

Gridline

The magazine for
National Grid grantors
Summer 08

nationalgrid

Olympic challenge

Powering up for 2012

Great Estate

At home with
Lord Gerald
Fitzalan Howard

Scene & herd

Inside the cattle ring at the Devon County Show

Also in this issue: gas pipeline maintenance, nest sites for stone curlews, win a digital camera

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NATIONAL GRID'S 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. We act as the main interface for landowners who have our gas and electricity equipment installed on their land. Listed below are your local land and development team contacts.

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.



ENTERING COMPETITIONS FINALLY PAYS OFF!

Gas grantors Philip and Helen Bletcher, who run a 1200-acre arable farm in The Isle of Axholme, north Lincolnshire, are the lucky winners of the Best Western Hotels competition in the last issue of Gridline.

“We’re absolutely thrilled to have won,” said Helen, who sent in the correct answer. “I tend to have phases when I enter competitions – usually when I’m not too busy. But the only thing I’ve won before now is a bag of horse and pony snacks.”

The couple can select where to stay from a choice of three hotels: in London, Telford or Southport.

WE WANT TO HEAR FROM YOU

Please contact us if:

- You have any news of interest to other grantors
- You have a hobby or business which would make a good profile
- You would like to comment on anything you have read about in the magazine.

Phone 01926 654 948 or email gridline@uk.ngrid.com.

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GOT A STORY?

TEL: 01926 654 958
or email gridline@uk.ngrid.com. Or write to Gridline, Summersault, 122 Warwick Street, Leamington Spa, Warwickshire CV32 4QY.

Welcome to Gridline



It’s my pleasure to welcome you to the Summer issue of Gridline.

As this issue drops through your letter box, the National Grid hospitality marquee has travelled to four county shows and we will be moving on to another four venues between now and October. I hope those of you who have been able to join us for lunch have enjoyed your day out.

For National Grid, agricultural shows provide an excellent opportunity to meet and thank our rural grantors for their valued support during the essential maintenance work we carry out on our electricity and gas transmission networks.

County shows are an important showcase for the agricultural industry, farmers and rural crafts businesses. Read our report on page 14 to find out how grantors Henry and Emma Vooght fared at the Devon County Show in May when they presented two of their pure-bred Charolais cows in the livestock competition.

On page 6 the focus shifts from rural matters to the urban setting of East London to look at the massive project to prepare the Olympic Park for the Olympic 2012 Games. National Grid has been heavily involved in preparations to switch power to the site from overhead lines to underground electric cables.

Two of our articles this month look at efforts to restore the habitat for birds which have suffered as a result of intensive farming.

On page 10 we chart the success of an RSPB campaign – which is being supported by National Grid – to restore numbers of stone curlew. Shooting often has a bad press but on page 18 Yorkshire grantor Lord Gerald Fitzalan Howard argues that game conservation measures are behind the reappearance of grey partridge on his Carlton Towers estate.

We profile the team which maintains National Grid’s gas transmission pipelines on page 16. There are occasions when we have to come on to your land to conduct essential maintenance – and this article explains why.

Finally, don’t forget to enter our competition to win a fabulous digital camera on page 20, and while you’re at it, why not enter our photo competition too?

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Editor, Gridline



UNITED FRONT: (l to r) grantor David Dawson, Sue Dunham, lands officer south east, and Gary Hemmings

Gas diversion enables major safety upgrade

National Grid has diverted a section of 36-inch gas transmission pipeline in Suffolk as part of a £32 million safety improvement scheme by the Highways Agency on the busy A14 trunk road.

A new 2.3 mile stretch of dual carriageway will straighten out a notorious accident blackspot known as the Haughley Bends near Stowmarket.

“We have diverted around 300 metres of pipeline and created a temporary bypass where the new section is going under the road so that the supply of gas can be maintained during the works,” said National Grid project manager Gary Hemmings.

National Grid has been working on land owned by grantor David Dawson, who has farms on either side of the A14.

“The new section of road will be a lot safer,” said David. “The realignment also means that the farm will no longer open out straight on to the dual carriageway. It used to be a nightmare moving tractors and trailers across the road.”

Treemendous news for the environment

The Tree Council and National Grid have launched The Tree Bank – a new initiative that will see thousands more trees planted across the country.

Coordinated by the Tree Council, the Tree Bank will assist National Grid with its Vegetation Management Policy which commits to planting four new trees for every mature tree removed during essential works.

The scheme is being piloted during the

South West Reinforcement Project gas pipeline project from Ilchester to Lynham where 250 trees have had to be felled and 1,000 new trees are being replanted. During 2008 further projects in Yorkshire, Cheshire, Hampshire, Warwickshire and Gloucestershire will go ahead.

National Grid has been a strong supporter of the Tree Council and the Tree Warden scheme for many years.



TEAM EFFORT: (left to right) Lee Durant, Colin Barker, Katy Bickerton of Natural England and Doris Clarkson

On the right track

National Grid has gone the extra mile to protect one of the largest semi-natural woodland habitats in Staffordshire during an overhead line refurbishment project near Cellarhead substation.

