies with weaker ESG performance may still however qualify for the Fund, particularly when they are smaller businesses. It is our objective however to persuade them over time to join the top right quadrant (see Figure 5 below). We report in the tables below the profile of portfolio holdings in our cleaner energy, sustainable transport and resource efficiency themes.

**Figure 5: Mapping company impact**



## Cleaner energy theme: Stock-level impacts

Figure 6 plots the performance of our four investments in our cleaner energy theme. The x-axis is focused on the impact of the product/service<sup>15</sup> and is relatively straight-forward, measured in terms of kgCO<sub>2</sub>e per MWh of power produced. We have classified Infinis, Canadian Solar and China Singyes as 'Breakthrough' companies with emission rates that are more than 95% lower than an average CCGT power plant.

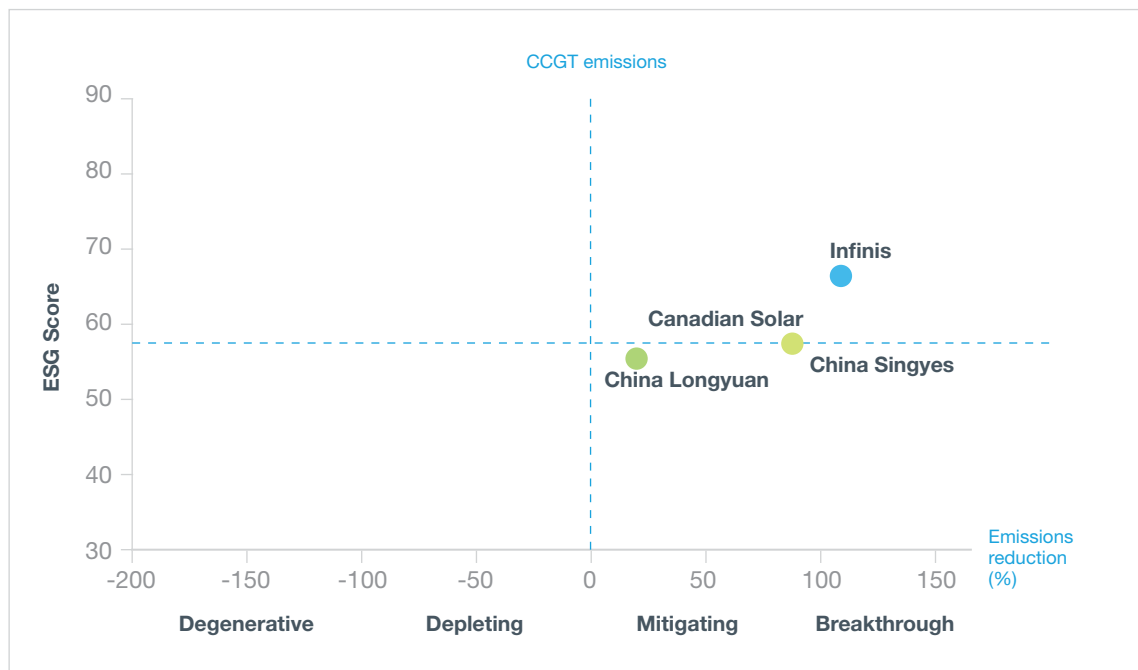
China Longyuan achieves only a 'mitigating' rating because it owns some coal fired power stations as well as the world's largest portfolio of wind farms. The blended emission rate is still nearly 30% lower than that of a CCGT power plant and is improving every year as its wind portfolio expands.

<sup>14</sup> For this analysis we have used ESG scores supplied by the third party rating agency Sustainalytics.

<sup>15</sup> Data is derived from company reports or based on standard emissions intensities for the different technologies.

As described, the Y-axis in the chart is the ESG Score of the companies<sup>16</sup>. In our cleaner energy theme, only Infinis is rated with above average ESG performance. China Longyuan, Canadian Solar and China Singyes are not yet rated by Sustainalytics and so we have ascribed them the average score in this framework<sup>17</sup>.

**Figure 6: Cleaner energy stock-level impact**



## Sustainable transport: Stock-level impacts

In Sustainable Transport, the focus is on harmful air emissions/km travelled, and we assess the impact of the products relative to the average performance of the equivalent road-based transport. Shimano, for example, appears on the far right of the graph because the full life-cycle emissions of a bicycle involve the production of just 12g of carbon dioxide per km travelled (almost entirely in the production of the bicycle) this is equivalent to a 70% reduction in CO<sub>2</sub> emissions per km travelled. Constellium in contrast manufactures light-weight aluminium panels and structural components for cars. On average, these are estimated to deliver a 12% reduction in CO<sub>2</sub> emissions.

