

nationalgrid

GRIDLINE

The magazine for landowners

Autumn 2016

Britain's **desert**

Weather-beaten boats and
rusting rail tracks mark the spot
for a major new power project

Inside

It takes 'allsorts':
keeping sweet-toothed
tradition alive

**Laser learning: are
you making the
most of your land?**

WIN a relaxing
two-night getaway



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 who have 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

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

Gridline is produced by

SONDER

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Leamington Spa, Warwickshire
CV32 5AE

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From May to November, grantor Richard Baugh's life is one long party, but it's strictly business now he's found a new sideline for his pig farm enterprise. The result is pure theatre



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Welcome



Our grantors are critical to the safe and secure supply of energy to homes and businesses around the UK.

The relationship National Grid has with grantors is something we treasure and constantly strive to improve upon, as new CEO John Pettigrew explains in an interview on page 9 and at gridline.nationalgrid.com

This autumn, in a project led by James Dean, land officer north-west & Scotland, we will be contacting grantors with underground electric cables on their land as part of a nationwide initiative to make sure we have correct land ownership details and to share essential safety information.

We operate 1,400km of underground electric cables in the UK, often in built-up urban areas where space is at a premium and in protected landscapes or sensitive habitats where they are sometimes chosen because of their reduced visual impact compared to overhead power lines.

It's vital our records are up to date so we can contact landowners and occupiers quickly when we need to

carry out maintenance or repair. We'll also be taking the opportunity to remind people about essential safety advice, and about the processes they should follow if considering any work in the vicinity of underground cables.

This edition is full of all the usual diversity our grantors bring, from a laser gaming centre to the UK's only commercially grown liquorice field.

Dawn

Dawn McCarroll
Editor, Gridline



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ONE-MINUTE INTERVIEW

Harriet Griffin, land officer east

BACKGROUND I joined National Grid as a land officer in January 2016. Previously, I worked for Yorkshire Water as a land and property graduate surveyor after graduating with a degree in rural property management from Harper Adams University, Shropshire.

CURRENT FOCUS Completing the land officer development programme over the next 18 months alongside my land officer role, currently focusing on tower maintenance schemes.

LEISURE INTERESTS Bikram yoga – it's much better than it sounds.

FILM YOU CAN WATCH TIME AND TIME AGAIN Bridget Jones, it's a classic.

FAVOURITE FICTIONAL HERO Harry Potter. Who wouldn't want magical powers?

HAPPINESS IS Walking my dogs, Lola and Coco, in the sun.

PET HATE Coriander. I can't stand it.

BEST BIT OF ADVICE YOU'VE BEEN GIVEN Everything happens for a reason.

NOT MANY PEOPLE KNOW I once appeared on The Apprentice, but as a customer, not a contestant!

FAVOURITE PHRASE A calm sea never made a skilful sailor.

FAVOURITE HOLIDAY DESTINATION Dubai. The sights, beaches and food are out of this world.

IDEAL DINNER GUEST The one and only David Beckham (Victoria could come too if she treated me to one of her bags!).

TOP OF BUCKET LIST To visit Renaissance Island, Aruba, and feed flamingos on the beach.



Safety and keeping in touch with grantors will remain the top priorities during the sale process



Find out more: visit www2.nationalgrid.com/UK/Safety/Dial-before-you-dig/

Business as usual

National Grid announced its intention to sell a majority stake in its Gas Distribution business last November. We've been working on separating the business ready for sale by starting to engage with buyers, with a view to completing a sale early in 2017.

Although ownership of the business is changing, there won't be changes for grantors or land owners. We remain committed to operating our pipelines safely and reliably, with minimum inconvenience to communities.

We will continue to provide updates on the sale in future issues and on completion, bringing you details about how best to contact us. In the meantime, please continue to contact us in the same way you currently do. If you are planning any work near gas pipelines, contact the Plant Protection team at least 14 days in advance. To contact us:

- complete an online request at beforeyoudig.nationalgrid.com to receive an initial response within minutes
- email plantprotection@nationalgrid.com – you will be sent an automated response to confirm receipt
- call Plant Protection for free on 0800 688 588 or write to National Grid Plant Protection, Brick Kiln Street, Hinckley, Leicestershire LE10 0NA. We will complete a risk assessment and provide you with a free map of our infrastructure, if appropriate.

NEWSLINE

The latest news from National Grid and its landowner partners

Of mice and men

Overhead power line corridors in Sheffield are set to double up as wildlife havens in an ambitious project to save threatened species.

National Grid is teaming up with Sheffield City Council to link isolated populations of great crested newts and harvest mice through focused habitat creation. A series of breeding ponds under the power line between Holbrook Marsh and Beighton Marsh will be created a few hundred metres apart. "Many land-based species face genetic isolation because of roads, development, inappropriate land management practices and unsuitable habitat," said Angus Hunter, the city council's biodiversity officer.



Chris Plester, National Grid environmental advisor, said: "The project is an example of our collaborative approach to managing power line corridors to create a natural grid of better and bigger habitats."

SMART ENERGY

A number of NHS hospitals are among energy-using companies and organisations that have signed up to a National Grid scheme where they receive payments in return for reducing the amount of power they draw from the grid at peak usage times. Demand Side Response should not just be seen as an emergency back-up crisis measure in cold winters but as a routine way of helping to balance supply and demand, says National Grid, which has launched an initiative called Power Responsive to encourage more companies to get involved.