Cresswell’s Piece Wood, a Site of Botanical Interest, supports a variety of flora and fauna – including the rare argent and sable moth.

The two National Grid towers above the woods are approached by a 1.4km access track. Some of the wettest weather on record caused the track surface to deteriorate quickly when maintenance

work started last year, forcing an early halt.

In April the project team returned. “We put in a completely new surface using compacted granite aggregate and a special geotextile mesh which enables grasses and moss to grow through naturally,” explained Colin Barker, project manager Electricity Alliance West.

“It’s been a really positive outcome for National Grid as well as the owner of the woods Dora Clarkson, the County Council, Natural England and the Staffordshire Wildlife Trust,” said Lee Durant, lands officer south west.



ALL ABOARD: (left) Mike Fearne, Electricity Alliance East, with (right) Paul Sage, lands officer south east

Full steam ahead

A light railway which hasn't been used for commercial purposes for nearly 40 years is back in action helping National Grid to carry out refurbishment work on the overhead line from Canterbury to Kemsley.

The Sittingbourne and Kemsley Light Railway is conveying equipment and construction materials across the Kemsley Marshes to where the overhead line passes directly over the track.

"The railway line passes right under our line and it means we won't have to lay any vehicle track to provide access," said Alan Lodge, Electricity Alliance East project manager.

The railway was built to serve the Sittingbourne paper mill and carriages were drawn by horses until the introduction of the first steam train in 1905. The line is open to the public every Sunday, and some Saturdays, until the last week of September.



NEW HOME: (left to right) At the handover: PLUTO pump local expert Robin Maconchy, National Grid's Geoff Smale and Dave Chamberlain, Charlotte Corney, the owner of the zoo, and Phil Burgess

All hands to the pump

How a fascinating World War Two artefact has been found a new home

A rare piece of equipment which helped the allies triumph in World War Two has been saved for posterity – thanks to Phil Burgess, lands officer south east.

The seven-tonne PLUTO (Pipeline Under the Ocean) pump was once part of a critical fuel lifeline supplying the Normandy landings, and the subsequent drive to Berlin, from its base at Dungeness in Kent.

Until 1997 the pump was used by National Grid to wash insulators on England's tallest pylon – the giant 650ft electricity tower at West Thurrock, on the north bank of the Thames.

"We used remote control water cannons to prevent a build-up of residue from the chimneys of nearby West Thurrock power station," said Phil, an overhead linesman at the time. "It enabled us to clean the insulators without taking the overhead lines, which spanned the Thames, out of service."

The pump became redundant when the power station was decommissioned. Now after a 10-year search by Phil, a new home has been found at Sandown Zoo (formerly Sandown Fort) on the Isle of Wight. Only three of the pumps are thought to have survived worldwide.



BLAST FROM THE PAST: Inspecting a photo of a pump in its original location



THE REGENERATION GAMES

A major 2012 Olympic and Paralympic Games milestone is within reach as National Grid prepares to switch the supply of electricity from overhead lines to underground cables

Viewed from a tall building on its fringe the Olympic Park reveals itself as a wide expanse of brown earth in the surrounding urban sprawl. The only structures to remain are the pylons that still bisect the site – but these, too, are living on borrowed time.

Construction on the Olympic site started in May – three months ahead of schedule following the demolition of more than 200 buildings. After the Games the Lower Lea Valley will be transformed into a 500-acre park with revitalized waterways and some 9,000 new homes.

National Grid has joined forces with the Olympic Delivery Authority, distribution network operator EDF Energy and the contractors J Murphy & Sons and Prysmian Cable Systems to restructure and upgrade the existing electricity and gas networks for the 2012 Games and the community thereafter.

The £230 million Powerlines Undergrounding (PLUG) project has involved the construction of two 6km underground cable tunnels between West

Ham and Hackney. The tunnels carry the national transmission network which crosses the site and is vital to the supply of power to London.

By the time the Beijing 2008 Games are underway power will have been switched to the underground supply. The 52 pylons (29 owned by National Grid) which dominate the Lower Lea Valley will then be dismantled by early next year.

The removal of the pylons was an Olympic Organising Committee requirement and will free up around 100 acres of land for redevelopment.

Because of the technical difficulties, cost and environmental challenges, it is only in exceptional circumstances that National Grid considers undergrounding or relocating overhead transmission lines.

“National Grid very rarely takes down its pylons – but this is a project of national significance and one of the most important regeneration programmes in the UK,” said Owen Keith, National Grid Olympic senior project manager.

Phase one of the project – the construction of the cable tunnels – started



BIRD'S EYE VIEW: Artist's impression of how the site will look





OLYMPIC EFFORT: (Previous page and above) One of the tunnel access shafts. Centre: National Grid's Risk and Responsibility Committee inspect the site. Right: Tunnel breakthrough.

in December 2005. Four tunnel-boring machines were employed, excavating 250,000 cubic metres of soil for reuse in the Olympic Park construction.

Travelling west of the Stratford City development and beneath Hackney Marshes, at a depth of up to 30m, the tunnels pass under numerous structures including the Hammersmith & City line, Northern Relief Sewer and Stratford International Station.

