



Gresham House
Specialist asset management

Gresham House Sustainable Infrastructure

Impact summary

May 2023



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About Sustainable Infrastructure and BSIF II

Gresham House British Sustainable Infrastructure Fund II LP (BSIF II) is a closed ended, long-term investment vehicle, managed by Gresham House's Sustainable Infrastructure strategy.

- Our Sustainable Infrastructure strategy invests in real asset based solutions that tackle key environmental and societal challenges faced by humanity.
- The problem of achieving 'net zero' is broad and non-linear, covering everything from low carbon footprint food, great access to the internet, how we care for the elderly, to how we turn our waste into a valuable product.
- To reach it will require a multi-faceted approach, incorporating a range of interlinked solutions, covering everything from ensuring access to the internet to how we process our waste.
- We strive to target investments that have the potential to deliver the biggest impact and the best financial returns for our clients.
- This is done through innovative real asset based infrastructure investment across six key subsectors.

Our mission

We intentionally scale impactful infrastructure assets that are good for investors because they are good for people and the planet.
















Our vision

To solve society's most difficult challenges by partnering with the smartest capital to make great investments.

Investing with
intentional impact

Investing with intentional impact

We invest across six subsectors where we believe Real Asset-based solutions have the potential to create the biggest impact and the biggest financial reward.

Subsectors	Target impact	Target investments	Current investments
Resource efficiency 	Better use of limited environmental resources	Sustainable food infrastructure, hydroponic farming, alternative proteins	 Fischer Farms <small>the future of farming</small>
Decarbonisation 	Lowest cost migration from fossil fuels to clean energy	Hydrogen and EV infrastructure, heat solutions, energy transition infrastructure	GH Bio-Power Limited 
Digital inclusion 	Improved access, connectivity and productivity for all parts of society	Fibre and gigabit networks, data centre infrastructure	  
Health & education 	Improved access to higher-quality services underprovided by the state	Dementia and specialised healthcare, SEN schools, nurseries, vocational training	 
Waste solutions 	Better recycling, re-use of waste and less landfill	"Closed-loop" and on-site waste processing solutions to turn waste into value	FORNAX 
Regeneration 	Restoration of natural habitat and biodiversity enhancement	Biodiversity net gain habitat banks, nature-based solutions	

Investment approach cannot guarantee returns. Impact defined later in this presentation.

Our impact framework

01

Identify intended impact type and affected stakeholders

- BSIF aims to intentionally scale infrastructure assets that are good for investors because they are good for people and planet
- Our investment approach and associated anticipated outcomes are aligned with specific UN Sustainable Development Goals (SDGs)
- Using the Impact Frontiers' *ABC of Impact*,¹ BSIF not only mitigates harm and benefits stakeholders by delivering positive outcomes, but it also **contributes to environmental and social solutions**

02

Source aligned opportunities

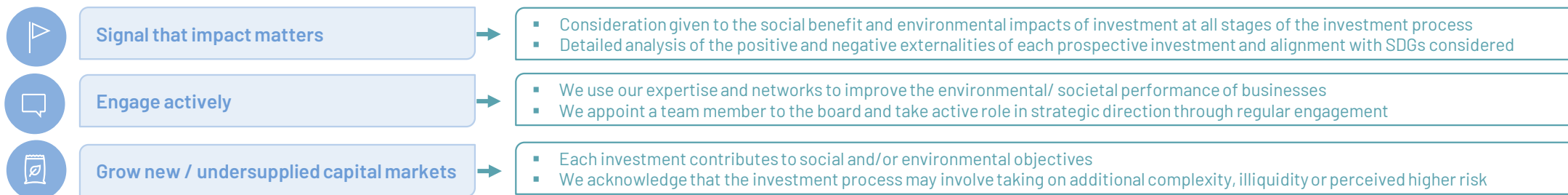
We will only invest in opportunities that contribute positively to society or the environment. This is assessed using the Impact Frontiers' *Five Dimensions of Impact*²

- What outcome(s) we are looking to achieve
- Who will experience that outcome
- ≡ How significant the effect will be
- ⊕ How it contributes to a business-as-usual scenario
- △ What might risk that impact not being achieved

03

Outline expected investor contribution, set targets and measure

We apply a combination of levers to influence the outcomes of our investments. These are aligned with the Impact Frontiers' *Investor Contribution Strategies*:³



The impact framework is subject to change.

