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Environmental Services

Innovation Awards 2017



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Innovation Awards 2017

Contents

Innovation Award categories

Technology Innovation Award Finalists

Parks and Greenspaces Innovation Award Finalists

Waste and Street Scene Innovation Award Finalists

This brochure contains everything you need to know about the winners and finalists in the Environmental Services Innovation Awards 2017.

For details on how to enter the 2018 Environmental Services Innovation Awards, contact Matt Ellis at mellis@apse.org.uk

For exhibition and sponsorship opportunities at any APSE event, email Matt Paton at m.paton@spacehouse.co.uk

Technology Awards Finalists

Nottingham City Council

Innovative use of integrated technologies at Loxley House

Nottingham City Council faces ever-increasing cuts in funding. Energy usage is one of the Council's biggest non-fixed costs and the first to be targeted for reduction. Committed to green energy generation, Loxley House, the Council's head office, had multiple innovative energy efficiency technologies and projects installed in it. The building's electricity is now supplied directly by a private wire, sustainably generated in conjunction with the city's District Heat Network which produces the majority of the energy required for the building's usage, including heating, cooling and power. Today, this system annually delivers 126GWh of renewable heating and cooling, which is distributed through approximately 90km of pipework to customers across the city, diverting 160,000 tonnes of non-hazardous waste from landfill per year and supplying over 200 commercial premises and 5,000 homes. In 2017, the Energy Projects Team installed 100 solar panels using a non-intrusive ballasted system. The PV system is expected to generate over 21,000 kWhs in the first year and is expected to provide a return on investment of 8%. The system is forecast to produce a financial saving of £133,500 over a 30 year period, saving the council on average £4450 per year.

Oxfordshire County Council

The Dragon Patcher

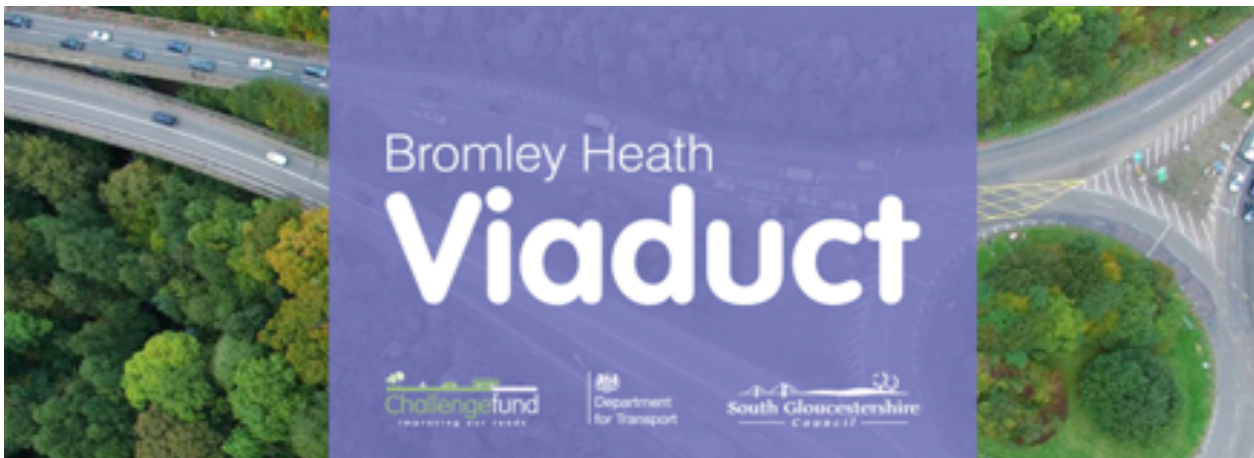
With increasing budgetary pressures and deteriorating highway assets, an innovative method of service delivery was required to mitigate against the escalating rate of defect repairs. Traditional industry inspection and repair techniques are labour-intensive, time consuming and wasteful. The Council recognised that to solve the problem, it had to innovate. By working closely with construction and development company Skanska, the solution was the Dragon Patcher. The Dragon Patcher is designed to treat a multitude of defect types through its ability to both surface dress and deliver bulk hot coated material. Having developed confidence in the quality of repair achieved by the Dragon, operatives have been trained to undertake and record statutory inspections, allowing a find and fix approach to pot holes and removing the need for a traditional inspector identifying a defect. The Dragon Patcher has surpassed expectations by repairing defects quickly, efficiently, cost-effectively and sustainably. Compared to the daily output from a traditional 2-person gang, the Dragon Patcher process brings over a 900% increase in area repaired. Significant cost savings have also been delivered with costs per m2 repair reduced by over 80%.



