

Gridline

nationalgrid
THE POWER OF ACTION

Autumn 2010

Living the high life

The job of an overhead linesman

OUR ENERGY FUTURE

by National Grid's CEO Steve Holliday

GREEN FOR LIFE

National Grid's environmental centres

SHOWING OFF

The grantor with a passion for pigeons

GRAPE expectations

The Kent grantor putting the fizz into English wine



PLUS: PROJECT ROUND-UP, POND IMPROVEMENTS, WIN SIX BOTTLES OF FIZZ

Welcome to Gridline



Welcome to the new-look Autumn issue of Gridline.

Gridline went straight to the top for the feature on page 8 and asked Steve Holliday, National Grid's chief executive, to provide an overview of the challenges facing the UK as it strives to meet energy

security and climate change targets.

A significant element of National Grid's role will be to connect new sources of renewable energy such as wind farms and nuclear power stations to the grid. On page 12, Gridline profiles the work of the linesmen who erect and maintain overhead power lines and learns how safety is a key priority at every stage of the job.

Then it's back to the energy theme on page 14, with a feature on National Grid's environmental education centres and the role they play in teaching youngsters about the importance of reducing carbon footprint, conserving scarce resources and protecting threatened biodiversity.

Steve Holliday has gone on record to say that the dramatic improvements in energy efficiency that are needed will only come with a change of mindset on the part of the public – and where better to start than with the very young.

But climate change hasn't been bad news for everyone. Turn to page 16 to find out how an electricity grantor – the English Wines Group – has been picking up international awards for the quality of its sparkling wine grown from vineyards in south-east England.

Finally, if you win the photo competition on page 20 you will be able to sample some of the wine yourself. Good luck!

Editor, Gridline



16

National Grid's Land and Development Group

The Land and Development Group is 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

- North-west and Scotland **0161 776 0706**
- South-east **01268 642 091**
- South-west **01452 316 059**
- East **0113 290 8235**.

Wayleave payments

- For information on wayleave payments, telephone the payments helpline on **0800 389 5113**.

Electricity emergency

- Emergency calls to report pylon damage to National Grid can be made on **0800 404 090**. 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 023 270** (local call rate). Website: www.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 688 588** so that searches can be made to determine the exact position of any National Grid assets.



Contents

News

- 04 New TV series on National Grid
- 05 A warning about the danger of crop protection sheets
- 06 Environment Agency thanks gas project team for pond improvement

Features

SPECIAL FOCUS

08-11 National Grid's CEO Steve Holliday outlines the steps necessary to meet the UK's future energy needs

SAFETY

12-13 How the job of an overhead linesman has been transformed over the last 30 years – with safety a major focus

ENVIRONMENT

14-15 The work of National Grid's environmental education centres

PROFILE

16-18 The Kent grantor at the heart of the English wine success story

Competition page

20 Enter our competitions to win a case of Chapel Down sparkling wine and a £150 Jessops gift card

Get in touch

Please contact us if:

- You have any news that you think would be of interest to other grantors
- You think your business or hobby would make a good article
- You have any suggestions for topics you would like to see covered in Gridline.

Gridline is produced by Summersault Communications, 23-25 Waterloo Place, Warwick Street, Leamington Spa, Warwickshire CV32 5LA.

To contact Gridline, phone 01926 656 325, email gridline@uk.ngrid.com or write to the address above.

19



Turn to page 20 for the results of last issue's photo competition.

ESSEX GRANTOR IS CAMERA COMPETITION WINNER

Congratulations to retired farmer and electricity grantor John Kidman of Romans Farm near Chelmsford, who is the winner of the Sony Cyber-shot digital camera competition in the last issue of Gridline.

"I've always been interested in photography but all my cameras date from the 1930s, so they're rather bulky.

"My wife and I are joining some friends on a 10-day motorbike trip through France into northern Spain in October, so it will be great to have a compact digital camera to record the journey."



14



08



12

For more information

Tel: 01926 656 325

email: gridline@summersault.co.uk

www.nationalgrid.co.uk

Newsline

The latest news from **National Grid** and its nationwide grantor network



SECURING THE FUTURE: Today electricity is available at the flick of a switch – but it wasn't always the case

TV series explores the world of electricity

WHEN THE FIRST TOWERS FOR the national grid went up in 1928 they were regarded with a mix of shock and admiration – but 80 years later a future without electricity seems unthinkable.

A new TV series starting in October on BBC Four – *The Secret Life of the National Grid* – provides a fascinating history of Britain through the ‘wires’. The producer Gaby Hornsby has previously been responsible for the highly acclaimed *The Secret Life of the Motorway* and *The Secret Life of the Airport*.

Across three parts, the series ranges from the challenges of designing an ‘aesthetically-pleasing’ tower in the 1920s, to managing TV pick-ups today, via protests and the

electricity-fuelled consumer boom of the 50s and 60s.

“Besides being a social history of how the grid came into being, the series is an entertaining look at how Britain got used to living with it, and the ways in which it changed us,” said Gaby.

The series also looks at the impact of electricity in a busy neonatal unit and examines how electric lifts took away the need to climb stairs – and in the process transformed the urban skyline.

