

GRID

The magazine for landowners

AUTUMN 2015

nationalgrid

Going against the grain

The grantor two decades ahead of the game

HEDGEHOG'S LAST STAND

Saving the nation's most iconic animal

Forever Humble

“When it comes to farming, we’re winging it”

PLUS: Farmyard therapy • The sheriff's coming! • National Grid's eye in the sky • Win a National Park break for two

WELCOME TO GRIDLINE

Grantors are **inspiring** the **next generation** of consumers to **bridge the knowledge gap**

The passion and innovation of landowners is the driving force that ensures the UK remains at the forefront of world farming... and our grantors are in the vanguard.

In this edition we feature a pioneering farmer whose determination to produce the superfood quinoa is finally reaping rewards - 20 years after he first started growing it.

We also caught up with countryside champion Kate Humble, who speaks candidly about government support for agriculture, rural internet and her groundbreaking new aquaponic greenhouse, the first in the UK.

Both are passionate about what they do and the importance of making future generations aware of the importance of the countryside for food, finance and fun.

Nowhere is that connection more evident or powerful than at Monkshill Farm in Kent, where deaf young people and adults with learning difficulties learn and grow by



spending time with the animals.

The therapeutic effect of being outside on a working farm has changed the lives of countless youngsters under the watchful eye of their tutors, farmer Richard Stephens and his team.

Still with the theme of youth, and the subject of countless children's

books, we've delved into the world of hedgehogs and chatted to grantors doing their best to stop the ranks of one of the nation's best-loved animals from dwindling to dangerous levels.

Meanwhile, Chris Cornford, National Grid land officer in the south-west, writes for Gridline on what's really going on when the company's helicopter is hovering over your land.

I hope you enjoy the remainder of the summer as much as we've enjoyed producing this edition of Gridline.

Dawn McCarroll
Editor, Gridline



Gridline at a glance

- Every edition goes out to 37,000 landowners
- 70% of Gridline features are submitted by grantors
- The BBC Countryfile team are big fans of Gridline
- The magazine has won a string of national awards
- If you have an interesting business success story contact me, Dawn, on 01926 656325 or email gridline@nationalgrid.com

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Some useful contact numbers

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

ELECTRICITY AND GAS

➤➤ Land teams - all regions
0800 389 5113

WAYLEAVE PAYMENTS

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

CHANGE OF DETAILS

➤➤ To inform National Grid of changes in ownership or contact details, telephone 0800 389 5113 for electric and 01926 654 844 for gas, or email grantorservices@nationalgrid.com

ELECTRICITY EMERGENCY

➤➤ Emergency calls to report pylon damage to National Grid can be made on 0800 404 090. Note the tower's number - found just below the property plate - to help crews locate it

ELECTRIC AND MAGNETIC FIELDS

➤➤ For information on electric and magnetic fields, call the EMF information line on 08457 023 270 (local call rate). Website: www.emfs.info

GAS EMERGENCY

➤➤ 0800 111 999

DIAL BEFORE YOU DIG

➤➤ Before carrying out any work in the vicinity of gas pipelines, overhead power lines or underground electric cables, you should contact Plant Protection on 0800 688 588 so that searches can be made to determine the exact position of any National Grid assets

CUSTOMER COMMENTS

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

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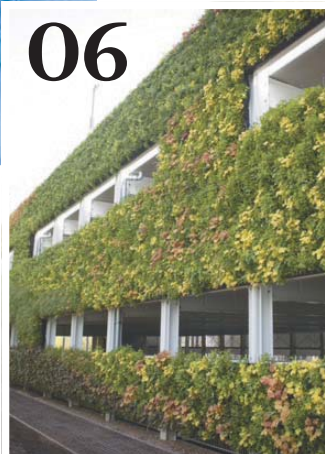
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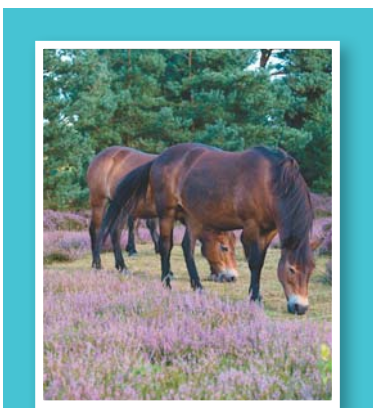
CONTENTS