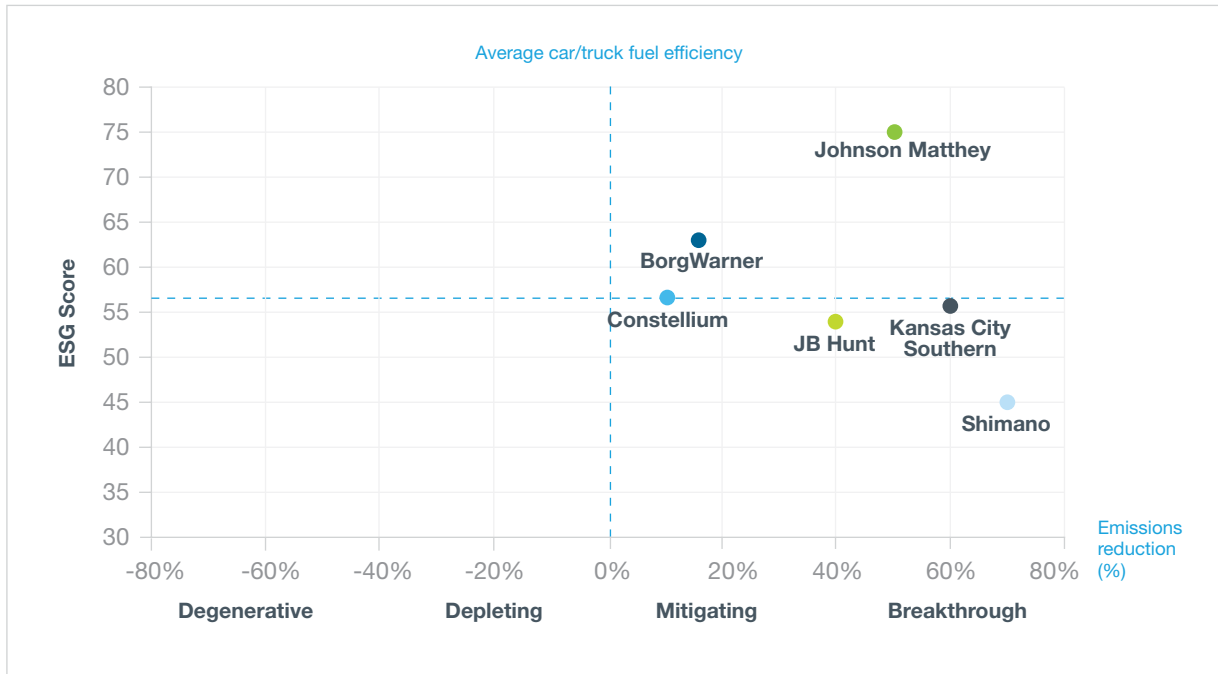
ESG performance is also quite varied. Johnson Matthey clearly has high quality ESG policies and performance, and BorgWarner is also substantially better than average. JB Hunt and Kansas City Southern both have average ESG performance though we have discussed this with Kansas City Southern and expect its performance to have improved significantly this year. Constellium is not yet covered by Sustainalytics and so gets an average score in this framework<sup>19</sup>. Shimano appears to be a poor performer on ESG, due largely to poor disclosure, but with no actual evidence of poor ESG performance.

<sup>16</sup> ESG scores are based on Sustainalytics research except where ratings are unavailable in which case an average (57) score is given.

<sup>17</sup> Our own assessment of the ESG performance of these businesses is not materially different, with all these businesses achieving reasonable ESG quality.

<sup>18</sup> We have assumed average passenger car emissions at 163gCO<sub>2</sub>/km and for freight we have assumed a transport efficiency of road transport of 41gCO<sub>2</sub>/tonne km.

<sup>19</sup> We believe Constellium has a high quality approach to ESG issues though this is not yet reflected in its Sustainalytics score.