Look out for grantor Bob Pearson recalling the teams of horses employed when a tower was erected on his farm in Perthshire, Scotland during the 1930s, and a bird’s eye view of life as an overhead linesman.

“ a social history of how the grid came into being... and the ways in which it changed us ”

Look up, look out

THE POTENTIAL HAZARD OF crop-protection sheeting blowing on to high-voltage conductors, was highlighted in a recent incident in Lincolnshire.

“We had to switch out both circuits of a 400kV power line after a member of the public reported a 10-square metre section of fleece caught up in the conductors,” said Tony Holmes, overhead line delivery engineer for the north-east.

The sheeting had detached itself from a farmer’s field where it had been protecting cabbages from frost over the winter.

“There was an added danger of workers being electrocuted trying to secure the remaining sheeting if a sudden gust had lifted a section into the live conductors,” added Tony.

Remember

- Secure sheeting well and monitor its condition
- Report any incidents immediately – it’s never a wasted call if it prevents an accident
- Sheeting in contact with power lines will conduct electricity



Capping carbon

NATIONAL GRID IS part of a consortium of ScottishPower and Shell selected by the government to participate in a final bid process for a Carbon Capture and Storage (CCS) demonstration project.

The front-end engineering and design contract, awarded in March, will enable engineers from the consortium to plan what could be the world’s first commercial scale CCS

scheme to be fitted to a coal-fired plant.

The 11-month study is looking at what is involved in the capture of CO₂ from ScottishPower’s Longannet power station in Scotland, and its transportation hundreds of miles along existing National Grid pipelines for storage in the Golden Eye depleted gas field, operated by Shell.

CCS will be key in meeting the UK’s CO₂ emissions reduction target of 80 per cent by 2050.

For more information...

i on Carbon Capture and Storage (CCS) go to www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/ccs/ccs.aspx

News
from the
US



SUPPORT FOR YOUNG PEOPLE

National Grid has donated \$750,000 to City Year’s ‘Whole School, Whole Child’ programme in which young people work as tutors, mentors and role models in schools, to improve student attendance and behaviour.

POWERING UP WITH SOLAR

National Grid has installed the first utility-owned solar system in Massachusetts with more than 4,600 solar panels located on the roof of its New England Distribution Centre in Whitinsville. The 1MW facility will provide enough electricity to power nearly 200 homes, and prevent the release of around 1.3 million pounds (lbs) of carbon dioxide into the air.

HELP FOR HOSPITALS

National Grid will provide technical assistance and up to \$10 million funding for energy-efficiency initiatives in New York state hospitals. The aim is to cut energy costs by 20 per cent.



One minute interview

Charlie Webber, consents officer north-west and Scotland

Background: I joined National Grid in March 2009, having been a planning manager for Redrow Homes in Yorkshire.

Current focus: Sellafield and Heysham nuclear connection projects.

Family matters: I live in Marple, near Stockport. I’m married and have two small children – a very bossy two-year-old girl and a very chilled three-month-old boy.

Dream job: International talent scout for Manchester United!

CD in the car: Across the Universe by Justice, the French electronic-house music masters.

Not a lot of people know that... After leaving school I lived in a Nepal village for 12 months teaching English very badly.

Favourite film: Ferris Bueller’s Day Off – for the Ferrari-off-the-cliff scene.

What would be your first purchase if you won the National Lottery? It would have to be an original stormtrooper outfit.



TRANSFORMATION: Nigel (left) and Philip with the improved pond near the Paull Above Ground Installation

Still waters run deep

The construction of a gas pipeline in East Yorkshire has provided the opportunity to improve a local wildlife pond

THE ENVIRONMENT AGENCY HAS commended a National Grid team building a new gas pipeline from the import terminal at Easington to Paull, for its sensitive handling of works in a wildlife conservation area.

Close to the Above Ground Installation (AGI) at Paull, the new pipeline had to pass under an 18-inch pipeline transporting condensate (a by-product of gas processing) to BP's Saltend chemical works.

"The land has a high water table because it was once part of the River Humber, and so dewatering operations were necessary before the tunnel-boring machine could begin excavations," said Philip Knipe, National Grid's project manager.

Environmental impacts were considered at the outset. "The works border the 80-hectare Paull Holme Strays reserve, an intertidal area of salt marsh and mudflats that supports a variety of waders and wildfowl," said Nigel Taylor, lands officer (surveyor) east.

"The reserve was created by the

Environment Agency as a 'managed realignment scheme' to compensate for other habitats lost by flooding or the construction of sea defences."

A key priority was to maintain water levels in a large pond owned by the Environment Agency during the dewatering operations. Water levels were continuously monitored and regular water quality testing carried out.

"On one side of the crossing, we encountered brackish (salty) water, which we pumped over the flood defence into the estuary," said Philip. "On the other side, the groundwater was fresh, so with the agreement of the Environment Agency, we discharged it directly into the pond."

Peter Stevenson, a team leader at the Environment Agency said: "The pro-active approach to protecting the environment by National Grid was highly effective."

"The fresh water reduced the salinity of the pond and resulted in a significant improvement in its habitat value."