For the full story visit gridline.nationalgrid.com



The 15 by 10-inch robot has a dolphin-nose design to reduce drag and friction

Robot makes the GRAID

The world's first robot, capable of inspecting the condition of previously inaccessible buried, high-pressure gas pipework, is being developed by a team at National Grid.

The Project GRAID (Gas Robotic Agile Inspection Device) solution will enable National Grid teams to look inside high-pressure installations for the first time since their construction; in some cases, dating back nearly 50 years.

Transmission gas pipelines are inspected using Pipeline Inspection Gauges (PIGs), which are propelled through the pipeline by the flow of gas, but they cannot negotiate the variable gas flows and complex pipework geometry of

high-pressure installations.

In partnership with Synotech, Premtech and Pipeline Integrity Engineers, the team have created a robot design that has been 3D printed and fitted with mechanical components for bench testing.

The current model has a rounded front profile, with a tapering tail section, which is inspired by nature – borrowing from the highly efficient body shape of the dolphin to reduce drag and friction, giving it greater agility in flow conditions. Further refinements will be made to the data collection capabilities and safety aspects of the design as the project progresses.

A more polished prototype is being assembled, with field trials due to begin in 2017, prior to the system being employed.

Building firm foundations

Strengthening work is taking place on an embankment of the River Mersey after soil erosion started to threaten the foundations of an electricity pylon, originally constructed in the 1960s.

Project engineer David Woodcock said: "These works are a precautionary measure to protect the pylon and the line from any future problems."

"A specialist marine and civil contractor is reprofiling the riverbank, installing 6,000 tonnes of rock armour to protect the foundations and provide safe access for future maintenance."

Surveys to understand how river currents were affecting soil erosion began three years ago, along with negotiations to gain planning and defence consents for the work.

Strict environmental controls have also been necessary due to the presence of Japanese knotweed and Himalayan balsam at the site.

To move machinery to the pylon, an access route was created using part of the Trans Pennine Trail, requiring the closure of a short section in Ashton-on-Mersey until October, during which time a diversion was put in place.



IT'S A FACT! £16 BILLION – THE SUM BEING INVESTED BY NATIONAL GRID OVER THE NEXT FIVE YEARS, TO 2021, TO ENSURE BRITAIN'S ENERGY SYSTEM IS FIT AND READY TO SUPPORT A LOW-CARBON ECONOMY

Ken Copley, a farmer for 60 years, still helps out with the labour-intensive side of harvesting the liquorice



LOVE IT OR LOATHE IT?

.....
EITHER WAY, ONE GRANTOR COUPLE IS DETERMINED TO MAKE A CENTURIES-OLD TREAT A FIRM FAVOURITE WITH YOUNG AND OLD ONCE AGAIN
.....

Take a wander around Rob and Heather Copleys' farm and you probably wouldn't give the unremarkable plants growing between the weeds in one small field a second glance.

Why would you? There's nothing that special about them to be honest, but dig a little deeper – a lot deeper in fact – and you'll find that this tiny quarter of an acre plot is totally unique.

That's because the slightly overgrown spot next to a track and a weather-beaten hut in the middle of West Yorkshire is, incredibly, home to the only commercially grown liquorice in the UK.

The crop's pioneering grantor owners, who farm

berries, rhubarb, asparagus, maize, lamb and beef, run the thriving Farmer Copleys venture on the edge of Pontefract, a town whose history is inexorably linked with the sweet root plant made famous by Bertie Bassett. Cluniac monks brought it back from its native Middle East after the Crusades in the 1500s for its medicinal qualities, and the de Lacy family, who built the town's castle, continued to grow it.

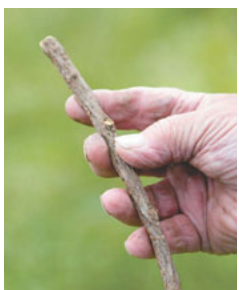
By 1900 there were 10 liquorice factories in the town, which flourished until the Americans arrived bearing chocolate in World War II. Now there are two.

Heather launched the farm shop from the side of her house 14 years ago 'for something to do when the children were little' and had a bell so she could dash from



the house when customers arrived. Today she oversees a burgeoning empire that turns over £2.2 million a year while remaining homely, with farm provenanced food at its heart... and with the taste of nostalgia at its core.

“Older visitors to the farm shop and Moo cafe always told lovely stories about how they used to buy the hardened root and chew it as a breath freshener when they were young, so it got us thinking about picking up the gauntlet,” said Heather.



Parents-of-two Heather and Rob, who describe themselves as ‘business people who happen to be farmers’, rather than the other way round, began researching and sourced cuttings from growers who still had ancestors of the town’s original plants.


Heather said: “Our first big harvest will be this autumn when we’ll take some of the roots and propagate them in our greenhouses before replanting them and extending the plot, hopefully, to a full acre.”


It would have been sooner but eight years ago, after they planted their first garth, a relative inadvertently dug it up as he cleared space for a car park outside the expanding shop.


Five years on – you have to be patient as the plant takes time to spread its roots 25 feet slowly through the deep, sandy soil – the extract from the first harvest of 100 plants is earning star billing in some of the mouthwatering liquorice and pork pies, sausages and, of course, Pontefract cakes, beautifully presented in the nearby farm shop.