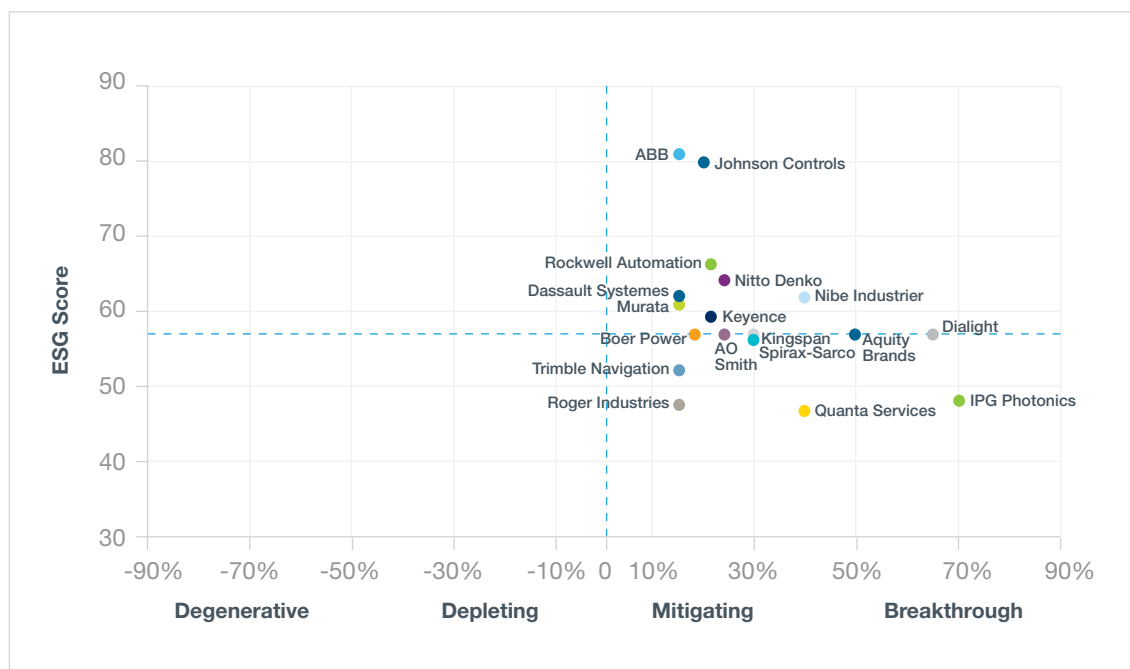
**Figure 7: Sustainable transport stock-level impact**

### Resource efficiency: Stock-level impacts

The largest theme in the Fund is our Resource Efficiency theme that covers a wide range of products and services, most of which are focused on improving energy efficiency in everything from buildings to manufacturing processes. Here we have estimated the overall improvement in energy efficiency offered by the products and services supplied by the company. Some of these businesses deliver significant improvements in efficiency. IPG Photonics, for example, builds fibre lasers mainly for manufacturing applications that are 70% more efficient than traditional lasers. The LED lighting businesses, Dialight and Acuity Brands, also deliver high efficiency improvements of more than 50% on average according to company and WHEB estimations.

Other companies deliver less impressive efficiency improvements, but in much larger markets. The Irish business Kingspan, for example, provides insulating boards for buildings which on average increase the energy efficiency of buildings by 30%. Trimble navigation supplies software and hardware tools for improving building construction and agricultural processes. On average, we estimate that these products and services improve efficiency by 15% compared with activities that do not use their products/services.

In terms of ESG performance, there is a significant spread of performance from the high-performing businesses of ABB and Johnson Controls down to poor performance from IPG Photonics, Quanta Services and Roper Industries. These companies are targets for our engagement work in the coming year.

**Figure 8: Resource efficiency stock-level impact**

## Plans for the future

Reporting on the social/environmental impact of listed equity investing is, we believe, critically important to the development of sustainable investing. Ultimately, we believe that this type of reporting has to focus on the impact of the products and services supplied by companies. However, it is not straightforward to measure these impacts, not least because the companies themselves frequently do not report this information. If they do, it is usually not in a comparable format that would allow aggregation at a fund level.

Nonetheless, sufficient data is available to make estimates in certain areas, which is what we have attempted to do in the preceding charts. We hope to refine our approach in measuring impact in these areas and to extend this to the remaining two environmental themes (environmental services and water management) and four social themes (education, health, safety and well-being) in the coming years.

## Engagement with companies

The final positive impact that the Fund has is through the discussions we have with portfolio companies. We view this activity as both a responsibility that comes with our role as stewards of the companies that we invest in, but also as an opportunity to gain insight into a company and its management. We believe that the way in which a company's management team responds to specific challenges we raise, can reveal a great deal about its attitude to its stakeholders, risk and other issues.