Regulars

- 04** The sheriff on a mission to raise rural awareness
- 06** Europe's largest green wall in line for award
- 07** Two-year partnership turns power line corridor into wildlife haven

Features

- 08** How Mrs. Tiggy-Winkle is under threat and the volunteers dedicating their lives to saving her
- 11** Land officer takes to the skies to answer your helicopter questions
- 12** 'Today's children risk losing touch with the real world' - Kate Humble Gridline exclusive
- 15** It's pronounced 'keen-wa'... pioneering grantor's persistence pays off after superfood boom
- 18** The young farmers with a difference - the students in a silent world who learn from the animals
- 20** Win a luxury two-night National Park stay with breakfast for two



20

Win a National Park break

Breathtaking scenery, sensational walks, two nights of luxury and a breakfast to set you up for the day. Find out how to make it all yours by turning to page 20.



15



Andrew (right) with deputy lieutenant of Leicestershire Resham Sahndu and chief superintendent Sally Healy at Armed Forces Day in Leicester

By Royal Appointment

THE GRANTOR COMMUNITY has more than its fair share of movers and shakers, among them Andrew Brown, the current High Sheriff of Rutland.

"I was greatly honoured to be invited to take up the position," said Andrew, a mixed enterprise farmer at Caldecott, Rutland, who has won awards for his conservation work, which he is passionate about.

Royal visits

Reputedly the oldest secular office in the UK after the Crown, the responsibilities of High Sheriff originally included tax collection. Now the role mainly centres around supporting the judiciary and the police, encouraging crime-fighting initiatives and promoting voluntary organisations.

Andrew devotes two days a week to the role, which can range from hosting royal visits to attending fetes, civic functions

and citizenship ceremonies, to going into schools to give talks.

It's also been a fantastic opportunity to talk about causes close to his heart, such as the vital role that farmers play in food production and as custodians of the countryside.

"Rural deprivation is another issue that doesn't grab the headlines like inner city poverty often does," said Andrew, who has highlighted the work of two charities that are active locally.

Home-Start volunteers support parents with young children, while Charity Link provides basic items, such as beds and cookers, to families experiencing hardship.

Ceremonial

When he visits schools, Andrew likes to put on the full court dress worn for ceremonial duties.

He laughed: "I get asked if I live in a castle and how many people I've killed with the sword."

Sitting on the grid of the bay

Some of the nation's finest scenery could be sensitively protected in a project to introduce new power connections in north-west England.

The North West Coast Connections project will link new sources of electricity, including the proposed nuclear power station at Moorside, into the grid in Cumbria and Lancashire.

Work on the project linking Harker substation in Carlisle along low-voltage power lines to Moorside, on to the Furness Peninsula and under Morecambe Bay, could start in 2019 if an application to the Planning Inspectorate is approved in spring 2017. The scheme will reduce wildlife and landscape impacts, and the lines would emerge at Middleton substation near Heysham.

For more information...



... visit www2.nationalgrid.com/UK/in-your-area





Made of the white stuff

A GROUP OF NATIONAL GRID employees took time out from their day jobs to help renovate the famous Bronze Age Uffington White Horse.

Under the supervision of the National Trust site owners, 39 volunteers from the company's South-west Construction team scraped out the old chalk from the 110-metre-long feature etched into an Oxfordshire hillside. This was replaced with fresh, whiter chalk - an annual task that needs to be done because of weather-related discolouration. Thistles were also removed from a nearby field.



"Our day job building the nation's electricity infrastructure often takes months and years to complete, so it was great to come and do something that we were able to complete in a day," said senior project manager Matt Ray.

"National Grid encourages its employees to take part in a wide

range of voluntary activities and works with the Volunteering Matters charity to run its flagship volunteering programme."

Hands-on help

Andrew Foley, National Trust ranger at White Horse Hill, said: "We re-chalk the horse once a year. It's great for people to give real hands-on help in looking after our local heritage.

"Without the hard work of volunteers like those from National Grid, chalking the horse, and many other conservation tasks, would be impossible."



(Left to right): James Dean, David Knowles and Michael Dutton

Iron men show their mettle

Two land officers from the north-west team completed an arduous triathlon half marathon to raise £400 for Scope, which National Grid is match funding.

