National Grid Transco

GridLine

Newsletter for National Grid Transco electricity grantors

Spring 2004

All systems go – but gently

NATIONAL Grid Transco and its contractors are pulling out all the stops to protect sensitive farmland in South Wales during a major refurbishment project.

They are using vehicles that minimise disturbance to the land, including a new Transcat road-legal vehicle with rubber tracks.

Work began in November to replace the earthwire and all insulators, fittings and spacers along 180 spans of the 400kV overhead line between the Swansea North and Cilfynydd substations in Pontypridd. The 60-kilometre route passes through the Vale of Glamorgan and up the Rhondda Valley.

The work is being undertaken by two contractors, Eve Transmission and Balfour Beatty Power Networks and supervised by National Grid Transco project engineer Andrew McKenzie and engineering services project delivery engineer Robbie Griggs — and is on target for completion this spring.

The £12 million scheme is a "first" for the company in that the old fittings are being recycled.

"We are pleased that recycling is now a priority," said Andrew. "In the past, the old fittings would have ended up in landfill. Now they will make a useful contribution. We are also doing our best to recycle everything associated with the project — right down to bits of wood, paper and even teabags."

Wayleave staff, including Richard Biggs on his first major assignment, are liaising with more than 140 grantors involved.

He said: "With much of the work being carried out at this time of the year on pasture land, our priority as always has been to do all we can to protect the environment — hence the use of specialist vehicles."

From left: Paul McKenna, project delivery; Richard Biggs, wayleave officer; Steve Askew of Eve Transmission and Robbie Griggs, project delivery

Graham Ducker, National Grid Transco's Environmental Business Partner (Network Strategy) said: "Andrew and the contractors involved in this scheme are being very pro-active with regards to recycling on this project. Porcelain and timber are two of the three major waste streams identified as a priority for recycling by National Grid Transco's Safety and Environment Team.

"Hopefully this is just the start of reusing porcelain in this way and the process can be expanded to include old insulation removed from substation projects."

Factfile

- Recycling overhead line insulator strings has been difficult until now. The components include a porcelain or glass bell with a centre pin of high tensile steel and a top cap of pearlitic malleable cast iron. About 5,000 tonnes of insulators are expected to be recycled.
- At the end of last year, CF Booth Ltd, the contracted waste carriers for both contractors, demonstrated a facility for crushing and shredding the insulators in a single pass using a 2,500hp shredder.
- Ceramic materials are now being screened to three output sizes for use as aggregate replacement and the steel and iron shreds are being separated out for melting.

James' rare turkeys are a breed apart

BACK in the early 1930s, farmer Frank Peele saved the Norfolk black turkey from extinction in this country by launching a breeding programme at his farm near Norwich.

Working closely with an expert from an agricultural research station, he scoured the country to locate non-related birds so he could establish a healthy breeding stock unaffected by interbreeding.

His efforts paid off. Frank saved the rare black turkey and today, more than 70 years later, his 37-year-old grandson, grantor James Graham, continues his work at Rookery Farm, Thuxton.

Frank died in 1980 and James took over the farm in 1989 after leaving agricultural college. Today, he is the only farmer in the country to breed the Norfolk black turkey on a major scale and last Christmas fattened 3,500 birds, supplying the London food emporium Fortnum & Mason, a number of leading London butchers and several butchers in Norfolk itself.

"My grandfather bought Rookery Farm in the early 1930s and as he came from a long line of poultry keepers, he was rather expected to raise poultry!" said James. "He realised black turkeys were rapidly becoming extinct in the UK, and the few left in Europe had become smaller and smaller because of interbreeding."

The Norfolk black became rare partly due to its slow-maturation time, and a preference by producers for the faster-growing, larger-breasted bronze varieties.

"My turkeys take twice as long to mature and grow to table weight as the usual commercially-reared turkeys," said James. "They have to be hand-plucked and they have a higher and more pointed breast. The joke used to be that once you plucked one, you had to hit it with a wooden mallet to fit it into the oven."

As a result, Norfolk blacks are more expensive than other faster growing varieties, but James believes they are well worth it.

"The taste is more along the line of pheasant and there is a thin layer of fat under the breast," he said. "When you carve it, it has a very tight grain, so you can cut it very thin, like a wafer, and it never crumbles.

"We don't waste the feathers either — last Christmas we sold about half a tonne of them to a dealer in Kent who uses them to make native American headdresses for customers in the United States!"

James works closely with The Rare Breeds Survival Trust. Last Christmas, he also fattened some rare bourbon red turkeys for the festive season and maintains a small breeding flock of rare slate turkeys. James hopes that the Norfolk black turkey will be included in schemes to safeguard endangered livestock, and will become as famous and trendy as creatures like the Gloucester old spot pig.

● Peele's Norfolk black turkeys are produced mainly for Christmas, although a few are raised for Easter. Rookery Farm is crossed by the Walpole-Norwich 400kV overhead line, and together with Lent Farm covers about 380 acres, 200 of which are arable. The Grahams also have a small herd of beef shorthorn cattle.

For more information, contact James at Peele's Norfolk Black Turkeys, Rookery Farm, Thuxton, Norwich, Norfolk NR9 4QJ. Tel: 01362 850237.

James Graham with his flock of Norfolk black turkeys

The Bonga *inches its way under the bond wires between the two towers*

Ship's safe passage is a towering achievement

A MAJOR partnership operation ensured that *The Bonga*, the UK's biggest ocean-going vessel, made a safe passage down the River Tyne following a £300 million refit at Wallsend, near Newcastle.

A team from National Grid Transco's Network Strategy and Engineering Services worked closely with Shell, its contractors AMEC, the Port of Tyne harbourmaster and many other authorities and organisations during the complex exercise that involved reconfiguring the grid to allow overhead high-voltage power lines to be moved out of *The Bonga's* way.

The huge floating oil production and storage vessel arrived on the Tyne from South Korea in November 2002. Then it fitted easily under the six pairs of conductors and an earthwire that span the Tyne 500 yards from the AMEC site at Wallsend. However, leaving for its base offshore of Nigeria was a different matter as a newly-built flare stack was taller than the power lines.