To reach our plate or sweet bag, the macerated plant root is boiled to form a thick syrupy extract used to infuse other products or added to demerara sugar, flour and syrup and cooled until solid to make the black stuff


A FEW ALLSORTS


 When the Moonraker Bond baddie Jaws bit through a cable car cable it was in fact liquorice braided together.


 Louis XIVth’s doctor at Versailles said the ‘king should only use liquorice from Pontefract’ as the Spanish version was less medically effective.

 The main liquorice-producing nations are Turkey, Syria and the Lebanon.

 An acre of liquorice garth can produce four tonnes of harvested root every three years.

 TV chef Gary Rhodes visited Pontefract and created liquorice ripple ice cream.

 The first reference to the plant is in Royal Assyrian clay tablets from 7BC, but its first connection to Pontefract appears to be in 1500.

 It has been used as a treatment for a wide range of ailments including coughs, colds, asthma and stomach upsets.

Liquorice

Heather Copley's energy has turned the family farming venture into a major Pontefract tourist attraction



we love... or loathe. Visit Pontefract on a Wednesday – boiling day – and you can smell it.

Copleys Farm has applied to the EU to have the product safeguarded under a Protected Designation of Origin order, which will ensure the new-found revival remains exclusive to Pontefract long into the future.

But Heather readily admitted: "It's very much a Marmite kind of sweet. You either love it or hate it. Luckily, I love it, and if you've never tried it infused in bacon you haven't lived.

"Feedback from people in the area has been really positive and we've even had orders from abroad. Customers of all ages are enjoying its revival. It's a low-fat alternative to sugar, has pain-reducing qualities and is a healthy alternative to sweets, so mums like it for their children."

ASTOUNDED

Apart from the GI squaddies' intervention, its decline in popularity was accelerated because it's such a labour-intensive plant, takes years to grow and is, at Copleys, grown organically without pesticides, so weeds are a constant issue.

Ken Copley, a farmer for 60 years from a family that's been in the business for 140, still works the land with son Rob and has been astounded by the interest in the liquorice side of the business.

"The aim now is to make sure everybody around the



"Customers of all ages are enjoying its revival. It's a low-fat alternative to sugar, has pain reducing qualities and is a healthy alternative to sweets"

world knows about Pontefract and its sweet history," Ken said.

Tens of thousands of visitors flocked to July's annual Pontefract Liquorice Festival, where Farmer Copleys gave demonstrations of the plant's versatility and sold everything from stout to sausages and tea.

Heather said: "It's all go at the moment because we harvest in September, but a lot of our work away from actual farming is about educating schoolchildren and visitors of all ages about where their food comes from.

"If we can instil local community pride in something that was in danger of becoming forgotten, then we'll be protecting part of the nation's history, which is important. If we can play our small part, then that's great."



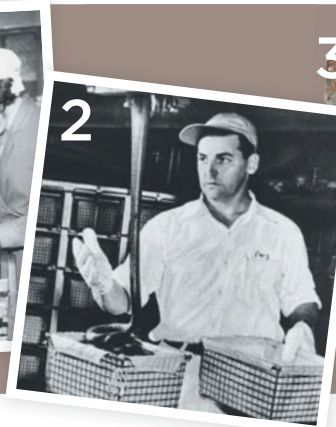
Visit farmercopleys.co.uk and see Pontefract Museum's liquorice picture gallery at wakefield.gov.uk/residents/events-and-culture/museums/museum-collections/liquorice

LIQUORICE FACTS

1 The Liquorice Allsorts production line at Wilkinson liquorice works. The women are checking the sweets for defects.

2 Liquorice being piped into trays at Wilkinson liquorice works.

3 Tin for confectionery made by J.H. Addingley & Sons. The business was founded in 1860 and closed in 1937 as chocolate's popularity grew.





THE RARE BREED CEO

.....
NATIONAL GRID'S NEW CEO REVEALS WHY THE GRANTOR-GRID RELATIONSHIP IS CRUCIAL TO THE FUTURE OF ENERGY IN THE UK
.....

The new CEO of National Grid is, by his own admission, something of an anomaly in the world of company bosses.

Rugby-loving Welshman John Pettigrew's rarity comes from working his way through the business after joining as a graduate in 1991, a year after privatisation.

After a quarter of a century in transmission, distribution, project management, the regions and heading up the US arm of the business, he understands well the importance of the grantor-grid relationship.

John (above left) said: "It's a two-way communication, which is critical to our daily business. We should always have three things in mind when we communicate with grantors: not to surprise them; to treat them with respect; and to talk openly and honestly with them."

The priority, he stresses, is in ensuring the 40,000 people who allow National Grid to span their land with cables and underground pipelines remain free from peril.



Call the Plant Protection line on 0800 688 588 for a free technician visit to establish safe distances for all works OR call the Grantor helpline on 0800 389 5113

"Our job is to protect our grantors and customers and build on the relationship we have with them to make sure they understand what is on their land and the implications of working on it. We want them to get home safe to their families each day," he said.

John concedes the relationship can become stretched by major projects and maintenance work but expects his teams to be constantly forging long-term relationships so grantors feel National Grid is their first port of call.

MISCONCEPTION

"Sometimes, people think we have a financial incentive to run a project or put a line through their land, but in reality, we get funded for what we do and not the solution we propose. We have to be honest with our messages to continue stressing that point," he said.

"It's a careful balance for us because we don't want to scare people but equally we want to make sure that if they need to work on their land, we will do everything we can to make sure they can do it as safely as possible."