In 2014, we engaged with 56 companies on a wide range of issues, including governance concerns such as executive remuneration and the independence of the audit as well as

environmental and social issues. We also attempt to measure the impact of this engagement work. This is not always straightforward, but we apply a fairly simple measure which classifies our work as either:

- 'successful', where the company agrees to amend or alter its approach to the issue;
- 'partially successful', where the company acknowledges the problem and agrees to review it further but does not commit to change anything; or,
- 'unsuccessful', where the company either does not respond to our approach or refuses to amend its policies.

In 2014 we rated our engagement as follows:

	Engagement Activity 2013-2014 (2012-13)
<b>Successful</b>	19% (15%)
<b>Partially successful</b>	36% (44%)
<b>Unsuccessful</b>	45% (41%)

We provide full reporting of our voting and engagement work in quarterly reports which are available on our website.<sup>20</sup> Examples of these engagements during 2014 have included:

### Johnson Matthey ("JM") – Innovating lower impact chemicals

JM is a specialty chemicals manufacturer focusing on the manufacture of catalysts to reduce polluting emissions in a range of industries, most notably automotive emissions. Some of their products however, are being impacted by the European Union's 'REACH'<sup>21</sup> regulations intended to phase out chemicals substances of 'very high concern' ("SVHCs"). We coordinated a group of investors and met senior executives from investor relations and from the corporate environmental, health and safety ("EHS") function. JM has had a team working on these issues but as a result of our engagement has agreed to prioritise a focus on 'green chemistry' including adding capacity to its EHS team.

### Emerson Electric – Poor disclosure and governance

Emerson Electric is a large US-based capital goods business selling a wide range of electrical products and services. It was a holding in our resource efficiency theme but has been a long-term laggard in a range of issues, including environmental disclosures, audit independence (its auditor has not changed for 71 years) and wider corporate governance issues. Several years of engagement have included meetings, phone calls and letters and in 2013, we co-filed a shareholder resolution asking for improved disclosure on environmental issues. At the most recent Annual General Meeting in February 2014, fully 49% of shareholders either abstained or voted in favour of the resolution calling for reports on Emerson's performance on a range of social and environmental issues. The company has not given any indication that it will respond to this vote, and we decided that we no longer wished to invest in this business and sold our shares.

<sup>20</sup> <http://www.whebgroupp.com/investment-strategies/listed-equity/fund-governance/engagement-and-voting-records/>

<sup>21</sup> Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), EU Regulation No 1907/2006



# WHEB INFRASTRUCTURE

WHEB's infrastructure team focuses on investing in commercially proven renewable energy infrastructure projects



Since 2010 when the WHEB Infrastructure team was founded, its particular focus has been on solar photovoltaics (PV) and onshore wind in core European countries. This asset class has been one of the fastest growing sectors within infrastructure and continues to enjoy strong support with over US\$1trillion of further investment required in clean energy capacity in Europe by 2030.

The team secured two institutional mandates in 2012 with a total investment volume of €140 million. As an infrastructure investment business, our objective is to provide these clients with stable defensive financial returns with strong cash yields of typically 8-10% per annum.

### Environmental impact

Because the team is 100% focused on renewable energy infrastructure, the environmental impact of the projects is inherently positive. Nonetheless, ESG considerations are routinely integrated into investment submissions and decisions. Typically, WHEB only invests in projects once they are 'construction ready' and have received the required planning consents. It is during the planning process that community concerns, health and safety and wider environmental impacts are taken into account.

WHEB's involvement begins with construction and involves consideration of standard health and safety practices as well as wider procurement issues. We have for example used the solar scorecard<sup>22</sup> in considering solar module suppliers and have discussed with them their involvement and support for this initiative.

Once the projects are built, we utilise operations and maintenance consultants to ensure that the equipment is operating safely and efficiently and monitor health and safety issues as well as wider environmental impacts of the projects including, for example, carbon emissions and air, water and land pollution reduction. Although the lifespan of the projects is typically twenty years, we prefer to work with solar module manufacturers that are members of 'PV Cycle'<sup>23</sup>, a European industry grouping that ensures solar modules are recovered and recycled at the end of their useful lives.