“
The pro-active approach
to protecting the
environment by National
Grid was highly effective
”

Project watch

A round-up of recently completed, current and forthcoming projects around the country

EASINGTON TO PAULL GAS PIPELINE PROJECT

WHEN: Construction: April-July 2010 (for commissioning late September)

WHY: A new 24km stretch of 48-inch gas pipeline has been constructed from Easington gas import terminal on the East Yorkshire coast to Paull on the River Humber.

WHAT: The new gas pipeline will help to manage the increased volume of gas entering Easington terminal, via the Langeled subsea pipeline from Norway. The pipeline also reinforces the north/south supply of gas from East Yorkshire into Lincolnshire and beyond.

WHAT: Trenchless excavation techniques were used to construct the pipeline beneath two major drainage channels near Keyingham and Winestead, as well as 16 roads and numerous ditches.

STOKE BARDOLPH 400KV/132KV SUBSTATION

WHEN: March 2011

WHY: National Grid is building a new 400kV substation and 132kV substation (jointly with Central Networks) at Stoke Bardolph in the East Midlands. The facility will be built on 42 acres of arable land, close to a sewage treatment works operated by Severn Trent Water. The project will provide a new connection to the high-voltage grid and help to maintain the security of electricity supplies to Nottingham and surrounding areas.

WHAT: National Grid has liaised with the Environment Agency on mitigation measures to address potential flood risk issues from the nearby River Trent, as well as soil contamination arising from 100 years of sewage sludge disposal at the site. Extensive landscaping will also be carried out, resulting in new wildlife habitats, which will be managed by a local nature reserve.

RAINHILL TO FIDDLERS FERRY OVERHEAD LINE REFURBISHMENT

WHEN: July-Sept 2010

WHY: A fittings-only refurbishment has been carried out on the 31 towers that comprise this 8km 400kV overhead power line on the outskirts of Liverpool in Merseyside.

WHAT: The route crosses a mix of agricultural land and urban areas. Specific measures were taken for one tower on land occupied by a herd of alpacas. Access was arranged through a neighbouring field and bio-security measures (disinfectant washes for vehicles and footwear) were enforced to prevent any potential transmission of animal diseases.


A connecting section of 11km overhead line between Kirby and Rainhill was completed in July. Special trackways, which provide extra ground protection, were used to gain access to four towers on a golf course.

LITTLEBROOK TO LAKESIDE TEE UPGRADE SCHEME

WHEN: March-October 2010

WHY: The overhead power line between Littlebrook substation and Lakeside Tee is being refurbished and uprated from 275kV to 400kV. The works are part of a major reinforcement in the Thames Estuary to enable connections with new generation from offshore wind farms and the BritNed Interconnector with the Netherlands.

WHAT: After running from Littlebrook substation under the Thames via a cable tunnel, the circuit connects to a new substation at West Thurrock and on to Lakeside, where it will tee into an existing 400kV line to Tilbury substation in the east. The Lakeside to Barking route to the west will be similarly upgraded by 2014.

A stylized map of Europe is shown against a dark background. The United Kingdom is highlighted in a bright orange color, while the rest of the continent is rendered in a blue, starry or pixelated style. The background features a dark, silhouetted landscape with trees and a bright light source, possibly the sun or moon, creating a lens flare effect.

IT'S A FACT
National Grid signed
more than 22GW of
agreements to connect
new generation
(including renewables)
to the transmission
system last year

It's 2020.

North Sea reserves are depleted and the UK is dependent on gas imports.

Meanwhile, a number of fossil fuel and ageing nuclear power plants have closed, the population has soared to 70 million and climate change targets are starting to bite.

As this potential scenario approaches, how is National Grid planning to secure the future of UK energy?

THE NEED TO DELIVER SECURE SUPPLIES OF clean energy at affordable prices, and to meet stringent climate change targets, is driving a huge shift towards a low carbon economy and renewable energy.

“The race for clean energy is about to become one of the defining economic trends of the 21st century,” said Steve Holliday, National Grid’s chief executive.

A third of the UK’s existing electricity generation needs replacing over the next 10-15 years. Fossil fuel power stations are ageing, and with North Sea reserves in decline, additional investment is needed to reduce an increasing dependency on unreliable gas imports.

The UK also faces an unprecedented challenge of reducing carbon emissions to combat global warming. The EU has set targets for a 20 per cent reduction in greenhouse gas emissions and to source 20 per cent of total energy from renewables by 2020.

The Climate Change Act commits Britain to one of the most ambitious short-term targets of any country – a 34 per cent cut in emissions by 2020 and an 80 per cent reduction by 2050.

Population meanwhile is expected to hit 77 million by 2050, and the number of households will have risen to 35 million – a 40 per cent increase.

So can the UK hit the targets by 2050 and still keep the lights on? “We think the answer is yes,” said Steve. “But it’s going to be very challenging and will need a range of carbon abatement measures, as well as a sense of urgency and a joined-up effort that is lacking today.

“The energy mix of the future will require a wide range of solutions rather than a single answer. Diversity in electricity generation is key to security of supply. And it’s clear we will all have to become a lot more energy efficient, and the energy we do use will have to be much less carbon intensive.

“Electricity generation accounts for around 32 per cent of greenhouse gas emissions, but any road map for the future must consider how heat (41 per cent) and transport (25 per cent) can contribute.” (See page 11.)