David Knowles was the first employee to finish the Ironman 70.3 event in a time of 5 hrs, 46 mins, 42 secs and was followed home by ex-land officer Michael Dutton (6 hrs, 19 mins, 2 secs) and land officer James Dean (7 hrs, 7 mins, 58 secs).

The Staffordshire event started with a 1.2-mile swim in the choppy waves of Chasewater reservoir, before competitors embarked on a 56-mile cycle through Cannock Chase AONB and a 13.1-mile run through the National Trust's Shugborough Estate.

David and Michael had their sights set on a full Ironman in Mallorca in September - a gruelling 2.4-mile swim, 112-mile cycle and 26.2-mile run.

Learning from the robots

Robots descended on the Kent County Show as National Grid showcased a fun new learning programme due to be rolled out this autumn.

Four local schools will take part in the VEX Robotics programme, which uses robots to introduce youngsters to engineering.

The hope is that they will develop an interest in STEM (Science, Technology, Engineering and Maths) subjects and go on to

consider engineering as a career.

Developed by Texas-based VEX Robotics Inc, youngsters get hands-on experience of building robots, as well as developing teamwork and leadership skills.

National Grid's attendance at the show supported consultation on a new power line connection between Richborough and Canterbury, to connect the Nemo electricity interconnector from Belgium with the wider network.





One-minute interview



Mike Rockett,
land officer east

BACKGROUND: After leaving school, I worked for British Rail Engineering as an electrician for 10 years, and after a short spell as a house parent in a child care home, joined the CEGB in 1989 as an electrical fitter at Thorpe Marsh. I became a wayleave officer in 1992 and realised it was what I wanted to do for the rest of my working life.

CURRENT FOCUS: I've recently taken up responsibility for the east region of gas distribution.

NOT MANY PEOPLE KNOW: I have just ventured into the world of 'steampunk', with my daughter, which involves wearing tweed, a bowler hat and twizzling my moustache!

LEISURE INTERESTS: I instruct woodcraft skills, as well as hiking and map-reading at my local Scout Group, and enjoy leather making as a hobby.

FAVOURITE JOKE: There are two parrots sitting on a perch, one says to the other "ere, can you smell fish?".

FICTIONAL HERO: Batman. He's so moody and so coool. Oh, and he gets the bad guys, so it's a win-win for me.

FAVOURITE SONG: Stairway to Heaven by Led Zeppelin. Pam and I have just celebrated our pearl wedding anniversary and it's been our song for 36 years.

ADVICE TO A CHILD: You never know what you can achieve until you have a go.

National Grid tackles an unwelcome visitor

CONTRACTORS FOR National Grid have felled a number of trees near power lines after being alerted about the presence of a potentially damaging tree pest by the Forestry Commission.

The discovery in Farningham Woods, Kent, of the Oriental chestnut gall wasp, native to Asia, is the first recorded UK sighting.

About 35 acres of the 168-acre Local Nature Reserve have been affected by the problem.

The wasp's larvae cause abnormal growths called galls to form on leaves, twigs and stalks

of sweet chestnut trees. This eventually weakens the tree, making it susceptible to other pests and diseases.

Minimise risk

"The wasps emerge, fly and lay their eggs in July, so we had to act quickly to minimise the risk of the pest spreading to other areas," said Rob Miller, vegetation manager for National Grid. "The infected material was mulched into small fragments, which destroys the insects."

Tiny, at just 3mm long and

harmless to humans, the wasp has a black body and orange legs. It is also parthenogenetic, meaning that males of the species are not needed to reproduce.

Investigations are under way to trace the source of the outbreak.



Blooming marvellous!

Europe's largest green wall is up and growing on the sides of a new car park at National Grid's headquarters in Warwick.

As well as demonstrating National Grid's commitment to sustainability in all its undertakings, the building is swathed in greenery, which benefits a huge range of insects and other wildlife, including the bees that are kept on the site.

The wall is made up of more than 97,000 individual plants from over 25 different species anchored in soil

within the wall's panels, flowering throughout the seasons to provide a constantly changing visual interest.

Green walls absorb and filter rainwater - removing pollutants in the process - and as the plants grow, they improve air quality by absorbing carbon dioxide and releasing oxygen.

Having won the local Britain in Bloom competition, the green wall has been put forward for the regional Heart of England in Bloom competition.

Youngsters who visit regularly from the local Oasis Academy, Immingham, with a new wildlife pond they helped create



The power of partnership

A PARTNERSHIP APPROACH has helped to create dramatic biodiversity and improvements to the landscape at a large wood.