1. Impact Frontiers: *ABC of Impact* ([link](#))

2. Impact Frontiers: *Five Dimensions of Impact* ([link](#))

3. Impact Frontiers: *Investor Contribution Strategies* ([link](#))

Impact summary

04

Take action within our control

Intended impact, based on current business plan projections, over the life of the current BSIF strategies

Environmental



5.5mn

m³ of water savings

4.4mn

tonnes of CO₂ emissions avoided

4.3mn

tonnes of waste diverted from landfill

16.6mn

MW of low-carbon energy generated

4,000

hectares of biodiversity created

566,392

hectares of farmland savings

Social



340,996

homes connected to the internet

4,294

jobs created in local communities¹

7,353

nursery places managed

97%

staff on or above real living wage²

3,316

people cared for

33:67

workforce gender ratio (m:f)³

These figures are estimates and are provided for illustrative purposes only. There is no guarantee that BSIF II will fund the full amount of intended pipeline although funds managed by Gresham House have the exclusive right to do so. Impacts based on assumed BSIF II commitment amount.

1. Jobs figure excludes construction jobs

2. Real living wage analysis excludes NCC

3. Please note gender pay gap sits at 33% but excludes Fornax, Telcom and NCC so is not included in the core metrics due to incompleteness

Environmental: water and ha farmland savings – Fischer Farms vertical farming annual data analysis by Carbon Responsible, multiplied by assumed 10 year investment period; biodiversity creation – Gresham House/Environment Bank Ltd estimates; Waste diversion – GH Bio Power analysis by Carbon Responsible and company data (n.b. investment process for this development project ongoing) and excludes Fornax CO2 analysis as no independent study yet commissioned; Social: digital inclusion – Wildanet, Borderlink, Telcom estimates; Healthcare – New Century Care (NCC) company estimates and average nursing stay per Bupa estimates; Nursery places and jobs data per N Family Club company estimates.

Investment summary

Indoor hydroponic infrastructure “vertical farm” using LED lighting and water recycling systems to grow leafy greens with strong environmental and social credentials. Fischer Farms Ltd (FFL) currently operates two farms: one small (3,200m² growing space) farm in Staffordshire, with a second, larger (25,000m²) farm, in Norfolk

Impact summary






Food production	<ul style="list-style-type: none"> FFL requires less than 1% of the total land required by conventional farms to produce the same yield² This represents a yield increase of 707% when comparing rocket grown on Farm 1 to conventional farming methods² KPIs: Production by principal crop (tonnes); Number of food safety inspections undertaken in the period; Total estimated land savings (acres); Price per tonne yield (£) vs. import price (£)
Energy use	<ul style="list-style-type: none"> FFL’s domestic production produces c.99% less greenhouse gases compared with importing. Farm 2 saves 4,000tCO₂e per annum, compared with importing from Europe, and 11,400tCO₂e compared with importing from Mexico (1,900x less carbon intensive)² Impact of material electricity consumption is mitigated through the use of on-site solar panels and PPAs from solar/renewables projects KPIs: Operational energy consumed (kWh), percentage renewable (%); Zero-carbon energy produced on site (kWh); GHG emissions avoided (tCO₂e)
Water use	<ul style="list-style-type: none"> Growing produce indoors means that FFL uses less than 1% of the total water required to grow the same amount of crop on a conventional farm. FFL 2 will save 493,000m³ water per year, which is equivalent to the annual water consumption of 9,500 people in the UK² A lack of pesticides means that emissions to water are negligible² KPIs: Total water usage (m³); Total estimated water savings (m³); Total emissions to water (nitrates, phosphates and pesticide emissions)

1. Impact Frontiers: Five Dimensions of Impact ([link](#))

2. Carbon, water and energy analysis as undertaken by Carbon Responsible

3. Gresham House / Fischer Farms estimates, 2022

FFL through the Impact Frontiers ‘Five Dimensions of Impact’¹

Impact dimension	Fischer Farms application
What 	Seeking to deliver a viable alternative to field-grown crops free from land and water scarcity, weather, disease, pesticide and fertiliser use and pollution
Who 	<ul style="list-style-type: none"> Consumers may benefit from lower retail prices and fresher food compared to imported goods due to lower costs associated with shorter distance supply chains Supermarkets will benefit from local, reliable and year-round food supply with a much smaller carbon footprint and more reliable supply
How much 	The team has extensive plans for future production and a pipeline of 19 sites in the UK and abroad that it is actively exploring – UK alone would require c. £119bn to meet salad and soft-fruit production from vertical farming ³
Contribution 	<ul style="list-style-type: none"> Significant land, water and carbon savings compared with conventional farms High electricity consumption monitored and renewably sourced where possible
Potential risks 	<ul style="list-style-type: none"> Execution – FFL is unable to deliver on pipeline of future farms or on delivery of produce due to technology failures Efficiency – risk that FFL’s impact could have been achieved with fewer resources (e.g. lower energy usage) Reputational risk for potential impact on seasonal employment as farms create full time employment but high levels of automation are utilised

Alignment with Sustainable Development Goals



SDG subgoal 2.4: ensure sustainable food production systems and implement resilient agricultural practices

Investment summary

Waste Knot Energy (WKE) provides an enabling technology processing solid recovered fuel (SRF) into pellets that provide a consistent and reliable low-carbon fuel source for energy/carbon intensive industries. SRF is residual waste that has been through recycling and no longer has value in recycling or resource recovery supply chain other than as a source of energy.