South Gloucestershire Council

St Bromley Heath Viaduct Major Maintenance and Improvement Scheme - Communication and Engagement

The A4174 Bromley Heath Viaduct major maintenance and improvement scheme required the Council to close a major bridge on the busiest road in South Gloucestershire right next to the M32 and M4. The works would severely restrict a major strategic route linking Bristol to the motorway network; a network that has over 55,000 vehicles on it every day. To avoid a massive negative impact on communities and businesses, both local and multi-national, the Council implemented an imaginative and innovative communications plan to inform and engage everyone with the aim of changing travel habits permanently. Adopting an unprecedented integrated, multi-platform communications campaign allowed the Council to significantly exceed their aims. The proactive communications strategy helped the Council avoid sustained gridlock on the West of England's busiest road, influence employers and individuals to encourage a long-term modal shift towards sustainable travel (evidenced by a 31% increase in cyclists), and protect the reputation of the Council.



Suffolk Coastal District Council

PHILIS – Port Health Interactive Live Information System

In 2008, the Port of Felixstowe was expanding and Suffolk Coastal District Council Port Health Authority (SCPHA) needed to make sure it could deliver its services as efficiently as possible; dealing with the increasing workload without taking on additional staff. The old and inefficient DOS based computer system was not able to meet the changing and growing demands on the Port Heath service. The Port Health Team looked to the technology market place but there were no off-the-shelf systems available that would meet requirements, so the decision was made to develop a system in-house. Consequently, the Port Health Interactive Live Information System (PHILIS) was developed, going live in 2009. The innovative software has since been licensed to 4 other ports in the UK. 2017 saw its implementation at Heathrow Animal Reception Centre. PHILIS has been continuously developed to include modules such as document scanning, mobile working and to manage animal welfare with live animal movements at Heathrow. Workload through PHILIS across all four ports totals approximately 180,000 jobs, with import containers handled by PHILIS at Felixstowe in excess of 3 million per year.



WINNER

Doncaster Metropolitan Borough Council

Smartlight

The Council's Smartlight project was born from the need to reduce street lighting energy, carbon emissions and upgrade all street lighting to Light Emitting Diodes (LED's) and Computer Management Systems (CMS).

In 2015, the burden of financial pressures, carbon taxation and street lighting manufacturers moving away from old technology lead to the development of a financial model which showed the advantage of upgrading all Doncaster's streetlights to LED's and CMS. Doncaster's Mayor, Cabinet and senior managers fully supported the project,

To deliver the project, the Council secured £14.4m of Salix and internal funding. Through vigorous procurement and tender evaluation, the Council procured suppliers that could bring added value and substantial experience in delivering the project.

A robust communication plan was developed to minimise any negative impact. The Council used press releases, local radio, email, council web site, Chamber of Commerce and Twitter to inform residents and businesses.

A major challenge for the project was what to do with 44,000 redundant lanterns and 211 miles of internal column cable. Redundant lanterns contain valuable materials. Recycling companies offer disposal services. However, the Council wanted to challenge this way of recycling by recovering the materials in a cost effective meaningful way.

