

JRPsolutions

Towards Net Zero



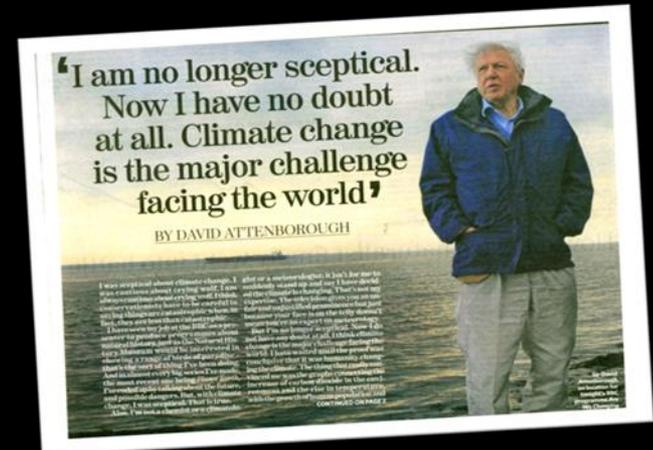
George Richards – Director, JRP

Discussion Framework

- 
- ✓ Introductions
 - ✓ Background and context
 - ✓ A bit about JRP – who we are and what we do
 - ✓ The Net Zero Roadmap
 - ✓ A phased approach
 - ✓ Getting on the same page
 - ✓ Understanding your current position
 - ✓ Planning the road ahead
 - ✓ Making it happen
 - ✓ Data and reporting
 - ✓ Summary

A Changing World

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Towards Net Zero



Businesses are waking up!

This article is more than 1 month old

Firms ignoring climate crisis will go bankrupt, says Mark Carney

Bank of England governor warns of financial collapse linked to climate emergency

- Top asset managers oversee \$300bn fossil fuel investments
- Why are asset managers investing in fossil fuel companies?



▲ Mark Carney, the Bank of England governor, has led efforts to address the dangers global heating poses to the financial sector. Photograph: Leon Neal/Getty Images

It's Personal!



Who are JRP?

JRP solutions

- Est in 1999 JRP is an independent Energy, FM Optimisation and Net Zero specialist
- We help businesses to:
 - Develop and implement Energy, FM and Net Zero Strategies
 - Provide practical assistance
 - Optimise existing systems
 - Improve energy & resource efficiency
 - Reduce costs
 - Help achieve Net Zero targets
- Clients include: GSK, WJFG, BAE Systems, Airbus, AG Barr, Meadow Foods, Leeds University. Air Liquide, Hull & East Yorks NHS Trust, Diageo, Clarks, Boots, Severn Trent Water, Vodafone, Moy Park, London School of Hygiene & Tropical Medicine & other HEIs, National Grid, etc .