Two of the men who helped overcome the problem were senior project manager Dave Mercer and wayleaves officer Wilson Holmes. "The Tyne crossing is one of a number of power routes carrying electricity generated in Scotland and the North East of England on to the grid," explained Dave. "When it was built in the 1960s, we agreed with the port authority it could be removed for access given reasonable notice. However,*The Bonga* is the only vessel to have made it necessary."

The Port of Tyne approached National Grid three years ago about the problems that would be faced when the 300-metre long vessel arrived. Dave's team, headed by project engineer Paul Bell, got to work to plan a solution.

Much preparatory work was needed to protect local supplies so the bulk of power could be re-routed ensuring no loss of supply to customers.

The operation to remove the wires began last September — special winches and pulley blocks on each side of the river removed the conductors one by one. The bond wires were then hauled up to the top of the towers, well out of the way of the vessel, ready to pull new wires back into position.

The engineering team was among thousands of local people who gathered to watch *The Bonga* set sail with an extra 22,000 tonnes of new equipment.

"It was a fantastic sight," said Paul. "It's hard to imagine the sheer size of the vessel unless you see it edging its way along the river, dwarfing the tiny tugboats. The enormous flare stack cleared the conductors with several metres to spare and there was a ripple of applause and a cheer from the people standing by."

With *The Bonga* safely on its journey to Africa, a month-long operation got under way to replace the wires and restore the circuits to their normal configuration.

NGT project engineer Paul Bell, right, and Balfour Beatty project manager Andrew Rigby survey the cable-winching procedure

There's light at the end of the tunnels…

London project takes major step

Steady as she goes… the transformer reaches St John's Wood substation

NATIONAL Grid Transco's new cable tunnel from Hertfordshire to North London has reached a major milestone.

Just before Christmas, all five new transformers reached the 400kV substations being built at Elstree and St John's Wood.

The monorail safety and maintenance system has been tested and installed in the tunnel and cable installation is due to start this spring. The scheme, known as The London Connection, was started in March 2000 and is expected to be completed in 2005.

Elstree substation buildings are now complete, and switchgear installation is expected to be finished by the middle of the year.

At St John's Wood, the substation has been built and switchgear installed, and all works are due for completion by 2005.

The three-metre diameter tunnel, construction of which was completed within a year, will house a 400kV electricity transmission cable circuit feeding London.

Running at an average depth of about 27 metres, the tunnel has been constructed to allow for a second 400kV circuit when demand for electricity increases further.

All the buildings have been designed to integrate in style with the local environment or to complement existing buildings in the vicinity, and National Grid Transco has taken into consideration comments from planning officers, local residents and businesses.

Along the 20km route, there are tunnel shaft access buildings in Elstree, Centennial Park, Canons Corner, Colindale, Cricklewood, Kilburn and St John's Wood for maintenance and ventilation.

The monorail, although in operation in other countries, is the first of its kind in the UK. It can travel at 2.5m per second, roughly five mph, and inspects the cabling by remote control. Should maintenance work be needed, staff can also use the monorail to transport themselves and equipment.

Cable installation will commence shortly and will be one of the longest 400kV circuits to be installed in Europe. Using cross-linked polyethylene insulation technology, this type of cable requires minimal maintenance.

By constructing a tunnel, most of the works have been carried out underground, were invisible and inaudible at ground level and minimised traffic disruption.

Jim Street, project manager for National Grid Transco, said: "This cable tunnel represents a major investment by NGT to reinforce the network. At a cost of £200 million, the circuit will be feeding electricity to London. The tunnel has been designed to accommodate a second circuit in years to come to meet future demand."

North London wayleaves officer Brian Mead has been liaising closely with grantors along the route of the tunnel throughout the project. KBR was appointed as NGT's technical consultant and site representative. ABB is undertaking the St John's Wood substation and cable manufacturing and installation contract. The Elstree substation contract was awarded to Siemens. JMS built the tunnel and is in the process of completing the head houses. The £60 million XLPE cable and switchgear contract has been awarded to ABB.

The transformer goes in through the gates watched by its police escort

Tunnel vision… the view from the inside at Dartford

A brush with toothpaste under the Thames

WORK is progressing well on the new 2.4km Dartford 400kV cable tunnel. It forms part of a two-year, multi-million pound scheme to remove two 275kV circuits beneath the road deck of the west Dartford road tunnel, and install replacement 400kV circuits in a new tunnel.

Once up and running, it will allow future maintenance without affecting traffic flow on London's orbital motorway network.

Civil engineering contractor AMEC brought in a specialist tunnel boring machine (TBM), for the drive beneath the Thames.

The 85-tonne machine, measuring 3.5 metres diameter by eight metres long, went into the ground at Littlebrook in Dartford, Kent, in August and, at full capacity, advanced towards Thurrock in Essex at more than 200 metres a week.

Both access shafts are now constructed and the tunnel drive was completed in February. The tunnel has an internal diameter of three metres and is 30-35 metres below ground level — 15 to 20 metres below the river bed.

National Grid Transco project manager Jim Street said construction of both shaft headhouses and the installation of mechanical and electrical services will take until July. After that, cable installation will begin and final commissioning is scheduled for April 2005.

The TBM goes into the ground at Littlebrook

"A main feature of the project is the geology," said Jim. "Being so close to the River Thames, the tunnel was constructed well below the level of the local water table — so the whole construction operation had to be watertight as the ground water tried to force a path into the TBM and the tunnel.

"Secondly, we had to tunnel through ground that was all chalk. The chalk when cut by the TBM and mixed with all the natural water, became a toothpaste-like material — you can imagine the difficulties we had in dealing and disposing of this. It was stockpiled on site at Littlebrook and transferred daily by sealed wagons to a local registered tip in Essex able to accommodate the high moisture content."

AMEC's tunnel construction contract is worth £16 million while the £10 million cable and switchgear contract has been awarded to ABB. Babtie is NGT's technical consultant and site representative. Franklin and Andrews are cost consultants.