The two-year link-up between National Grid, the Humber Nature Partnership (HNP) and Total UK has transformed Burkinshaw's Covert in North Lincolnshire.

The 95-acre woodland at the huge Total Lindsey Oil Refinery (Total LOR) has evolved into a stunning wildlife reserve, following National Grid's decision in 2012 to modify its management of a 1km power line corridor at the wood's heart.

Conservation

As part of the agreement with National Grid, long-term conservation management was taken over by the landowner Total LOR, under the direction of HNP.

"The power line corridor is now one of the richest and most diverse parts of the covert," said Alan Jones, HNP's conservation

officer. "Deer, badgers, birds, small mammals, amphibians and invertebrates, such as butterflies and dragonflies, can all use the conservation grassland as an associated habitat in the improved woodland."

Diverse

In 2013, National Grid felled faster-growing trees, such as poplar and sycamore, along the corridor margins to ensure future line clearance, enabling the planting of a more graduated and diverse woodland edge, now managed by volunteers as a coppice.

The restoration of a medieval ridge and furrow field system has also benefited biodiversity - providing a linear habitat of grassland, permanent and



Left: Orchids are among the species that have responded so well to the work carried out by National Grid



Above: Alan Jones with members of the Humber Nature Forum, looking at the work carried out by National Grid

seasonal pools with aquatic and marginal vegetation, and

associated fauna such as frogs, smooth newts and dragonflies.

National Grid's contractors also helped create the woodland rides, which are now used by birds, mammals and invertebrates to access areas of the site, while enabling the timber extraction

that makes the woods sustainable.

Encouraged by the success of the scheme, new habitat creation is now going ahead by Able UK, which is developing the adjacent marine energy park.

And with additional landfill-tax funding from the Land Trust, a nearby glade has been enhanced with new groundwater ponds and specially created bat roosts in a series of large sycamores.

TACKLING A PRICKLY SUBJECT

Generations of children have grown up on Beatrix Potter's charming story about the industrious washerwoman, Mrs. Tiggy-Winkle.

And in a poll to find the nation's most iconic animal, 42 per cent voted for the hedgehog.

So it's shocking that numbers of the UK's only spiny mammal have declined from more than 30 million in the 1950s to an estimated one million in the wild today - with the population falling by 37 per cent between 2003 and 2012 alone.

Intensive farming has severely reduced the hedgehog's traditional habitat of hedgerows and permanent grasslands, with 200,000 hedges having been grubbed-up since the Second World War. Other factors include increased use of pesticides, the impact of growing road traffic and a move to smaller, tidier gardens, as well as predation by badgers.

"Contrary to some newspaper headlines, there are enough people concerned about the hedgehog's plight to make sure they don't become extinct," said Warwickshire Wildlife Trust's (WWT) Simon Thompson. "But they have disappeared in many areas."

Landmark project

As the Trust's hedgehog officer, Simon is leading a landmark project to create the UK's first hedgehog conservation area in the West Midlands town of Solihull.

Funded by the British Hedgehog Preservation Society (BHPS), the project aims to bolster local hedgehog populations and inspire local people and organisations to take action to help the species.

Although the scope of the project is borough-wide, it centres on a 90-hectare microsite that includes WWT's Elmdon Manor nature reserve and Solihull Metropolitan Council's Elmdon Park.

Animal lovers are being enlisted in a **groundbreaking project** to create a safe haven for one of the UK's **best-loved** garden residents



Spine tinglers

- A distant relative of the shrew, the hedgehog has changed little over 15 million years, since the days of sabre-toothed tigers.
- Like most nocturnal creatures, they have poor eyesight but good hearing and an excellent sense of smell. If frightened or disturbed, a hedgehog will roll up into a tight ball to protect itself.
- As scavengers, they eat almost anything, but prefer beetles, caterpillars, earthworms, slugs and snails.
- They hibernate from November to April.
- The hedgehog's home range can be from 10 to 30 hectares.
- A hedgehog's 7,000 spines are made of hollow hairs, strengthened by keratin.

Simon said: "The area has a mixed housing demographic, which makes it ideal as a pilot project. There are properties with large gardens backing on to public green spaces, as well as houses in less affluent areas, parks, farmland, land owned by Jaguar Land Rover and Birmingham airport, and infrastructure such as motorways."

