

GRIDLINE

The magazine for landowners

Summer 2017



Coastline **crusaders**

Behind the scenes at a charity that has saved 140,000 lives in two centuries of dramatic rescues

Inside

Grantor on the roof: the man keeping history alive

Developing a man-made Natural Grid

The former dairy farm that's now pure theatre

nationalgrid

Some useful contact numbers

The Land & Business Support team are responsible for acquiring all rights and permissions from statutory authorities and landowners needed to install, operate and maintain National Grid's electricity and gas transmission networks. The group acts as the main interface for landowners with gas and electricity equipment installed on their land. Your local contacts are listed below.

ELECTRICITY AND GAS

» Land teams – all regions 0800 389 5113

WAYLEAVE PAYMENTS

» For information on wayleave payments, telephone the payments helpline on 0800 389 5113

EASEMENT ENQUIRIES

» Email box.electricityeasements@nationalgrid.com

CHANGE OF DETAILS

» To inform National Grid of changes in ownership or contact details, telephone 0800 389 5113 for electric and 01926 654844 for gas, or email grantorservices@nationalgrid.com

ELECTRICITY EMERGENCY

» Emergency calls to report pylon damage to National Grid can be made on 0800 404090. Note the tower's number – found just below the property plate – to help crews locate it

ELECTRIC AND MAGNETIC FIELDS

» For information on electric and magnetic fields, call the EMF information line on 08457 023270 (local call rate). Website: emfs.info

GAS EMERGENCY

» 0800 111 999

DIAL BEFORE YOU DIG

» Before carrying out any work in the vicinity of gas pipelines, overhead power lines or underground electric cables, you should contact Plant Protection on 0800 688588 so that searches can be made to determine the exact position of any National Grid assets

CUSTOMER COMMENTS

» Write to Land & Business Support, National Grid House, Warwick Technology Park, Gallows Hill, Warwick, Warwickshire CV34 6DA. Or email ld.customercomments@nationalgrid.com



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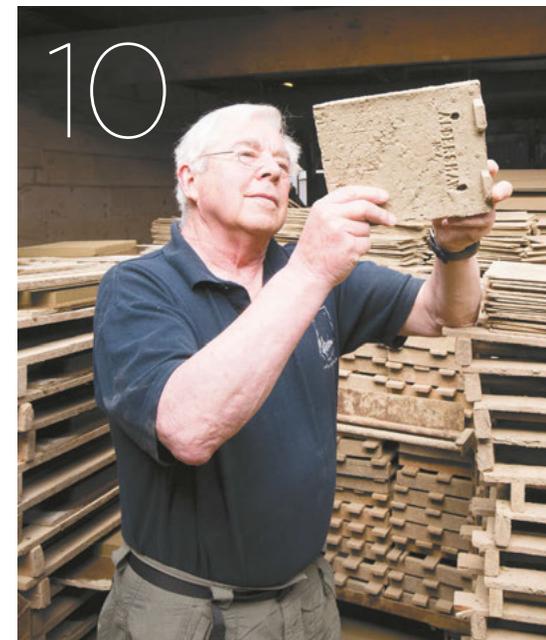
SONDER

Victoria Court, 8 Dormer Place,
Leamington Spa, Warwickshire
CV32 5AE



*Warwickshire Wildlife Trust team leader
Tim Precious maintains a canal bank near
a National Grid substation to encourage
endangered water voles to set up home*

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Welcome



As editor of a magazine that celebrates all things positive about our grantors and the rural economy,

it's good to know there are so many diverse environmental projects promoting sustainability and conservation in our communities.

By supporting the Natural Grid through partnerships and multi-agency projects as part of its Environmental Sustainability Strategy, National Grid is playing a tangible part in reconnecting the natural world that is otherwise at risk of being destroyed by urbanisation.

Small projects on National Grid land around the country will make a difference, which it's hoped will ultimately leave a powerful and lasting legacy for the environment.

Elsewhere in this edition, we were delighted when the Royal National Lifeboat Institution, an electricity grantor, agreed to let us inside their new headquarters to see where heroes are made.

We turned the spotlight on the team that train the thousands of lifeboat crew volunteers around the UK for a feature we hope will spawn a new wave of fundraisers – and even volunteers – among our readers.

Diversification is never far away from the thoughts of enterprising grantors, so Rachel Wallis and her glamping venture is another wonderful success story worth sharing and proof that sometimes, when you have a great idea you're passionate about, it's worth pursuing.

If you have a story like Rachel's, we'd love to hear from you, so please get in touch.

And in the meantime, enjoy the read.

Dawn McCarroll
Editor, Gridline

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ONE-MINUTE INTERVIEW

Arran Dixon, land officer north west and Scotland

BACKGROUND

I joined National Grid in 2016, having worked as a land agent for Berrys, a firm of chartered surveyors.



CURRENT FOCUS

Working on a fittings-only refurbishment near Capenhurst and preparing for a forthcoming maintenance works in North Wales.

MOST OVERUSED PHRASE

'Two minutes Turkish' - I quote Guy Ritchie films far too much!

LEISURE TIME I'm usually in the gym, game shooting or with a pint watching rugby union.

MOST SCARED OF Heights. You won't find me up a tower!

NOT MANY PEOPLE KNOW

In 1998, I won the under-11 British rapid play chess championships.

IDEAL DINNER GUEST

The original Top Gear trio - Clarkson, May and Hamster.

BEST ADVICE GIVEN TO ME

You miss 100% of the shots you never take.

LIFE PHILOSOPHY The man who thinks he can and the man who thinks he can't are both usually correct.

FILM YOU COULD WATCH

TIME AND AGAIN Top Gun - it's an absolute classic.

FAVOURITE HOLIDAY

Montenegro because it's not too touristy and has amazing landscapes.