ISO 9001:2015



Net Zero Complexity

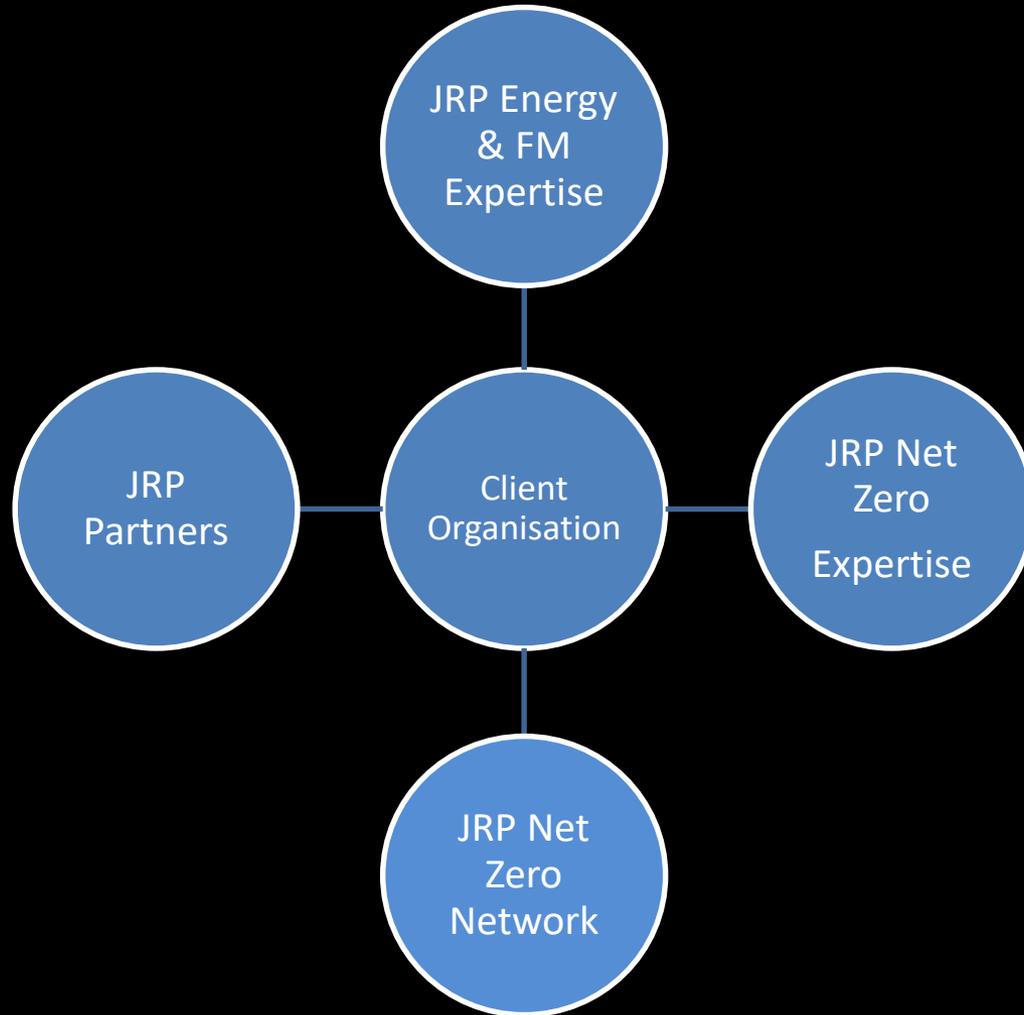


Renewable & Emerging Technologies

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JRP's Delivery Capability



JRP Energy & FM Optimisation Expertise

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Name: Kevin Stephens

Qualifications:

Academic: MSc Degree – Energy Engineering
BSc Degree – Science of Resources

Professional: Member Energy Institute
C Eng
Registered Professional Energy Consultant

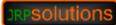


Key Skills: ESOS Lead Assessor
Modelling and optimisation of complex energy systems
Application of Kaizen principals to process energy management
Negotiation and supervision of ESCO agreements for energy investment projects
Design and project management of energy efficient installations
Implementation of ISO 50001 compliant energy management systems

Background:

Principal Consultant	JRP Solutions Ltd
Principal Consultant	CMR Consultants Ltd
Senior Consultant	Environmental Resources Management
Senior Project Engineer	Kinetica Energy Management
Senior Energy Consultant	Nufco Consulting Group
Sales Engineer and Project Engineer	Dalkia Utilities Services
Energy Consultant	Inenco Group
Management Services Analyst	Brymbo Steel Works