Impact summary






Waste diversion	<ul style="list-style-type: none"> WKE's SRF pellets are produced from residual waste, which is non-recyclable and would otherwise be deposited in a landfill site or burnt in a waste-to-energy plant Analysis of WKE's proposed Middlesbrough plant suggests that it will play a role in the avoidance of 300,000 tonnes of waste from landfill each year² KPIs: Tonnes of waste diverted from landfill; Tonnes of construction waste
Replacement fuel	<ul style="list-style-type: none"> WKE pellets can be equated to calorific fuel products, such as coal or pet coke, rather than waste. This ensures that a large proportion of coal used by target customers can be replaced with WKE pellets (i.e. greater than just 20% for non-pelletised SRF) Analysis suggests WKE provides an enabling technology in the SRF value chain that produces a total carbon benefit of 795,828t CO₂e³ KPIs: Tonnes of pellets produced; Price of pellets per megajoule vs coal or pet coke
Emissions	<ul style="list-style-type: none"> Pellets are suitable to be used in energy intensive industries. The total carbon benefit of using SRF in place of pet coke is 795,828t CO₂e. A net benefit of 115,000t CO₂e (or the equivalent of taking 60,000 cars off the road each year) can be attributed to WKE³ The process is highly energy intensive, is associated with other emissions to air which need to be monitored and managed over time KPIs: Tonnes of CO₂ avoided (via pellets displacing coal burnt)

1. Impact Frontiers: [Five Dimensions of Impact](#)

2. Source: Monksleigh, Sol Environment analysis

3. Source: Monksleigh, Sol Environment analysis of Waste Knot. Assumptions cover initial mechanical biological treatment of waste into SRF, benefits of avoiding sending waste to landfill, transport of SRF to WKE facilities, process of transforming SRF into pellet form and the carbon benefit of replacing pet coke with WKE SRF pellets in the cement kiln process

WKE through the Impact Frontiers 'Five Dimensions of Impact'¹

Impact dimension	Waste Knot application
What 	WKE processes SRF into higher-quality SRF pellets that provide a consistent and reliable low-carbon fuel source for use in highly carbon intensive industries, contributing to the circular economy by reducing waste to landfill within the UK
Who 	<ul style="list-style-type: none"> Customers in energy intensive industries, such as steel and cement, can claim significant carbon savings associated with burning WKE's pellets instead of coal WKE plant will benefit the community in Teesside, Middlesbrough through contributing to high quality employment and revenue in the local area
How much 	<ul style="list-style-type: none"> Three plants are planned for construction by 2026 around the UK, with the potential for many more Aiming to produce over 1 million tonnes of pellets by 2026
Contribution 	<ul style="list-style-type: none"> Seeking to produce c.240,000 tonnes of pellets annually WKE will play a role in diverting 300,000 tonnes of waste from landfill² WKE provides an enabling technology in the solid recovered fuels (SRF) value chain that produces a total carbon benefit of c.796,000 tCO₂e³
Potential risks 	<ul style="list-style-type: none"> External - end of waste supplier does not supply the contracted quality or composition of waste leading to a lower pellet yield; demand lower than anticipated Execution - plants cost more to build than expected and may not be delivered within planned timeframe Reputational - risk of controversy over the environmental benefits of waste to energy conversion

Alignment with UN Sustainable Development Goals



SDG subgoal 7.2: increase substantially the share of renewable energy in the global energy mix by 2030

SDG subgoal 12.5: by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse

Investment summary

GoFibre is building gigabit-capable broadband to connect hard-to-reach rural homes and businesses across Scotland and the North East of England. It is making use of UK Government subsidies (Project Gigabit), that are designed to provide high-speed connectivity to the last 20% of premises in the UK

Impact summary

Digital inclusion	<ul style="list-style-type: none"> In the UK, the digital divide disproportionately affects those in the North, with 11-12% of adults categorised as “internet non-users – those that have either never used the internet or people who have not used it in three months”² GoFibre’s investment will help to enable up to 350,000 local homes in the North of the UK to access gigabit-capable speeds (up to 10GB) over the next three years KPIs: Total premises passed & connected; Total customers; Total customers in areas qualifying for Government subsidies; Number of customers on a social tariff
Job creation	<ul style="list-style-type: none"> Investment will boost local employment with the creation of over 250 local jobs at peak roll out. These will be a mixture of skilled roles, including fibre engineers and planners. GoFibre will support an apprentice programme to retrain employees from low skilled jobs KPIs: New jobs created (FTE); Total employees (FTE); Employee churn (%); Number of apprentices employed
Environmental impact	<ul style="list-style-type: none"> Impact of network construction to be monitored and managed over the life of the investment GoFibre is committed to achieving Net Zero emissions by 2050, and have a carbon reduction plan in place KPIs: CO2 emissions avoided; Percentage of EVs in fleet; Progress against decarbonisation plan