The aim is to improve the habitat and inter-connect it for hedgehogs, as well as to help them disperse into and inhabit surrounding areas. If successful, the plan is to have similar schemes in Coventry, Stratford-upon-Avon and Rugby.

"Something as simple as creating a CD-size hole in garden fences creates a continuous habitat corridor for hedgehogs to forage, seek shelter and rendezvous with potential mates," added Simon.

Fascinating insight

Hedgehogs range for up to two miles every night, so it only takes one person to build a fence to force them into smaller, more fragmented areas, with knock-on effects that threaten their survival.

Since March, Simon has given talks to more than 2,300 children in local schools as part of an ongoing education programme. "It's something I'm very proud of because it's key to inspire the next generation. Often it is the kids who get their parents involved," he said.

A number of HD cameras are also available for homeowners to borrow, providing a fascinating insight into the nocturnal and secret world of hedgehogs.

Surveys will be focused on identifying the distribution of existing hedgehog populations in the study area through the use of 100 purpose-built footprint tunnels placed in private gardens, schools and elsewhere.

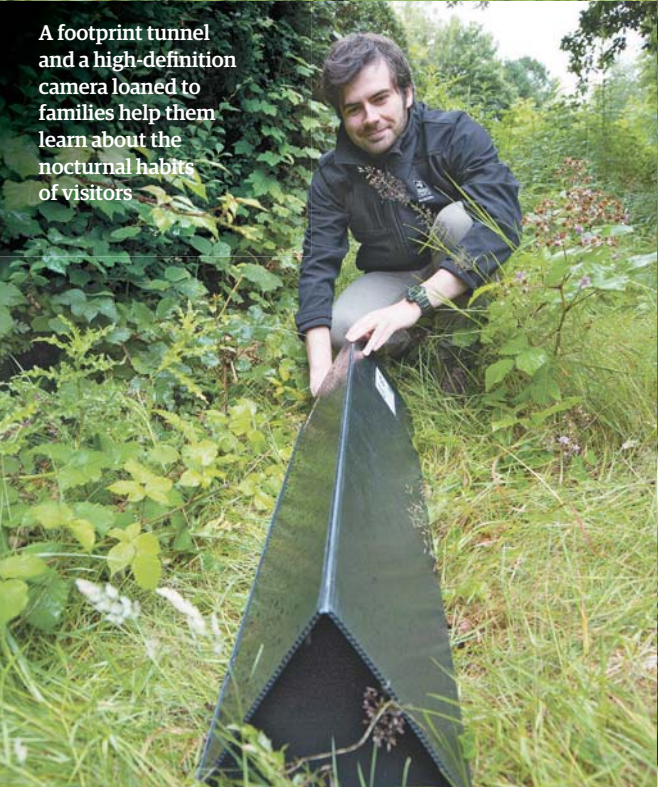
Armed with this information, it's hoped that



Simon Thompson inspects a footprint tunnel in the garden of homeowner Caroline Pugh and her children Otis and Anabella



“There are enough people concerned about the hedgehog’s plight to make sure they don’t become extinct”



A footprint tunnel and a high-definition camera loaned to families help them learn about the nocturnal habits of visitors



night-time surveys can begin to calculate hedgehog abundance. Individuals are cage-trapped by Simon (under licence from Natural England) and marked with colour-coded tags before being released. When unmarked animals are no longer captured, it becomes possible to calculate population size.

Amazing animal

“The project is exclusively about conservation and so the focus is on how we can encourage more wild hedgehogs into a bigger area, not about reintroduction,” said Simon.

“The people on the rescue side do a great job, but we must never lose sight of the fact that if there was sufficient habitat, fewer hedgehogs would need to go through rescue centres.”

Ongoing management initiatives in the parks are focused on improvements in hedgehog habitat by leaving swathes of insect-rich long

grass unmowed as well as areas of brambles, which collect leaves and provide nest sites.

Simon believes the future well-being of hedgehogs depends on overcoming a disconnect in the way people think about their gardens and wildlife.

Whereas they were once an outdoor space for growing produce in which wildlife could thrive, gardens are now all too often viewed simply as an extension to the house.