"The breakthrough for the tunnels occurred 19 months later in June 2007 and since then up to 130 engineers have been working round the clock in the National Grid tunnel," said Owen.

"To install 36km of cabling in just seven months was an extremely challenging timeframe and required a high degree of coordination with the Olympic Delivery Authority and other suppliers. It was necessary to start work in the tunnel even before the construction team had finished installing ventilation fans and monitoring systems."

Adding to the difficulties of working underground was the sheer size of the tunnel (at 4m, the National Grid tunnel has a similar diameter to the London Underground).

The cables had to be fitted high up on the tunnel wall to allow additional capacity to be added in the future, and engineers were required to work on raised platforms mounted on a maintenance inspection monorail.

In August last year National Grid



created a temporary diversion of the overhead line to enable construction to start on the Olympic Village. Four sections of the line were realigned along a planned corridor of water features so that demolition could begin either side.

"The project was completed on time and under budget and enabled construction activities to start 12 months earlier than scheduled," said Owen.

To reinforce the electricity supply to the Olympic Park and to meet the future energy needs of the regeneration zone as a whole, National Grid is also building a new 400kV electricity substation at its existing location in Hackney.

Teams of National Grid UK Gas

Distribution engineers have also been on site. "To date we have decommissioned around 10km of pipeline and diverted others in a rolling programme of mains isolations and disconnections to ensure that the demolition works have been able to proceed smoothly," said Steve Barrass, National Grid UK Gas Distribution project manager on the site.

Owen described the job of Olympic senior project manager as a "superb" experience. "There has been a lot of pressure because of the demanding deadlines, but there's also been a real determination throughout the team to complete the project successfully.

"It's been a privilege to be involved in a project which has delivered the Olympic site to a point where construction can begin. The challenge now is to create a vibrant new living and working space for generations of Londoners to come."



DISMANTLING OF ELECTRICITY PYLONS MOVES A STEP CLOSER

Brian Mead, lands officer south east, is liaising closely with developers at the Olympic site, as well as local Highways Authorities, various utilities, Network Rail, and British Waterways, to ensure that everything runs smoothly when the overhead lines come down.

"Dismantling pylons – some of which are 65m high – in an urban environment is a complex task," said Brian, who has worked in the electricity industry for more than 38 years.

"Railway line outages have to be organised many months in advance and are timed to take place overnight to minimise service disruptions. Traffic management plans for road closures have to be agreed with local councils and the police, and the removal of the pylons planned around the activities of anything up to 9,000 construction workers on the site."

LAYING THE FOUNDATIONS FOR 2012

Simon Wright, the Olympic Delivery Authority's director of infrastructure and utilities, provides an insight into some of the challenges involved in preparing the Olympic Park for London 2012.

Q What have been the difficulties of preparing the site for the 'big build'?

A We are creating one of the largest new urban parks in Europe for 150 years, all on previously neglected and contaminated land, so the challenge is enormous. But the scale of the works is matched by the new buildings and infrastructure that will last for decades after the Games finish.

Q How important was the project to resite the power lines underground?

A The removal of the power lines was critical to the Olympic Park construction project. Constructing the new tunnels beneath the park was a challenging project and their completion on time was a considerable achievement.

Q How do you anticipate the energy needs of the park will be met?

A Working with our partners National Grid and EDF Energy we have planned a new high voltage supply network and we're confident that it will provide a resilient supply for both the Olympic Games, and all its complex broadcasting needs, as well as for the legacy developments.

Q How green will the Games be?

A Sustainability runs through the heart of the project and



“We are creating one of the largest new urban parks in Europe for 150 years”

our plans are for 2012 to be a truly sustainable green Games. Renewable energy is a crucial part of this and we have committed to 20 per cent of energy after the Games coming from on-site renewables – including biomass fuels in a new energy centre and a wind turbine in the north of the Olympic Park.

Q What was the legacy of heavy industry on the site?

A Contamination of the area has built up through a century of neglect and heavy industrial use. Petrol, oil, tar and heavy metals such as arsenic and lead have all been found and it has been one of the UK's largest and most challenging land clean-up jobs.

Q How are you tackling the issue of contaminated soil?

A Soil washing machines at four large remediation plants are treating most of the estimated 800,000 cubic metres of contaminated soil by washing, sieving and shaking out the contamination. We have also taken the unique step of creating an on-site laboratory where 60 scientists, technicians and other specialist staff are using state-of-the-art equipment to judge when decontaminated soil is ready for reuse on site.

Q Have you unearthed much about the history of the site?

A Yes we've uncovered some fascinating relics which build a picture of how the land and

waterways have developed.

Findings to date include four Bronze Age skeletons, a Roman coin, World War Two gun emplacements and a complete 19th century boat.

Q What transport links are being put in place?

A The Olympic Park will be one of the best connected parts of London. The new Stratford International Station will provide high-speed links into central London and Europe; the capacity of Stratford Regional Station will be trebled with huge improvements to accessibility; and walking and cycling routes will create new links across the lower Lea Valley.

Q What will happen to the site after the 2012 Olympic Games?