"We offer a free service to grantors or their contractors planning to work beneath a power line or build something over a pipeline, so I'd urge grantors to use it. There's a misconception that if they tell us we will block them, but we will help them find a way.

"We recognise that they don't have to tell us but we are reliant on their goodwill. Quite often it can be difficult because we contact grantors when something needs to be done to the network and that can impinge on what they do. Communication is the key... and we have to plan and understand the implications of what we do on grantors."

John believes government could do more to spark a narrative about the energy infrastructure investment needed over the next decade: "When we go into communities and talk about the need to build overhead lines, it's the first people are hearing of it. More can be done nationally to articulate where we are.

"We do a good job telling people about major projects, which will always be emotive. There's more we can do to give people a longer term view of the wider horizon."

Read the full interview at gridline.nationalgrid.com

THE MEMORY MAKER

ENTREPRENEUR DAVID POINTIN BELIEVES HE HAS A QUICK FIX FOR GRANTORS SCRATCHING THEIR HEADS OVER HOW TO MAKE THE MOST OF 'DEAD SPACE'

David Pointin happily concedes he's a big kid with an even bigger zest for being outdoors.

Both attributes help a lot when you're trying to build a business that appeals to the child in every customer.

So far, he's doing a pretty decent job on a 50-acre swathe of mature woodland just south of Oxford, which features a heronry and beautiful bluebell sanctuary.

Dotted respectfully in-between are sizeable clues to the business he and wife Lisa set up just over a decade ago in the form of a huge RAF rescue helicopter, an armoured personnel carrier and a disused London bus.

When they launched their lasergaming business, they were the first to bring the concept of outdoor action, strategy and team gaming to the UK. For the uninitiated who think David's dreamscape is like indoor lasergaming with an infra-red zapper where players take several hits until the game's up, think again.

"Our mantra is very much 'you've played the game, now live it'. The game is as big as your imagination"



The props – the chopper alone cost a cool £15,000 – imaginative landscaping, sound effects and missions that test teams' strategic thinking, teamwork and planning have ensured thousands of children, adults and work colleagues have a new take on adventure gaming... and the countryside.

"We looked at video games and how they created a fantasy world and then tried to recreate that experience in real life. So our mantra is very much 'you've played the game, now live it'," said the 44-year-old sub-grantor.

Helicopter rotors, gunshot and the sound of jungle crickets add to the 'out-of-comfort-zone' feel, with David adding excitedly: "We can recreate anything here, so the game is as big as your imagination.



"Bottom line is we wanted to take something that had been traditionally done indoors and do it with a bigger horizon outdoors in the rain, mud, fresh air and beneath the trees with a maze, hazards and all that nature can offer."

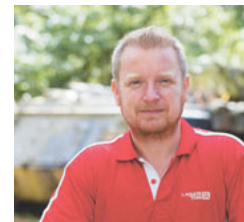
The husband and wife team worked closely with an Australian technology developer to find the right kind of phasers and laser 'flag' memory boxes, which now form the mainstay of the games.



Find out more: visit outdoorlaser.com or contact David direct at David.Pointin@yahoo.com



David (below) leaves the briefings to eldest son Kaine (above right), as teams try to get their strategy right



“There are no winners or losers and it’s not about being hit three times and then having to sit the game out. It’s about protecting your territory, trying to take the other team’s and working together to do it,” said the father-of-three.

“You can adapt the games and missions dependent on the audience, so for a corporate team, we tend to let them make mistakes and then have a debrief to show them how working better together could have made things easier. It’s interesting to see them work smarter afterwards.”

His Lasergaming Oxford company is gaining notoriety, with the Top Gear Live team, creators of the Call of Duty game and even Hollywood film gurus booking him for premieres and events.

He is wary of extending further into the woodland for the sake of it: “The countryside here is stunning and we’ve been careful to build high ropes, zip wires and freefall equipment to complement it.

“Before launch, we ran a major ecological survey, which we repeat each year, and the numbers of bird species in the heronry have actually grown.”

REVOLUTIONARY

David has a team of nine leaders, including son Kaine, who look after groups who come from across the UK to celebrate birthdays, weddings or more corporate team-building events.

He has now launched a new scheme he

believes will revolutionise the ‘dead land’ that’s traditionally the bane of landowners’ lives.

His Laser Tag in a Box product means grantors can hire all the equipment and a digital toolkit, which explains everything from missions to health and safety requirements, for £250 per weekend.

“The toolkit explains everything, so for a farmer who has the environment and can charge £20 a head, it can be a lucrative sideline,” said David, who insisted the recession has actually strengthened the business as people seek escapism.

It’s about more than money for David, who searched in vain for something ‘outdoorsy’ for Kaine when he was small: “I’m a big kid, so I love seeing them having fun, but it’s rewarding when you see people develop and know the skills they’ve learned are transferrable. When people leave us they always say how great the games are, but also how good it felt to be in the countryside.”

And when one of those people was the 12-year-old son of a terminally ill woman, who approached David asking him to give her son a birthday to remember, he insists he’s doing something right.



UPGRADE AHOY!

.....
ON A REMOTE HEADLAND, DESCRIBED AS BRITAIN'S ONLY DESERT
AND ONE OF THE MOST PRECIOUS SHINGLE HABITATS IN EUROPE,
ESSENTIAL REFURBISHMENT IS TAKING PLACE ON THE OVERHEAD
POWER LINE THAT TRANSPORTS VITAL ENERGY ACROSS THE REGION
.....