1. Impact Frontiers: [Five Dimensions of Impact](#)






2. ONS ons.gov.uk/exploringtheuksdigitaldivide

3. GoFibre (2022) Business plan forecasts

4. GoFibre (2022) gofibre.co.uk/about-us/

5. Thinkbroadband labs.thinkbroadband.com/local/councils

GoFibre through the Impact Frontiers ‘Five Dimensions of Impact’¹

Impact dimension	GoFibre application
What 	Seeking to enhance equitable access to online services and facilitate digital inclusion, which is key to enhancing access to education, telehealth and contributing to the digital economy
Who 	<ul style="list-style-type: none"> Primary beneficiaries are premises located in rural and urban-fringe locations in Scotland and the North of England Local communities will benefit from direct and indirect job opportunities
How much 	<ul style="list-style-type: none"> Planning to enable up to 350,000 local premises to access gigabit-capable broadband speeds over the next 3 years³ Aiming to create 250 new, local jobs over the next 2 years⁴
Contribution 	<ul style="list-style-type: none"> Targeting 160,000 customers that would otherwise be underserved Launching a social tariff designed for households on Universal Credit to ensure equitable access to internet services Reduces energy compared to copper services and reduces travel related carbon Connectivity is 28x faster than the current average speed across the Scottish Borders⁵
Potential risks 	<ul style="list-style-type: none"> Execution – network build strategy and demand-led approach causes operational challenges and delays to connecting customers Execution – costs are higher than modelled External – risk of reduction in subsidies

Alignment with UN Sustainable Development Goals



SDG subgoal 9.1: develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all

SDG subgoal 17.8.1: significantly increase access to information and communications technology

Investment summary






Investment into UK internet service provider Telcom to accelerate its delivery of ultrafast and reliable fibre broadband to commercial and residential properties across the UK. Focus on “Northern powerhouse” cities in England – Manchester, Leeds, Liverpool, Birmingham, Sheffield and Newcastle

Impact summary

Digital inclusion	<ul style="list-style-type: none"> While the digital divide – the gap between those that have access to good broadband and those that do not – has been closing in recent years, the North of England lags the rest of the UK with c.11-12% non-users vs. 7.8% for the rest of the UK, 4.9% in London and 5.7% in the South East² Telcom seeks to address this issue through the rollout of its full-fibre optic cables to the premises offering speeds of up to 10GB KPIs: Total premises passed and connected; Total customers; Total customers on BDUK voucher scheme
Job creation	<ul style="list-style-type: none"> Providing local employment through the creation of operational, technical and engineering roles in Northern England. Telcom has additionally created the engineering bootcamp Recode to upskill and hire engineering and construction staff Telcom is seeking to support the UK government vision of creating a Northern Powerhouse and building a strong economy decentralised from London KPIs: Jobs created (FTE); Jobs retained (FTE)
Environmental impact	<ul style="list-style-type: none"> Network construction may significantly disturb wildlife and biodiversity in rural locations Impact of network construction to be monitored and managed over the life of the investment KPIs: Biodiversity enhancement measures in place

1. Impact Frontiers: [ABC of Impact](#)
2. Internet users – Office for National Statistics(ons.gov.uk)
3. [Stewardship Report \(2021\)](#)

Telcom through the Impact Frontiers ‘Five Dimensions of Impact’¹

Impact dimension	Telcom application
What 	Delivering high quality fibre service to commercial and residential premises in the North and Midlands, facilitating digital inclusion and speeding up deployment of connectivity in the UK, in line with UK government ambitions
Who 	<ul style="list-style-type: none"> Primary beneficiaries are consumers and businesses within six target key cities Social housing developments and rural regions will benefit from Telcom’s Wefibre affordably priced gigabit capable broadband provision Providing skilled engineering and civil construction jobs to local communities
How much 	<ul style="list-style-type: none"> 2,450 customers and 390km fibre network created so far Engineering bootcamp Recode was launched in August 2021, which is free to applicants and targets unskilled labour or those seeking to enter a new profession³
Contribution 	<ul style="list-style-type: none"> Target 124,000 customers by 2036 14/16 participants have graduated from the Recode bootcamp and have been employed by Telcom since August 2021³
Potential risks 	<ul style="list-style-type: none"> Stakeholder participation – focus on high density areas may lead to higher levels of competition and overbuilding Execution – risk of lack of staff to roll out fibre; risk of low brand recognition

Alignment with UN Sustainable Development Goals



SDG subgoal 9.1: develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all

SDG subgoal 9.8: significantly increase access to information and communications technology

Investment summary






Wildanet is an internet service provider building gigabit-capable broadband networks to connect rural hard-to-reach homes and businesses across the South West. It is making use of UK Government subsidies (Project Gigabit). These subsidies are designed to support the cost of providing high-speed connectivity to the last 20% of premises in the UK that do not currently have access