“But this project has demonstrated the power of grass roots community action - and in some cases neighbours have started talking to one another for the first time,” said Simon. “The reasons for the hedgehog’s decline are complex, with no single ‘silver bullet’ solution. But gardens provide half a million hectares, which can potentially be a hedgehog refuge. That’s more green space than all the UK’s nature reserves put together, so we can all help secure the future of this amazing animal.”

For more information...



... and to report sightings, visit the WWT website at www.wildlifetrusts.org/hedgehogs

More information is available from the British Hedgehog Preservation Society (www.britishhedgehogs.org.uk), which runs an initiative called Hedgehog Street, recruiting hedgehog champions at street level

Hedgehog heroes

SICK, INJURED, ORPHANED or just underweight - hedgehogs are never turned away by wildlife volunteer Brian Scott and his wife Janette.

The couple, who run the Warwickshire Hedgehog Rescue charity from their home in Leamington Spa, rely on fundraising and public donations to pay for food, medicines and equipment such as syringes.

The couple's converted garage is an intensive-care ward with hutches for up to 18 hedgehogs, complete with clipboards for each little patient detailing medication doses and treatment information.

New arrivals are given fluids to combat dehydration, along with a worming treatment and antibiotics. If needed, Brian can also call on the expertise of local vets.

This week there is a hedgehog with a broken ankle, another with breathing problems and a third with a headsore, caused by parasitic infection, being treated with ointment.

Nearby, a three-week-old hoglet curls up in an old bobble hat in one of the incubation units fitted with special heat pads. "At that age, they need hand-feeding every two hours, 24/7," said Brian, a former mining engineer.

After a fortnight, most hedgehogs are in recovery mode. Now bed blockers, they're ready to be farmed out to Brian's network of 18 or so foster carers, who feed them up to a weight at which they can be released.

"We're busiest in the autumn when we get orphans who were born late and won't put on



"It can be emotionally hard when you've put a lot of hard work in and sadly a hedgehog doesn't make it"

enough weight to make it through the winter hibernation," said Brian. "Hedgehogs don't actually need to hibernate, so the foster carers overwinter them in a warm environment and provide food."

The youngsters are released into a safe and secure area in the spring, when they have attained a weight of at least 600gms.

"It can be emotionally hard when you've put a lot of work in and sadly a hedgehog doesn't make it," Brian admitted. "But it's also very rewarding when you return a healthy animal to the wild."

- Hedgehogs are nocturnal animals, so if seen out during the day, particularly if wobbling about or lying still, they may be injured or suffering from hypothermia.
- Pick it up and place in a high-sided box with a hot water bottle wrapped in a towel, together with meat-based cat or dog food.
- Contact the BHPS on 01584 890801 to find your nearest rescue centre.

5 ways to save a life

- Leave a 5-inch square gap in fences and walls to help hedgehogs to roam and forage between gardens.
- Carefully check before strimming hedges, mowing, and burning rubbish or leaf litter, and avoid using slug pellets, which can be poisonous.
- Don't keep your garden too tidy! A small wildlife area with long grass, leaf piles and undergrowth provides an insect-rich habitat for foraging through, and to rest or nest in. Ponds are great for wildlife, but remember to create a sloping edge as a means of escape.
- Provide hedgehog food or meaty pet food and water, especially during dry weather. Don't provide cow's milk - it can be fatal to the animals as they cannot digest lactose.
- If you manage farmland, leave field margins to provide food and cover, and avoid cutting back hedges at times when hedgehogs are most active.

In numbers

1 million

hedgehogs remain in the wild, compared to an estimated population of more than 30 million in the 1950s

5%

rate of annual decline, the same as the world's tigers



Safety Feature



Pilot Liam Hughes (left) with observer Barry Thomas

'COPTER WATCH

Chris Cornford, National Grid land officer in the south-west, gives **his account** of a day with the company's **flying observer**



Observer Simon Gudgeon all set for take off

National Grid helicopters always fly in our livery and are easily identified, so you can tell if it's us.

Most people, on hearing a helicopter circling overhead, will make one of several assumptions. It's either an 'eye in the sky' traffic reporter, the police or National Grid carrying out routine checks. So my trip with an observer certainly helped me understand how power line surveys operate and I can now reassure anxious callers worried about our presence above their fields.

Why do we do the flyovers?

We have to survey the lines once every eight years and that means visually inspecting every fitting on the pylons and spans using a HD camera, like the ones used by police.

The observer uses the Tower Tracking Program to report the results for each pylon, which are uploaded at the end of the day with a red, amber and green system.