Utting three miles into the English Channel at Britain's most south-easterly point, the 12-square-mile headland of Dungeness is a desolate and surreal place.

On the foreshore, beneath the huge skies and distant horizons of this eerily flat landscape, lie abandoned fishing boats and wooden houses.

Despite the presence at Dungeness of gravel extraction pits, an airport, army firing range and a nuclear power station, nature has survived and thrived.

The headland is a designated National Nature Reserve, Special Protection Area, Special Area of Conservation and Site of Special Scientific Interest (SSSI), with the largest area of vegetated shingle in Europe. The habitat is home to 600 types of plant (a third of all those in Britain) and a variety of rare bees, moths, beetles and spiders.

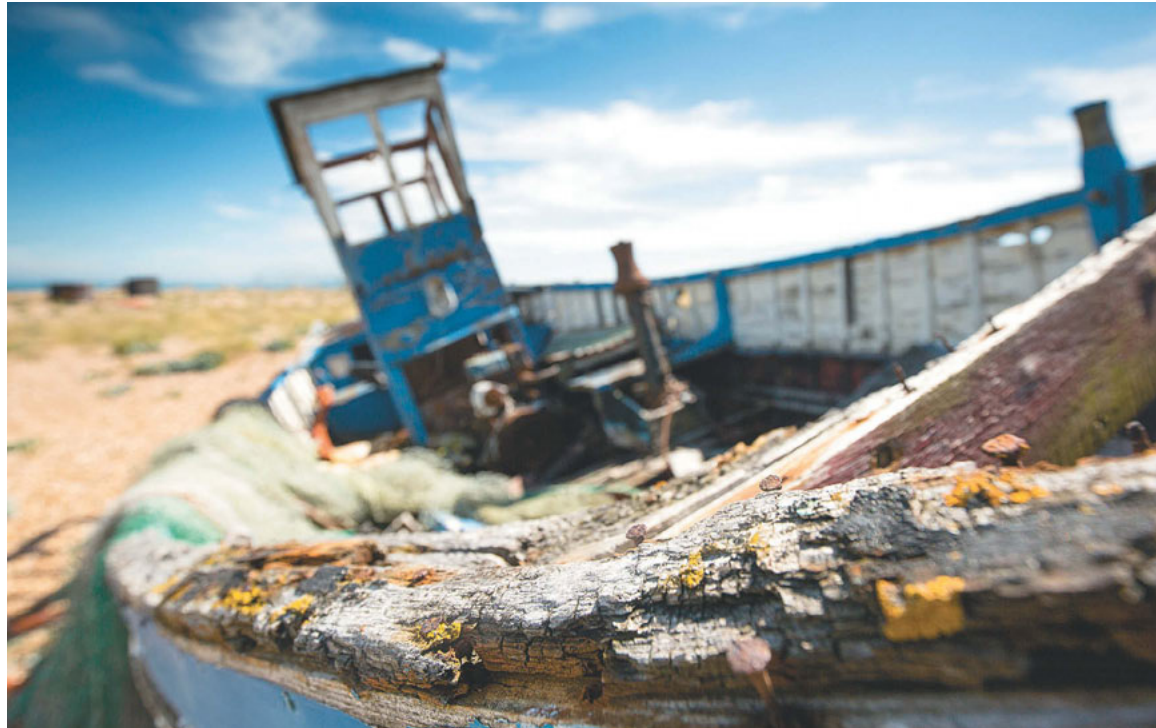
Dungeness nuclear power station has supplied low-carbon energy to the grid for nearly half a century and the 25km-long 400kV overhead power line that connects it with Sellindge substation is being refurbished.

The line is part of the transmission network that runs from the Greater Thames Estuary, along the North Kent Plain and on towards Sussex and the south-east.

Refurbishment on the 85 towers by contractor Balfour Beatty is taking place in two power outages between March and November this year. As well as new conductors and insulators, sections of steel are being replaced and towers repainted.

A new 400kV substation is also being built alongside the substation at Sellindge, providing extra capacity for the transmission system and supporting new power generation in the area. The Sellindge site already hosts the converter station for the existing 2000MW IFA1 interconnector with France, which this year marks its 30th anniversary.

A separate driver for the refurbishment is to reinforce the network ahead of the proposed 1000MW NEMO Link interconnector with Belgium at Richborough, in Kent. Interconnectors are vital for energy security, meeting demand, while managing intermittent supply from renewable energy sources such as wind or solar.



Rotting wooden fishing boats, long since abandoned, provide a new home for lichen



Graham Livings, National Grid project engineer

More than 240 people, including 90 linesmen and a host of other specialists, have worked on the refurbishment, which is necessary to ensure safe and reliable energy supplies into the future.

On this project, the line's new conductors have been pulled into place using the old wires.

Raising the replacements from the ground would be far more disruptive and would risk damaging them.

In March 2015, contractor Balfour Beatty began looking at site-specific factors, such as how best to access individual towers and complete the works efficiently and in total safety.

The safety of the public and our workforce is key and to make sure they are protected from the work above, scaffolding with protective nets has been used at busy road and rail crossings.

Where scaffolding would cause too much disruption, other options are road and footpath closures or a catenary support system (CSS).

This has allowed safety cables and machinery to be suspended between towers to prevent the loss of the conductor in the unlikely event of failure during installation.