Crops with a difference give farmers a whole new outlook on life…

Simon Tunnard on his plantation with a handful of ginseng root

G for ginseng – and gold

GRANTOR Simon Tunnard was intrigued when he read an article about ginseng in *The Economist* more than 10 years ago.

"It reported that ginseng, the plant commonly used in Chinese medicine, was worth more than its weight in gold," he said. "That, of course, was something of an exaggeration — but there was a glimmer of truth in it."

Simon, who runs Stratton Farm at Biggleswade in Bedfordshire, remained interested in the subject and nine years ago, attended a conference in Vancouver on ginseng production.

Today, he is the only commercial UK producer of ginseng and a member of Euro Ginseng, a collaboration of European growers who collectively can supply the largest companies.

Stratton Farm has been in Simon's family since the 1940s and originally supplied vegetables for the family's stall at Covent Garden. Today, the 250-acre farm — which is crossed by the Cottam-Wymondley 400kV overhead line — grows combinable crops such as wheat, barley and beans.

"Years ago, the writing was on the wall that a farm this size simply wasn't a viable proposition," said Simon. "I realised we had to diversify so, nine years ago, I decided to give two and half acres over to ginseng production."

It was a brave decision — ginseng plants take four years to reach maturity, so there would be no income until the first roots could be harvested.

As the plant's natural environment is forest, Simon initially erected a seven-foot canopy to represent the shade cover of forest leaves and used straw mulch to take the place of leaf litter. Since then, he has planted hybrid poplar trees to mimic the ideal growing conditions.

As part of Euro Ginseng — which includes growers from Holland, Germany and Switzerland — Simon sends the raw material in a transit van to Holland where it is processed into capsules, ointment and other products like shampoo and body lotion.

"The finished product is returned to me so that I can sell it by mail order direct to my customers," said Simon. "I couldn't do the processing myself… just the machine needed to dry the ginseng root costs £100,000. Together we can supply demand, but independently we are able to treat customers as individuals."

Ginseng root can live for literally hundreds of years, and the older it is, the more potent it becomes. Simon harvests after four years, and a continuous seed planting operation ensures future supplies. "Last year was dismal," he said. "The lack of rain meant that everything got too dry. But the roots survived and will produce a crop this year."

Growing ginseng not only requires considerable patience, it's also hard work — Simon's two and half acres of ginseng all has to be hand-weeded.

But while there may not be gold in them thar fields, he said, the ginseng proved itself to be a useful source to supplement the farm's income — despite all the waiting and the effort.

FOOTNOTE: In case you are wondering…. yes, Simon and his wife do both take ginseng themselves, and their two children have used ginseng ointment which can help alleviate skin conditions.

- For more information, visit www.euroginseng.co.uk

About ginseng

- The genus name of ginseng "Panax" is derived from the Greek pan (all) akos (cure), meaning cure-all. This alone tells you a lot about this herb — no single herb can be considered a panacea but ginseng comes close to it.
- It is the most famous Chinese herb, and has been used for 7,000 years to boost energy, sharpen the mind, reduce stress, treat impotence and extend life. Other traditional uses include: to enhance the immune system, control blood pressure, regulate blood sugar levels, strengthen the cardiovascular system and alleviate symptoms of the menopause.
- Ginseng is native to deciduous woodland in the mountainous area of north eastern China, Korea and far eastern regions of Russia. Vast acreages are also under cultivation in North America and Canada.
- The ginseng plant grows only two to three inches in the first year, finally reaching up to two feet by the fourth year.
- Korean and American ginseng are different in that Korean is hotter and more associated with extra energy. The American variety is more cooling and therefore more appropriate for stress and high blood pressure.

Hemp comes in from the cold

THERE can't be many of our grantors who have received an unexpected visit from the drugs squad.

But it happened to the West family of Hillcroft Farm near Battle when they introduced a new crop to join the wheat, oilseed rape and peas grown on their 240-hectare farm.

The crop they planted was hemp, a very misunderstood member of the vegetable kingdom that for years caused a raging debate over the distinction between industrial hemp and marijuana.

Hemp is actually cannabis grown specifically for industrial use and thus contains very low levels of cannabinoids (THC). In other words, it has a virtually zero drug content — it has been said that you would have to smoke at least a field of the stuff even to get a smile!

"You can't blame the police," said Bob. "They had just had a major drugs raid in Hastings and when someone took a sample of hemp from our field into the local police station, they had to investigate. Hemp does look very similar to cannabis!"

Bob, 35, farms alongside his brother Steve, 30, and father Will, 60, and the farm has been a family business since it was bought in 1948 by Will's father. Their land is crossed by the Dungeness-Ninfield 400kV overhead line.

Hemp prohibition in Britain was lifted in 1993, and the Wests began production in 2001 when it became more profitable to grow than flax, under the subsidies available through the Integrated Administration and Control System (IACS).

"We had a real disaster with our first crop," said Bob. "It was harvested in the wrong way and was ruined. We had better luck the following year, and a good year in 2003, when we grew about 140 acres. It's an amazingly quick-growing crop. We plant at the beginning of May and cut it during the last week of July when it's about 12 feet tall."

The West family sell their hemp to Hemcore, the UK's largest grower and processor of hemp. The company, which has been trading for more than 10 years, has a factory in Essex which processes the whole hemp plant and separates the stem into fibre and core. This core or pith produces Hemcore horse bedding and the fibre is sold into Europe's paper, automotive and insulation industries.

"Strange to think that some of our hemp ends up in car door panels!" said Bob.