Trusting in the natural world



One of National Grid's largest grantors will create thousands of acres of new natural habitat on its land to save endangered species such as cuckoos and water voles.

A total of 62,000 acres of new habitat will be created, including lowland meadows, woodlands, hedgerows and field margins, with the aim that half of all the National Trust's farmland is nature-friendly by 2025.

Species benefiting range from large blue butterflies to mountain hares, smooth snakes and bluebells, as well as birds such as lapwing, cuckoo and curlew. Many of the Trust's 1,500 tenant farms are already managed to deliver wildflower-rich, productive landscapes.

NEWSLINE

The latest news from National Grid and its landowner partners

High-wire act spreads the power

Linesmen have scaled the dizzying heights of two of the country's tallest pylons to replace equipment and keep power flowing across the River Severn to homes and businesses in the south-west, Wales and beyond.

The engineers climbed the 500ft towers on either side of the estuary to install new insulators on the arms, which carry the weight of the wires spanning the mile-long river crossing.

The previous insulators dated from 1969 when the towers were constructed over the estuary, one of the most exposed locations on the network.

The £550,000 project has involved a number of new tools and techniques, enabling work to be done quickly and safely and without disrupting electricity supplies.

Winches on top of the pylons were used to lift the insulators into the towers and move tools.

Guy Johnson, overhead line manager, said: "We used a 'ladder basket' to access

the insulators and wires, which is an innovative ladder with a basket attached to the rungs, allowing up to two engineers to work comfortably on them."





Tunnel vision

Engineers are celebrating a milestone in the North Sea Link project after breaking through a 2,000-metre-long tunnel at the site in Norway.

The work is part of a joint project by Statnett and National Grid to create a 720km electricity interconnector between Norway and Britain that will be the longest subsea interconnector in the world when it becomes operational in 2021.

Buried deep beneath a mountain, work on the tunnel in Norway started in early 2016, with the project team blasting their way through 10 metres of rock each day. Essential power cables will now be passed through the tunnel, connecting subsea cables from the North Sea to the converter site.

Charging ahead on fuel

Electric charging points at National Grid's Warwick HQ are constantly in use as more employees switch to electric vehicle (EV) technology, with the outlet charging stations seeing a 334% increase in use in a year. Six units installed by the supplier eVolt cover 12 parking bays at Warwick and can fully charge two EVs in around three to four hours.

Darren Watson, environmental operations advisor for National Grid's sustainability and climate change team, said: "The number of company car Plug-in Hybrid EVs (PHEVs) has risen from 177 to 375, along with an increase in the fully electric vehicles."

The project is in line with National Grid's Our Contribution environmental sustainability strategy and its focus on climate commitment and care for the natural environment.



Inbrief

WORK STARTS ON £50-MILLION POWER PROJECT

A line of pylons bringing power to the south-west is being refurbished between Exeter and Landulph. Originally built in the 1960s, the wires have approached the end of their working life. Engineers inspected more than 300 pylons on the 100km route and are replacing equipment as needed. The refurbishment, which follows a similar £30-million project in 2016 between Indian Queens and Landulph, is due for completion in October 2017.



RECEIVING THE ROYAL SEAL OF APPROVAL

Young people have shared their ideas for solving National Grid's office recycling challenges with the Prince of Wales.

National Grid worked on the project with the Ideas Foundation, a registered charity that aims to equip young people with the skills to work in creative industries. Students from four schools were asked to devise a marketing and communications campaign that would help encourage employees to recycle at National Grid's Warwick HQ.

Two pupils presented their concepts to the Prince, who has championed sustainability for many years.

Student Tommy Ash, from Oaklands College in St Albans, Hertfordshire, said: "It was a once-in-a-lifetime experience."

Rebecca Forster, senior sustainability advisor at National Grid, said: "It has been a great opportunity to harness young people's creativity to help find a sustainable solution to office waste, while providing them with new skills and career choices."

Saving lives at sea



THE life-saving TRAINERS

.....
JIM LEVACK MEETS THE ELITE TEAM HELPING
TO SAVE LIVES ON WATER NEAR YOU
.....



I'm in the coxswain's seat of a lifeboat, powering through 12-foot-high rolling waves and thick fog towards a blazing freight ship. Suddenly, the desperate waving arms of people bobbing like buoys in the sea hove into view.

Adrenaline courses through my veins as I struggle to maintain control of the 17-metre Severn class lifeboat as it veers perilously close to the drowning souls, their hopes of survival dependent on my mastery of the vessel.

We're just minutes in, but trainer Dave Riley (inset) has seen enough and calls an end to the exercise on the Royal National Lifeboat Institution's (RNLI) simulator; a piece of kit so realistic that I'm left swaying as I gingerly step back on to 'dry land'.

Normally, lifeboat crew spend around 90 minutes in the simulator, at the mercy of a controller who can add gale-force wind, rain, fire and sea foam to the virtual-reality experience.

"The coxswain and his team's every move, word and interaction are recorded by four cameras for analysis later in an adjoining debrief room," explained Dave, as I instantly regretted an inadvertent minor expletive uttered moments earlier.

This is just one part of the wealth of training run by the electricity grantor Institution, which has saved more than 140,000 lives since its foundation almost 200 years ago.



Saving lives at sea

“The simulator doesn’t recreate the sea but it gives crew a taste of what to expect and allows us to monitor their responses to stressful, rapidly developing situations,” said Dave, one of the 13-strong lifeboat training team at the training centre in Poole, opened by the Queen in 2004 as part of a facelift for the charity’s Dorset headquarters.

Since then, around 6,000 lifesavers a year from the UK’s 238 lifeboat stations have been put through their paces by the lifeboat team, who are supported by around 15 colleagues covering casualty care, machinery training, and launch and recovery.