Through detailed meetings with the National Offender Management Services, the Council secured Doncaster's HMP Lindholme as a recycling partner. The Council also secured the services of a local company that had the capacity to transport the redundant lanterns, dispose of the recycled materials, comply with HMP Lindholme's strict security arrangements and offer direction about the most economically advantageous time to sell the recycled materials.

Security measures at HMP Lindholme result in detailed accounting of material and show that 97% of materials have been recycled. The project has also delivered a surplus of £1.98 per lantern.

Additionally, the Council wanted to align with the Governments strategy of 'purposeful activity to better prepare offenders following release into their communities'.

Recycling offers meaningful work and qualifications that can break the cycle of crime and the subsequent financial pressures that an offender places on society (keeping a prisoner costs £65,000 a year). Approximately 32 prisoners have been employed throughout the project and many have enrolled on the City and Guilds NVQ.

The Council has enjoyed considerable financial and corporate benefits as a result of the project. There has been over 50% reductions in street lighting energy spend and a reduction in carbon taxation. Condition surveys at the time of the LED lantern installation allows the Council to risk rate columns and better target column replacement budgets. CMS will allow the Council to manage lighting stock and minimise any future energy increases. Furthermore, income generation from the recycling element of the project will lead to a reduction in project borrowing.

In terms of environmental benefits, the project has resulted in a year on year reduction of 9,400 tonnes of carbon. The project also keeps the recycling of the redundant lanterns within the geographical boundaries of Doncaster; reducing the number of road miles.

The Council has met with and provided information to other local authorities and contractors who will be delivering similar projects. Additionally, the Council has provided contact details for the prison service; actively encouraging them to make contact to discuss this innovative recycling route.

The street lighting manufacturing industry will eventually stop making old technology street lighting. As such, an excellent country wide opportunity exists for the prison service to replicate the recycling element of the Smartlight project. The prison service has subsequently secured further recycling projects with a mixture of private companies and local authorities utilising six English prisons to carry out lantern recycling.



Parks and Greenspaces Awards Finalists

Kirklees Council

Natural Kirklees – Greenspaces

Kirklees has a diverse and exciting range of parks and green spaces. However, with a reduced budget the Council has been unable to maintain all these spaces to the high standards of previous years. As service standards reduce, this increases the risk of areas degrading – becoming subject to anti-social behaviour such as fly tipping. To avoid this degradation, the Council looked for different ways to engage the community and enable them to take a greater ownership of parks and green spaces. The Council worked with Natural Kirklees to create a project called Natural Kirklees – Green Spaces. As part of the project, the Council provides Natural Kirklees members with free insurance, access to tools and an online portal with a vast array of information. This enabled better peer to peer information exchange. The collaboration has helped to create initiatives such as imagination stations, other ways to walk cards and the woodland wellbeing trail.

Wakefield Council

Regeneration of Thornes Park Nursery

The former nursery in Thornes Park was once a vibrant and energetic hub where skilled, qualified and professional nurserymen produced plants of the highest quality. Unfortunately, the nursery closed a few years after the turn of the century. What was once a hive of activity and a center of excellence became desolate and isolated.

Over the last few years, Street Scene officers have worked with Wakefield Tree Wardens volunteers and the Family Services Day Opportunities Team on various activities that have breathed new life into the nursery. In 2016, a tree nursery was started to support community tree planting projects throughout the district. The project has restored around 135 park benches and helped manufacture habitat boxes for wildlife to nationally recognized standards. The rose garden adjacent to the nursery has been restored with free access to the public; local groups and schools are regularly given tours of the park. Last year, the partnership opened the Rose Garden Nursery Shop selling fruit and vegetables grown in the nursery. All income is re-invested into the project and the wider park.