Impact summary

Digital inclusion	<ul style="list-style-type: none"> 220,000 people in the South West have never used the internet and around 125,000 do not have the digital skills to operate a device effectively² Cornwall is underserved by high-speed broadband, with an average download speed of 31MB compared to the UK average of 60MB Wildanet's network will deliver speeds of up to 2.4GB, around 40x faster than the average Cornish connection, to over 200,000 rural homes and businesses over the next three years KPIs: Total premises passed and connected; Total customers; Total customers in areas qualifying for Government subsidies; Number of customers on a social tariff
Job creation	<ul style="list-style-type: none"> By creating innovative high-speed broad band across Cornwall, Wildanet offers increased potential for enhanced skills and education as well as efficiencies for local businesses BSIF's investment is expected to contribute to £615mn of new Gross Value Add and £111mn GVA safeguarded per annum in Cornwall by 2030³ KPIs: Jobs created (FTE); Staff turnover (%); Number of apprentices employed
Environmental impact	<ul style="list-style-type: none"> Impact of network construction to be monitored and managed over the life of the investment. Both positive and negative impacts can be assessed and monitored using these two dimensions Committed to achieving Net Zero emissions by 2050, and have a carbon reduction plan in place KPIs: CO2 emissions avoided; Percentage of EV in fleet; Progress against decarbonisation plan

1. Impact Frontiers: [Five Dimensions of Impact](#)
2. ONS. Internet users in the UK 2020, April 2021(tabs 5a, 5b)
3. Curia: Connecting Cornwall report 2022
4. Good Things Foundation Report, 2022 [goodthingsfoundation.org](https://www.goodthingsfoundation.org)

Wildanet through the Impact Frontiers 'Five Dimensions of Impact'¹

Impact dimension	Wildanet application
What 	Providing broadband to rural homes and businesses across the South West, that would otherwise be left behind by other broadband operators, aiming to be one of the most sustainable and carbon-free enterprises in Cornwall by 2023
Who 	<ul style="list-style-type: none"> Rural homes and businesses in the South West will benefit from fast, reliable and good value internet connection Local communities will benefit from direct and indirect job opportunities Enhanced skill development and education access will benefit a range of individuals
How much 	<ul style="list-style-type: none"> Planning to enable over 200,000 local premise with gigabit-capable broadband over the next three years, connecting ~70,000 customers Over 230 local jobs created over the next two years
Contribution 	Enhancing digital inclusion in a region which is currently at a disadvantage due to low connectivity. Including social, wellbeing and economic impact, for every £1 spent on digital inclusion, there is a £15 return ⁴
Potential risks 	<ul style="list-style-type: none"> External - risk that grant funding is scaled back Execution - risk of lack of visibility into governments roll-out plan Execution - risk that high cost of deployment makes delivery unfeasible Execution - service may be unaffordable for areas of extreme deprivation

Alignment with UN Sustainable Development Goals



SDG subgoal 9.1: develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all

SDG subgoal 9.8: significantly increase access to information and communications technology

Investment summary






Environment Bank (EBL) intends to lease or acquire low-value areas of land and cultivate them to create high-quality natural habitats, increasing the diversity of plant and animal life. The increase in biodiversity, as quantified by Defra, creates Biodiversity Net Gain (BNG) units. These are sold as credits to developers who need to satisfy planning conditions to demonstrate BNG for new developments

Impact summary

Biodiversity creation	<ul style="list-style-type: none"> In the UK, the Environment Act 2021 has introduced a requirement for new developments to provide a mandatory minimum 10% BNG as a planning condition from November 2023. This will be a requirement of all Nationally Significant Infrastructure Projects by November 2025 Through its partnership with BSIF, EBL plans to develop over 8,000 hectares of habitat banks that deliver BNG, verifiable using the Defra calculator The investment aims to lead to tangible and authentic improvements in biodiversity alongside facilitating development KPIs: Area of biodiversity created in hectares; number of biodiversity-related assessments undertaken in the year; trees or hedgerows planted; species diversity or abundance index/Number of endangered or IUCN Red List species and soil quality assessments
Competing land use	<ul style="list-style-type: none"> Competing land use priorities, from renewable energy generation and green infrastructure to industry, affordable housing, and food security, mean competing land use arguments are a risk to the long-term roll out of the scheme Regulatory and policy support for investment into grid infrastructure and renewable energy generation projects could affect national and local planning policies. Community/governmental commentary to be monitored and, where relevant, engagement plans drawn up to support BNG creation given the verifiable long-term benefits to people and planet from BNG KPIs: Number of governmental/community engagements and number of BNG/land use consultations responded to