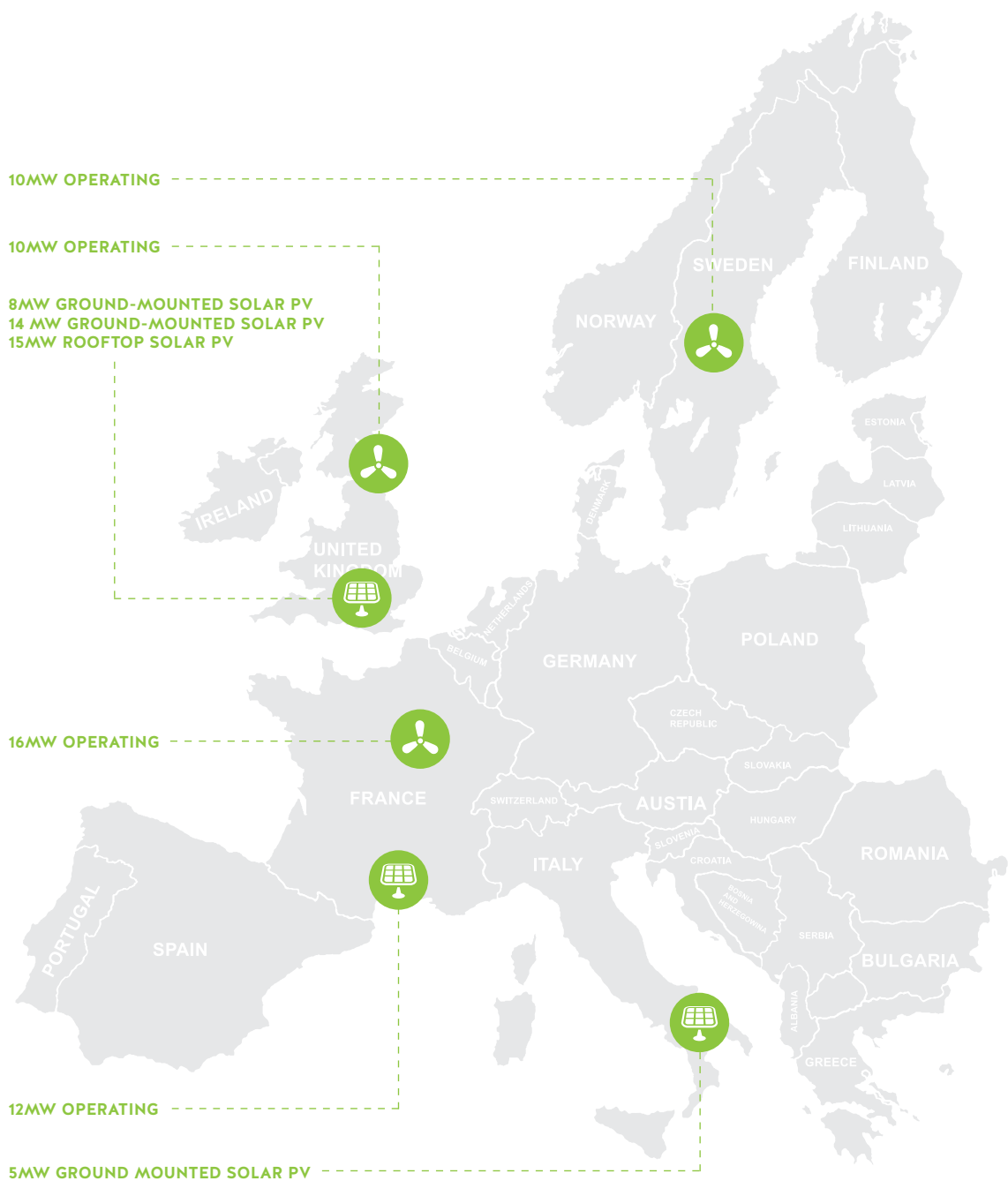


<sup>22</sup> [www.solarscorecard.com](http://www.solarscorecard.com)

<sup>23</sup> <http://www.pvcycle.org.uk/>

## Current portfolio

The team is based in London and has invested in eight renewable energy infrastructure projects diversified across onshore wind and solar PV in four European countries with a combined energy capacity of 90MW. 60% of projects are solar PV and 40% onshore wind.



We estimate that the portfolio collectively generates approximately 74,000 tonnes of CO<sub>2</sub> savings per annum. A breakdown of the details is provided below.