PROFILE:
Kevin has 35 years' experience implementing energy solutions in the heavy industrial, pharmaceutical, food and drink manufacture, building services and energy services sectors.
Kevin's initial career was the steel industry. Successful projects in furnace improvement and ladle pre heating raised a passion for energy which led to a Masters degree in Energy Engineering.
In energy consultancy and energy service companies Kevin has developed and project managed energy projects as diverse as decentralised steam systems in heavy engineering and hospitals, waste to energy systems for furniture manufacturer, process hot water system for a brewery and optimisation of a molten sulphur storage facility.
For ERM Kevin established an energy efficiency capability in an international environmental consultancy. Projects included use of energy savings as a cost driver to promote improved environmental performance in heavy industry in former Soviet countries; initially fostering capability of local environmental authorities, then directly for joint venture international companies.
More recently Kevin has provided long term support to major energy users including negotiation and supervision of a 10 year ESCO agreement for a 6.2 MW CHP plant for an aerospace manufacturer; project design and process optimisation supporting a 50% reduction in energy use over 6 years for a pharmaceutical manufacturing site. Kevin has also facilitated kaizen energy reduction programmes for numerous pharmaceutical manufacturing sites in Europe, India, Pakistan, SE Asia and the US and more recently ISO 50001 gap analysis and implementation work. Now Principal Consultant at JRP Solutions, Kevin works with clients to deliver practical and cost effective business solutions.




Name: Jes Rutter

Qualifications:

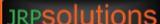
Academic:	BSc (Hons) Degree Energy Engineering Member Energy Institute
Professional:	Member BIFM, Member IAM

Key Skills: Customer focused with good communication skills
Energy management
ISO 50001 implementation
Energy Trainer/Facilitator
Chairman of the Independent Energy Users Group (IEUG) of ESTA
Change management
Excellent leadership and organisational skills
ESOS Auditor
Outsourcing commercial/Legal negotiator, most recently for Diageo, AstraZeneca and a Global Power Systems Manufacturer

Background:

Managing Director	JRP Solutions Ltd
Head of Business Improvements	Dalkia
Partner Manager	Symonds FM
General Manager	AHS Emstar plc
Product Development Manager	AHS Emstar plc
Head of Energy Surveys Dept	AHS

PROFILE:
Jes Rutter is Chairman of ESTA, Independent Energy Users Group (IEUG) and a recognised UK expert in improving the effectiveness of energy utilisation of, in particular, steam and compressed air-derived energy within industrial process environments.
Jes has over 33 years' experience in the Energy Management sector much of which has focused upon the analysis, effectiveness and improvement of energy generation and utilisation. His advice and training programmes have been sought by a diverse range of businesses from across numerous industrial sectors as well as NHS Trusts and Local Authorities.
Jes's expertise has been successfully used to develop and implement practical tailored solutions for and on behalf of numerous blue-chip multi-national businesses. Most recently, he has helped a Global Power Systems Manufacturer to implement FM and energy solutions valued at £60M per annum and since 2003 have reduced their energy consumption by over 30% against a backdrop of a 40% increase in production. For this same organisation ISO 50001 was piloted with work involved from concept and gap analysis to implementing the system.
With a Degree in Energy Engineering Jes developed his practical experience by working with a number of large Contract Energy Management businesses building an unrivalled level of expertise in energy generation, utilisation, analysis and reporting.
Jes also developed a deep understanding of Contract Energy Management and Facilities Management successfully negotiating numerous high value Agreements before the 'poacher turned gamekeeper' used his unique expertise to develop and negotiate outsourcing and in-sourcing strategies for an impressive portfolio of blue chip clients.




Personal Profile

Chris Smith

Position: Position Title

Qualifications:

Academic:	HND Electrical & Electronic Engineering DMS: Diploma in Management Studies
Professional:	IWFIM

Key Skills: ESOS Auditor
Customer focused with good communication skills
Energy management
Change management
Excellent leadership and organisational skills
Highly successful General Manager within CEM Company
Commercial/Legal negotiator, most recently for AstraZeneca and a Global Power Systems Manufacturer

Background:

Principal Consultant	JRP Solutions Ltd
Head of Governance & Performance:	Rolls-Royce
Property	Rolls-Royce
Head of Contracts FM	Rolls-Royce
Partnership Manager	Rolls-Royce
Programme Manager- FM	Rolls-Royce
Maintenance Manager	Rolls-Royce