Newcastle-under-Lyme Borough Council

Newcastle in Bloom - the economic power of the flower

The Council sought to cultivate and maintain an attractive town centre in the face of dwindling resources. To achieve this, the Council's Community Development team developed a network of businesses, residents, schools and partner organisations who worked together to create a vibrant, attractive and cared-for town centre. This in turn encouraged inward investment and visitor dwell time. The banner of "Britain in Bloom" was used to co-ordinate these efforts, and to provide recognition and celebration of achievements. A high-profile, jointly-funded public art programme on the town centre roundabouts was also launched and created a unique sense of place and legacy from the campaign. A Community Pledge scheme has also ensured continuing floral impact at key locations.

Hertsmere Borough Council

ParksHerts

The ParksHerts project originated from the Hertfordshire Association of Cultural Officers Parks Officers Group (HACO) recognising that there was a lack of consistent, accessible and good quality online information about the county's parks and open spaces. This is a particular challenge for a county such as Hertfordshire where park ownership is spread across administrative areas. Hertfordshire also faces challenges to address the levels of obesity and physical activity within the population. ParksHerts was developed by the Council to provide an innovative solution to these challenges. It's a mobile-first website providing a single information point for Hertfordshire's many parks and open spaces. The website also provides details of free to use parks and open spaces, highlights available routes (with step count for each) and provides information on events to promote health and wellbeing e.g. in park exercise classes and health walks. These activities also support emotional wellbeing by reducing social isolation. Owing to considerable interest from potential partners, the Council now has the opportunity to expand the site to include more non-district council partners with key sites across the county.

WINNER

Leicester City Council

Leicester Environmental Volunteers

Along with dwindling revenue budgets and an ever-increasing reduction of resources to look after Leicester's Parks and waterways, the Council's service also had a disjointed, low key volunteer engagement which was fragmented to a few sites. Parks Grounds Staff were able to deliver regular maintenance but had no capacity to deliver improvements and regeneration projects. Volunteer engagement was mostly with schools, colleges and universities and occasional group bookings through the Park Officers, with no dedicated team.

Following a review, the Council decided to create a dedicated community development team to centralize and standardize their delivery of volunteer engagement. Building on previous successes, the new team created "Park Force". Volunteers who had previously supported the Council were invited to sign up to the new scheme. As members, the volunteers would receive a monthly "What's On" bulletin from which they could choose the sessions they would like to engage in, book onto and attend. Activities were seasonally focused with pond improvements, coppicing and woodland thinning in the winter, path improvements in the summer and regular gardening and litter picking groups throughout the year.

When the service level agreement for conservation sites came to a close, it was decided to bring those activities

in-house and amalgamate them with Park Force. Initiatives such as the Flood Warden Scheme, Wild about Leicester and the already highly successful Royal Horticultural Society scheme "It's Your Neighbourhood" were amalgamated to form the Leicester Environmental Volunteers (LEV) scheme.

Leicester Environmental Volunteers currently have over 18 environmental volunteering projects that fall under 5 themes:

- Conservation volunteering
- Land-based volunteering
- Water-based volunteering
- Neighbourhood volunteering
- Partnership volunteering

LEV consists of many different volunteering groups. Via the LEV scheme, the Council engages with corporate companies, community and reparation groups, schools, colleges and universities. Through the LEV groups, the Council is now able to plan and deliver improvements across the City much more effectively.

In relation to water-based volunteering, LEV are involved in the infants swimming programme "Puddle Ducks". The Council also has a new narrowboat, the Kingfisher,

that safely conveys volunteers up and down the twelve miles of waterways throughout the City. The Kingfisher extracts fly tipping, floating debris and reduces invasive aquatic plants to support wildlife. Other water based opportunities include improvements to City ponds. Island Castaways for example, help to reduce bank erosion and maintain habitats on lake islands. Litter removal sessions are conducted on the river Soar tributaries to prevent rubbish entering the main watercourses, and the "Riverbank Crew" repairs water course bank erosion and makes improvements to tow paths.