CSS has been deployed where the route crosses a rail track used by the busy HS1 services between St Pancras in London and the Channel Tunnel, as well as a Network Rail service, a minor road and a 132,000-volt local distribution electricity line.

"More than 240 people, including 90 linesmen and a host of other specialists, have worked on the refurbishment"



Precious habitats



Alison Williams, land officer south-east

I started contacting the 55 grantors on the route in March 2015 to agree access routes to towers, as well as requirements for scaffolding and working areas.

As a land officer in the area for 12 years, I already had a good working relationship with many of them.

Early engagement with landowners enables both parties to understand the impacts on affected land, with a view to minimising disruption.

Much of the route crosses the low-lying Romney Marsh, where the land is devoted to arable crops like potatoes or wheat, or set to pasture for cattle or sheep.

A landscape feature here is the drainage ditches, locally called 'sewers', and as part of the consultation process, we liaised with the Internal Drainage Board.

The MOD is the single largest grantor on the line, having 22 towers on the 3,000-acre Lydd Ranges.

During the project we checked that we had accurate records about the owners and occupiers of land so we could contact them about essential maintenance.

The job isn't finished until grantors are happy with the way we have left their land and that all agreed reinstatement has been carried out to their satisfaction.

"The job isn't finished until grantors are happy with the way we have left their land"

DUNGENESS FACT FILE

- The abundance of nectar-producing flowers supports more species of bumblebee than in any other UK location.
- Avant-garde painter and film-maker Derek Jarman made his home here in his final years before his death in 1994.
- Five lighthouses have been built – each one replaced as tonnes of new shingle stranded them inland.
- In the 15th century, owners living on low-lying areas in Romney Marsh paid a tax called a 'scot' to fund drainage works. Those on higher ground, however, got away 'scot-free'.
- The world's first submarine oil pipelines were laid from here to France as part of Operation Pluto to support the 1944 D-Day landings.

Rail tracks and rusting winches, which once hauled fishermen's catches to the roadside, litter the foreshore





"To avoid disturbing the shingle, we used a temporary trackway, made of a lightweight hard plastic, to access affected towers"



David Smith, Middlemarch Environmental

Our company, owned by the Warwickshire Wildlife Trust, is advising the team on ecology aspects of the project.

About a third of the entire route lies in a SSSI. Our first task in June last year was to verify the findings of previous baseline ecological assessments about the presence of protected and notable species.

One of our key priorities has been to ensure two rare types of lichen habitat at Dungeness are protected. Crustose lichen, which colonises undisturbed bare shingle, is visible as a black crust on the upper side of pebbles, while Cladonia heath lichen grows in low bushy clumps and is grey/green in colour.

To avoid disturbing the shingle, we used a temporary trackway, made of a lightweight hard plastic, to access affected towers, which had a special reflective surface to protect the lichen from excessive heat build-up.



In consultation with Natural England, trackway use was limited to five weeks for crustose lichen and three weeks in the case of Cladonia heath.

We also successfully trialled a new kind of sledge for the tractors and the winch points needed for restringing, which are anchored to the ground to prevent slippage and damage to the shingle.



Christine Evans, Copper Consultancy

We are carrying out the community relations role for National Grid. Our priority is to establish good relations with local people and community representatives, raising awareness of why the work is necessary and how it will be done.

Letters and project leaflets were sent out to 546 properties along the route. We also kept people up to date about road or footpath closures in conjunction with road signage to indicate diversions.

In June 2015 we gave a presentation to Lydd Town Council, attended by councillors, residents and the local media, setting out how environmental specialists would ensure the works had no long-term impact.

Local people were reassured that a traffic management plan was in place for construction vehicles, and as part of their induction process, all field operatives were also reminded to use only agreed access routes and parking areas.

We met affected parish councils, and team members visited two local primary schools to deliver Mad Science shows and workshops promoting STEM (science, technology, engineering and maths) subjects.



POWER TO THE PEOPLE

- Dungeness B, which began operations in 1983, generates enough electricity to power 1.5 million homes. Dungeness A, which came online in 1965, is currently being decommissioned.
- The UK's 16 nuclear reactors at 9 plants generate about 21% of its electricity.
- Nuclear plants help meet climate change targets as they operate on a closed loop cooling system and don't emit carbon emissions when they burn fuel, unlike coal or gas.
- There are proposals to install 18 gigawatts of new nuclear at 6 sites: delivering 30% of our electricity in the 2030s.

"Our priority is to establish good relations with local people and community representatives"

THE PIG ATTRACTION

GRANTOR RICHARD BAUGH PRODUCES PORK FOR AWARD-WINNING LOCAL BUTCHERS AND CHEFS, AND HAS DIVERSIFIED WITH A HOG ROAST BUSINESS

In this day and age, people are more and more concerned about the meat they eat, what kind of life the animal had and whether additives contribute to the look or taste.

So it is reassuring to know that pork from Woodside Farm, on the outskirts of the pretty Nottinghamshire village of Wellow, is fully traceable and produced to high welfare standards.

"All our pigs are bred and reared here by us, which means that we are there for every stage of the process," said third-generation pig farmer Richard Baugh, whose farm is certified and inspected under the terms of its membership of the Red Tractor farm quality assurance scheme.

Richard runs the 250-acre farm with his father Andy and stockman Jamie, who has been with them for 15 years.


"The provenance of sourcing from a small family farm is important to our customers, who want to know that the animals have lived and eaten well, and been cared for by people who value their welfare," said Richard.