Throughout his 37 year career at Rolls-Royce, Chris has been a key influencer in creating the vision, developing the strategy and program managing the implementation of the Facility Management solutions for the company.
In his formative years Chris was responsible for both Infrastructure and Production Maintenance at the 250,000m² Defence Facility at Bristol. Having established a strategy of outsourcing for FM across all RR UK sites in 1999, Chris was appointed to manage the primary outsourcing of hard services and manage the selected FM suppliers.
During subsequent years, Chris has been responsible for the implementation of a single sourced integrated FM contract (Hard and soft service) initially in the UK (2003) expanding into EMEA in 2012 and more recently, globally.
As he was at Rolls-Royce, Chris is recognised by the company as being a subject matter expert on FM strategy, solutions and the management of those strategic programs for the company.
Chris has also been instrumental in establishing behavioural change programs within the supply chain which ensures the suppliers promote the correct customer focused culture and values whilst developing staff with exceptional interpersonal skills.

www.jrpsolutions.com

JRP Net Zero Expertise

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Personal Profile



Ethan O'Brien, MEI

Position: Consultant

Qualifications: Academic:

BSc in Geoscience, University College Cork
MSc in Carbon Management, University of Edinburgh Business School

Professional:

Member of the Energy Institute (MEI)
Level 2 – Energy Management Professional, Energy Institute
Level 3 – Advanced Energy Manager, Energy Institute

Key Skills:

Energy management
Energy purchasing and export PPAs
ISO 50001 audits and implementation
Energy legislation and compliance
Corporate sustainability and reporting to GRI-G4, GRESB infrastructure asset assessment, and the UN Sustainable Development Goals
Carbon management, carbon foot-printing (Scopes 1-3) and life-cycle analysis
Waste-to-energy, recycling and circular economy business models
Project management



Background: Project Manager
Energy and Sustainability Advisor

CO2 Balance
Cory Riverside Energy

Profile:

Ethan graduated with a BSc in Geoscience from University College Cork in 2013, having initially planned to work in the oil and gas sector. Through his studies he came to understand the necessity of a transition to sustainable energy and was awarded an EU highly skilled workforce scholarship to study an MSc in Carbon Management from the University of Edinburgh Business School. Here he learned multi-disciplinary skills in engineering, economics and business, and management that relate to sustainability.

During his time at CO2balance, Ethan lived and worked internationally developing renewable energy projects including solar and biogas across East Africa under a UN backed certification process, in partnership with international development agencies. Alongside this, Ethan consulted on carbon foot printing, sustainability and energy efficiency solutions for UK businesses, supporting several organisations in achieving ESOS compliance including Toshiba Medical, Hill Dickinson LLP, Watson Farley Williams LLP, Haygrove Agriculture and Residential Management Group. At Cory Riverside Energy (a large waste-to-energy and recycling firm based in London) as an in-house energy manager, Ethan was focused on managing energy legislation compliance (CPC, ESOS), energy management, through implementing ISO 50001 and performance improvement projects at various sites, ensuring energy was purchased/sold at the best price, in the most flexible way, and wider corporate sustainability both internally and externally.

Internally, Ethan played a central role in supporting the business in the publication of its first ever Sustainability Report, developing the reporting in line with the UN Sustainable Development Goals, Global Reporting Initiative (GRI) and GRESB infrastructure asset assessment external standards. Externally, Ethan has strived to highlight the positive impact the waste management sector has on the environment, economy and society producing sustainability reports and policy work for government, industry and trade bodies. The best endorsement of his contribution to the sector was being announced as the winner of a 'Under 35' Award in 2018. An active science, technology, engineering and maths (STEM) ambassador, Ethan is committed to taking sustainability to the classroom, delivering workshops to students and acting as a mentor for university students and energy professionals.

www.jrpsolutions.com



Name: Carol Somper

Qualifications: Academic:

BSc Hons Economics
MSc LEDM
BREEAM Communities Assessor
ISO 14001: 2015 trained Lead Auditor



Key Skills:

Corporate responsibility/sustainability process and procedures
Corporate policy and environmental review & bid support
Environmental gap analysis and EMS set-up
Carbon foot-printing, reduction strategy and management plans
Carbon verification/assurance
Sustainability appraisal for products and processes
Sustainable supply chain management and procurement
Climate resilience planning and area or site-wide management plans.
Experienced Facilitator/trainer

Background:

Associate Sustainability Director JRP Solutions Ltd &TGC
Technical Director – Sustainability Temple Group
Associate Director – Sustainability WVG Environment
Principal Sustainability Consultant ADAS
Sustainable Land Manager Forum for the Future
Senior Policy Adviser Countrywide Agency

PROFILE:

With over 30 years of experience, Carol understands the sustainability challenges facing companies and organisations, and the many opportunities open to them for reducing risk, improving performance and offering clients [added value](#).

Carol has advised corporates including Northern Aerospace, Vodafone, Allied Glass, Colas Rail, British Airways, Premier Modular, Simply Business and the Girls' Day School Trust on various aspects of sustainable corporate governance to improve operational performance, resource efficiency and cost-effectiveness. Other clients who need help in developing their Carbon Management Plans are Grange Hotels London, the Universities of Greenwich and Chester, and CMS Cameron McKenna Nabarro Olswang LLP, one of the UK's largest legal LLPs.

Carol has led carbon foot-printing projects for Network Rail, [BT](#), British Telecommunications, the former Yorkshire Forward Development Agency, Serco's Local Govt Division, Oxford City Council, BT and former employers ADAS and WVG. She has undertaken carbon verification for Henderson Global Investors, Slaughter & May LLP and Cameron McKenna LLP. Her development work includes Sustainability Appraisal for Extra MSA, LDC, [Coca Cola](#), Development Company, Sainsbury's Stores Ltd, Network Rail and more recently, BREEAM Communities assessments Highwood Group Ltd, Linden, Bloor & [Kjaer](#) Homes, [Onglyne](#) Group (Mauritius). She is also experienced in corporate and community participation and engagement work.

Carol enjoys yoga, running and gardening for relaxation, plus travelling with friends and family, especially with her three adult daughters.



Name: Dr Gavin Milligan



Qualifications: Academic:

PhD in analytical instrumentation awarded by King's College, University of London
Alumnus of Harvard Business School and IMD Lausanne
Chartered member of the Royal Society of Chemistry Lead Assessor

Professional:

Sustainability
Supply Chain
Risk Analysis
Procurement
FMCG
Change Management
Facilitation

Key Skills:

Background: Proprietor

Group Sustainability Director
Sales Director
Commercial Director
Supply Chain Manager
Operations Services Manager

Green Knight Sustainability Consulting Ltd

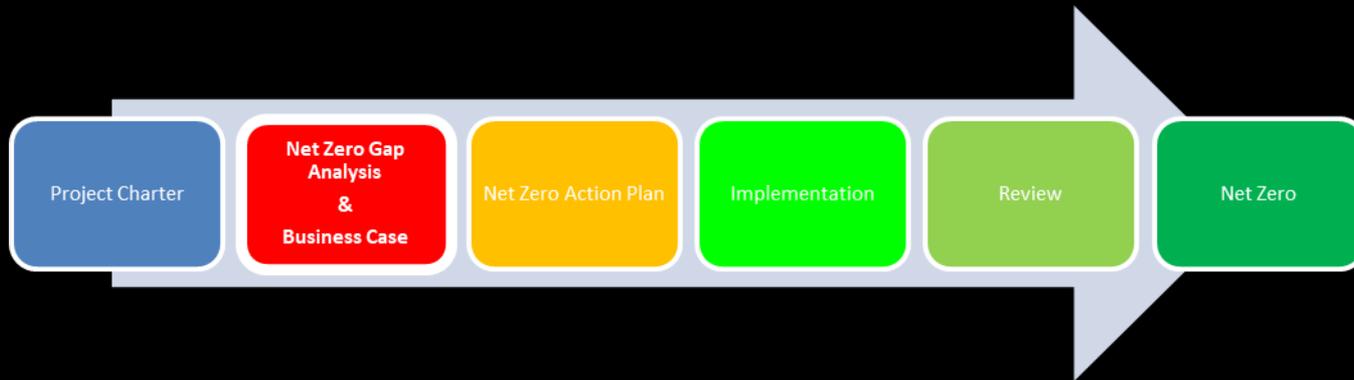
William Jackson Food Group
[Coca Cola](#) Foods Ltd Name
[Coca Cola](#) Foods Ltd
The Sauce Company
Broadus UK