Bob West in front of a consignment of hemp. Inset: at the growing stage

About hemp

- Hemp is one of the most useful plants known — it is used to make paper, textiles, building materials, food, medicine, paint, detergent, varnish, oil, ink and fuel.
- Hemp uses the sun more efficiently than virtually any other plant and can be grown in nearly any climate and soil.
- The earliest known woven fabric was apparently of hemp, which began to be worked between 8,000-7,000 BC.
- The word canvas is derived from cannabis. In the Middle Ages in England, thousands of acres were grown to produce the fibre for all the sails and rigging of the sailing fleet. It took 200 acres to fit out one ship.
- Hemp seed is far more nutritious than even soya bean.
- Hemp grows well without herbicides, fungicides or pesticides.
- It produces more pulp per acre than timber and can be used for every quality of paper. It can also be recycled more times. Until 1883, more than 75 per cent of the world's paper was made from hemp fibre. Hemp paper more than 1,500 years old has been found,

Workers still leaving the industry

ANOTHER 17,200 farmers and farm workers left the agricultural industry in England in the 12 months to June 2003, despite improvements in farm income and the fight by producers to stay in business.

The total job losses — revealed by the Department for Environment, Food and Rural Affairs (Defra) — represented a fall of 4.6 per cent in the workforce.

The National Farmers Union said the figures demonstrated just how incredibly tough it has been for the industry and that the future is still precarious.

Many farmers have recently broadened their horizons and looked beyond the fields for additional ventures to earn a living wage.

The NFU says that more than 150 non-farming occupations are carried out by farmers. They include tourism, on-site production of dairy produce, provision of IT and conference facilities, and even leisure activities such as llama trekking.

If YOU are a National Grid Transco grantor who has diversified successfully, why not share your experiences with others. Write to Gridline, Papers Publishing, Stirling House, College Road, Cheltenham, Glos GL53 7HY or e-mail john@paperspublishing.co.uk

There's more to farming than growing food

A NEW National Non-Food Crops Centre (NNFCC) has been opened to raise awareness among industry, scientists and farmers of the developing opportunities of non-food uses of crops.

It will be a centre of excellence that for the first time unites all the work on non-food crops taking place across the UK.

The York-based centre will also play an important role in helping to tackle climate change through the use of developing energy crops and renewable products.

Non-food crops from hemp to oilseed rape can be used to make car parts, lubricants, beauty creams, green fuel and starch-based plastics.

- For more information, visit www.nnfcc.co.uk

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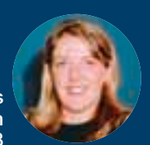


Wayleaves payments

Call Helen Metcalfe, Martyn Blakeley and Dawn Ingham on 0800 389 5113

Administrators (South)

Mary Lawson

Maureen Bright

Skelton's grand opening

CONSERVATIONIST and champion of the environment David Bellamy has launched a new state-of-the-art environmental education centre at Skelton Grange, Leeds.

The £600,000 development — kickstarted by National Grid Transco funding — secures Skelton Grange's role as a focal point for sustainable development education both for children and adults in West Yorkshire.

"You don't know how lucky you are," David told guests at the official opening. "This should act as a spawning ground for a new generation of Magnus Pykes and David Attenboroughs, and is a fantastic opportunity for children in this area.

"I've opened many of these centres up and down the country and they just keep getting better and better."

David Bellamy with young visitors at the launch of the centre building

Skelton Grange, one of National Grid Transco's 12-strong network of environmental education centres, is managed by the UK's largest conservation charity BTCV and is supported by Leeds City Council.

This summer it welcomed its 50,000th visitor and reinforced its reputation as a leading centre for excellence and innovation with children and career training.

Previously housed in a portable building close to Skelton Grange substation, the centre is now operating in a building that is a showcase for sustainable development, featuring the best in eco-friendly design and technology.

When the need for a new building was identified, National Grid Transco provided £140,000 towards the project and the initial feasibility study.

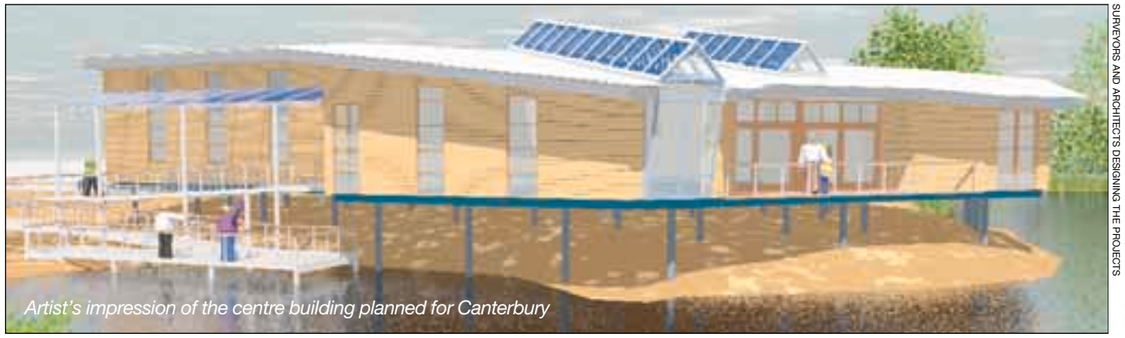
The project later attracted £290,000 of Lottery funding, and there was further financial backing from WREN, Clearskies, The Energy Saving Trust and Yorkshire Water.

The building was designed by Queen's Award-winning architects Leeds Environmental Design Associates, and its "green" features include sun-converting photo-voltaic energy cells on the roof, a wind turbine, a heat pump capturing heat from a nearby 275kV underground power cable, rainwater for the toilets and floor and roof insulation made from grass-cuttings.

The centre — which gained coveted Eco-centre status in 2002 — has two classrooms, four office/meeting rooms and a workshop. There is also a pond-themed conservatory area that helps bring the outside environment inside the building.

National Grid Transco's group corporate affairs director Ruth Thompson said that the new centre provided a wonderful chance for children to explore environmental issues.

"It also shows what can be achieved when business and charities work in partnership together," she told guests.


Artist's impression of the centre building planned for Canterbury

PICTURE COURTESY OF GRAY HOLMES & JAMES, THE CHARTERED SURVEYORS AND ARCHITECTS DESIGNING THE PROJECTS

Network spending boost

NATIONAL Grid Transco plans to invest £5 million over the next three years developing its environmental centre education network.