National Grid forecasts that average household demand must also reduce by an estimated 15 per cent by 2030 and 25 per cent by 2050 to hit targets.



VISION: National Grid's CEO Steve Holliday believes that energy challenges can be overcome

Energy efficiency is one of the most cost-effective ways of delivering carbon reductions, as well as energy security.

But National Grid's CEO believes that a decade of central policy implementation may be required to incentivise and empower people to use less energy. More energy-efficient appliances, new building regulations and standards will play a part.

Many new generation sources will be built in remote locations (ie wind offshore) and an investment of £4.7 billion in the grid is needed in the run-up to 2020, according to the Electricity Networks Strategy Group (ENSG).

"The good news is that it's a great opportunity to replace assets with more energy-efficient systems and equipment so that the grid can handle the needs of future customers," said Steve.

Another opportunity is the smart grid. An intelligent electricity transmission and distribution network, it uses two-way communications, advanced sensors and embedded intelligence to help manage and reduce customers' energy use.

"It will facilitate the connection of distributed generation facilities such as micro-combined heat and power (CHP) plants and wind turbines to the system and allow demand management to handle intermittent sources of supply such as wind power," explained Steve.

"The smart grid will also help to ensure the system can efficiently handle the advent of electric vehicles, which in turn can store power and even return it to the network when required."

Regulatory and market reform is a crucial area. "The incentives for low carbon investment need to be transparent so that potential investors are given the clarity and certainty to invest," added Steve.

Another potential constraint is the planning system. "We will be building more infrastructure than ever before and will need to put a lot of effort into ensuring we communicate and engage effectively with communities," he said.

Steve Holliday believes engineering needs more recognition to bring about the influx of new talent that is required to implement the green agenda.

A study, commissioned by National Grid in 2009, found negative attitudes towards engineering are widespread. The company has launched a range of new programmes to encourage more youngsters to become engineers over the next 20 years.

So how optimistic is National Grid's chief executive about the future?

"There are challenges but we also live in very exciting times in which there are tremendous opportunities. There is a revolution happening and National Grid is at the heart of it," concluded Steve.



BUILD: 40km of new cable tunnels will meet increased electricity demand in London

Infrastructure

OVER THE PAST FIVE YEARS, National Grid has invested a total of £14 billion in the UK gas and electricity transmission infrastructure and this will increase to £22 billion over the next five years.

By 2020, electricity transmission flows from Scotland to England are expected to increase significantly as a result of new wind farms coming on stream, requiring investment in the network to handle the flows.

Upgrading will include new circuits, as well as HVDC subsea links to reinforce the north-south connections between Scotland and England.

The introduction of a smart grid will enable the connection of distributed generation facilities to the system and allow demand management to handle the intermittency of wind.

New gas pipelines are planned to reinforce the network between Preston and Manchester, Humberside and East Anglia, and South Wales and Bacton in Norfolk.

£22 billion
investment by National Grid in the
next five years

i For more information... see 'The Future of Energy' at www.nationalgrid.com/corporate/About+US/futureofenergy/



GREEN: National Grid is test driving two Mitsubishi zero emission full-electric cars

Transport

70%

the contribution of road travel to transport emissions

THREE-QUARTERS OF TRANSPORT emissions in the UK are from road travel. The adoption of petrol hybrid cars will result in engine-efficiency increases of 24-40 per cent, while plug-in hybrids or full-electric cars could see a 70 per cent efficiency gain.

Car manufacturers are responding to the green challenge and putting hybrid, electric and fuel-efficient engines on the market.

In the short term, reductions in CO₂ will be limited by the carbon intensity of existing sources of electricity generation. "It's important we prepare for, and begin to deploy, electric vehicles today so that we will see mass market penetration as the power source becomes greener, most likely in the 2020s," said Steve.

New battery technologies also have the potential to play a crucial role in electricity management by providing a flexible source of electricity storage. Compressed natural gas or bio-diesel for larger fleet vehicles will also have an impact on targets.



EFFICIENT: A one degree Celsius reduction can cut home bills by 10 per cent annually

Heat

SOME 80 PER CENT OF UK HOMES are heated with gas from the grid – the same homes where many people will live in 2050.

Green electricity may help to provide base-load heat through an increased use of heat pumps. But the demand for heat rises hugely in the winter months and it won't be economic to build electricity generation capacity that runs for just a few months to meet these spikes in demand.

"It won't just be natural fossil fuel gas that we rely on, but also renewable biogas from waste, fed directly into homes and industry by existing infrastructure," said Steve.

The drive to reduce landfill presents an opportunity to produce more clean energy from waste. Analysis by National Grid suggests that if all domestic and urban waste (municipal/commercial) is directed at producing biogas, it could produce enough gas to heat around 50 per cent of homes.

50%

of British homes could be heated by gas produced by domestic and urban waste



SOLAR: 20,000 sq ft of solar panels at National Grid's New England corporate office

Electricity

REDUCING CARBON EMISSIONS in power generation is also part of the solution for transport and the heat sectors.