PROFILE:

Gavin has over 20 years' experience in the food sector, covering roles including Operations, Procurement, Account Management and Sustainability. Alongside these day-to-day roles he has been closely engaged with industry and academic networks. Current [activities include](#):

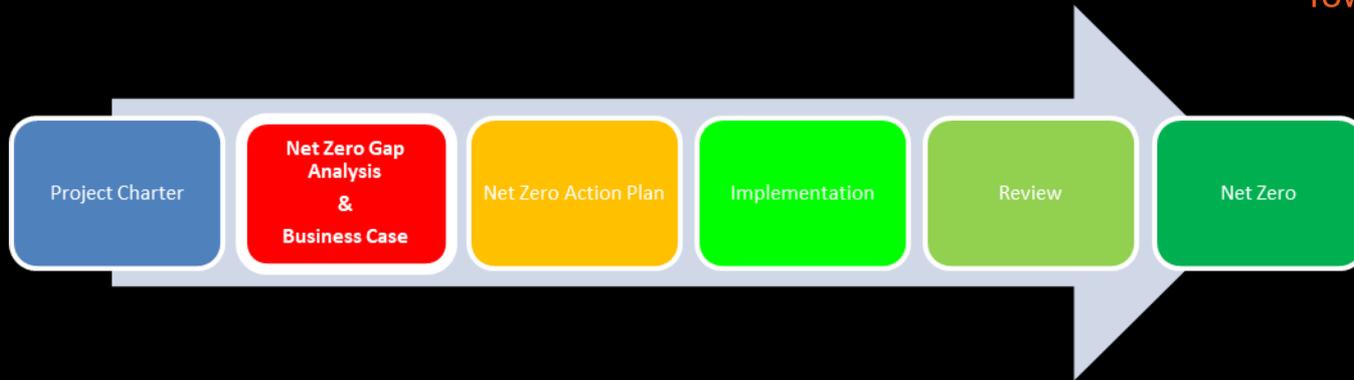
- Member director of the Supplier Ethical Data Exchange ([Sedex](#))
- Management Committee member of FoodWasteNet
- Chair of the Agri-Food member interest group at Campden BRI
- Member of the Industrial Advisory Board at Sheffield Hallam University's National [Crest](#), for Excellence in Food Engineering
- Member of the Industrial Advisory Board for Lincoln University's MSc course in Agri-food Technology
- Committee member of the Royal Society of Chemistry's agriculture sector group
- Member of the Institute of Grocery Distribution's consumer sustainable lifestyles engagement working group

The Net Zero Roadmap



- ✓ A simple linear process
- ✓ Staged approach
- ✓ Senior Management buy in
- ✓ Key stakeholder involvement
- ✓ Long term strategy that will change over time

Project Charter



- ✓ Vision
- ✓ Mission
- ✓ Targets
- ✓ Scope
- ✓ Timelines
- ✓ Critical Success Factors
- ✓ Key Stakeholders

Gap Analysis & Business Case



In depth analysis of current practices that would include:-

- ✓ Audit of current EMS & EnMS
- ✓ High level Site Energy Audit(s)
- ✓ Supply Chain Analysis
- ✓ Shareholder, stakeholder and employee perspectives
- ✓ Transport/logistics review
- ✓ Review of current procurement policies and practices
- ✓ Review of current Energy, Waste and Water policies
- ✓ Review of Energy, Waste and Water targets