“When they leave us, the lifeboat crew will be skilled in navigation, search and rescue, seamanship, first aid, radar and crew emergency survival. We then constantly top up their training by going out to the stations to assess and keep them up to date with techniques,” Dave said.

LASTING LEGACY

Like many of his colleagues, when not training, Dave is an unpaid volunteer crew member and a veteran of around 700 ‘shouts’ during his 20 years.

“Once the pager goes off, I know I have four minutes to be at the lifeboat station and around 10 to launch the boat. It’s an instant surge of adrenaline, and my friends and family know it’s just something I have to do,” he said.

Last year, volunteers like Dave saved 558 lives and launched 8,851 lifeboats, and rescued 23 people each day, statistics that heap pressure on a charity that spent £177 million last year on essentials.

Training is an intangible cost – no one can put a figure on the life of a loved one – that Dave says leaves a lasting and sustainable legacy at stations from Sennen Cove in Cornwall to Aith in the Shetlands.

The new training college helps ease the fundraising burden slightly as its hotel and conference facilities double as another revenue stream to help meet the annual £1,569 cost of training a crew member.

Volunteer community fundraising around the



SLIPWAY STATS



23

average number of people rescued each day

140,000

lives saved since launch



200

beaches where RNLI lifeguards operate

country is a crucial part of the jigsaw too, with 95% of the charity’s total income coming from generous donations and legacies.

The camaraderie and strong support network essential to keeping the RNLI going helps develop what the trainers affectionately call ‘the RNLI family’. This is immediately evident as a handful of trainers work seamlessly together in the centre’s state-of-the-art training pool.

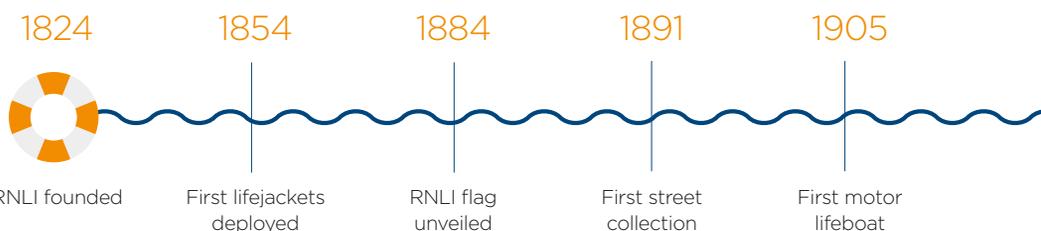
UNCOMFORTABLE

A life raft or inshore lifeboats – the 8.5-metre twin engine Atlantic 85 or the 5-metre D class lifeboat – can be winched into the pool as a wave machine creates giant breakers for the trainers to stretch the volunteers to the limit.

Dave said: “We can black the pool out, set up strobe lights to recreate lightning, in fact, pretty much anything they’ll come across on the water. In the pool, they will swim lengths in lifeboat kit, right life rafts and learn survival techniques. At the end of the scenario, we tend to keep them in the raft for about 20 minutes to experience how uncomfortable it could be. These conditions sometimes affect crew who, on occasions, have felt pretty seasick by the end of it.”

The Institution’s Saving Lives at Sea mission statement is clear, but trainer Nathan Jauns insists that’s not the reason why most lifeboat crew volunteer.

“I do the job because I enjoy being with a team of



people who are so willing to learn and the end result of that is we save lives,” he said.

“A lot of the time people come back to us with a crate of beer to say thank you. Cards with nice messages are lovely and all the reward we need.”

For all the successes, there are the occasional setbacks, and the men and increasing numbers of women who patrol our waters have to deal with both.

Dave said: “Even when the outcome is sad, we are still bringing someone home to their family and that is a huge comfort.”

More than 90% of current RNLI volunteers – from the team at the sharp end to shore helpers who assist with launches – are from non-maritime backgrounds, and around 360 of the 4,700 lifeboat crew are women, with an average starting age in their 30s.

Dave said: “The RNLI has come a long way since its launch, but we couldn’t monitor 19,000 miles of coastline without the help of the public, both in terms of funding and actual physical volunteering.”

“There really is something very unique about the British public’s attitude to us. Perhaps it’s down to the fact that we’re an island, but whatever it is, we’ll keep striving to save lives.”

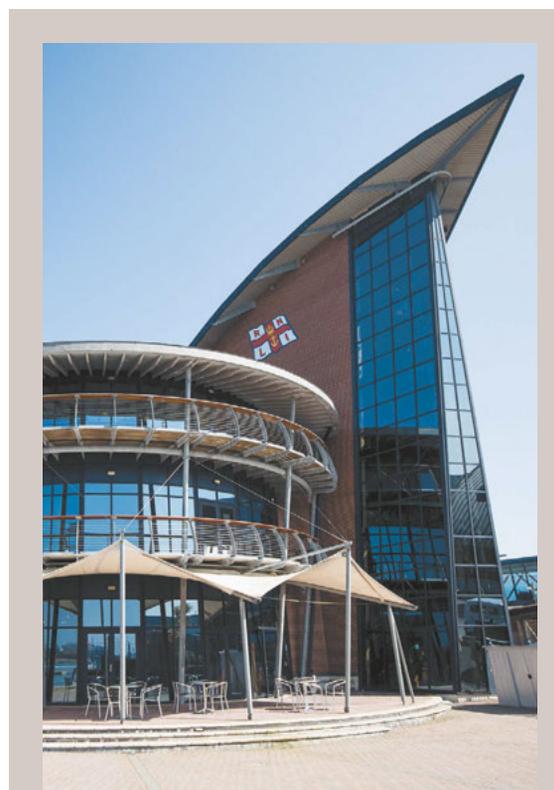
Clockwise from below: Three of the team practise righting a lifeboat in the training pool; some of the training team on standby; the lifeboat simulator prepares to leave the harbour



Find your nearest RNLI station and fundraising group at rnli.org/find-my-nearest

Become a volunteer – visit volunteering.rnli.org/vacancies.html

For general information go to rnli.org



SUSTAINABLE FUTURE

The RNLI is moving with the times to put sustainability and return on investment top of its priority list... after saving lives, of course.