"It takes a bit longer to raise pigs in this way, but that care is reflected in the quality and fantastic flavours of the meat."

The Baughs work closely with award-winning Nottingham butcher Johnny Pusztai, who ensures a perfect cut and



"All our pigs are bred and reared here by us, which means that we are there for every stage of the process"



preparation for the locally sourced meat. As well as the farm's fresh meat, Johnny sells delicious smoked and cured produce from his premises, Johnny Pusztai at JT Beedham & Sons, in Sherwood, and supplies hotels and restaurants.

Back in 2007, top local chef Sat Bains used Johnny's air-dried meat in a ham dish that was awarded three perfect 10 scores on BBC's Great British Menu.

"Johnny orders from us every week and says he wouldn't go anywhere else," said Richard. "He typically will contact us on a Monday and order five or six different weights of pig, but also sometimes comes over here in person to make a selection, or to show clients round."

Another customer is Hartland Pies in Cotgrave, famous for their Melton Mowbray pies. The farm's meat can also be ordered online.

FAST TURNOVER

The Baughs grow and mill 50% of their wheat and barley feed requirement on-site, buying in the remainder from neighbouring farms, and produce all their own straw for the pigs' bedding.

"Soya sourced from Brazil is added for extra protein, as well as an energy-rich biscuit meal – a by-product of the biscuit industry – and fish oil," said Richard.

The breeding herd is based on 120 Large White/Landrace sows crossed with Pietrain boars by means of artificial insemination.

The dry (pregnant) sows are kept on an outdoor site about a mile from the farmhouse where the sandy soil is more suitable for keeping pigs, and they can root and forage, cool in the wallows and behave naturally.

Ten days before they are due to give birth, the sows are moved into straw-bedded farrowing

IT'S A FACT

- Pigs are highly intelligent and inquisitive animals that can outperform dogs in many tests. They can even be taught to push a joystick with their snouts – something that chimps struggle with.
- A pig's squeal can reach up to 115 decibels, which is higher than a supersonic aircraft.
- Contrary to their image of being dirty animals, pigs are very particular, being the only farm animal to make a separate sleeping den away from the latrine area.
- Winston Churchill said: "I am fond of pigs. Dogs look up to us. Cats look down on us. Pigs treat us as equals."
- There are an estimated 10,000 pig farms in the UK, with more than 90% of production coming from around 1,600 assured farms.
- Czech immigrants Jan and Vlasta Dalibor chose pigs for their 1960s hit TV puppet show Pinky and Perky because the animals are a symbol of good luck in their native country.

The pregnant sows are moved into straw-bedded farrowing arcs 10 days before the due date



The sows have litters of 10 piglets, on average (right). The piglets stay with their mothers for 28 days



For more information go to: bofshogs.co.uk



and no growth promoters or antibiotics given. Every effort is made to avoid unnecessary interventions with the pigs.

This sensitive management means the pigs are not stressed or aggressive, making practices such as tail-docking (to reduce tail-biting) and tooth-clipping unnecessary.

Richard is always on the lookout to make improvements. For example, he has begun replacing the converted blue oil barrels used for drinking with a system based on nipple feeders from raised tanks, which provides a cleaner supply of water.

HIGH QUALITY

The family is very happy to show interested visitors round the farm, including children from local schools. "We're very proud of what we do here," Richard said.

Many British pig farmers have gone out of business, unable to compete against lower-welfare cheap pork from Europe, where there is an over-supply situation. The Baughs, however, remain committed to producing high-quality home-grown pork, which appeals to discerning customers who care about where their food comes from.

And to diversify and generate additional income, Richard also runs a hog roast catering business, capitalising on the popularity of street food, traditional markets and barbecues.

Richard calls himself Bofs Hogs because his surname is pronounced that way, and it reminds people of Boss Hog, a character in the Dukes of Hazzard TV series.

"I run the business in partnership with Johnny, who has his own hog roast service and who trained me up and provided the equipment," said Richard. "I tend to focus on the north of the county, but we cross-promote each other on our banners at events, which works well."

He offers hog roasts from May through to November, taking in around 18-20 events, including weddings, private parties, local ploughing matches and music festivals, within a 40-mile radius of the farm.

"Hog roasts are cost-effective for wedding receptions, with an 80kg pig feeding up to 250 people," he said.

People love the theatre of roasting a whole pig, seeing the carving process, the smoke, smells and sounds of the meat crackling on the spit. The pigs are slow-roasted for 12 hours to bring out the flavours, with Richard starting cooking the night before.

Earlier this summer, the farm hosted an episode of Don't Tell the Bride, the hit TV show in which the groom must choose every detail of the wedding, from venue to wedding cake.

"The bride was allegedly sentimental about pigs, so the groom secretly planned the ceremony to be in a pig field," chuckled Richard.

"Predictably, nothing went to plan. There was a huge thunderstorm on the day of the wedding, and an attempt on a world-record pig parade was a complete fiasco. I don't think the bride particularly enjoyed her big day."

arcs in a separate field to nest. The piglets are weaned from their mothers at 28 days and then go into an outside 'cosy kennel' in groups of around 50, with a shelter and outdoor run.

"The gestation period for sows is three months, three weeks and three days, and within five days the sows are on heat and ready to be served again," said Richard. "For a pig farm to be viable, there has to be a fast turnover, and the aim is for each pig to have 2.5 litters a year."