Almost half of that will be used on new building or refurbishment projects that will allow the centres to meet the rising demand for the highest standards in education in environmental and sustainable development.

Here is where the money is going:

- £580,000 will be spent on a new centre building for **Canterbury**
- £220,000 will fund the refurbishment of **Ninfield**
- £100,000 will go on new accommodation for **West Boldon**
- £120,000 will be spent on new facilities at **Bramley Frith**
- £150,000 will pay for new facilities at **Iver**
- A further £1 million is earmarked for development of other centres.

Canterbury: Construction of the new building is planned to start this year and will take approximately six months. It will provide 2/3 classrooms, a viewing area, a foyer, a library, a resource room, offices and toilets on a lakeside site.

The building will be timber-framed and timber-clad, and elevated on steel tube piles recycled from North Sea gas pipes, and a recycled steel deck to overcome flooding risks.

The centre will incorporate environmentally-friendly features, including natural ventilation and lighting.

Additional energy and resource-saving measures will be included, such as daylight sensor control of artificial lighting, rainwater harvesting for toilet flushing and infra-red sensor-controlled taps.

Ninfield: The refurbishment scheme will include two new classrooms. The building will meet all school building regulations.Windows and doors are being replaced with ones that meet the latest thermal performance standards and there will be a new glazed porch to provide a covered area. An outside demonstration area will also be developed.

Rainwater will be collected for toilet flushing and improved accessible toilet and shower facilities will be provided. Work is expected to last four months.

West Boldon: Developments will allow the centre team to move from a Portakabin into the National Grid Transco site office and workshop. Refurbishment will provide two classrooms, a library and resource room, a foyer and display area, cloakrooms and toilets, staff offices and rest room.

Bramley Frith: Work is due to start this year to install new toilets, a staff shower, a secure store for bags and coats, a covered boot washing and storage area and a sheltered walkway to the centre. Rainwater will be collected for use in the centre garden, and infra-red sensor-controlled taps and toilet flushing will reduce water consumption.

Iver: Iver is also to have new toilet facilities including infra-red sensors. An extension to the centre building will include a meeting room. Work is expected to start in the spring.

National Grid Transco Environmental Education Centre Network

enbrief, the NGT environmental centre network newsletter, has been relaunched to keep readers up-to-date with developments. If you would like to receive future issues of enbrief, *call Joan Dunstan on 01242 260046, fax 01242 584425 or email joan@paperspublishing.co.uk*


John Hill, left, and Simon Witty with their trophies

John and Simon take top honours

MORE than 27,000 visitors flocked to the 53rd British National Ploughing championships at Brougham near Penrith in Cumbria to see the country's leading ploughmen in action.

Once again, National Grid Transco was a main sponsor of the event where the quality of the ploughing matched the glorious weather.

More than 160 competitors fought for top honours and these went to two Yorkshiremen — 46-year-old farmer John Hill and Simon Witty, a 27-year-old freelance agricultural mechanic who won the conventional ploughing championship and reversible ploughing championship respectively.

Simon was keeping success in the family — his brother James won the 2002 British reversible championships and went on to take the World Reversible Ploughing Championship title in Canada last August. Now Simon has the opportunity of becoming the third world champ in his family, following James and their father Graeme.

James, 24, had to withdraw from the British championships because a docker's strike left his plough stranded on a Canadian quayside after the world event.

John's victory puts him back on track for the World Conventional championship title that has so far eluded him. A former triple world reversible ploughing champion, John returned to conventional ploughing only last year and had not ploughed in that class for 12 years. His success at Brougham was his 11th national title.

John, who runs a mixed dairy and arable 280-acre farm at Hoylandswaine near Sheffield, and Simon, who helps to run the family farm of 650 arable acres at East Lutton, near Malton, will now plough for England at the 2004 World Ploughing Contest in Northern Ireland. It will be quite an occasion — the last time a Witty and a Hill ploughed for England was 1993 when John and Simon's father Graeme ploughed in Sweden.

Visit www.ploughmen.co.uk for the full results.

- DIARY NOTE: This year's British National championships will be held at South Stoke, near Reading, Berkshire, on October 9 and 10. The 51st World Ploughing Contest is on September 3 and 4 at Ballykelly, Limavady, Co Londonderry, Northern Ireland.


Thomas Cochrane from Coleraine won the National Grid Transco award in the reversible ploughing

We say hello…

Two fresh faces in the South West

THE LAND and Development Group has welcomed two new field staff to represent wayleaves in the South West.

Wayleave officer Richard Biggs and wayleave warden Jane Bishop cover an area stretching from St Austell in Cornwall to Southampton in Hampshire and Iron Acton in Gloucestershire. They are based in Taunton, Somerset.

● Richard has amassed a wide variety of experience since leaving school and has already spent 15 years with National Grid.

"I have always enjoyed the great outdoors and meeting people, so it is great to have the opportunity to combine these interests in the wayleave function," he said.

Richard was born and brought up in Dorset. He joined National Grid as a craft attendant at Melksham substation, and was later seconded to the commercial department as a stores stock controller in Andover.

He moved to Bristol in a similar role before joining business services as a contract administrator in 1994. He later became a business services assistant until 2001 when he moved to National Grid's HQ at Coventry to take up a planning and performance role with the company's United Kingdom Electricity Services (UKES) department.

"I gained a good grounding in the engineering side of the business, so it's rewarding to take that knowledge out into the field," said Richard.

Richard and his wife Heather live at Gastard in Wiltshire and have teenage twin girls and a young son. When busy family life allows, he enjoys DIY and walking the dog.

● Jane is a country girl through and through. Born and bred in Somerset, she has close links with the rural community and is enjoying the challenge of building strong business relationships with grantors.

She lives in the village of Bicknoller at the foot of the Quantock Hills and her favourite pastime is riding her two horses.

Jane, 33, left school to take a diploma in business and financial administration at Taunton College. She joined design and quotes with Transco in 1997. This later became Transco Connections and more recently Fulcrum Connections.