Carbon Capture and Storage (CCS) enables coal, which is plentiful, to be part of the low carbon mix by capturing CO₂ from fossil fuel power stations and storing it in such a way that it does not enter the atmosphere. CCS networks in Humberside

78 million

tonnes of carbon dioxide that could be cut by two CCS hubs

and Scotland could prevent 78 million tonnes of carbon dioxide rising into the atmosphere every year.

At present, gas and coal each provide around 40 per cent of generating capacity. In the short term, over the next 10-15 years, an increased use of wind (up to 33GW by 2020) and nuclear power will be necessary to hit targets, while other new technologies are developed, including CCS, wave and tidal power. Subsequently, wind may become too expensive relative to other technologies.

In terms of the electricity generation output mix (actual contribution to total energy required), CCS will rise to around 35 per cent by 2050 and nuclear to 42 per cent.

High achievers

Working more than 100ft above the ground is all in a day's work for National Grid linesmen – for whom safety is a way of life

MANY OF NATIONAL GRID'S 7,000km of high-voltage transmission lines were installed more than 40 years ago and now require refurbishment.

But despite all the technological advances in the industry, maintaining the network is still very much a hands-on job relying on the skills of the dedicated linesmen who scale the towers.

The Pentir gang is one of National Grid's 12 teams of linesmen. Although nominally based at Pentir substation in North Wales, they can be working anywhere in the country from Cornwall to the border with Scotland.

"Apart from scheduled maintenance, we carry out annual line inspections, and turn out to get the lights back on when faults develop or if there is damage from high winds, ice or snow," said Mike Till, the field technician who leads the nine-strong team.

This July saw the gang working on a 14-week refurbishment of the Drakelow to Bustleholme 400kV overhead power line in the Midlands.



The project is a joint operation by National Grid and the Electricity Alliance – with National Grid linesmen changing insulators and fittings on the 26 tension towers, and those from the Alliance doing the same on the 74 suspension towers.

Access to the insulators is via a platform, which is raised into position by a six-tonne capstan winch mounted on a Mercedes Benz Unimog all-terrain vehicle. To the side of the tower, another winch and straining rope keep the platform away from the structure as it is raised.

The linesmen wear harnesses that are



TEAM LEADER: (above) Mike Till who heads up the Pentir gang; (left) the insulators are removed

permanently attached to the tower as a fall-prevention measure, and wear full Personal Protection Equipment (PPE) – hard hats, safety glasses, steel-capped boots, gloves and all-weather clothing.

When working on the tower, tools are also tethered to guard against the danger of items being dropped from height.

Little more than 20 years ago, there were no platforms, winches, PPE or harnesses, and linesmen scaled the towers wearing boiler suits, donkey jackets and wellies.



WORK IN PROGRESS: A head for heights and muscular strength – particularly in the upper body – are essential for a linesman

Will Jones



“I used to be in the Army and there’s a similar camaraderie and shared humour in a linesmen’s gang. Everybody looks out for one another. The worst aspect for me, after 33 years in the job, is the colder winter months. We used to be particularly busy from March to October but now it’s all year round.”

Damon Stewart



“Before joining National Grid, I worked for a company maintaining mobile phone masts and so this was a natural progression to something bigger and better. The challenge of keeping the nation’s lights on is an important job – it affects everybody in the country.”

“Equipment was hauled up by three or four men using ropes, and if a heavier item was required 100ft up, you had to reverse a vehicle 100ft,” said Mike. “The modern stationary winches have much less impact on a grantor’s land.”

Back in the 1950s, a fatalistic approach to safety was deemed part and parcel of doing a dangerous job. Risk taking was the norm and only extreme hazards were managed. Falling from height wasn’t considered extreme nor was injury from any falling objects.

Today, every aspect of the work is governed by safety considerations. For example, full PPE must be worn in an outer work zone around the tower marked

out with cones, while all work above has to stop whenever anybody enters the inner “drop zone” below.

Apprentice linesmen undergo three years of instruction at the Company’s National Training Centre in Eakring, followed by further on-the-job learning.

“Besides having a head for heights, you need to be an outdoors kind of person and a good team player,” said Mike. “Linesmen need to be physically fit – particularly in the upper body – and the guys work hard at keeping themselves in shape.”

That’s one of the few things that hasn’t changed in a job transformed by technical innovations and the adoption of safer working practices and processes.



ECO-CREDENTIALS: (left) John Rhymer in front of an environmentally friendly dome house, developed by Jay Emery in the grounds; (above) a teddy bears' picnic with children from a local primary school

If you go down to the woods today...

At National Grid's Bishops Wood Centre in Worcestershire, children are encouraged to take a lifelong interest in the natural world

A GROUP OF FIVE-YEAR-OLDS FROM St Ambrose's Roman Catholic School is enjoying a teddy bears' picnic at Bishops Wood Centre, near Stourport.

But this is no day off from education, said John Rhymer, head of the centre and also sustainability advisor for Worcestershire Children's Services.

"The children are exploring the needs of living things – such as shelter, water, air and

food – through the eyes of the teddy bears, in a very hands-on way during role play, experiential and sensory activities," he said.

"They learn how they can make informed choices about reducing their own impact on the natural world. Back at school, they look at how they can make a difference in the home by turning off lights to save energy, and looking after plants and wildlife."

Bishops Wood is part of a network of six environmental education centres established some 25 years ago by National Grid, on land next to substations, and operating in partnership with local authorities and environmental charities.