1. Impact Frontiers: [Five Dimensions of Impact](#)
2. [Global Risks Report 2023, World Economic Forum](#)

EBL through the Impact Frontiers' Five Dimensions of Impact¹

Impact dimension	EBL application
What 	Aiming to increase biodiversity relative to baseline levels, as per Defra definitions, seeking to create "Habitat Banks" to meet anticipated BNG credit demand and supply a source of credits available for purchase by developers and providing key provisioning services associated with biodiversity creation
Who 	<ul style="list-style-type: none"> Primary beneficiaries are developers seeking off-site biodiversity provision in order to meet BNG requirements and overcome the barriers associated with on-site provision Farmers benefit through the opportunity to diversify their income sources Communities benefit through the creation of high-quality biodiverse areas
How much 	8,000 hectares of Habitat Banks are planned from 2021 to 2026; priority locations are local planning authority areas which have the highest predicted demand
Contribution 	<ul style="list-style-type: none"> Seeking to create Defra-verified biodiversity gains on over 8,000 hectares of land; lack of biodiversity has been identified as a World Economic Risk Report top five risk² Aggregation of biodiversity in large areas enhances conservation impact compared to smaller sites due to the biodiversity multiplier effect
Potential risks 	Regulatory - risk that the mandatory 10% BNG requirement may be reduced; Execution - competing land use means land supply is compromised; Endurance - maintenance and monitoring of sites is insufficient and long-term quality BNG isn't achieved; External - if Habitat Bank development costs increase or BNG credit prices decrease

Alignment with Sustainable Development Goals



SDG subgoal 15.5: take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species

SDG subgoal 15.9: by 2020, integrate ecosystems and biodiversity values into national and local planning, development processes

Investment summary

GH Bio-Power (GHBP) is an operational biofuel processing and biopower plant with 26MW of capacity. The business collects used cooking oil (UCO) locally and converts it into a biofuel that can be used in transportation, power generation and heating. The business is made up of investments into Lifecycle Oils (LCO) a collector and processor of UCO and Living Power biopower plants that use this fuel to generate energy and attract various National Grid tariff payments.

Impact summary

Waste reduction	<ul style="list-style-type: none"> At capacity, LCO collects and converts up to 200 million litres of UCO per year. Assuming a typical investment period of seven years, this equates to 1.4 billion litres of UCO collected, or just under 1.3 million tonnes of waste potentially diverted from landfill² KPIs: Tonnes of UCO used; tonnes of waste avoided (non-hazardous and hazardous)
Low carbon energy production	<ul style="list-style-type: none"> LCO's processed fuel is used both by its customers and in its own processing plants. Across its customer use and in its own processing plants, GHBP's fuel can generate up to 2.6 million MW of low-carbon energy across the life of the investment LCO saves c.1,700tCO₂e annually by using UCO in its processing instead of diesel³ Lifecycle Oils customers may have up to 14 times lower greenhouse gas emissions than if they used forecourt diesel⁴ KPIs: GHG emissions avoided/reduced; low-carbon energy generated for sale (MW)
Energy use	<ul style="list-style-type: none"> The processing of UCO requires the use of natural gas at peak hours, which emits greenhouse gases. Natural gas use is to be monitored and managed over time, with an aim to reduce this going forward KPIs: GHG emissions associated with production, natural gas usage (kWh)






1. Impact Frontiers: Five Dimensions of Impact ([link](#))

2. Assuming 0.92t/m³ density

3. This figure only measures the emissions from the processing of the oil at Lifecycle Oils' facilities and assumes 20,000,000 litres produced

4. This analysis includes the processing of oil at Lifecycle Oils facilities, transport of product to customers, and downstream combustion of product. The figure does not include agriculture and initial production of vegetable oil, transport of oil from restaurants, or the further refinement by downstream clients.

GHBP through the Impact Frontiers 'Five Dimensions of Impact'¹

Impact dimension	GH Bio Power application
What 	Seeking to provide a low-carbon, alternative fuel source for transportation, power generation and heating through converting UCOs into biofuel and enhancing the speed of transition of energy-intensive industries to low-carbon energy sources
Who 	<ul style="list-style-type: none"> High volume UCO generators will benefit through provision of a "closed loop" waste solution Local communities will benefit from job creation opportunities
How much 	Lifecycle Oils saves c.1,700tCO ₂ e annually by using UCO in its facilities instead of using diesel generators. ³ Lifecycle Oils customers may have up to 14 times lower greenhouse gas emissions than if they used forecourt diesel ⁴
Contribution 	<ul style="list-style-type: none"> Offers customers an alternative fuel source associated with decreased carbon emissions Aiming to create 389 jobs for local communities Diverting UCO from landfill and other harmful methods of disposal
Potential risks 	<ul style="list-style-type: none"> External - UCO supply is localised, creating the possibility of inconsistent quality depending on the geographical origin and processing technique Execution - fuel pricing is dynamic as waste based biofuels are non-listed commodities. Technical/operational risk - engine performance and maintenance Regulatory - changes to legislation

Alignment with Sustainable Development Goals



SDG subgoal 7.2: increase substantially the share of renewable energy in the global energy mix by 2030

SDG subgoal 12.5: substantially reduce waste generation through prevention, reduction, recycling and reuse

Investment summary




N Family Club (NFC) is a differentiated, B-Corp nursery business offering new high-quality care and progressive education with a focus on environmental and social responsibility. They operate primarily in London and the South East, a region that has suffered from significant undersupply of nursery places, leading to a shortage of childcare.