Business Case to include:-

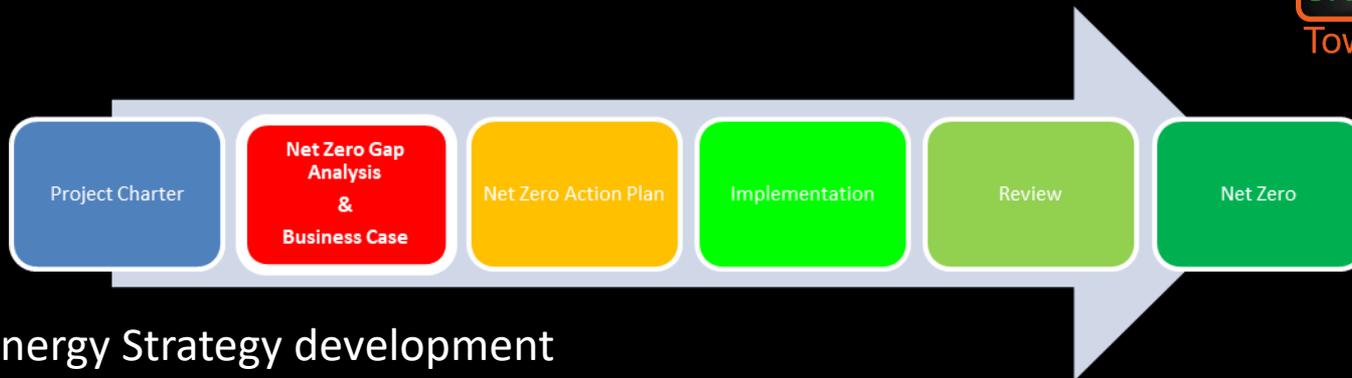
- ✓ Costs & Benefits
- ✓ Resources
- ✓ GHG impacts

Strategy Development & Action Planning



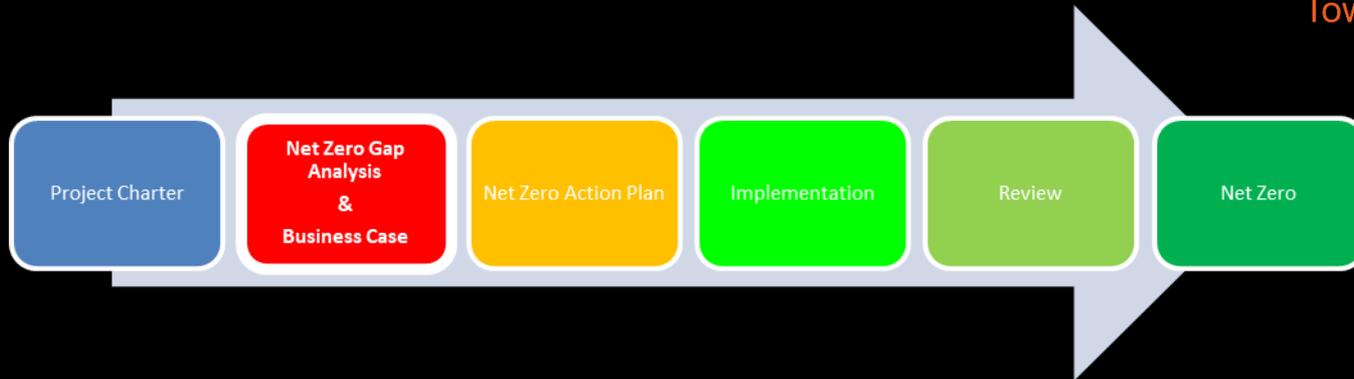
- ✓ Gap Analysis findings
- ✓ Key observations, challenges and opportunities
- ✓ Outline Business Case
- ✓ Strategy Development
- ✓ Workshop to outline initial Action Plan to incl.
 - ✓ Key actions
 - ✓ SBT's
 - ✓ Resources (internal and external)
 - ✓ Costs (internal and external)
 - ✓ GHG impacts
 - ✓ Reporting
 - ✓ Delivery mechanisms
 - ✓ Timelines
 - ✓ Roles & Responsibilities
- ✓ Next Steps