### Size and CO<sub>2</sub> savings of WHEB renewable energy projects

Technology	Size	Est. annual electrical generation (MWh)	Est. annual tonnes CO <sub>2</sub> savings <sup>24</sup>
Solar PV (five projects)	54MW	56,400	30,569
Onshore wind (three projects)	36MW	79,900	43,306
<b>TOTAL</b>	<b>90MW</b>	<b>136,300</b>	<b>73,875</b>

### WHEB's investments in UK residential solar

One of the projects the team has developed during 2014 is a portfolio of domestic rooftop solar projects. The UK solar market has grown significantly in recent years. Residential rooftops have emerged as a core part of the UK solar generation market representing nearly 900MW of installed capacity by the end of 2013 and representing 26% of the total UK solar market.

WHEB's portfolio, which is part of a 50:50 joint venture with a Canadian infrastructure fund, includes 3,600 domestic solar systems with a total installed capacity of 10.7MW. About 75% of the installations are with housing associations, and the remainder are with private homeowners. The initiative is expected to provide employment for approximately 100 contractors who are involved in the design, installation, maintenance and support for the solar systems.

Under the scheme, WHEB as the owner of the system, receives a fixed 20 year feed-in-tariff indexed to inflation and guaranteed by the UK Government. The homeowner or housing association, in return for leasing the roof space, receives free electricity which typically accounts for 40-50% of their total electricity use. The electricity that is generated by the panels is in turn sold on to Good Energy, one of the UK's most prominent sustainable energy utilities. The Infrastructure team expects to further develop the project during 2015 with the objective of increasing capacity to 20MW.



<sup>24</sup> CO<sub>2</sub> savings based on conversion factor is 0.542 kg CO<sub>2</sub> saved for each kWh produced from a carbon free source (calculations based on <http://www.rensmart.com/Information/KWHToCO2Conversion>).

# WHEB CAPITAL PARTNERS ("WCP")

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WHEB's private equity business is the longest standing part of WHEB and has offices in London and Munich



The focus of the private equity business is on European small and medium sized enterprises (“SMEs”) that serve the markets for energy and resource efficiency, including;

- cleaner, more efficient industrial processes,
- energy efficiency,
- energy storage,
- more sustainable materials,
- renewable energy generation equipment,
- smart grid solutions,
- waste minimisation, treatment and recycling, and
- water treatment, conservation and usage efficiency

As with the other businesses, the underpinning philosophy of WCP is that companies in these markets will grow more quickly than the market as a whole. Our objective is to help portfolio businesses achieve their full growth potential and maximise our clients’ returns on investment.

## Focus areas

The private equity team focuses on growth stage capital and takes significant (on average 35%) stakes in profitable or near profitable businesses that are looking to expand into new markets. Portfolio companies are based in Europe with an emphasis on both the ‘DACH’ region covering Germany, Austria and Switzerland, as well as the UK, Ireland and the Nordic region.

## ESG integration

WCP’s investment approach is focused exclusively on energy and resource efficiency businesses. A key requirement on which investment will depend is to establish ‘whether the company produces products or services encouraging the efficient use of energy and/or natural resources and promote protection of the environment’. There are also parts of the market that the team avoids including involvement in armaments and nuclear energy.

ESG issues are a central part of the review process with due diligence focusing on ESG risks prior to investment such as the quality of environmental management systems, health and safety, employee turnover and governance. If an investment is made, monitoring of these matters will remain a core part of the team’s work.

Post-investment, WCP will always require a seat on the boards of its portfolio companies, and the boards regularly review ESG risks such as health and safety, employee turnover and governance issues. During the past few years, 50% of portfolio companies have established an environmental and/or social policy covering critical ESG issues, and more than 90% have now allocated responsibility for ESG issues to the board or senior management.

Each portfolio company provides a report on management issues, financial disclosure and ESG indicators for discussion at Board meetings which are typically held on a monthly basis. In addition, WCP requests additional information on management issues, financial disclosure and ESG indicators from portfolio companies for quarterly reports to investors in its funds.

During 2014, we have seen improved ESG performance at many of our portfolio companies. For example, FriedolaTech, a business which manufactures light-weight structural boards made out of polypropylene ("PP"), has been focused on increasing the proportion of recycled material in its products. During 2014, the company successfully increased the proportion of recycled PP from 50% to 80% which it achieved in part through investments in the company's own recycling operations.

A second portfolio business, VIA Optronics, which manufactures low-power consumption, sunlight readable displays, has invested in energy efficiency projects to reduce the electricity consumption of its Chinese plant. These investments have had a pay-back period of less than 12 months.