Regarding land-based volunteering, regular gardening activities offer an opportunity for volunteers to improve their plant identification skills. These occur on several sites throughout the year. Volunteers take ownership and feed their ideas into improvement projects to enhance special secluded gardens within larger parks. With the LEV Botany Group, volunteers visit sites collecting plants that can be saved, cared for and then replanted on another site. Volunteers spend time in Leicester's greenhouses growing and tending plants. The Litter Legacy group also has regular volunteers who meet on Monday afternoons all around the City to target troublesome sites to help to keep litter under control.

Volunteers can also sign up to become "Street Champions",

regular lone volunteers who pick litter from their neighboring streets and report fly tipping and hazards. The Council advertises the Flood Warden scheme, supporting volunteers who provide regular information and help to their neighbours about imminent flood alerts who offer themselves as an emergency contact. Conservation tasks help to improve designated wildlife sites and corridors for the wildlife in addition to Leicester's parks, with tasks that follow the seasons. This ranges from coppicing and woodland thinning to creating dead hedges and removing self-set trees. The Council also offers horticultural work experience for adults through Job Centre Plus.

In terms of publicising Leicester's volunteer schemes, the Council promotes its volunteering groups on Facebook, Do-it, banners throughout the City, posters on parks and on the Council's mobile vehicle units.

The improvements speak for themselves; the benefits are felt by the wildlife, Leicester residents and visitors alike. Last year, the Council engaged with 5930 volunteers who kindly donated 58,000 volunteer hours. The Council now has over four hundred volunteers signed up to LEV. Volunteers receive increased personal confidence and life skills, social interaction and once they are a member, they can choose to engage as little or as much as they choose and experience all of the activities on offer across the City.



Waste and Street Scene Finalists

Ards and North Down Council

Food Waste Recycling Project

The Campaign involved banning food waste in landfill bins. A 3 sticker warning system was created with the aim of educating householders; a yellow, amber and red sticker system where bins are emptied (yellow/amber), a follow up letter to householder and house visit (amber) escalating to a red sticker (bin not emptied until the food waste is removed). The project also included the provision of liners and containers to householders. The project was accompanied by a major communication initiative. The initiative used a variety of channels: Facebook, direct mail, email and direct advertising. The Project has delivered an almost 30% reduction in residual waste with an additional 9000 tonnes of food waste diverted from landfill. It has increased the Council's recycling rate by 9%, ensured compliance with the Food Waste Regulations (NI) 2015 and the NILAS targets for the diversion of biodegradable waste from landfill. The project has also yielded significant financial savings.

London Borough of Redbridge

"Our Streets" Commission

The Council believed there had been a lack of effective community engagement over the quality of Redbridge streets. The "Our Streets" consultation was set up to give local residents a voice in shaping Council strategy. The consultation took a new approach to capture participants' suggestions and ideas. The process was led by five community representatives who met regularly to discuss their findings. The discussions were led by an independent facilitator which gave the opportunity for residents to speak their mind and provide constructive comments without being too critical. The commissioners then agreed recommendations for the Council to consider. This was presented in an easy-read report which was then later shared with participants and published online. The Council considered the recommendations provided a response via a directorate-level strategy called "Our Streets". The strategy involves increasing resources for volunteer led community garden forums, fly-tipping reduction measures, increased safe-street patrols and public area vegetable patches.

London Borough of Tower Hamlets Council

Smarter Environments Programme

Following a slew budget cuts, the Council's service was left depleted with fewer resources to combat the same demand. Instead of reducing services, the Council decided to use this as an opportunity to work smarter and utilize modern technology and innovative forward-thinking ideas. The first initiative was to launch a smartphone application 'Find it, Fix it, Love it; (FIFILI). The application allows residents to report any issues in the borough that would go straight to the Council's contractors to remedy. The council then launched a similar initiative that saw all public litter bins fitted with quick response (QR) codes. The Council encoded QR stickers to generate a text message. This was created so overfilled bins could quickly be reported by scanning the QR code, generating a free text message to our contractors. FIFILI and the QR code project introduced a great alternative to calling or emailing and opened a new channel of communication prompting residents that wouldn't normally report issues. After a period of 3 years in operation, the Council has saved £300,000. This has allowed for officer time to be better utilized.

