

## SHAPING A SUSTAINABLE ISLAND

by Peter Cadiou, Managing Consultant

Welcome to the first issue of *ENERJISE*, the e-newsletter from the expert team at the cutting edge of environmental building design and energy related consultancy services.

Our seven-strong, multi-disciplinary team has over 175 years experience in the design of low energy, sustainable building solutions.

We can add value to all stages of your building project. We proactively collaborate with planners, architects, builders and developers in a design process that balances environmental and commercial considerations to deliver high performance buildings that will shape a more sustainable future for our Island and the next generation.

Our consultants are experts in electrical, mechanical and sustainable design solutions for all types of buildings using both tried and tested technologies together with more innovative design solutions for all types of developments.

Our track record includes housing, hotels, private and public sector offices, corporate HQs, government buildings, data centres, supermarkets, warehousing and cold storage facilities.

We constantly review and improve the range of services we offer to ensure clients benefit from the latest technology

and industry innovations available. We are now pleased to offer BREEAM Assessment for a variety of buildings, 3D Modelling to identify and solve issues before they materialise during the construction phase of a project and we are also pleased to offer thermal surveys using infrared technology.



ABOVE: THERMAL IMAGING SHOWING THE TYPE OF WORK WE CARRY OUT



### THE IMPORTANCE OF FORWARD PLANNING

COMMENT BY Peter Cadiou  
Managing Consultant,  
Jersey Energy

As a business specialising in the design of sustainable, low energy building services, we hope that 2012 will finally see the much delayed Energy Policy debated by Jersey States members.

The Island needs clear energy and carbon reduction goals and a practical framework setting out how these goals are to be achieved. Jersey is a microcosm of the world situation and needs to do everything in its power to reduce emissions and conserve resources.

We at Jersey Energy are doing what we can to shape a more sustainable future for the Island by working alongside construction professionals to reduce the environmental impact of developments and help ensure they perform in the most energy efficient way.

Competition in this field is fierce. Overseas companies pose a constant threat to local businesses and our economy. In order to invest in training of local indigenous skills, we need to see Government supporting the local profession. Government must ensure a level playing field when procuring services for major capital projects. When the skills, vision and innovation are readily available and competitively priced on-Island, opportunities should be afforded to local businesses employing and training locally skilled staff.

## Jersey Energy - Jersey's **breeam** team

Jersey Energy is the only certified BREEAM Assessor in the Channel Islands listed in the BRE Green Book Live. Senior Mechanical Consultant Bob Farrell has been awarded the International and Commercial Standard in BREEAM Assessments by BRE Global.

The Building Research Establishment's Environmental

Assessment Method is the internationally recognised standard for best practice in sustainable building design, construction and operation and the means by which these are measured for reduced environmental impact.

However, with sustainable buildings moving from buzzword to environmental and business

necessity, we are able to help developers, designers and building managers demonstrate the environmental credentials of their buildings with a BREEAM Assessment.

A Certified BREEAM Assessment will provide you with:

- market recognition for low environmental impact buildings
- confidence that tried and tested environmental practice is incorporated in the building
- inspiration to find innovative solutions that minimise the environmental impact
- a benchmark that is higher than regulation
- a system to help reduce running costs, improve working and living environments
- a standard that demonstrates progress towards corporate and organisational environmental objectives.

### Bob's BREEAM seal of approval

With over 30 years in the business, Bob Farrell has proved you're never too old to learn new tricks by becoming a BREEAM Certified Approved Person to conduct BREEAM Assessments. Bob has been awarded the International and Commercial Standard in BREEAM Assessments by BRE Global.



### IN THIS ISSUE:

Award-winning projects  
3D modelling  
Our team



# 'Green' welcome for Durrell visitors

In each issue of ENERJISE we will take an in-depth look at a specific project Jersey Energy has been involved with. In this issue we turn the spotlight on Durrell Wildlife Conservation Trust's new Visitor Centre.

As the project's Sustainability Advisors and Mechanical and Electrical Design Engineers, we are delighted to have played a significant role in the delivery of the new, award-winning, environmentally friendly Visitor Centre for Durrell Wildlife Conservation Trust.

Designed by Ray Hole Architects in association with local architectural firm Axis Mason, the re-modelled facility was voted 'Best Example of Innovative and/or Sustainable Design' at the 2011 Jersey Architecture Awards.

The £1.5 million project provides an improved admissions centre, retail area, 140-seat café outdoor dining terrace, garden

centre, educational facilities and flexible exhibition space. The development has exceptionally strong sustainability credentials with more than 70% of materials from demolished sections of the old building being recycled for use in the new.

From inception, the Jersey Energy team looked at how Durrell's sustainability ethos could be incorporated throughout the project. The building is designed to deliver passive means of controlling the internal environment when conditions permit. Sun-pipes provide natural lighting and monodraught 'wind catchers' in the roof provide natural ventilation.