Fulcrum Connections provides gas connection services to the national pipeline infrastructure on behalf of National Grid Transco, undertaking some 200,000 new connections and alterations a year for domestic and industrial customers.

As non-domestic site surveyor, Jane's role with Fulcrum involved dealing with daily enquiries.

As a wayleave warden, she is still able to enjoy customer contact. "But it's even more rewarding now as I am dealing with individual landowners and farmers, rather than big corporations," she said. "Hopefully a lifetime of rural links will stand me in good stead for the future."

Above: *new field staff in the South West… Jane Bishop and Richard Biggs, with Jane's horse Lily, at Bicknoller*

Left: *Julie Smith at her desk*

… and Julie joins north team

THE wayleave team in the north has welcomed a new member to the fold, administrator Julie Smith.

Julie has worked in the electricity supply industry for about 15 years, and met her husband Ashley when they were both working for the Central Electricity Generating Board at Burymead House in Guildford.

She is delighted to join the wayleave team and said: "I had been seconded to various departments for a while so I was really pleased to get a permanent post here . It's the department I would have picked above all others."

Julie hails from Surrey and joined Burymead House as a clerical assistant in the facilities department. She met Ashley, a civil engineer, and in 1991 the couple wed after moving to Hookstone Park in Harrogate.

Julie worked in the drawing office there, until transferring to Thorpe Park in Leeds.

Drawing management later became part of asset strategy and the function was moved to Coventry. Julie's family commitments — the couple have a seven-year-old son and a four-year-old daughter — made it impossible for her to go, and that's when she went on secondment.

and farewell…

Travel time for Mike

MIKE FORD'S colleagues got used to him turning up for work at the NGT offices at Northallerton along with baskets of pigeons. Mike, 60, who retired recently after nearly 39 years service, most of them in wayleaves, was helping out an elderly neighbour by releasing his 18 pigeons for him.

The old chap could no longer drive, so his son would drop off the pigeons at my house at 7am just before I left for the 40 miles drive to the office at Northallerton," he explained. "I'd leave the birds in the car until 9am when I'd pop out to the car park to release them — much to the amusement of my colleagues. During the season, I would be out there with pigeons four mornings a week!"

Mike was born and bred in Yorkshire and joined CEGB after leaving Askham Bryan Agricultural College in York in 1965. He began his career as an assistant wayleave officer in the North East, based at Leeds, moving over to the Estates Section in 1971. For the next 15 years, he worked on ash disposal and landscape schemes at power stations.

In 1986, Mike was back in wayleaves, working on new overhead line projects in Lincolnshire and east Yorkshire, along with major refurbishment schemes in Cheshire and Lancashire.

For the past four years, he has been involved with the construction of the northern section of the second Yorkshire line linking Teesside with York.

Mike has a keen interest in everything to do with agriculture and forestry and is anxious to "stay in touch". When he's not doing that, he has plenty of other plans for the future.

He and his wife Liz, who live near Harrogate and have a son, daughter and grandson, plan to visit their caravan over the border in Dumfries and Galloway, and look forward to having more time for walking and travelling.

Mike collects books — among other things — and is interested in anything to do with shipping — particularly 19th century coastal trading ships that were used extensively by the farming fraternity to transport crops.

He is also a frequent passenger on the *Waverley*, the world's last sea-going paddle steam cruiser.

Above: *Mike Ford with grantor John Calvert, a dairy farmer at Crathorne near Northallerton, North Yorks.* ***Inset left:*** *Roger Rose on the golf course*

Roger rises to new challenge

MEANWHILE… the Group's consents and acquisitions surveyor Roger Rose has retired and moved to a new challenge in the North West.

Roger, 53, served the electricity industry for almost 30 years, but is now broadening his horizons by setting up his own independent company of chartered surveyors, valuers and property consultants.

"I have thoroughly enjoyed my time with the company, and my working relationship with wayleave, engineering and other staff. But I still have plenty of years left to make good use of the skills acquired over the years and I look forward to setting up my own business," he said.

Roger's role involved acquiring land for network reinforcement, easements for overseas interconnections, advice on operational property matters as well as negotiations for permanent easements relating to underground cables and overhead lines.

Birmingham born and bred, Roger graduated with a BA in Planning and Urban Studies, and later became a Fellow of the Royal Institution of Chartered Surveyors, and a Fellow of the Institute of Revenues Rating and Valuation.

He joined the Central Electricity Generating Board in 1975 as area estates and wayleaves officer based in Birmingham, later moving to Manchester as head of estate management.

In 1989, Roger transferred to the National Grid Company as regional surveyor for the North of England, based at the Roseneath offices in Stockport, Cheshire. Five years later he moved to National Grid's Coventry HQ as senior estates surveyor in the Planning and Environment Department.

Roger is married to Elizabeth and in his spare time, enjoys golf and horse riding.

ENERGY auditing and brokering, energy efficiency planning and product testing and evaluation are just some of the many activities covered by the Farm Energy Centre (FEC).

It is the UK's leading source of information on the application of energy-based techniques in farming and horticulture and the FEC works with farmers, utilities — including National Grid Transco — research institutes and manufacturers providing expertise on energy applications and efficiency.

For more information about the work of the FEC, visit www.farmenergy.com. If you would like to know more about any of the issues featured on these pages, contact the FEC at Stoneleigh Park, Kenilworth, Warwickshire CV8 2LS. Tel: 024 7669 6512 or e-mail: info@farmenergy.com

Use the same numbers to obtain a list of FEC publications, including technical guides, and technical notes.

Get good advice

FARMERS are frequently horrified by electricity supply quotations from electricity companies.

Fortunately, sound advice is at hand.

"Time after time we have helped grantors drive down the cost of new or upgraded electricity supplies," said Andrew Kneeshaw of FEC.

"Electricity companies often don't understand the customer's needs and simply oversize."

Andrew highlighted typical examples:

- a potato store in the Cotswolds from a village supply — costs started at £25,000, but the FEC got these down to £6,500.
- a redeveloped pig farm near Rugby — the first quote of £10,612 was reduced to £4,929.
- a large new crop storage complex near Oxford — the electricity company specified a 500kVA ground mounted substation for "starting current reasons". This was reduced to a 200kVA pole mount, saving £13,000.