WINNER

Wigan Council

The Wigan Deal - Deal For Your Street Experience

Austerity and public sector reform has forced the Council to seek new ways of working. "The Deal" is an informal agreement between the Council and residents, to work together to create a better borough. A key element of "The Deal" relates to re-thinking how the Council delivers environmental services, particularly in relation to the frontline staff.

The principles behind the "Deal for Your Street" (DFYS) focus on an asset based approach which builds on community capacity and empowers and enables communities to help themselves and take pride in the borough.

The key to the successful implementing of this innovate concept is to promote a new workforce culture, centred around "BeWigan" behaviours. This empowered the Council to work more creatively and imaginatively in partnership with residents and provide a safe, clean and green borough.

By developing a walk through DFYS Experience, the Council provided staff with the tools and confidence to engage with residents and business partners to be more involved in delivering their part of The Deal. The experience shows how staff and residents alike can become more involved, giving them the opportunity to enhance their local area and explore the digital and physical toolkits that will assist them to achieve this. The Council also wanted to ensure they got the best out of existing and new technologies to build self-reliance, ensure the right intervention at the right time and deliver value for money services.

The experience has been designed with the operational



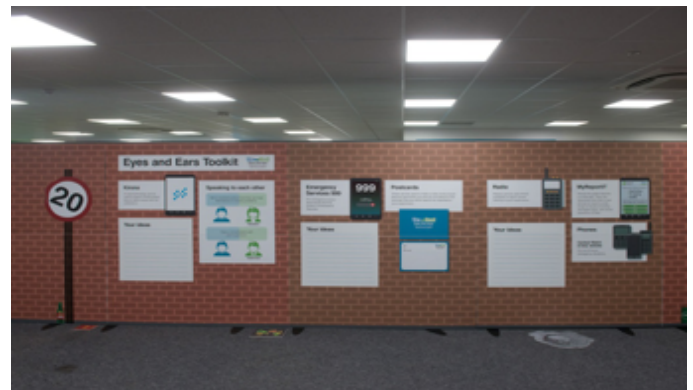
workforce in mind and is fully interactive. On a fictional street, "No Deal Street", attendees identify a range of issues that they may encounter on a day to day basis that have financial, social or physical impacts on resident's, employees or the Council. Attendees are then encouraged to identify options of how they can report problems, encourage residents to resolve issues by being more self-reliant or get the appropriate intervention where required.

As part of the experience, an "Eyes and Ears" reporting toolkit has been developed to reduce the costs and will speed up the process from initial report to resolution. This also gives employees the courage to anonymously report sensitive issues such as domestic abuse, child abuse and anti social behaviour. Such issues are then dealt with by a dedicated team to protect the most vulnerable residents of the borough.

A fictional "Ideal Street" is part of the experience and shows the community in future to be thriving and self-reliant. It is an aspirational element to the experience which encourages staff to work with residents and communities to achieve this. Staff are encouraged to identify ways in which the street has changed, such as using digital services, taking part in litter picks and volunteering in community groups ranging from flood wardens to recycling champions.

By promoting these groups and inspiring more volunteers, the impact on council resources will be reduced and will help keep council tax to a minimum in keeping with "The Deal" principles.

The Council has encouraged staff to volunteer and, for those who reside in the Borough, to champion the DFYS in their own communities and join or create volunteering groups. Volunteers are also celebrated during the experience by being recognized for "giving something back" on a stars-wall. Since the experience was launched over 400 frontline staff have attended. Over 95% of attendees have expressed positive feedback.