The grantor, one of the largest employers in Poole, has just opened a £24-million All-weather Lifeboat Centre, which is set to save the charity £3 million each year.

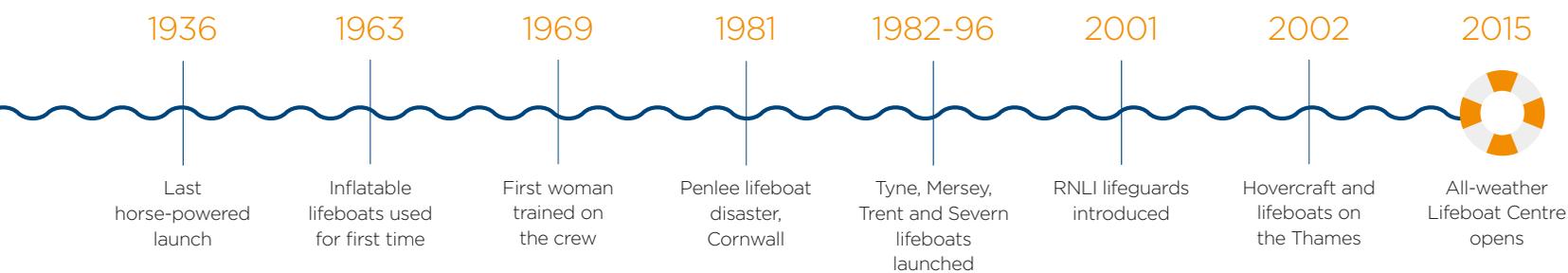
As well as creating nearly 100 new jobs and offering apprenticeships in marine engineering, the workshop has brought production and maintenance of the fleet in-house for the first time in the RNLI’s history.

“It opened last August and aims to build six new boats every year as part of our target to provide every all-weather station with a 25-knot boat by 2019,” said Dave.

The Centre features two boat halls with flexible bays for manufacturing and maintaining lifeboats, a parts-building area and a workshop dedicated to the inshore training fleet.



© Nathan Williams



A day on the tiles



THE
HERITAGE
HERO

.....

A GRANTOR IN THE 'MIDDLE OF NOWHERE' IS ENSURING BRITAIN AND THE WORLD'S BUILDINGS RETAIN THEIR ORIGINAL CHARM

.....





When Henry VIII's artisans built the half-timbered Queen's House at the Tower of London, they made it to last, lest the fiery monarch sought reprisals. The distinctive building, a gift for Anne Boleyn shortly before the king turned against her and ordered her execution, has stood the test of time – one of a few to survive the Great Fire of London, thanks to the Tower's stone walls.

It has had facelifts since 1530, but when a new roof was needed, there was only one man for the job. Step forward grantor Anthony Kindell, custodian of England's heritage.

The 72-year-old former mechanical engineer, who has owned and run Aldershaw Handmade Tiles in Sussex for the past 20 years, is the go-to expert when English Heritage and the National Trust require period renovation work.

A team of 10 create roof, wall and floor tiles – each one handmade – using the 500 tonnes of Wadhurst clay that's dug each year from his 33 acres of ancient woodland, just north of Hastings.

Some of the 8,000 tiles created every week have ended up on the roofs of the Real Tennis Court at Hampton Court and St James's Church in Piccadilly, and on the crypt floor in St Paul's Cathedral.

STATUS SYMBOL

The company is also one of only a handful that still makes sanded, rubbed and glazed mathematical tiles, which have been part of Britain's architectural heritage since the early 1700s. The tiles were laid on the exterior of timber-framed buildings as an alternative to bricks and were seen as a status symbol.

"Our tiles are used by conservationists and planners whenever the project calls for something genuine, but we also try to compete with one or two well-known companies on the high street," explained electricity grantor Anthony.

Architects working on a chateau in France, houses in Denmark, a Swedish palace and floors in the US have also called on the small business to supply them, but the modest owner insisted: "It's not the most profitable business, but we have a good reputation and I enjoy what I do."

So much so that Anthony was back in the factory overseeing the three-day process of turning wet clay into tiles within a week of being released from hospital following a stroke late last year.

"You have to just get on with it. My ambition is to get back out sailing and take a boat around the British coastline from Chichester," he said.



"Our tiles are used by conservationists and planners whenever the project calls for something genuine. We also try to compete with the high street"

Softly spoken and reticent, Anthony is reluctant to talk about a recent Sussex Heritage Trust Person of the Year award and has never taken a salary. "I enjoy it, I oversee all aspects of the production and packaging to meet delivery dates. Visitors are always welcome – with notice, as we have moving plant. If it has rained, wellies are essential!" he laughed.

The 150-million-year-old clay – dug twice a year from a carefully monitored clay pit – is the key to the firm's reputation. Its rich red-orange >>

A day on the tiles



colour and variations in texture are perfect for mixing with sand to create six different colours that match the hue of ancient buildings across the south-east.

Anthony said: “Once the clay is dug up, we crush and grind it and dry it. Then we add water and it’s formed by hand in a mould. In-between, we add sand to bring out the colour, so this is where each tile reflects the individual craftsmanship of its maker.

“Then we dry it and fire it to 1,050 degrees and it’s ready. The process

takes a few days from making, through drying to unloading the kiln. It’s fascinating as every tile comes up slightly different.”