SENSITIVE MANAGEMENT

At 8-10 weeks, now weighing about 35kg, the piglets are brought back to a straw yard at the main farm with plenty of natural light, air and space to exercise. Here they spend three months in the growing/finishing process prior to slaughter at around 4-5 months.

Oral medicine is administered just once to the piglets

HEART OF THE COMMUNITY

National Grid – making a difference

Yew bet we care!



National Grid volunteers who normally work on major construction projects have been branching out to protect a public park's historic yew avenue.

Roots of the ancient trees in Derby's Markeaton Park are in danger of being trampled by thousands of visitors, so big-hearted volunteers from the company have been helping to create a new log-lined path, which steers walkers away from the yews – helping to preserve them for future generations.

Clearing overgrown areas,

mulching shrub beds and putting in new plants will put the finishing touches to the new-look area, part of a £3.4-million restoration project to transform the park.

The event is part of National Grid's community volunteering programme, which encourages staff to use existing skills – or learn new ones – to support worthwhile community causes.

Mumta Ladwa of National Grid said: "We're delighted to be making such a popular park even more accessible for Derby residents and visitors."

Power to the people

Communities across London are to benefit from safer and longer-lasting pipelines as part of a £1-billion project.

A new gas pipe under the River Thames is being constructed by National Grid in an essential gas mains replacement project in the capital.

The pipeline between Chelsea and Battersea will involve installing new equipment in the grounds of the Royal Hospital Chelsea and Battersea Park.

The majority of the work will be underground, with only a small kiosk and a three-metre-tall pipe being built and visible above ground level.

DURABLE

Several temporary construction compounds will also be set up in the grounds of the Royal Hospital Chelsea and in the north-east



The grounds of Chelsea's Royal Hospital will house new equipment

corner of Battersea Park.

Subject to agreement, the work will be undertaken in two stages: from September 2016 to March 2017 and from September 2017 to March 2018.

During the essential works, 1,800 miles of metal gas mains under London will be replaced

and upgraded with safer and more durable pipes.

Andrew Hejdner, National Grid's project manager, said: "Our work will help make sure local homes and businesses keep on enjoying safe and reliable energy supplies to help support the capital's growth."

Grant helps youngsters find their feet

National Grid has donated more than £4,000 to a charity to help provide volunteer mentoring for young people aged between 9 and 19.

The Lifespace charity offers support to children suffering from anxiety, bullying, self-harm, eating disorders or family problems.

It needed £4,200 to train 12 new mentors and National Grid stepped up to the plate. Training consisted of an initial three-day course, followed by ongoing specialist sessions and regular supervision.

Lifespace involves volunteers mentoring young people one-to-one for between four months and a year, and helps reduce the distress some children experience, building their resilience and ability to cope with difficulties and enabling them to achieve more in school.

The pupils are chosen from primary and secondary schools across South Warwickshire.

"In 2015, Lifespace was presented with the Queen's Award for Voluntary Service for the outstanding work of its mentors, so National Grid was delighted to support this excellent organisation," said Stephen Murray, head of National Grid's west area network.

"The new mentors trained by the grant will allow Lifespace to work with six new primary schools, helping the community's young and vulnerable members to get a good start in life."

LASTWORD



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PHOTO GOLD: KATE'S SUNSET SHOT
LANDS HER £150 IN SHOP VOUCHERS



WIN A £150 SPREE

We get so many great pictures that we're using our new website to show them all off.

Visit the site at gridline.nationalgrid.com to see if yours is there. Once you've done that, grab your camera and take a shot on the

theme of 'a moment in time', then send it in high resolution to gridline@madebysonder.com and £150 in M&S vouchers could be winging their way to you. The closing date for entries is 18 November 2016.

Grantor Kate Kitto captured the romance of an English sunset as she wandered through the fields near her home with her two daughters.

The girls were heading home beneath the overhead power lines when they started to try to catch the sun and mum reached for her camera.

Kate said: "We get some great sunsets in Cornwall and this was a perfect opportunity for a selfie with a twist. It's a lovely surprise to win."

The shopping vouchers are heading to Liskeard where, no doubt, Kate will face some demands for appearance money from her two subjects.

View more pictures at gridline.nationalgrid.com

WIN!

A RELAXING TWO-NIGHT GETAWAY

Whisper it, but Christmas is on the horizon, so if you need to recharge your batteries before the mayhem, answer the question below to be in with a chance of taking your pick from one of 200 weekend getaways around the UK, from picturesque countryside retreats to vibrant city breaks.

Ruth Girdham, from Retford in Nottinghamshire, and Susan Barnes from Penistone in Sheffield each won a relaxing one-night break in the last edition.

Susan said: "What a lovely surprise. I almost didn't open your email as I never usually win things like this. I'm very glad I did."



How many liquorice factories were there in Pontefract by 1900?

Email your answer, name and contact details to gridline@madebysonder.com or send to Sonder Gridline Luxury Break competition, Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire CV32 5AE. Closing date is 18 November 2016.



The correct answer to last edition's question – What's the address of Gridline magazine's new sister website? – is gridline.nationalgrid.com



DON'T FORGET TO VISIT THE WEBSITE FOR MORE EXCLUSIVE NEWS AND FEATURES AT GRIDLINE.NATIONALGRID.COM

COMPETITION TERMS AND CONDITIONS WEEKEND BREAK The winner will be the first entrant selected at random who correctly identifies the answer (to be featured in the next edition) 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 18 November 2016. **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 18 November 2016.

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