"The main focus is on outdoor learning, offering imaginative activities to support the UK National Curriculum," said Jonathan Richardson, National Grid's social and community programmes advisor.

"The centres also help us to meet our commitment to operate as a socially and environmentally responsible business by



The centres in numbers

70,000
people who have benefited from education and community programmes

£1.5 million
the value of activity generated by the centres

£500,000
the value of volunteering at all the sites



WOOD FOR THE TREES: Pupils from St Ambrose’s Roman Catholic School explore their surroundings

mitigating the impact of substations on rural environments.”

Bishops Wood, run in partnership with Worcestershire County Council’s Children Services, is the largest of the centres, with 70 acres of mixed woodland and meadow areas.

Its eco-building was opened by naturalist David Bellamy in 1994 with part-funding from National Grid, the council and the local Training and Enterprise Council.

The building has a turf roof, sewage water is recycled through a reed bed and only wood managed from sustainable resources was used in the construction.

Visitors often ask why a substation was allowed in such a beautiful location. “The truth is we’re only here because in the 1960s National Grid built their facility in this wood

to screen its presence,” said John. “In fact, much of the surrounding land has since been ploughed up or turned into a golf course.”

Around 340 educational visits from local schools are hosted a year for learning linked to the National Curriculum on sustainability, bio-diversity and the natural world.

The centre also runs courses for teachers and environmental professionals. It has a school grounds advisory service and hosts forest schools – as well as greenwood craft courses for 14-16-year-olds.

“These children often get into trouble at school because they’re not auditory or visual learners – they learn by doing things,” said John. “Here they can work towards a qualification by, for example, making a chair from a greenwood such as hazel. It shows

National Grid’s centres

Penwortham Environment Education Centre, Lancashire
Operated by: Wildlife Trust for West Lancashire
Size: 24 acres

Bishops Wood Centre, Worcestershire
Operated by: Worcestershire County Council Children’s Services
Size: 70 acres

Iver Environment Centre, Buckinghamshire
Operated by: Groundwork Thames Valley
Size: 2 acres

West Boldon Environmental Education Centre, Tyneside
Operated by: Groundwork South Tyneside
Size: 29 acres

Skelton Grange Environment Centre, Leeds
Operated by: BCTV
Size: 6 acres

Canterbury Environmental Education Centre, Kent
Operated by: Kent County Council
Size: 29 acres.

them they can achieve things and it can transform their lives.”

The Centre has hosted forest schools for eight years, and trained leaders since 2008. There are now more than 300 forest school sites and 400 trained leaders in the county.

Forest schools help young people to develop independence and confidence through exploring and experiencing the natural world.

An important aspect is to support the learning that the children are interested in – for example, designing the layout of their woodland campsite.

There are exciting benefits in terms of the children’s empathy, social communication, independence, self-esteem and confidence in the classroom.

“Forest schools very much connect with the other things we do here,” said John. “There’s a lot of evidence to suggest that first-hand experience in the natural world is an essential first step in encouraging people to become engaged in sustainability and other issues.”

SPARKLING

future for English wine

English Wines Group, a National Grid grantor, is among a number of producers putting the fizz into English wine



CHEERS: Frazer (above) says English sparkling wine has a great story to tell

A HEADY CONCOCTION OF climate change, maturing know-how about viticulture and healthy demand is driving the growing popularity of English wine.

Parts of south-east England, such as Kent, share the same topography and chalky soil as the Champagne area of France and are only about a degree cooler.

Global warming means that the envelope of land where grapes can be grown successfully is moving about 270km northwards for every degree change in temperature. Already, French investors are reportedly buying land in south-east England in readiness for when

it will be too warm to produce Champagne in Northern France.

Chapel Down, Nyetimber, Ridgeview, Balfour and Camel Valley are among the brands that have won international gold medals for their fruit-driven, aromatic and refreshing wines.

English Wines Group in Kent, which makes the Chapel Down brand, is one of the country's largest producers, and is consistently placed, year after year, in blind tastings against the best in the world.

At its 25-acre vineyard in Tenterden, planted in the late 1970s, there is a winery, walking trails, a restaurant (run by top chef Richard Phillips) and a retail outlet – attracting 50,000 visitors a year.

The Group grows about 30 per cent of its own grapes and buys the remaining 70 per cent from 15 independent vineyards in Kent, Essex, Sussex and the Hampshire border.

Frazer Thompson has been managing director

of English Wines Group since 2001, after working in a senior marketing position with brewery giants Heineken.

“The real breakthrough for English wine began about 10 years ago when there was a move from planting grapes that would simply crop well to serious varieties such as Pinot Noir, Chardonnay and Pinot Meunier, which people would actually want to drink,” he said.

“There’s also been a lot of media coverage because English wine has such a strong story to tell – including climate change, beating the French at their own game, and the fact that there’s now an appetite for locally produced food and drink in this country.”

There are now 381 vineyards in England and Wales with a total of 1,230 hectares under vine as well as 100 wineries of various sizes.

After two poor years, the warm wet summer and sunny September of 2009 resulted in a good wine crop in England and boosted production to 3.2 million bottles. But to put that in perspective, it’s still only a fraction of the annual UK consumption of 1.7 billion bottles.