AFTER THE KNACK... PRIDE

Elaine Knowles has been with Aldershaw for 31 years and counts hand-making an incredible 1,300 tiles in a day as her record. “There’s a real knack to it and you do feel pride when you drive past a property that’s got your tiles on it,” she said.

“Equally, it’s disappointing when you see people who have tried to cut corners on an old property because it just doesn’t look the same. It’s lovely to think that this small business in the middle of nowhere is ensuring we keep our old buildings looking like they should.”

Production manager Paul Willis keeps painstakingly detailed records of each row on each pallet that leaves the works to ensure customers have a minute trail of their order: “We have a capacity for 6,000 tiles a week, but some are special orders for heritage properties, so we have to make sure we have a trail,” he explained.

The bulk of the tiles created in this time-honoured way lie in the conservatories and kitchens of customers looking for a unique touch to their home, just like Henry VIII did all those years ago.

So next time you’re wandering round a stately home, castle or cathedral, just think... those tiles may have been made by Anthony in his workshop ‘in the middle of nowhere’.



(above) Experienced tilemaker Elaine passes on her knowledge to colleague Ryan Fielder; (left) Production manager Paul Willis has been handling the orders for 25 successful years

“I HATE CAMPING!”

GLAMPING GRANTOR RACHEL WALLIS
MAKES A SURPRISE ADMISSION

The woman behind one of the country’s most luxurious glamping sites has used her memories of damp midnight treks to the shower block as the motivation for a business venture that has silenced her doubters.

When the then 36-year-old Oxfordshire farmer’s daughter told regulars in the local pub she was building five eco-glamping lodges, the response was one of gentle scepticism.

Her family also warned her that the location, nestled in the rapeseed-carpeted Chiltern Hills in a largely forgotten hinterland between London and the Midlands, was hardly prime tourist country. But determined to diversify and forge her own path away from the 650-acre farm’s pig and agricultural business, she pressed ahead with the ambitious project, foregoing everything to make it work.

“The bank thought it was a good idea, but it was so tough at times. I was living on a really

tight budget. I was so passionate about making it work that I went without holidays. At times it was depressing, but the business had to come first,” she said.

WHERE THERE’S A WILL

Armed with that childhood unease at camping, she used local builders, wood and recycled materials to build the lodges as she would want them – camping in style, with wood-burning stoves, walk-in wet rooms, hot tubs, wifi and south-facing verandas with what she insists are ‘the best views in the world’.

A quick walk or cycle from Wallingford, home of Midsomer Murders and Agatha Christie, The Chilterns View lodges have been ranked ‘exceptional’ by one booking site and have featured in the Telegraph’s list of top 10 luxury glamping sites.

It’s environmentally friendly too, with each of the high-spec lodges cleverly camouflaged



in a freshly planted woodland and all the dirty water passing through a reed bed into a pond, which has led to the return of water voles for the first time in generations.

Rachel, whose brother still runs the electricity grantor farm, says that where there’s a will to diversify there’s a way.

“I left school with few qualifications, except art, and couldn’t use a computer, but you learn it,” she said.

“I have put money, time, effort, heart, mind and soul into this, so when you hear guests saying how much they’ve loved their stay, it makes it all worthwhile. When they return and share a glass of wine with me as the sun sets, I’m on cloud nine.”

Guests from as far afield as the States and South Africa have helped keep the rooms busy in summer and cosy winters. One couple tied the knot overlooking the lodges while others have enjoyed mini-moons, a short romantic break before their honeymoon proper.

SUPPORTING THOSE LOCALLY

Rachel is keen to support the local economy and offers guests a choice of pamper treatments, personal training programmes and even clay pigeon shooting as extras.

Now the locals are very supportive and the lodges are six years off beginning to pay their way, once Rachel has taken a small income.

But she does have one lingering regret: “When my father was alive, he never knew how much we loved the farm, but when he died I returned here and set up this business. I hope he’s looking down with a smile on his face now.”



The rolling rapeseed fields of south Oxfordshire are home to a great example of diversification



Find out more at
thechilternsview.co.uk
or call Rachel on 01491 836353/
07890 586038



NETWORKS FOR *nature*

WILDLIFE CAMPAIGNER HUGH WARWICK BELIEVES THAT MAN-MADE LINES IN THE LANDSCAPE CAN PLAY A HUGE ROLE IN RECONNECTING AN INCREASINGLY FRAGMENTED NATURAL WORLD

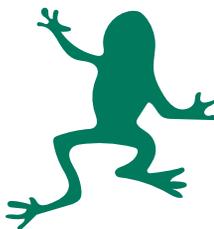
Conservationists have long used terms such as ‘making space for nature’, ‘wildlife corridors’ and ‘living landscapes’ to make the point that our vanishing natural world urgently needs more elbow room.

Now ecologist and writer Hugh Warwick has written a book about the ‘linescapes’ that man has drawn across the landscape and the far-reaching ecological consequences from the perspective of wildlife.

“I was struck by the paradox that the first lines, such as walls, hedges, ditches and dykes, created to enclose and separate are now the most effective means of connection for wildlife,” he said.

“In contrast, the lines carved out for connection, such as canals, railways and roads, are the agents of

IN NUMBERS



50

National Grid sites will have Sustainable Action Plans in place by 2020

fragmentation, cutting habitats into smaller and increasingly unviable pockets.”

While the focus is often on habitat loss, he argues that fragmentation may pose a greater danger as the remaining pockets of habitat become increasingly isolated and at risk of localised extinction through the loss of genetic diversity.

“Computer modelling now projects the minimum habitat that hedgehogs require is equivalent to the size of three 18-hole golf courses,” said Hugh.

Roads are the most formidable barrier to this essential connectivity, killing 100,000 of his beloved mammal each year in the process.