Impact summary

Accessibility	<ul style="list-style-type: none"> Creating new childcare places in an undersupplied early years education market that has seen a reduction in overall places over the last three years Extending portfolio to 80 nurseries by 2025, creating c.2,700 new nursery places and acquiring 2,200 existing places. Extended hours to provide flexibility for working parents KPIs: Number of new childcare places created; New places as a % of new South East group-based places; % new places in regions with waiting lists of 12 months or more
Quality	<ul style="list-style-type: none"> Clearly-stated commitment to high standards of care, as a provider of education to children, as an employer, and through its support to local communities. Rated 1st in the UK for two years in a row in Nursery World's Quality table with 100% Ofsted "outstanding" ratings on its sites KPIs: % Ofsted outstanding ratings; Parents' Net Promoter Score; B Corp assessment score; Staff wages relative to market rates and living wage (%); Staff turnover rate (%) and staff satisfaction score
Affordability	<ul style="list-style-type: none"> NFC's offering targets "mass-affluent" households. Given the target market of the proposition, its offering could exclude lower income households from accessing its services NFC has committed to increase the proportion of revenue from children receiving government funding to 10% by 2025, up from the 4.6% at the time of investment BSIF will donate its annual monitoring fee to fund five new bursary places every year KPIs: NFC annual fees to average target market/local earnings (%); NFC hourly fee to competitors' per hour price (%); Proportion of children on state-funded places (full and partial); Proportion of children in bursary places (full and partial)

1. Impact Frontiers: [Five Dimensions of Impact](#)
2. Nursery World [nurseryworld.co.uk](https://www.nurseryworld.co.uk)

NFC through the Impact Frontiers 'Five Dimensions of Impact'¹

Impact dimension	N Family Club application
What 	Seeking to increase the number of childcare places and staff jobs in an undersupplied market, increase the proportion of state-funded places, provide flexible opening hours for parents and achieve high standards of childcare
Who 	<ul style="list-style-type: none"> Primary beneficiaries are "mass-affluent" households given premium fees - although document commitment to improve affordability offering to over 10% publicly funded students will provide more opportunities for families in other earning segments over time Nursery staff benefit from wages that are above living wage / market rates
How much 	<ul style="list-style-type: none"> Expanding portfolio to 80 nurseries by 2025, creating c.2,700 new nursery places and acquiring 2,200 existing places. Creating c.2,000 new jobs by 2025 with NFC being in the top-10% in terms of pay in the nursery market Seeking to at least double the number of state-funded places it offers to over 10% of revenues by 2025
Contribution 	<ul style="list-style-type: none"> Seeking to add c.2,700 new childcare places, predominantly in London and the South East that has seen private group-based childcare places fall by over 3,000 over the last three years Extended opening hours increase flexibility for parents to re-join/stay in work 63% Ofsted "outstanding" compares with 17%-20% of UK early years care providers on average²
Potential risks 	Execution - NFC is unable to deliver on pipeline of new childcare places or increase state funded places; Reputational - Safety of children or standard of care is jeopardised; unable to improve affordability offering; Quality - Ofsted ratings are not maintained and high-quality staff not hired/retained



Alignment with UN Sustainable Development Goals

SDG subgoal 4.2: ensure that all boys and girls have access to quality early childhood development, care and pre-primary education, to be ready for primary education






Investment summary

Fornax aims to build and operate new small-scale waste incineration plants to safely dispose of clinical and hazardous waste for which high temperature incineration (HTI) is the only legally permissible treatment solution. Initial investment to fund the first plant in Durham, with a pipeline of up to four further high temperature waste incineration plants

Impact summary

Low carbon waste incineration	<ul style="list-style-type: none"> Fornax's Durham site has been designed to treat 8,500 tonnes of hazardous and clinical waste per annum in line with the EU's Best Available Techniques (BAT) for waste incineration (December 2019) Fornax's localised solution significantly reduces emissions from the transportation of waste KPIs: Tonnes of waste processed (tonnes); Emissions from incineration plant (tCO₂e); Transportation miles saved vs. existing incineration infrastructure (miles), tonnes carbon saved (tCO₂e)
Energy recovery	<ul style="list-style-type: none"> Fornax's HTI process produces 5MW of steam as a by-product per hour This is recirculated for use within the facility and the excess will be made available for export to other local businesses KPIs: Zero carbon energy produced (kW); Waste heat recovered from primary operations (kW)
Residual waste	<ul style="list-style-type: none"> The facility's primary by-product is ash which is currently sent to landfill. Fornax is exploring options of how this waste can be repurposed to be used in construction processes and be diverted from landfill While the plant is built in line with Best Available Techniques (BAT) standards, it still releases harmful emissions, including carbon These emissions should be monitored, managed and reduced over time KPIs: Waste by-product (tonnes); Emissions from incineration plant (tCO₂e); Waste by-product avoided from landfill (tonnes)