“It’s not possible to make a good wine unless you have good fruit to start with,” explained Frazer. “Location is all important – you’re looking for south-facing warmer areas of the south-east such as the High Weald, the North Downs, the western edge of the South Downs and parts of the Hampshire Basin.”

For farmers in these areas with the right soil conditions (see panel right), vineyards are a high-value use of land, with the potential to generate £800-£1500 a tonne, compared, for example, to £120 a tonne for wheat.

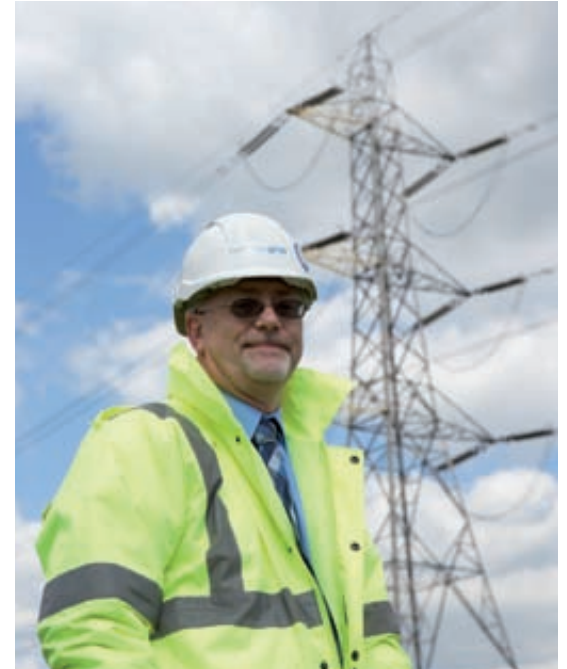
But the old joke that the way to make a small fortune is to start with a large fortune and buy an



What makes a good English vineyard?

- Southerly aspect**
- Slope of between five and 35 degrees**
- Well-protected site**
- Low frost exposure in the growing season**
- At least 20cm depth of soil**
- pH value of between five and eight.**





“It’s not possible to make a good wine unless you have good fruit to start with”

HEARD IT ON THE GRAPEVINE: (above left) harvesting in progress; (centre) Kits Coty vineyard and its towers; (above right) Paul Sage

English vineyard, still has more than a grain of truth in it.

“If you plant a vineyard it will take two or three years before you can get a grape from it; once you pick those grapes it will take perhaps another one to three years before you are able to sell a bottle, – perhaps even longer for some sparkling wines,” agreed Frazer.

“All the while, you’re maintaining the vineyard, bringing the crop in, making the wine, bottling it, labelling it and corking it. So it’s a long, time-consuming process that requires deep pockets.”

Purchases by visitors to Tenterden contribute only eight per cent of Chapel Down sales, but the ripple effect is far larger as people come away having enjoyed the visit and then recommend the brand to their friends and family.

Endorsements by top chefs such as Gordon Ramsay and Gary Rhodes have a similar effect. As grapes arrive, the juice from the first press at the Tenterden winery goes on to make reserve wines that are typically supplied to top restaurants and hotels for sale at a premium price.

About 60 per cent of the Group’s sales come from supermarket chains such as Marks & Spencer, Waitrose and Morrisons. Supermarkets are important because they provide the opportunity for people, who have perhaps read about the wine, to sample it at their local store.

Currently about 40 per cent of the Group’s production is sparkling wine but the proportion is set to rise to 60 per cent by 2015. The margins on still wine are not as good as sparkling, but there is a quicker return on an investment because the

Lines and vines

National Grid recently needed access to the two towers on the Kits Coty vineyard for essential tower repainting work.

“The aim is to always progress works sensitively when there are high-value crops in the vicinity of an overhead power line,” said lands officer south-east Paul Sage.

“Fortunately in this case, access to the towers was straightforward and we carried out the work at a time of year when the vines were still in a dormant state so there was little or no disruption.”

production process is faster.

Looking to the future, Frazer has high hopes for a 120-acre plot of land purchased two years ago at Kits Coty on the North Downs – which includes two towers on the Cobham to Kemsley 400kV overhead power line.

“It’s the best Champagne soil we’ve seen,” said Frazer. “We’ve poured money into it for two years, and it will produce its first small but productive crop in October.”

The grapes brought in this year will be reaching tirage (second fermentation) around May next year and the wine will then be 12 months on its lees (the sediment of yeast that adds rich flavours), ready in time for the 2012 Olympics.

“Just in time to celebrate lots of British medals hopefully,” he added.

For more information about Chapel Down wine, visit www.englishwinesgroup.com or telephone 01580 763033.

Out&About

The latest news from **National Grid** and its nationwide grantor network

Flights of fancy

YORKSHIRE GRANTOR ANDY

Hopson has had a lifelong fascination with fancy pigeons and shows them at events throughout the country.

He can have as many as 200 pigeons in his lofts near Barnsley at the height of the breeding season in July.

“The birds are fed twice a day and their diet includes conditioners such as vitamins and fresh garlic,” said Andy, who works as an RSPCA dispatcher in Rotherham.