## Reporting impact




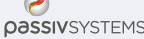








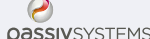













A central component in the relationship between WCP and the portfolio companies is a commitment to report performance on key environmental metrics on an annual basis. Using an external consultant to collate this data, WCP publishes a report on the positive environmental impacts created by them. The methodology involves aggregating the environmental impacts of the products and services provided by portfolio companies using the 'CLEAN™' framework detailed in the table below<sup>25</sup>.

	Environmental Benefit	Mitigation Opportunities
<b>C</b>	<b>Carbon</b> Reduced or avoided emissions of greenhouse gases, including carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), and chlorofluorocarbons (CFCs)	Mitigation opportunities include energy efficiency, low carbon energy sources and land use practices that minimise emissions.
<b>L</b>	<b>Land</b> Reduced or avoided landfilling of solids, wetland recovery and reduced soil contamination	Mitigation opportunities include waste reduction and diversion, recycling and waste-to-energy technologies.
<b>E</b>	<b>Energy</b> Quantity of energy saved or energy produced	Low carbon opportunities include grid technologies, wind, hydro, geothermal and solar PV.
<b>A</b>	<b>Air</b> Reduced emissions of combustion gases (NO <sub>x</sub> , SO <sub>x</sub> , CO, TOG)	Mitigation opportunities include clean energy alternatives, energy efficiency, safer chemicals and emissions control technologies.
<b>N</b>	<b>Natural Resources</b> Water contamination avoided (PAH) <sup>26</sup> Tropical hardwood Oil resources	Mitigation opportunities include technologies to manage water sustainably, increase the volume of process water for re-use and optimise the efficiency of water and energy use.

<sup>25</sup> For more information on the CLEAN™ framework please see <http://www.environmentalcapitalgroup.com/envassessment.html>

<sup>26</sup> PAH - Polycyclic aromatic hydrocarbon

Not all businesses have a material impact on all elements of the CLEAN framework but, where there is an impact, each company reports performance data on an annual basis. Because this data is reported at different times during the year, a full report is published with a one year time lag in order to ensure comprehensive data coverage of the portfolio. Our February 2015 report therefore covers data up to 31 December 2013. The table below provides the aggregated positive impact of the whole portfolio of companies using the CLEAN framework.

	Environmental Benefit	Fund Impact	Portfolio Holdings contributing to positive impact
<b>C</b>	Reduced emissions of CO <sub>2</sub> by 273,000 metric tonnes CO <sub>2</sub>	34,500 UK residents, at 7.9 tonnes CO <sub>2</sub> per capita	  <b>HOFFMEISTER</b>   
<b>L</b>	1.1 million metric tons landfill avoidance	4.2 million UK residents, at 263 kg waste per capita	   
<b>E</b>	Reduced energy use by the equivalent of 1.9 Petajoules <sup>27</sup> of energy	Equivalent to the annual power usage of 8,500 UK residents	  <b>HOFFMEISTER</b>    
<b>A</b>	Reduced air emissions (NOx, SOx, CO and TOG) <sup>28</sup> by 400 metric tons	Equivalent to the annual air emissions generated through power consumption of 34,700 UK residents	  <b>HOFFMEISTER</b>    
<b>N</b>	Water contamination avoided (PAH) of 87 million m <sup>3</sup> of water. Tropical hardwood avoided of 4,200m <sup>3</sup> . 236,000 barrels of oil conserved	Equivalent to the annual consumption of 36,600 UK residents	    

<sup>27</sup> A petajoule equals 1015 joules and equals 31.60 million m<sup>3</sup> of natural gas.

<sup>28</sup> Nitrogen Oxides (NOx), Sulphur Oxides (SOx), Carbon Monoxide (CO) and Total Organic Gases (TOG).

## FURTHER INFORMATION

It is clear that investors as well as other stakeholders are increasingly interested in a more thorough understanding of investment funds and their performance across a range of issues, financial and otherwise. This impact report is one element of a wider suite of communication tools that we use to communicate with our stakeholders and keep them informed of the positive impact and wider activities of WHEB.

More frequent updates on aspects of our activities, including our voting and engagement, are available from our website. We also provide regular commentary on key aspects of the sustainable investing agenda via blogs and other articles published on-line.

We welcome comments on this report and our other communications. Please contact [info@whebgroup.com](mailto:info@whebgroup.com) if you would like to get in touch.

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