A 2012 is sure to be a fantastic summer of sport but the real achievement will be in the years that follow. Venues will be transformed to become new facilities for community and elite use; the Olympic Village will be converted into around 4,000 new flats; and the media centre will provide new employment space the size of Canary Wharf tower, creating thousands of new jobs. All of this will be housed in a new urban park, creating new recreation, leisure areas and parklands in the heart of east London.

FEATURE



BACK
FROM THE

BRINK

A campaign to secure the future of an elusive wader called the stone curlew is being backed by National Grid

National Grid is contributing to vital work to protect one of the UK's rarest birds by providing the resources for an additional project officer for a year on the RSPB's Wessex Stone Curlew Project.

The move is part of a package of mitigation measures the company is taking during a cable replacement project on the Berkshire-Oxfordshire border. The work involves upgrading a 3.2km section of underground electricity cable between the Bramley and Didcot substations, which was laid in the 1960s, to avoid any detrimental impact on an Area of Outstanding Natural Beauty.

Unfortunately it has been necessary to temporarily take out of commission a two-hectare plot of land which has been used as a nesting site for a pair of stone curlew. Bunting and flags were deployed to deter the birds from nesting on the site when they returned from their over-wintering grounds.

Nick Adams is the RSPB project officer being funded by National Grid. "Besides providing advice to the cable project team, Nick is working closely with landowners throughout the Wessex area to improve breeding prospects for the birds," said Richard Walsh, National Grid consents officer



MOVING OUT OF HARM'S WAY: An RSPB officer carefully moves a chick to a safer location

south west. "He will also help us to reinstate the plot so that it will continue as a breeding ground for stone curlew for many years to come."

Stone curlews suffered a dramatic decline in numbers nationally when chalk grass downlands went under the plough after World War Two to create more crop-growing land. The number of breeding pairs fell from around 2,000 in the 1930s to just 160 in the early 1990s.

However, a recovery programme by Natural England and the RSPB working with around 150 landowners has reversed the trend and a government-backed target of 300 breeding pairs by 2010 was achieved five years early.

"A key aim now is to extend the range of nesting sites from the birds' strongholds in Wessex and East Anglia," said Nick. "For example, in the Berkshire Downs there are now more than 15 breeding pairs.

"By supporting the project in this way National Grid is providing us with the resources to monitor and protect these

rare birds more effectively and over a much wider area."

During the coming months Nick will be monitoring existing nests, as well as advising farmers on how they can manage their land to increase the breeding prospects for the ground-nesting birds.

"If they are nesting in crop areas, when approached by farm machinery the adults will run away from their young," explained Nick. "The chicks tend to freeze and are very hard to spot because their plumage blends into the background.

"If necessary we can move them temporarily out of the way while the fields are worked on," he added.

The end of set aside subsidies last year and the pressure to use fallow land for the production of bio-fuels and wheat could still threaten the habitat the birds rely on.

"Nevertheless the stone curlew project has been a great showcase for conservation and demonstrates how we can all make a real difference if we work together," said Nick.

THE ENIGMATIC STONE CURLEW

One of the strangest-looking birds, the stone curlew is about the length of a crow but has slimmer and longer wings. They have long yellow legs and large yellow eyes – which equip it to feed on insects at night. They are also known by a number of other names which reflect their striking appearance – including 'thick-kneed bustard', 'goggle-eyed plover' and 'wailing heath chicken.'



Power to the people

National Grid is investing in its gas and electricity networks to keep pace with the demand for energy



KIRBY TO LISTER DRIVE CABLE REPLACEMENT PROJECT

» **When:** Started July 2007 and due for completion October 2009.

» **Why:** The project is to replace the existing 275kV underground cable between Kirby and Lister Drive substations which is nearing the end of its operational life. A new route was chosen in order to maintain power supplies throughout the project.

» **What:** The majority of the cable is being laid in trenches excavated in roads running through densely populated areas of Liverpool. A total of 15 sections of 750m cable are being installed on a rolling construction basis. Horizontal directional drilling is being used to cross the M57.



» **Lie of the land:** The latest phase of the project, which began in May, affects the main access road to Croxteth Park estate – the largest private housing estate in Europe. “It is a very challenging environment and all parties are working to achieve the minimum disruption to the residents,” said Tony Dyas, zonal construction manager Electricity Alliance West.

BRAMLEY TO WEST WEYBRIDGE OVERHEAD LINE REFURBISHMENT

» **When:** March to December 2008

» **Why:** Refurbishment work is necessary on 142 pylons on the 49.4km overhead line from Bramley substation, Hampshire, to West Weybridge substation, Surrey.

» **What:** Five railways and several roads are crossed by the overhead line, including the M3 and M25 motorways. Due to the oblique angle at which the line crosses the M3 motorway, scaffolding was impractical and engineers are using a so-called catenary system instead. Once the spacers are removed, special supports hanging off the old lines enable the new conductors to be winched into place.

» **Lie of the land:** “The route crosses four golf courses, a polo club as well as land owned by the Ministry of Defence, including the Royal Military Academy at Sandhurst,” said Electricity Alliance East project manager Bob Banham. “We have also consulted closely with Natural England where we are accessing environmentally-sensitive areas such as Chobham Common – a Site of Special Scientific Interest (SSSI).”