Costs for the FEC electricity supply, planning and negotiation service are reasonable and the initial assessment is free. For more information, call Andrew on 024 7669 6512.

Cleaning air vents and fans restores the efficiency of electrical equipment

Clean up to cut the bills

A SPOT of spring cleaning could save you money.

Dirt can play havoc with the effectiveness of energy-using equipment, so cleaning refrigeration coils, light fittings and fans is a cost-effective way of cutting energy use.

Here's some advice:

- Good airflow is important for refrigeration heat exchangers and ventilation systems. Dirt build-up in refrigeration coils inhibits the heat dispersion characteristics of the fins and condensing efficiency is reduced — so clean them!
- Similarly, dirt on fan blades lowers air handling efficiency and increases the load on the motor, resulting in overheating and reduced motor life. Where fan outlets are fitted with guards, these soon clog up with dirt reducing the effectiveness of a ventilation system.
- Dirt can cling to light bulbs and fittings. While dust can be blown off, ingrained dirt might need a detergent solution. But remember — the electricity supply to the equipment should be isolated and only switched back on when the equipment is thoroughly dry. Avoid letting water enter enclosed areas where electric terminations are found.

Latest electric motors are more efficient

THINKING about replacing an electric motor, or buying a new one?… then specify an energy-efficient motor, advises the FEC.

Electric motors account for over 65 per cent of the energy used in industry, but we seldom question whether they have been chosen with energy efficiency in mind.

"In fact, they are generally quite efficient, converting about 85-95 per cent of electricity input into useful power," said the FEC's Andrew Kneeshaw. "However, there are differences in efficiencies between designs and manufacturers have started to focus on improving this.

"The latest high-efficiency motors are little more expensive than standard ones. Improvements of 2-3 per cent in efficiency do not look dramatic on paper; however, when a motor can consume its capital cost in just 40 days of continuous operation, this small percentage can be significant.

"For example, an 11kW motor costing £500 can consume £50,000 of electricity in its useful life. Saving three per cent of this gives a £1,500 lifetime saving."

However, said Andrew, it's rarely worth throwing away perfectly good motors just to upgrade to an energy-efficient design — the payback would not be quick enough. The important thing is to specify an energy-efficient motor when a motor has to be replaced, or a new one is required.

He added: "The decision to rewind or replace a motor is also affected. Even with the best rewind, the efficiency of a motor will fall by 0.5 -1 per cent. And as the rewind will cost 75 per cent of the cost of a replacement motor, the economics of replacing rather than rewinding start to look good.

"Take an 11kW motor running 4,000 hours a year, and where the difference in rewind and replacement costs is £115. A 3.5 per cent difference in efficiency would pay for the extra cost of a new motor in about a year."

- If you would like more information about energy efficient motors, contact Andrew at the FEC.

In the long run, it can be cheaper to replace motors than overhaul them

Don't generate danger

A CABLE jointer almost lost his life recently because of the careless connection of a standby generator on a farm.

So please remember, if you are going to use a standby generator, it MUST be fitted with an approved changeover switch.

Points to consider with standby generators are:

- use a competent electrician to specify and fit the required generator, changeover and safety equipment
- don't connect small portable generators designed for independent use to your mains wiring
- ensure that the flexible connection cable from a tractor-mounted generator is in good repair and is fitted with a "female" plug for connection to the fixed wiring
- maintain fixed and tractor-mounted generators regularly, running them on-load at least once a month to ensure they will operate when required.

If you are in any doubt about any electrical safety issues contact your local distribution company.

Shedding new light on saving energy

INCREASINGLY people are recognising the importance of lighting to provide a good working environment and are reaping the benefits of installing lighting that can run efficiently over the lifetime of the building.

"However," says Stephen Bettany from the FEC, "many agricultural buildings suffer from poor lighting in terms of low lighting levels (typically around 20 lux), inappropriate light fittings and installations that are expensive to run and are difficult to maintain."

One of the reasons we put up with poor lighting, he says, is the eye's ability to adapt.

Lighting illuminance levels are measured in lux and *table 1* shows the huge variance in lighting levels that the eye can adapt to.

Table 1	Lux
Bright sunlight	80,000
Overcast day, outdoors	5,000
'Bad light stops play'	1,000
Modern office or factory	500
Side road lighting	5
Moonlight	0.2
Clear starlit night	0.02

The practical problem is to decide how much light is required to perform a task easily and in comfort. Historically lighting levels in agricultural buildings have been very low, and even today the published recommendations are considerably lower than for many commercial and industrial applications.

ONE of the many services offered by the FEC is computerised lighting design and the supply of high-quality light fittings for agriculture. Here we cast some light on the subject…

"The level of lighting should take into consideration safety, so that hazards are visible, the work that has to be carried out and the effect on the contents of the building, particularly where animals are housed," said Stephen.

"When we design lighting schemes we need a lot of information from the client before we can advise on the most cost effective solution. The list below highlights just some of the factors that need consideration. While we can advise on many of these factors a lot boils down to personal preference including the level of lighting, which is very subjective."

Some factors in designing a lighting scheme are:

- What lighting level is required?
- How even does the light distribution have to be?
- Is the colour appearance under the lamps important?
- How dusty and damp is the location?
- Where are the fittings going to be installed?
- What colour are the surfaces? Light-coloured surfaces reflect light which can reduce the number of fittings required.
- What is the shape and size of the building and any internal obstructions?

This information enables the FEC to choose appropriate lamps and fittings and with the aid of a sophisticated computer programme advisers can produce a contour graph that shows the uniformity of the design.

Lighting levels… the FEC can give advice on cost and design

Sodium lamps are cheaper to run than tungsten halogen

Choosing the right lamp and fitting is important in terms of energy efficiency and the longevity of the lamps and fittings. The example in *table 2* shows the difference in costs between buying a cheap high-energy-use fitting and a more robust energy-efficient fitting. The 100W high pressure sodium fitting will give about the same light output as the 500W tungsten halogen.