Implementation & Collaboration



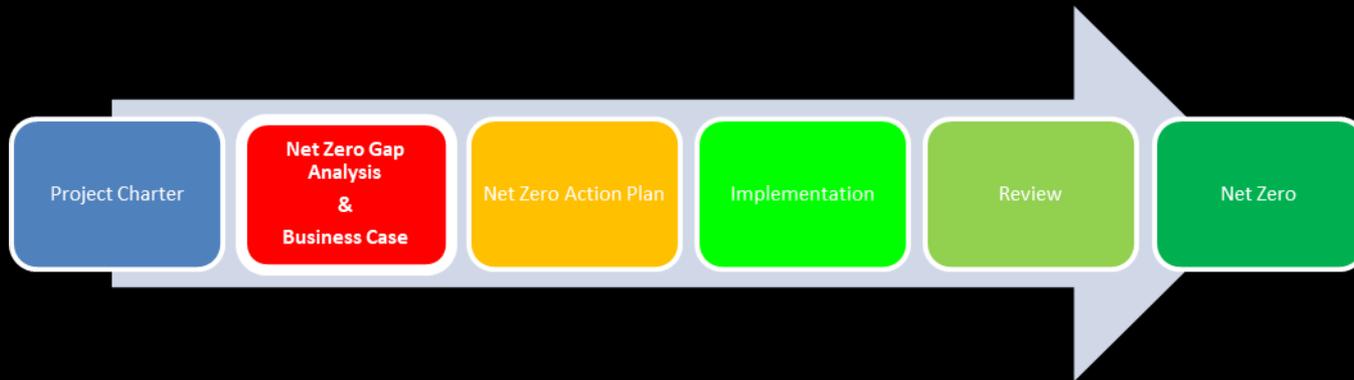
- ✓ Energy Strategy development
- ✓ Site Net Zero Plans
- ✓ MM&T & BMS Optimisation
- ✓ Waste Minimisation/reuse/repurposing towards a circular economy model
- ✓ Energy procurement incl certified 'Green Energy'
- ✓ Site Energy Support Service
- ✓ Water usage minimisation
- ✓ EMS & EnMS development/improvement
- ✓ GHG/Carbon data collation, analysis & reporting
- ✓ Stakeholder/Community engagement &/or behaviour change programmes
- ✓ Project identification, development and implementation
- ✓ ISO 50001/ISO 14001 implementation plus other standards as required
- ✓ Renewables (Solar PV, Wind, Biomass, AD & Heat Pumps) & CHP
- ✓ EPC/PPA/UMA/TEEM contract development, negotiation and implementation

Review



- ✓ The Strategy and Action Plan will be under constant review
- ✓ Flexibility is essential as the landscape changes, new legislation is enacted and new technologies emerge
- ✓ Impacts upon GHG's continually monitored
- ✓ Remedial actions agreed, tasked and implemented
- ✓ Roles & responsibilities reviewed and managed
- ✓ Quarterly progress reports

Net Zero



- ✓ Carbon or GHGs?
- ✓ Scopes 1,2,3?
- ✓ Science Based Targets (SBTs)
- ✓ Holistic and inclusive
- ✓ Carbon Off setting for residual emissions as appropriate

Summary

- 
- ✓ There is a pressing business imperative to become sustainable
 - ✓ Consumers are demanding cleaner greener products
 - ✓ Investors are disinvesting in companies that are not improving their business practices and products
 - ✓ UK Govt. have a legally binding target to become net zero GHGs by 2050
 - ✓ Increased legislation and policies
 - ✓ Business As Usual is **NOT** an option!
 - ✓ Understand where your business is currently in terms of sustainability
 - ✓ Agree with your key stakeholders where you want to get to and in what time frame
 - ✓ Develop a Net Zero Strategy and Implementation Plan
 - ✓ Review and adapt as new technologies and legislation emerge