BARTON STACEY TO LOCKERLEY REINFORCEMENT

» **When:** Started April 2008 and due to complete this autumn.

» **Why:** A 31km pipeline is being constructed in Hampshire from the above ground installation at Barton Stacey to Lockerley Compressor Station. The pipeline is necessary to meet increased demand for gas supplies in the south of England. It will also supply gas to a new power station at Marchwood, near Southampton.

» **What:** Running close to the existing service, the 900mm pipeline passes through open farmland largely devoted to cereal and

fodder crops. Horizontal directional drilling is being used to pass under the main A303 trunk road, as well as the Dever and Test rivers (and a railway that runs alongside it) to a depth of up to 25m.

» **Lie of the land:** “A short distance of the route is through the Valley of the River Test Heritage Area,” said National Grid project manager Shaun Smith. “We have worked closely with Natural England to protect the habitat; relocating great crested newts and doormice and constructing roosting boxes for owls and bats, as well as a new badger sett. Other measures include the use of full-height fencing where the work corridor passes through Michelmersh Deer Park.”



HAREFIELD TO SOUTHALL GAS PIPELINE

» **When:** Construction of major tunnel elements of the project started in April with other sections scheduled to finish in 2009.

» **Why:** An 18.1km gas pipeline is being constructed between the above ground installations at Harefield and Southall Gas Works. Around 5.5km of the route will be completed in 2008. The 1220mm-diameter pipeline is essential to meet the significant increase in demand for gas in the west London area.

» **What:** The project includes 14 road crossings, eight river crossings and 25 auger bore (trenchless) crossings. In 2008 tunnel-boring machines will be used to construct three sections of tunnel with a total length of 2.3km – including one under Hillingdon Circus and the Metropolitan Line railway. Pipe jacking trenchless technology will be used in two further road crossings.

» **Lie of the land:** “The tunnel-boring machines are being used in dense urban areas where access is too restricted for conventional construction methods,” said National Grid project manager Martin Magee. Special mitigation measures are being taken in Sites of Importance for Nature Conservation (SINCS) and other sensitive habitats, such as Yeading Brook Meadows Local Nature Reserve, managed by the London Wildlife Trust.

Putting on a SHOW



Grantors Henry and Emma Vooght's Little Bovey Charolais herd came away with a hatful of rosettes from the Devon County Show

The agricultural show calendar got underway in May with the Devon County Show, Exeter, which acts as a giant showcase for food and farming in the county.

Henry and Emma Vooght from Bovey Tracey, Devon, were among 450 grantors affected by gas or electricity projects in the region who were invited to complimentary lunch in the National Grid marquee during the three days of the event. Many more grantors dropped by for free refreshments.

The couple's four-year-old cow Little Bovey Vogue was the star performer in the Charolais class at the show, winning a string of honours including Best in Breed Female. She also went on to be named as Reserve in the interbreed 'Born and bred in Devon' championship.

It's just the latest show ring triumph

for the couple who keep 80 pure-bred Charolais cows at their 300-acre farm.

"You're always a bit anxious at the first event of the season because you can never be sure how the youngsters will behave," said Emma. "A calf remains with its mother for six to eight months of its life and has little contact with humans, so it takes time to build trust.

"We spend a lot of time getting them accustomed to being led by a halter and there's usually a radio left on in the shed so that they get used to noise."

In the week prior to an event the animals are washed and blow-dried every day. Before going in front of the judges they are also groomed with a special whitening soap which makes the hair curl outwards to emphasise the animal's size.

Charolais cattle are a passion shared by the whole family – son James and daughters Grace and Laura have all notched up impressive results in the livestock show ring.

"We started 21 years ago with just two or three Charolais to run alongside our dairy cows but the herd has grown into one of the largest in the south-west," said Emma. "They have tremendous power and presence but are also very calm and good-natured and, of course, they look magnificent in their creamy

white coats."

The main focus is to produce bulls for breeding purposes and heifers to act as replacements, explained Henry Vooght. "Some animals that don't make the grade are culled but beef production is not a primary aim. They are reared to have a long and happy life – so, for example, their diet is designed to ensure that they are healthy, not just to put on weight quickly."