The FEC can advise on most aspects of lighting. Simple lighting designs are free while more complex/larger schemes are charged for on a time basis. Email stephen@farmenergy.com for more

Costs over five years, operating for a total of 12,500hrs

Table 2	500W tungsten halogen fitting	100W high pressure sodium fitting
Capital cost	£5.00	£50.00
Running costs at 5p/kWh	£312.50	£62.50
Lamp replacement cost	£6.50	£0.00
Total 5 year cost	£323.50	£112.50

Contacts

For further information contact your local wayleave teams on:
North: 0113 2908236
South: 01245 592028

Your wayleave teams and their contact mobile phone numbers

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Richard Biggs
07785 716961
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07771 864528

Wayleave payments
▼ For information on wayleave payments telephone the payments helpline on 0800 389 5113.

Emergencies
▼ Emergency calls to report pylon damage to National Grid Transco can be made on 0800 404090. Make a note of 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, ring the EMF information line 08457 023270 (local call rate).

Easing the way for overheads…

GRANTORS do not need to be out of pocket by having to pay a fee to the agents acting for them on the granting of a permanent easement for the overhead line crossing on their property.

Paul Roberts, NGT's easements and acquisitions manager, said: "NGT is committed to ensuring that the compensation paid to grantors is not reduced by any fees they may incur in reaching an easement agreement.

"On completion of the legal deed, we will pay the grantor's reasonable agents costs — these fees will be paid to the grantors to allow them to settle the account directly.

"This arrangement is accepted by the vast majority of professional advisers."

Open day at Amersham Field Centre, where grantors are invited to have a look round

It's show time!

WE look forward to meeting grantors around the country when this year's agricultural relations programme gets under way.

It kicks off at the Devon Show on May 20-22 and our final outing will be at the 54th British National Ploughing Championships at Goring, near Reading in Berkshire on October 9 and 10.

National Grid Transco is once again a main sponsor of this important event in the agricultural calendar. Competition will be fierce as ploughmen and women fight for the supreme honour of taking the British National titles and representing their country in the 2005 World Ploughing Contest in the Czech Republic.

As a departure from our normal programme, we are this year inviting grantors to visit us at Amersham Field Centre — one of our 12 environmental education centres. Our guests will have an opportunity to explore the work undertaken there, and visit the substation.

We will be sending out lunch invitations to the various shows — including free show passes — to some of our grantors. Unfortunately, we can't extend this invitation to all 20,000 grantors, but if you are a member of the Grantors' Club, please wear your swing badge when you visit a show and enjoy free refreshments (not available between 12-2.30pm) in our hospitality facility. We'll be delighted to see you!

The venues:

Devon County Show, Exeter, May 20-22

South of England Show, Ardingly, June 10-12

Cereals 2004, Leadenham, near Sleaford, Lincolnshire, June 16-17

Cheshire Show, Knutsford, June 22-23

Royal Highland Show, Ingliston, near Edinburgh, June 24-27

Great Yorkshire Show, Harrogate, July 13-15

Royal Lancashire Show, Chorley, July 27-29

Pembroke Show, Haverfordwest, August 17-19

Dorset Show, Dorchester, September 4-5

Amersham Environmental Centre, Buckinghamshire, September 14-15

Ploughing Championships, near Goring, October 9-10

Safety first advice

BE SURE you know who is working on your land. That is the advice of wayleave staff to grantors.

All National Grid Transco personnel and their contractors carry identification. Ask to see it if you are unsure about people visiting your site or farm.

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National Grid Transco

Join us and you can be a shooting star

COME and join us again at this year's round of grantor clay pigeon shooting events organised by National Grid Transco.

Clay pigeon shooting is an increasingly popular sport and our grantors were quick to accept our invitation to seven events when we introduced shoots for the first time last year.

Dozens took part at venues around the country. The qualifying winners in novice and experienced classes met for a grand final at the NAC at Stoneleigh. This year's final will take place at the same venue on September 21, with overnight accommodation locally for the winners attending.

Five qualifying events will be staged in the South West at Bristol (May 26); Cheshunt in Hertfordshire (June 29); Nantwich, Cheshire (July 5); Harrogate, North Yorkshire (July 6) and Coventry, West Midlands (July 20).

Our 15 guests at each event will be divided into groups for safety briefings, tuition and practice to determine if they are in the novice or experienced category before the competition.

If you would like to take part, please fill in the application form and send it off.

If we are over-subscribed, a ballot will be held to decide who joins us at the shoots.


GridLine

All systems go – but gently

Full Name

Address

Postcode

Contact phone number

Please tick which clay shoot you would like to attend

Bristol ☐ Replies by May 1. All other replies by June 1

Cheshunt ☐

Nantwich ☐

Harrogate ☐

Coventry ☐

You can **fax** your form immediately on **01926 655633** or e-mail **sue.tyler@ngtuk.com**

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BUSINESS REPLY SERVICE
Licence No CV 2595

Please fold along the dotted line and join adhesive strips firmly

PRIVACY POLICY STATEMENT
National Grid Company plc* is committed to respecting your privacy and to complying with applicable data protection and privacy laws. Please take a few moments to read the sections below.

Personal information collection in connection with the administration and management of the electricity transmission system
We collect certain information about you in order to administer and manage National Grid's easements and wayleaves including the maintenance of relevant databases, processing wayleaves payments, responding to enquiries and communicating with you.
Your information may, for any or all of these purposes, be disclosed to or shared with the following:
other NGT Group companies;
third party service providers (e.g. Fountain Forestry), contractors, or advisors who use your personal information to provide services to us.

Updating Your Details
If any of the information that you have provided to us changes, please let us know the correct details by contacting us on 0800 389 5113.

Your Rights In Relation To Your Information
You can write to us to obtain a copy of your information or if you have an enquiry about National Grid at the following address:
Data Protection Office
National Grid Transco plc
51 Homer Road
Solihull
West Midlands
B91 2FN

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