However, the situation isn’t clear-cut. For example, hedges boast an incredible richness of biodiversity but



can become sterile if neglected. On the other hand, Network Rail manages 300,000 acres of ‘soft estate’, including fenced-off track, that Hugh says can be an ‘unpeopled haven’ for wildlife.

Also, if managed sympathetically, using reduced mowing regimes, roadside verges provide rich wildflower habitats for pollinators, as well as cover for small mammals like dormice.

Hugh also cites the example of Danish scurvy grass – a brassica related to cabbage – that has hugged the coastline for 10,000 years but is now moving along the road network at a pace of 30km a year, thriving in the salty margins of verges.

NATURAL GRID APPROACH

Hugh admires National Grid’s ‘Natural Grid’ approach to creating bigger, better and more connected spaces for wildlife.

Working with partners including The Wildlife Trusts, the company is utilising the non-operational buffer zones around its 300 substations as natural ‘stepping stones’ for wildlife, with management plans focusing on habitat restoration and beneficial practices such as conservation grazing.

In some locations, National Grid is also managing vegetation close to power lines in a way that positively benefits the natural world, as well as safety.

Traditionally, woodland trees that ran parallel to power lines and infringed minimum safety clearances were cut back in straight lines.

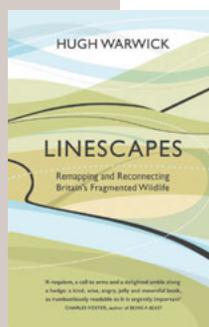
Where practical, power line corridors are being managed to resemble woodland open spaces or ‘rides’, creating a graduated woodland edge with habitat that is rich in food and shelter for wildlife. The increased



LINESCAPES - REMAPPING AND RECONNECTING BRITAIN'S FRAGMENTED WILDLIFE

Hugh’s book (right) examines the plight of wildlife and the role of nature corridors in its fight for survival.

A spokesman for the British Hedgehog Preservation Society, he has written two books about the mammals as well as being a media commentator on wildlife and the environment.



clearance from the wires may mean that sites need to be revisited less for vegetation clearance, bringing additional cost benefits to National Grid.

The company has also embraced the Natural Capital model to guide investment decision-making, based on the belief that the natural environment has a quantifiable financial value, derived from its contribution to clean air, clean water, flood resilience, and physical and mental wellbeing.

Looking to the future, Hugh is enthusiastic about the potential for our constantly evolving linescapes to be agents for what he calls ‘unfragmentation’.

Canals, once at the forefront of the industrial revolution, are now wonderful for wildlife. Might not roads offer a similar vision in the future?

Some of the necessary actions to reconnect nature are relatively small-scale, such as including green bridges or underpasses when new roads are built, or leaving CD-size hedgehog holes in garden fences.

Other solutions, such as the campaign by The Wildlife Trusts for a kilometre-wide ribbon of wildlife-rich habitat patches on either side of HS2, call for more ambitious thinking.

If connections are vital for wildlife, so too are those between humans and wildlife, according to Hugh. “We feel better, convalesce faster and learn more deeply when we have contact with nature,” he said.

He believes we will only save our wildlife if we place a sufficient value on it, quoting American biologist Stephen Jay Gould: ‘We will not fight to save what we do not love.’

“It’s time to take these lines back for good,” Hugh concluded.



Wildlife corridors



SAVING RATTY

National Grid is working with Warwickshire Wildlife Trust to create new habitat near its substation in Coventry for the endangered water vole – immortalised by the character of Ratty in Kenneth Grahame’s 1908 novel *The Wind in the Willows*.

The 30-acre site on the Oxford Canal served as a coal depot for Longford power station until it ceased operations in the late 1970s but is now part of a vital urban wildlife corridor, linking stranded populations of water voles.

“Water voles have declined nationally by 95% since 1930 and around eight years ago, it was feared they might become extinct in Warwickshire,” said Tim Precious, Trust team leader on the Water Vole Recovery Project.

“The population crashed as a result of predation by American mink, first released into the wild in the 1950s, and there has been habitat loss from the dredging of rivers, ditches and canals, and practices such as mowing to the edge of canal banks, which removes the grass cover they need.”

The aim of the project is to enhance the connectivity between watercourses in the region, such as the Oxford and Coventry Canals, the River Sowe and Wem Brook, so that water voles can disperse into a larger area.

Part of the £61,000 Heritage Lottery Grant funding is going towards training local volunteers in how to survey canals and rivers for the endangered species, and to identify key sites for habitat improvement.

“The land near our substation provides the Trust with a secure, much larger site than would normally be available on a towpath, with plenty of the lush

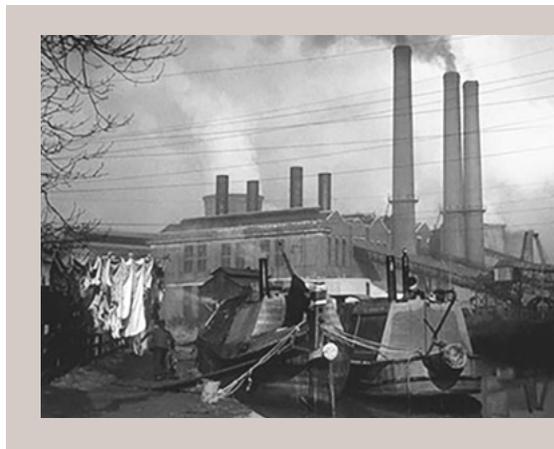
overgrown vegetation that water voles need for food and cover,” said Chris Plester, a sustainability advisor at National Grid.

In the past, the canal banks have been reinforced with concrete edging, presenting a barrier to the water voles exiting the water to forage, rest and build nests.