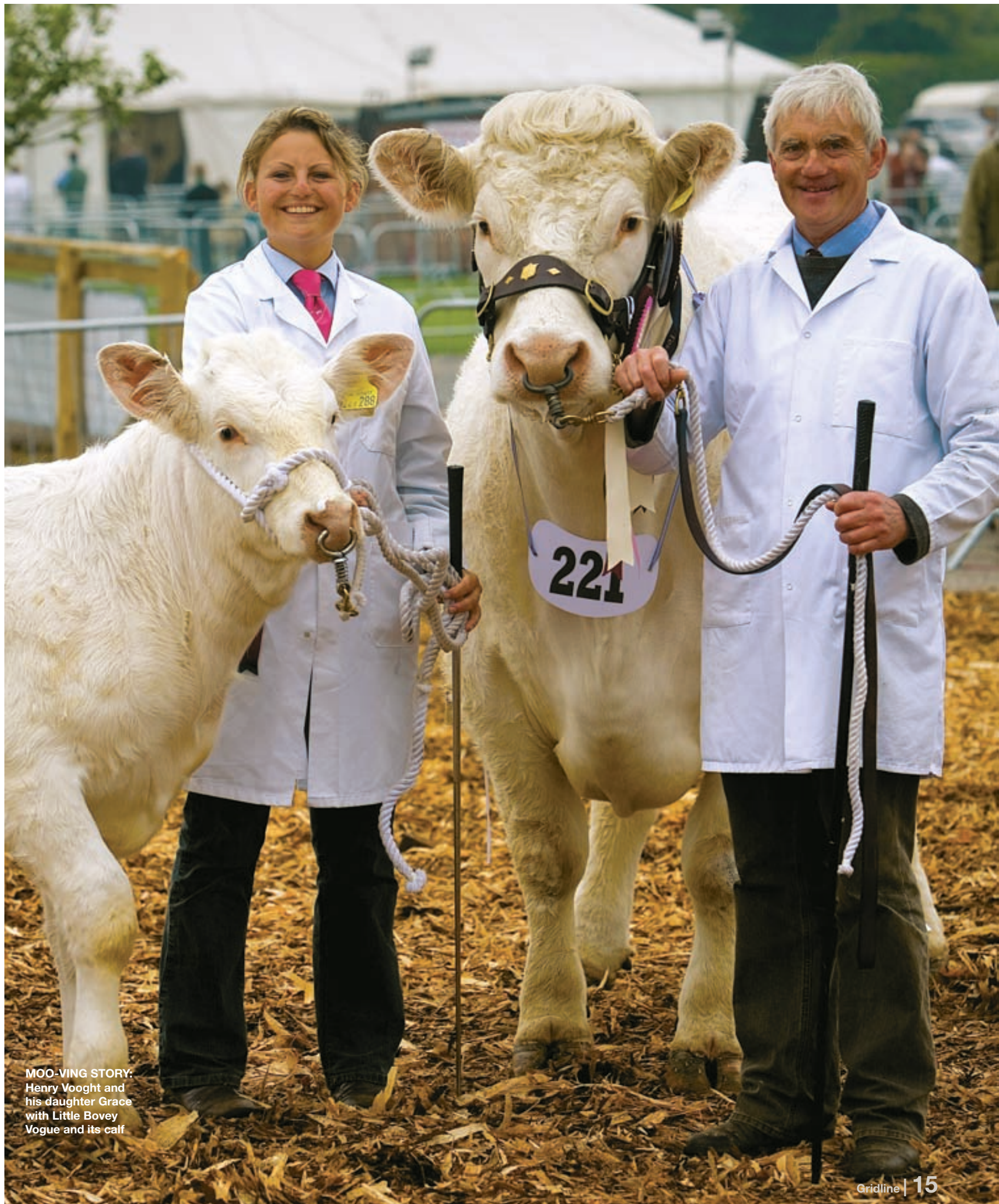
Charolais were the first Continental bulls to be introduced to the UK in the 1960s and are highly valued for their desirable performance traits such as conformation (muscularity), calving ease, the ability to produce enough milk for their young, and strong growth rate.

Henry and Emma travel up and down the country to buy suitable bulls at cattle sales, and also sell their own highly-rated sires and cows to other breeders. Agricultural shows are an important shop window, attracting the notice of potential purchasers and increasing the value of an animal's progeny.

"We often receive follow-up enquiries from potential buyers who have seen our animals at a show," said Emma. "A lot of people also come back to us year after year because they know that we stand behind the quality of our cattle."



WELCOME: Trish Grogan from National Grid's south-west office talks to grantors



MOO-VING STORY:
Henry Vooght and
his daughter Grace
with Little Bovey
Vogue and its calf

On the front line

The role of the Gas Pipeline Maintenance Team is to ensure that National Grid's high pressure gas transmission network runs smoothly

Looking after more than 7,000km of high pressure pipelines in the UK, as well as 400 above ground installations (AGIs), is the job of the Gas Pipeline Maintenance Team.

Tony Jackson, pipeline engineer west, leads one of the four area teams. From their base at Churchover Compressor Station in the West Midlands, the team carry out a wide range of maintenance tasks – everything from putting out gas marker posts to replacing pipeline valves.

“Most of our work is concerned with routine inspections and maintenance,” explained Tony.

Special equipment is used to monitor the pipelines from the inside. Surveys are carried out every 7-15 years and they don't require National Grid to come on to grantors' land.

So-called 'intelligent pigs' (Pipeline Inspection Gauges) are devices which travel through the pipeline between special pig traps at AGIs.