THE JERSEY ENERGY 3D MODEL



THE FINISHED BUILDING



LED LIGHTING

"Jersey Energy have proved to be an essential member of our team, assisting the Trust with our environmental strategy and, in particular, energy saving and use of renewable technologies"

Paul Masterton, CEO,  
Durrell Wildlife  
Conservation Trust



The new building is fitted with low energy LED lights, solar panels provide hot water and air source heat pumps have been installed to heat the building when necessary. A sophisticated control system means that natural lighting and passive ventilation are used whenever possible. The result is that despite almost doubling in size, the target energy consumption of the new building and its associated emissions will not increase.

From the earliest stages, Jersey Energy used its 3D modelling capabilities to assess how the various systems needed to integrate into the building and how the completed facility would respond to the proposed strategy.

Modelling of the thermodynamics of the building enabled all stakeholders to better understand how it would perform passively and when it would need mechanical support to maintain optimum internal environmental conditions for the annual 150,000+ visitors.

Durrell Chief Executive Paul Masterton said: 'This is a vital development for the Trust. The design provides a strong visible impression and the new facilities have enhanced our ability to deliver a top flight visitor experience.'



# VIRTUAL REALITY WITHOUT THE RISK

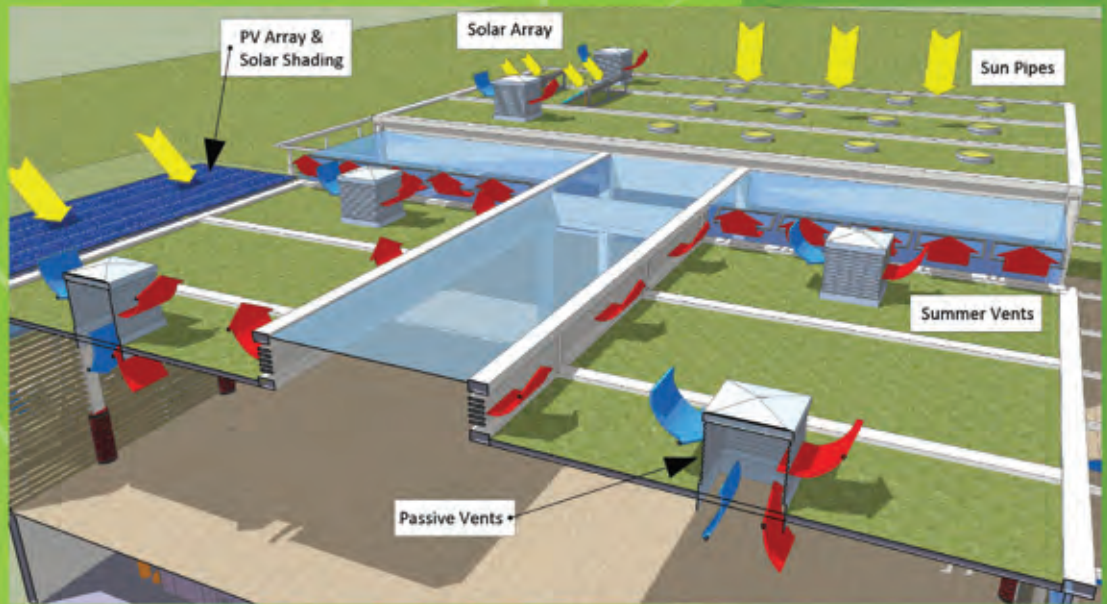
**3D building services modelling brings a new dimension to resolving conflict – before a spade goes in the ground.**

Buildings and their services are becoming ever more complex in this environmentally conscious age, with shorter construction programmes to speed delivery and reduce costs adding to the pressure on construction professionals.

That's why high quality 3D modelling of building services is an essential tool to help all parties involved in developments to identify issues and conflicts before they materialise on site.

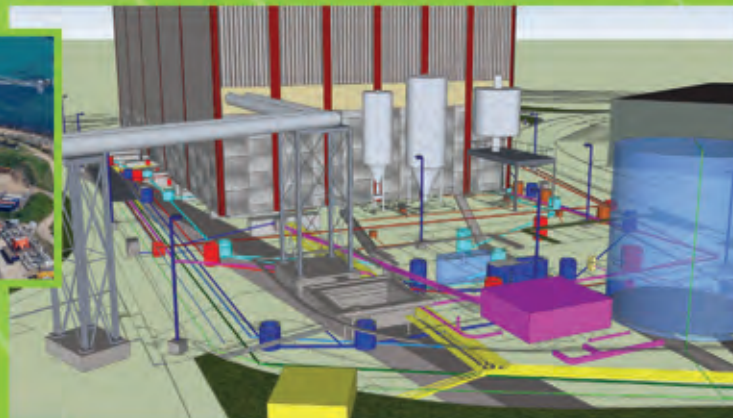
Jersey Energy has been involved in several projects where our 3D modelling capabilities have proved crucial.