To combat this, wooden poles have been driven into the canal bed at several points along the bank, and three-metre-long coir rolls fixed in the space behind to provide a platform for the water voles to easily get out of the water.

The rolls are impregnated with wetland plant plugs, such as yellow flag iris, reed sweet grass, willow herb and sedges, while additional wildflower seeds and plugs are also being planted on the bank side.

“These plants are full of the sugars the voles need for energy,” said Tim. “They are not fussy eaters and will devour more than 200 species of plant.”



MIDLAND POWER HOUSE

The Oxford Canal was designed by James Brindley and opened in sections between 1774 and 1790 with the purpose of bringing coal from the Coventry coalfields to Oxford and the River Thames. The brooding outline of Longford power station, which served local industry, dominated the skyline near Hawkesbury Junction for half a century.



(above left) A new design of platform is being trialled in which coppiced hawthorn and willow brush provide a climbing frame for the water voles; (above middle) The coir (the hairy stuff on the outside of a coconut) soaks up and holds water, giving the plants' roots the wet environment that they need to thrive; (above right) Tim checks the coir rolls for signs of water vole activity

Willow, hawthorn and blackthorn have been coppiced to allow more light on to the canal bank to aid growing conditions, and some of the cut brash is now being used as a cost-effective alternative 'stepping stone' to coir platforms.

Regular monitoring, trapping and the humane dispatch of mink is another part of the solution to the plight of the water vole, and the Trust is also working closely with landowners and farmers to improve waterside habitats.

The erection of stock proof fencing to create waterside buffer zones along watercourses prevents cattle and sheep from damaging water vole habitat by grazing or poaching the ground.

The Trust is also asking land managers to carefully inspect overgrown ditches for signs of water vole activity before clearing them out, and to maintain areas of hedge and scrub, which are important sources of food and shelter from predators.

In the past four or five years, the water vole population has started to recover in north Warwickshire and the hope now is that colonies expand into other areas, such as the Tame Valley where they are currently extinct.

"Young water voles naturally disperse into the surrounding area, travelling up to 2km when they leave the nest in summer or autumn," Tim explained.

Meanwhile, the Warwickshire Wildlife Trust team are urging members of the public to contact them via their website if they see signs of water vole activity.

Tim said: "We are always on the lookout for more volunteers to help us ensure water voles don't do another disappearing act, so even if people have a spare afternoon or two, we'd be very grateful."



IT'S A FACT

- ▶ Water voles burrow into banks with their teeth to a depth of around five metres, living on multiple levels, some above the water and some below.
- ▶ They favour slow-moving water, like ditches and canals, that are not prone to water level rises.
- ▶ They are predominantly herbivores, able to consume 80% of their weight daily.
- ▶ Slightly smaller than rats, with bodies up to 9 inches in length, they have a chubby, round-faced appearance.
- ▶ Predators include mink, foxes, stoats, weasels, herons and, increasingly, cats.
- ▶ There are an estimated 875,000 water vole left in England and Wales.
- ▶ They are Britain's fastest-declining wild mammal and a UK Biodiversity Action Plan priority species.



TELL-'TAIL' SIGNS

- ▶ Look for little piles of plant stems with their ends cut off at 45 degrees - it's an unmistakable sign of water vole activity.
- ▶ Near nest sites there will be latrines, characterised by piles of droppings cylindrical in shape with blunt ends, resembling a large 'tic tac'.
- ▶ Burrow entrances in the bank are tennis-ball-size.
- ▶ A distinctive 'plop' can sometimes be heard when water voles enter the water.



Find out more about providing habitat for water voles at wildlifetrusts.org/water-vole-faq



Paula with a late Victorian bustle dress she designed and made herself, and the stunning green dress that appeared in Natalie Portman movie *The Other Boleyn Girl*, which she acquired for her costume hire business

DRESSED TO THRILL

PAULA CAIN COMBINES A PASSION FOR FASHION AND THE THEATRE IN HER WORK AS A COSTUME DESIGNER

The curtain rises, the actors enter stage left, and the audience is instantly transported to another place and time. It's a ritual that takes place in theatres up and down the country each week.

That we feel we know a lot about the characters before they even speak is largely down to the costumes, which provide a wealth of information about each character's social status, personality and mood.

"The costumes support the narrative of the play so, perhaps ironically, we've succeeded if the audience

doesn't notice our creations," said Paula Cain, a freelance costume designer, based near Chester.

She works from a studio at Sealand Farm, which she rents from a National Grid grantor. Part of a converted courtyard once used for dairy production, the premises are also now the location for her costume hire business, Chester Costume House. Paula launched her career 17 years ago when she made the dramatic shift from her previous job working for British Steel at Shotton.

"I was always fascinated by history, fabrics and the theatre, and costume design combined all three. My daughter was in a local youth theatre, so I started helping out and it snowballed from there. At the time, I couldn't even sew," she said.

Over the next few years, she qualified in custom pattern cutting, design and illustration, bespoke fitting and costume construction techniques, culminating in an Advanced Higher Diploma in Period Costume Construction and Costume Management.

Paula has worked in theatres throughout the north-west, creating costumes for a wide range of productions including Shakespearean plays, pantomimes, outdoor theatre and mystery plays.

"As a freelance, it's all about building up a network of contacts and having a proven track record," she said. "The work is largely seasonal, with the busiest time being the run-up to Christmas."



Having the creative talent is important, she says, but so too are excellent organisational and communication skills and the ability to work to tight budgets and schedules to keep the customer happy.

She is regularly asked to design and create period costumes for arts education and heritage workshops, with past commissions including replica 18th-century corsetry for a National Trust property in Middlesex and Anglo-Saxon wear for a museum in Rochdale.

In 2014, Paula supplied military uniforms worn by actors marking the centenary of the Great War at railway stations throughout the region.