He specialises in four breeds – Mookees, Horseman Pouters, High Flying Tipplers and Birmingham Rollers (famed for doing backwards somersaults in flight).

“The birds are judged against a breed standard for various traits such as size, colour, shape and behaviour,” said Andy.

The main show season starts in October, as soon as the birds finish moulting, and goes right through to January.

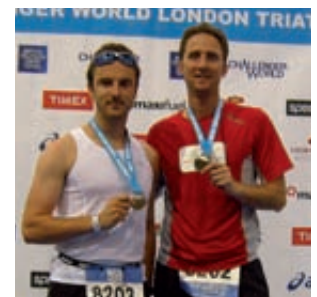


BOOST FOR DRY STONE WALLING

National Grid has donated £300,000 to a grant scheme for dry stone wall restoration in the 5km route corridor of its Wormington to Sapperton gas pipeline in the Cotswolds Area of Outstanding Natural Beauty.

TO THE RESCUE

National Grid has presented Bay Search and Rescue in Cumbria with a Land Rover Defender. The vehicle will form part of its rapid response service for fast water and quicksand.



LANDS OFFICER TRIATHLON UPDATE

Lands officers James Dean (left) and Ian McKenna battled through hot weather conditions to complete the London Triathlon in August.

Both men took less than three hours to finish the gruelling 1500m swim, 40km cycle ride and 10km run.

Including matched funding from National Grid, the two raised £1,000 for the Special Olympics Great Britain (SOGB) charity.

Award recognises 30 years of wildlife conservation



AWARDS: (left, back row) Charles Whittingham, attending on behalf of his father, and Peter Mitchell (right, back row), with FWAG Cymru officials and other finalists

George Whittingham of Llanbedr Farm in Ruthin, North Wales was named the North Wales and overall winner of the FWAG Cymru – National Grid Silver Lapwing Farm Conservation awards at the Royal Welsh Show in July.

Peter Mitchell, National Grid lands officer south-west, who was on the judging panel, said the Company was particularly pleased to be linked with an award scheme that mirrored its own approach to protecting the environment during essential works.

“Three generations of the family have carried out improvements to the farm and environment,” said Peter, a farmer himself.

Improvements made by the family include 2,000 metres of hedge restored or replanted to improve wildlife habitat, as well as the creation of fenced-off areas to protect woodland and streams.

Last Word

For more information

Tel: 01926 656 325

email: gridline@summersault.co.uk

www.nationalgrid.co.uk

Your chance to enter two great competitions

Photo competition



Congratulations to electricity and gas grantor Tony Vowden of Newton Abbott, Devon – the winner of last issue's photo competition on the theme of 'wildlife', for this beautifully captured shot of a Clouded Yellow butterfly perched on knapweed.



Win £150 of photographic equipment

Enter this competition to win a £150 Jessops gift card.

Use the gift card in full or part payment for goods purchased in more than 200 Jessops stores throughout the UK.

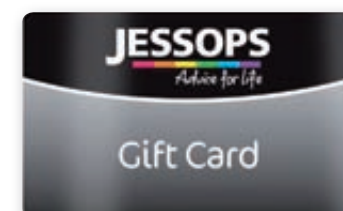
Choose from a wide range of items – including digital cameras and camcorders, digital photo frames, camera bags, binoculars... the list goes on.

Gift cards can currently only be used in Jessops high street stores or via the Mail Order Sales Department.

To be in with a chance of winning this camera, simply answer the following question correctly.

Q BY HOW MUCH IS THE UK COMMITTED TO CUT CARBON EMISSIONS BY 2020?

Send your answer to Gridline Jessops Competition, 23-25 Waterloo Place, Warwick Street, Leamington Spa, Warwickshire CV32 5LA. You must be a grantor to enter. Closing date is 10 November 2010.



Win six of the best!

Enter Gridline's competition to win a case of Chapel Down sparkling wine

WE'VE TEAMED UP WITH English Wines Group to offer the winner of this issue's photo competition six bottles of Chapel Down Pinot Reserve 2004.

Winner of countless awards – including a Silver Medal at the International Wine Challenge 2010 and the Decanter World Wine Awards 2010 – the wine is produced at English Wines Group's winery in Tenterden, Kent. It is open all year round to visitors, and offers a large wine and fine food store, restaurant, vineyard walks and guided tours.

The theme for this issue's photo competition is 'planes, trains and automobiles'. Just send in your selected photo for a chance to win this great prize.

Send your photo to Gridline Photo Competition, 23-25 Waterloo Place, Warwick Street, Leamington Spa, Warwickshire CV32 5LA, or email

your photo to gridline@uk.ngrid.com. Closing date is 10 November 2010. Only grantors are eligible to enter. Regrettably prints cannot be returned.

TAKE ADVANTAGE OF THIS EXCLUSIVE OFFER

Gridline readers can purchase a case of Chapel Down Pinot Reserve 2004 at a special price of just £99.00 per case of six bottles, (plus £8.00 delivery), representing a discount of over 25% on the usual retail price of £149.94. Delivery can be arranged by calling 01580 763033 or email to sales@englishwinesgroup.com and quoting 'Gridline'. Offer ends 10 November 2010.

Please visit www.englishwinesgroup.com for more information on the wines.