Propelled by the flow of gas they record potential problems such as rocks pressing on the pipeline, dents or damage caused by third party

TEAM LEADER:
Pipeline engineer
Tony Jackson



LIE OF THE LAND: After using special detection equipment to locate the pipeline, team member Mike Philpott marks out its position with pegs



IT'S A FACT

■ Gas pipes are made of high-grade carbon steel and are typically buried at a depth of between 1-1.5m

■ Pipelines have a protective coating of epoxy resin and are connected to special devices called transformer rectifiers which maintain a direct current into the pipeline to prevent the electrochemical reaction which causes corrosion

■ Above-ground installations are fitted with state-of-the-art telemetry devices which feed round-the-clock data about the performance and condition of equipment to National Grid's National Control Centre.

excavations and corrosion.

Above-ground surveys do require access to land. “These involve what are called close interval potential surveys (CIPS),” said Tony. “Most pipelines are equipped with permanent test stations located at field edges and other boundaries. The CIPS operator walks the route of the pipeline unwinding a coated copper wire, which is connected to the test station and to the metal pipeline via an electronic lead.

“Measurements are taken of the 'pipe to soil potential' – the voltage between the soil and pipeline metal – at various points to check that the cathodic protection system is doing its job of protecting the pipeline from corrosion.”

If an online survey shows up a potential problem the team will typically do a CIPS survey for a more detailed look. “Excavation is very much the last resort,” said Tony.

Fortnightly helicopter patrols are made to spot encroachments on gas pipelines, as well as



REMEMBER

- Emergency contact numbers are printed on gas pipeline marker posts
- Pipelines do not always run in straight lines across a field or between marker posts
- Notify National Grid prior to ground works within five metres of pipelines. If in doubt about the route of the pipeline contact the Asset Protection Team (tel: 0800 731 2961)
- Don't erect any permanent structure on or within the immediate vicinity of pipelines
- Consult National Grid before cultivating to a depth of more than 0.5m.
- Don't add to or reduce the depth of soil above the pipeline without consent from National Grid
- Ensure contractors are aware of these safety requirements

any earth movements, or flooding which could cause settlement. The 'eye in the sky' observers use laptops linked to Global Positioning Systems to track the route of pipelines on an interactive map – recording any potential threats.

Anything suspicious, such as building work too close to a pipeline, will be reported for investigation. In urgent cases the pilot will intervene by landing at the site. Some pipelines also have cathodic protection systems which indicate their status using colour-coded lights which are visible from the air.

For two years after pipeline construction finishes the contractors are responsible for any reinstatement requirements. After that period the Gas Pipeline Maintenance Team and Land & Development department work with the landowner to resolve any issues.

Although National Grid always aims to restore land to its original condition after pipeline construction projects, if further measures are

required there is a firm commitment to do anything it takes to put things right.

"It's very rare to be called back but sometimes there may be a drainage issue or perhaps grass has not reseeded," said Tony. "We always try to be as flexible as possible. For example, subject to cost considerations, we are happy for a grantor to use their own contractor – although we are required to supervise the job."

Although 24/7 emergency cover is maintained for contingencies like gas escapes, grantors are asked to give plenty of notice when they are planning work within 3-5m of a pipeline. As a

first step the Gas Pipeline Maintenance Team will visit the site with special detection tools to peg out the route of the pipe.

Grantors are given at least seven days' notice when National Grid needs to access land for routine maintenance and inspections, and in most cases considerably more warning is given. Exact start dates cannot be guaranteed, however, because jobs do sometimes run over.

"At the end of the day our aim is very much to work in partnership with landowners – we have a shared interest in working together to maintain a safe environment," said Tony.

CONTACT NUMBERS

- For all enquiries about National Grid Gas Transmission pipelines contact the National Grid Asset Protection Team on the following number: 0800 731 2961
- If you smell gas or are worried about gas safety, or if you suspect that a pipeline may have been damaged call 0800 111 999.

Grand designs

Game management and conservation go hand in hand on Lord Gerald Fitzalan Howard's estate in Yorkshire where, thanks to his efforts, grey partridge are once again a familiar sight

Home for Lord Gerald and his family is Carlton Towers near Goole – an extravaganza of Victorian Gothic architecture complete with towers, battlements, gargoyles and heraldic animals carrying banners.

In 1988 the house featured as the backdrop in the film *A Handful of Dust*. “Some members of the family had walk-on parts, including my father Miles – by then the Duke of Norfolk – who appeared as a gardener in a collarless shirt and cloth cap,” recalled Lord Gerald.

Today Carlton Towers is a popular venue for weddings, corporate events and conferences.

Lord Gerald also runs a business selling audio books and has high hopes for a compact preloaded audio book player he has just launched called mi-vox.

Extending to more than 2,500 acres, Carlton Towers Estate is run as a game shoot for pheasant, grey and French partridge. Part of the land is also devoted to arable crops managed by tenant farmers.

Last year the estate was presented with the prestigious Purdey Silver Award for Game and Conservation for its work re-establishing grey partridge. These ground-nesting birds have declined nationally by as much as 80 per cent in the last 30 years.

“I’ve always been interested in taking game management and conservation a step further and was convinced that if we could provide the right habitat the grey partridge would flourish,” said Lord Gerald.

Intensive farming methods have resulted in the removal of many hedges, with 10 acres blocks turning into 100-acre fields, a habitat that’s not suitable for the bird.