FABRIC AND COLOUR

Paula prefers to make her costumes by draping and cutting fabrics directly on a mannequin, working like a sculptor until the desired shape is achieved.

At the time of Gridline's visit, she is busy making 30 costumes for a forthcoming outdoor production of Hamlet by Wirral-based Hillbark Players.

For smaller theatrical productions like this, Paula will often combine the roles of designing and making the costumes, and may also supervise the wardrobe department during the play as well.

"I particularly enjoy a hands-on role, working with the set designers, lighting, sound crew and the actors," she said.

When working for larger professional theatres, she typically collaborates closely with the theatre designer, who has overall responsibility for the set and costumes.

"I read the script and talk to the designer about their vision for the play, and then research costume styles appropriate to the date and setting using



ALL OCCASIONS

Paula designs and makes most of the costumes that she hires out. Her collection covers all eras and genres, and she also offers a bespoke costume-making service. As well as hiring to theatrical productions and private individuals, items go on loan to education and heritage services, and for video and photo shoots, TV and film.

They are also in demand for masquerade balls, murder mystery evenings, vintage tea dances and 1940s-themed events, such as the Pickering Wartime Weekend and the Goodwood Revival. Her creations are also showcased by models at photography training workshops organised by Welshot Imaging.

"Recently, I provided costumes for a Victorian market in Chester and a Moulin Rouge-themed charity event," she said. "Last year, a man even hired a medieval dress for his wife to wear on Christmas Day."

reference books and the internet," she explained.

The script determines the social, historical and cultural context of the production, the status or profession of the characters and the emotional journey they make during the play. The shape, cut and fit of the garment, as well as the choice of fabric and the colour, are all used to convey mood and personality.

COSTUME PLOT

"Modern interpretations using contemporary dress are very popular and they can be fun to design for," said Paula. "I've created costumes for a Macbeth set in post-apocalyptic Japan."

She draws up a costume plot, which details all of the characters in the play, noting the actors who play them, what costumes they need in each act or scene, and when any costume changes take place.

Her costume designs must also be sturdy enough to allow for physical movement and to withstand daily cleaning between performances.

About three weeks before the play starts, costume fittings are held for the actors, followed by a technical rehearsal or 'tech' in which the actors work through scene changes, entrances and exits. It's an opportunity to make sure the costumes work with the chosen lighting, hair and make-up arrangements.

What does Paula enjoy most? "Getting the initial design, doing the research and coming up with costume ideas, and then working out how the clothes can be made," she said.

"And it's a tremendous buzz when you see everyone's hard work and vision come together in the final production."



For more information go to chestercostumehouse.co.uk

LASTWORD



We love to celebrate National Grid grantors' diversity in Gridline, so if you'd like to feature, email gridline@nationalgrid.com

Your chance to enter two great competitions



WIN

GOURMET GETAWAY FOR TWO

Whisk yourself and a partner away for an evening of fine dining and comfort with a luxury one-night getaway.

Our winner will select the perfect location to enjoy a sumptuous three-course meal and breakfast at a four-star hotel. And with more than 200 one-night experiences around the UK to choose from, our competition caters for all tastes.

Tailor the trip to your own preferences, with hotels in the heart of cities, on the coast or in more rural country locations.

To be in with a chance of winning, simply answer the question below.

SAFER TOGETHER

Grantors took time to complete a short survey on the effectiveness of the annual letter process, with the feedback making sure safety information we send you is user-friendly, targeted and effective.

Gas grantors who responded were invited to join a focus group at a compressor site where insights were shared on accessing land, drainage and marker posts. It is expected to be the first of many stakeholder engagement days to improve how National Grid and grantors work together to ensure the network's safety.

Lloyd Southerill-Smith, asset protection manager, said: "We're committed to a successful working relationship with our grantors. Our first stakeholder day gave us valuable feedback on how we can improve our communications with you."

If you'd like to get involved, contact grantorservices@nationalgrid.com or visit talkingnetworkstx.com

Q How many miles of UK coastline does the RNLI patrol?

Email your answer, name and contact details to gridline@madebysonder.com or send to Sonder Gourmet Getaway competition, Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire CV32 5AE. Closing date 11 August 2017



IT'S A FACT

The first continuous 24-hour, coal-free period for Britain since the use of fossil fuel began in 1882 occurred on 21 April 2017

JUST FOR FUN: SUDOKU

Fill in the grid so that every row, every column and every 3x3 box contains the numbers 1 to 9.

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NOIUNOTOS

WIN



TURN YOUR SNAP INTO A £150 M&S SHOPPING SPREE

Proud grantor Mary Birnie may have to treat granddaughter Lyn Maree Smith after this shot of a buck roe deer took top spot in the latest Gridline 'summer's coming' photo competition.

Lyn, from Alford in Aberdeenshire, was visiting her grandparents in nearby Banchory when she spotted the deer in the rough.

For your chance to win a £150 M&S giftcard, send Gridline a high-resolution shot on the theme of 'a grantor's life is never dull' to gridline@madebysonder.com.

Closing date is 11 August 2017.

COMPETITION TERMS AND CONDITIONS GOURMET BREAK The winner will be the first entrant selected at random who correctly identifies the answer and who is a National Grid grantor at the time of the draw. The editor's decision is final and no correspondence will be entered into. Gridline reserves the right to change the prize without prior notice. The prize is not transferable and cannot be exchanged for cash. Closing date is 11 August 2017. PHOTO The winning image will be the one judged to be the most visually appealing, original and relevant to the theme and will feature in the next edition. The winner must be a National Grid grantor. The editor's decision is final and no correspondence will be entered into. Gridline reserves the right to change the prize without prior notice. The prize is not transferable and cannot be exchanged for cash. The closing date is 11 August 2017.