Outstanding Achievement Winner

Orkney Islands Council

The Council faces significant financial cuts in the coming years. By 2022 the revenue budget will have reduced by around 25% from what was a gross budget of approximately £90m. This has the potential to significantly disrupt the Council's frontline services, adversely impacting the Council's new capital investment in housing, education, marine, highways and waste management. This in turn will have an adverse impact on the construction and civil engineering sectors. Due to being an island environment Orkney is particularly vulnerable from cuts; it does not have the potential economies of scale of mainland Scotland.

The overall challenge is to meet a predicted £12m cut in available funding, inclusive of several steps to stop, reduce or change services. The ongoing strategy of traditional efficiency measures around cost reduction, future year's mitigation and piecemeal income generation are insufficient to meet demands with falling resources. The Council have a targeted approach to "sweat" their assets to the full, be they tourism sector or naturally occurring assets. This is "Service Redesign" but at a whole council level, cross-cutting the executive and political landscape and new cornerstones of their medium term financial strategy.

Applying greater commercial-awareness, whether it is in relation to cruise ships, quarrying, renewables, waste or attracting de-commissioning, is now fundamental to the Council's strategy.

The Council has a strong track record of investing in resources needed to make a pivotal change. Over the last three years the Council has seen "Harbour Dues" rise to multi-million surpluses against a corresponding 40% increase in trade. The Council has also seen aggregate manufacture rise from circa 65,000 tonnes to over 110,000 tonnes. On the back of these successes, the Council's senior management team and politicians, guided and supported by key officers, have chosen to take further proactive and innovative approaches with future strategic projects.

The Council is now focusing on four key strategic projects that that will help offset the cuts in central government funding. These four project strands consist of the;

- Development of a "scale" wind farm of circa 60 – 100mw.
- Development of a "Private Wire" local electricity network to reduce fuel oil dependency, initially in public buildings.
- Development of an "Integrated Waste Solution".
- Development of an Energy Supply/Services Company.

The projects are considered sustainable, profitable and will "stretch" performance to a new level, thus providing greater long-term prosperity for the Council and local community. The combined impact of delivering these projects will address a significant part of the £12m budget challenge, circa £5-7m p.a., the potential investment into the local construction sector could be as much as £100m over the development period of between 5 and 7 years.

Significant steps forward have been made politically to secure the funding for the development stages as well as buy-in from the local community though consultation in the Council's energy strategy work. More is planned as part of the next stages of detailed business case work. Key to this stage is the "telling" and "selling" of the positive outcome and benefits this will have for Orkney as a whole.

The Council is working in partnership with bodies such as SSE to strengthen their business case for energy supply (new export capacity), thereby providing greater export potential to support Scotland's energy demand/resilience issues. The knowledge that the Council is prepared to "self-develop" and underwrite its development is a "good bet" in terms of taking up perhaps 60-100mw of the business case needs of circa 200mw of new capacity by 2022 to 2025.

This is in many ways a typical "invest to save or invest to gain" solution, but different given the complexities and the risk profile associated with venturing into a typically commercial environment and at an "island scale". The Council is confident it has a workable solution, in part through support and work done by APSE Energy on the renewables aspects, and support from Zero Waste Scotland on an emerging integrated waste management solution. This solution will help develop the potential for

“circular economy” solutions with local SME’s; adding value to waste products before final processing.

This is a detailed and fundamental service redesign. It involves wrapping up and delivering a new approach to the Council’s revenue and capital pressures. The delivery of the strategic projects will support ongoing provision of essential “front line” services, provide direct support and financial contribution to local community priorities and support wider funding applications for local project initiatives. Orkney has, at present, a strong and growing economy/population, but its success is fragile.

A sustainable investment strategy, with a strategic use of borrowings and reserves, will see the local economy survive through austerity by safeguarding and creating jobs in the public and private sectors. It will also the help Orkney’s supply chain, be it commercial, retail, industrial or tourism sectors. This will provide a financially positive legacy for decades to come.