Fornax through the Impact Frontiers 'Five Dimensions of Impact'¹

Impact dimension	Fornax application
What 	Providing a safe and efficient method of disposal for clinical and hazardous waste, addressing a shortage of waste processing facilities and recycling waste heat for parasitic power and for use in district heating networks
Who 	<ul style="list-style-type: none"> NHS, private hospitals, GP surgeries and other medical facilities together with pharmaceutical producers and the manufacturing industry will benefit from better availability of waste treatment facilities with reduced transportation requirements Neighbouring industrial users may benefit from potential heat exportation capacity
How much 	<ul style="list-style-type: none"> Developing pipeline of 4/5 sites over the next 7 years c.30 permanent full-time jobs will be created at each site, with a further c.70 construction jobs The proposed new facility development at Merchant Park will process around 8,500 tonnes of waste per annum
Contribution 	<ul style="list-style-type: none"> Currently no sites in the UK meet the Best Available Techniques (BAT) regulation for clinical and hazardous waste incineration; Fornax's proposed sites will lead to reduced carbon emissions vs. existing plants Planned sites will generate additional heat, to be recycled into district heating networks
Potential risks 	<ul style="list-style-type: none"> External - once operational, risk that feedstock supply to the plant is insufficient Execution - risk that planning permission not granted for one or more of planned sites

Alignment with UN Sustainable Development Goals



SDG subgoal 9.1: develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all

SDG subgoal 12.4: environmentally sound management of wastes in order to minimise their adverse impacts on human health

1. Impact Frontiers: [Five Dimensions of Impact](#)

Investment summary






Acquisition of ten care homes operated by New Century Care (NCC) through a joint venture between BSIF and Salutem Senior Living Ltd. Investment aims to establish a new platform of specialist senior living and dementia care assets

Impact summary

Accessibility	<ul style="list-style-type: none"> Anchor investment to build out an elderly care platform focused on delivering improved quality of care and serving a higher acuity of needs Differentiated business model that provides support for dementia sufferers and service users with complex, specific needs The business is aiming to grow its portfolio to 50 high-quality homes through acquisition and development over the next five years Possible criticism that NCC's strategy is making a profit out of providing services to vulnerable members of society KPIs: Number of beds added through acquisition; number of beds added through development; number of patients cared for - contact hours per patient
Quality	<ul style="list-style-type: none"> NCC is aiming to improve CQC ratings of all homes to 'Good' or 'Outstanding'. Since acquisition, two homes have had CQC embargos removed and one home rerated from "Requires Improvement" to "Good" Technological improvements, such as software platforms Nourish and eMAR have been employed to improve care plans and overall medication management NCC is supporting employment opportunities for general carers and registered nurses in a sector which has experienced higher than average turnover in recent years due to underpayment. KPIs: CQC ratings and Key Lines of Enquiry (KLOE) sub-ratings for homes; number of non-death related move outs; number of instances of whistleblowing or complaints by residents and staff satisfaction and staff turnover

1. Impact Frontiers: [Five Dimensions of Impact](#)

NCC through the Impact Frontiers' Five Dimensions of Impact¹

Impact dimension	New Century Care application
What 	Providing capacity in an underserved part of the care home market to meet rising demand for nursing and residential care with a focus on quality improvements across acquired portfolio
Who 	<ul style="list-style-type: none"> Providing facilities for dementia sufferers, elderly members of the population and individuals with complex needs Primary beneficiaries those who can afford the higher prices associated with the private care home market and those benefitting from Local Authority funded places Creation of new healthcare jobs in an industry renowned for staff shortages
How much 	<ul style="list-style-type: none"> 10 homes purchased and more under exclusivity Aiming to grow its portfolio to 50 high-quality homes over the next five years Potential for 3,000 people to be employed by NCC over the next five years
Contribution 	<ul style="list-style-type: none"> Directing capital into an underserved sector of the care home market with plans to grow number of beds in the future Aiming to achieve "good" or "outstanding" CQC ratings for all care homes Supporting employment opportunities within the undersupplied care sector - 650 people currently employed
Potential risks 	<ul style="list-style-type: none"> Execution - risk that quality of care delivered is below patient expectation Execution - risk to ability to provide care driven by factors such as staff shortages Unexpected impact / macro - risk that healthcare epidemic/pandemic severely impacts patients Reputational - risk that patient incident leads to negative perception of investment

Alignment with Sustainable Development Goals



SDG subgoal 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.