“They are extremely territorial so in a 100-acre field you will have just one pair,” explained Mark Fitzer, the estate’s head gamekeeper for the past 11 years. “You only need to put in a hedge to provide a barrier and some cover, and you get more territories and more grey partridge.”

Besides putting in new hedges and allowing them to grow tall, wide field margins are left uncropped and sown with wildlife seed mixes to provide the birds with the right feeding and nesting habitat.

Areas are also left unsprayed to provide the ants and insect larvae that grey partridge thrive on. The birds can also graze on fields devoted to game crops, such as millet and maize, and there are more than 200 feed stations maintained throughout the year.

Pest control is vital. Rats and carrion crow



IN MY VIEW: Lord Gerald and the imposing facade of Carlton Towers



NAME: Lord Gerald Fitzalan Howard
LOCATION: Carlton Towers Estate, near Goole, Yorkshire
LAND USE: 2,500 acre game shoot and arable
GRANTOR TYPE: Gas and electricity



CUSTODIAN: Head gamekeeper Mark Fitzer

eat the grey partridge's eggs, while nesting birds are preyed upon by foxes and other predators. "Conservation is about ensuring that as many different species of wildlife can exist, and that means controlling some so that others have a better chance," said Mark.

When it comes to reintroducing birds to the wild, Mark's wife Faye runs a fostering scheme in which partridge eggs are placed under broody hens for hatching, then barren pairs of partridges are persuaded to adopt the chicks and to foster them.

"Guided by their new parents the chicks soon become 'streetwise' about fending for themselves and this increases their chances of surviving to breed the following spring," said Mark.

The number of breeding pairs on the estate has increased from just a handful ten years ago to around 180 pairs today. And it's not just grey partridge – curlews and lapwings abound, as do many small birds such as chaffinches, tree sparrows, linnets and goldfinch.

"The job isn't finished yet, but the ultimate aim is to have a 'shootable surplus' which is where the grey partridge are naturally breeding in the wild and we don't have to rear chicks," said Mark.

Lord Gerald insists that everything shot on the estate goes back into the food chain. Some of the harvested birds are sold through a local butcher at fraction of the price paid in London restaurants.

"We are reaping a harvest and then putting back more than we are taking out," said Lord Gerald. "If everybody who took something out gave back more, the world would be a much better place wouldn't it?"

Find out more at: carlontowers.co.uk and mi-vox.com

To contact Gridline :

☎ 01926 654 948

✉ gridline@uk.ngrid.com

📍 122 Warwick Street, Leamington Spa, Warwickshire CV32 4QY.

YOUR CHANCE TO WIN A STYLISH DIGITAL COMPACT CAMERA

Our prize this issue is the superb Canon IXUS 80 IS digital camera.

This ultra-compact camera is loaded with leading technologies for ease of use and flawless shots.

Features include a powerful 8-megapixel CCD sensor, 3 x optical zoom and DIGIC III image processor as well as an optical image stabiliser which means you can say goodbye to blur. Its remarkable ISO sensitivity ensures photos turn out fantastically even in low lighting conditions, while a 2.5-inch TFT LCD screen lets you take complete control of your creations.

To be in with a chance of winning, simply answer the following question;

Q What is the ISO sensitivity of the Canon IXUS 80 IS digital camera?

Send your answer to Gridline Digital Camera Competition, 122 Warwick Street, Leamington Spa, Warwickshire CV32 4QY. Entries must be in by 25 July 2008.

WIN
A STYLISH
DIGITAL
CAMERA



Every picture tells a story

Well done to Jenny Norman, who won the last photo competition with this charming evocation of rural life

Jenny Norman from Holsworthy, Devon, never tires of watching the cows troop past her house for milking at a nearby farm. Now her photograph of this daily ritual (above) has been singled out by Gridline judges to sum up the theme of 'movement'.

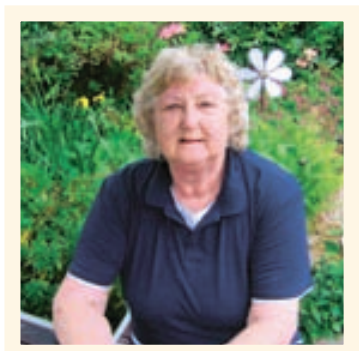
A member of her local Phoenix camera club, Jenny regularly enters photo competitions and her pictures have appeared in a variety of magazines and newspapers.

"I love the countryside and a lot of my photos focus on aspects of rural life," said Jenny. "It's very exciting to have my photo

recognised in this way."

ENTER GRIDLINE'S NEXT PHOTO COMPETITION

'Summer' is the theme of this issue's photo competition. All you have to do is send in your selected photograph for the chance to win a voucher from National Grid grantor Camel Valley Wines, entitling you to 12 bottles of wine (up to a maximum value of £130). Send your images* to Gridline photo competition, 122 Warwick Street, Leamington Spa, Warwickshire CV32 4QY. Or email images to gridline@uk.ngrid.com. Please



note you must be a grantor to be eligible to enter this competition. Closing date: 25 July 2008

*Regrettably, submitted prints cannot be returned. Visit camelvalley.com for more details of its wine.