The largest of these was the States of Jersey Energy from Waste (EfW) plant which was finally commissioned in March 2011.



Using both our computer aided design (CAD) software and our 3D modelling tools, enabled elements of the Energy from Waste service infrastructure to be visualised and planned in advance. This showed the complex 3D geometry of the services-intense areas and identified multiple clashes which were resolved before they occurred on site, which could have had significant time and cost impacts to the project.

Jersey Energy also provided the services design and 3D Planning for the new JT Global Data Centre at Rue des Pres. This multi-million pound project also benefited from our 3D Modelling technology by enabling the client to understand the space and commence pre-marketing before completion.



As the building originally housed publishing and catering facilities, it set a number of challenges for the project team, not least the confined space on site. The 3D Modelling enabled the site to be visualised early, the challenges highlighted and the electrical switchgear / plant rooms to be pre-planned in advance to fit within the confined spaces available and help avoid conflicts, speeding up the time to delivery.

More and more commercial projects are benefiting from the value our 3D Modelling facility delivery. Services can provide

unnecessary and unexpected costs and conflicts during the construction stage of a project.

The virtual 'fly through' makes it easier to sell concepts to clients because it enables them to visualise the finished development.

Domestic scale projects are also taking advantage of the technology. Whether for individual, high value homes or larger scale housing developments, 3D Modelling by Jersey Energy enables all stakeholders to visualise all stages of the build and identify and address potential on-site conflicts.

## Award winning projects delivered by Jersey Energy

### Durrell Wildlife Conservation Trust Visitor Centre

**Winner:** Jersey Architecture Awards 2011 'Best Example of Innovative and/or Sustainable Design'.

**Winner:** Jersey Architecture Awards 2011 'Best Large-scale Refurbishment or Remodelling'

**Winner:** Jersey Architecture Awards 2011 'Best Landscape Architecture Sustainable Mechanical and Electrical Design provided by Jersey Energy

### Jersey Magistrates' Court

**Winner:** Jersey Construction Council Award 2007 'Project of the Year' Mechanical and Electrical Design provided by Jersey Energy

### CI Co-operative Society Grand Marche, St Helier

**Winner:** Jersey Construction Council Awards 2005 'Project of the Year' Mechanical and Electrical design, industry integration planning and management provided by Jersey Energy.

**For more information on 3D modelling by Jersey Energy, please contact Stuart Gray on 618801 or email [SGray@jersey-energy.com](mailto:SGray@jersey-energy.com)**



**PERSONNEL PROFILE JUSTIN OLDRIDGE**

The newest member of the Mechanical Services Design Team, Justin Oldridge, brings a wealth of construction experience to the team at Jersey Energy.

Justin is the newest member of the Jersey Energy team, having joined us in the summer of 2011. A Chartered Engineer, Justin has over 20 years experience in building services management. He is responsible for Mechanical Services Design and Project Management.

Prior to joining Jersey Energy, Justin was responsible for the management of the mechanical and electrical design, specification and installation for large commercial and residential developments in the Channel Islands, including Castle Quays, Belvedere, Ex Hotel Rex site, etc. in Jersey.

He served 16 years in the British Army, attaining the rank of Major in the Royal Engineers. He commanded various military infrastructure projects in conflict zones such as Bosnia, Iraq and Afghanistan.

**TRAINING & DEVELOPMENT**

**Top marks to Stuart**

We are proud and delighted at the achievements of Stuart Gray who, over the last 12 months, has been awarded the highest training results in the history of Highlands College for his HNC in Building Studies. He was honoured by the Jersey Construction Council for 'Outstanding Achievement in Construction Studies'. Jersey Energy will be supporting Stuart as he embarks on the next stage of his career development - undertaking an MSc in Building Services Engineering at Southbank University.



**Carol's advice you can Trust**



As if managing the everyday running of our Jersey Energy offices wasn't enough, Carol du Feu has achieved the Energy Saving Trust's Telephone Advice Standard to equip her to give best telephone advice and help on energy saving matters.



**Jersey Energy services:**

- Sustainable Building Services Design
- Masterplanning and Infrastructure Concepts
- Energy Use Profiling, Audits and Certificates
- BREEAM Assessments
- Business Energy Efficiency Strategies
- Environmental and Alternative Energy Design Solutions
- Low Energy Design Appraisals
- Integrated 3D Modelling
- Infrared Thermal Imaging
- Feasibility Studies
- Cost Planning and Budgeting
- Site Survey and Condition Reports
- Service Infrastructure Pre-planning
- Building Control and Byelaws Compliance Checks
- Voltage Power Optimisation
- Power Factor Correction Reviews
- Preparation of 'As Installed Drawings'
- Production of Operating and Maintenance Manuals
- Production of Building Log Books
- CAD Draughting Services
- Building Service Maintenance Specifications

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