Pylons and spans where the helicopter couldn't get access because of roads, buildings or stables were designated as red and would need to be inspected by a climber another time.

As we moved to another field, the pylon was close to a group of horses, so we decided to fly by. An amber call - one to be checked out at another time.

Green indicates the pylon or span has been inspected and any irregularities listed. If the defect poses a safety risk, it's phoned through to the engineers.

What's the main complaint from grantors?

Because the helicopter has to hover in one position for some time, the biggest issue is noise, but it might help if people knew the typical time an inspection takes. It takes 15 minutes to inspect both sides of a tension pylon, 10 minutes for a suspension pylon, and 5 to 10 minutes for span and fittings checks.

So what are they actually doing?

The pilot is concentrating on hovering by the pylon or span that the observer is inspecting, while scanning the surrounding area to check for changing conditions, vehicles and livestock.

The pilot and observer use their judgment and experience to prevent a noise nuisance, always making sure they have identified a nearby safe landing area in the rare event of a problem.

Before deciding on whether to attempt the inspection, the pilot checked for anything that might be a safety or disturbance risk and judged whether it's appropriate to start the inspection.



Flight facts

Helicopter - Bell 429
Pilot - Liam Hughes
Observer - Barry Thomas
Flying time - 2hrs

In one field where the livestock was calm and showing no signs of stress, he decided to go ahead and the cattle drifted away. But minutes later they returned and looked agitated, so we abandoned the inspection.

Whenever we saw horse riders, we moved off without delay and carried out inspections further down the line, returning later. Whenever a rider emerged from heavy cover, we always moved off immediately.

What if National Grid can't gain access by helicopter?

Many pylons can't be inspected by helicopter, such as ones close to buildings and busy roads because we don't want to distract drivers.

Farm workers are another consideration. We flew over a lot of polytunnels and fruit pickers, who can be affected by the downdraft, so on each occasion we stayed 500m away to avoid any possibility of damage. That's more than double the statutory limit. The downdraft can kick up dust from the ground, so we monitored the direction and extent of drift so it didn't interfere with the workers in the next field.

Why do we need to do the checks?

It is estimated that for the cost of running the helicopters, there's a tenfold cost saving in refurbishment and fault prevention. Safety is the priority, but we try to avoid any nuisance.

Aerial surveys are safer, more cost-effective and less resource-intensive than climbing the entire network of pylons.

Feature **Kate Humble**

She's the face of the **countryside**, unafraid to shed a tear for the cameras, but when it comes to **educating** the public about **farming**, Kate Humble reveals her steely side

HUMBLE'S MUDDY MISSION

Five minutes into her first answer without appearing to pause for breath, it's strikingly clear that Kate Humble is passionate about what she does.

So it comes as a surprise when Kate admits that she and her husband Ludo are still 'winging it' when it comes to farming because - and these are her words - "we still don't really know what we are doing".

Modest maybe, self-effacing definitely, but when it comes to helping people connect with the countryside, wildlife and conservation, she has few peers.

Kate is aware she occupies a unique place in British agriculture - a friendly, attractive woman, with no qualms about fighting for what she believes in.

Witness the fading of her trademark broad smile as she bemoans successive governments' failure to invest in raising rural awareness among children. Or the 'appalling' lack of internet to support rural business.

Taking no-nonsense, Kate says she'd take a hedge cutter to stifling bureaucracy and above all, is determined to use her privileged position to continue bridging the gap between landowners and the public.

"The biggest challenge for today's generation is they're so used to being connected via the internet and social media that they've lost touch with the real world," she said.

"There is a huge disconnect and that manifests itself in a rural versus urban situation, which I believe landowners and farmers can address. It's hard work, but there are a lot of organisations around the country standing by to help."

Risky venture

Kate, just back from filming in Mongolia where she lived with herders in the Gobi desert, says experiences on her Humble By Nature farm in Monmouth and in front of the cameras have shown her the British public are desperate to get back in touch with the land.

She said: "The popularity of Springwatch is proof that the public are beginning to understand that wildlife is everywhere and needs the same essentials we need. If you get

"The biggest challenge for today's generation is they're so used to being connected via the internet and social media that they've lost touch with the real world"

that message through to children, so they understand where their food comes from, you are winning the battle."

Kate's farm, rescued by her in 2010 when the council planned to sell it off as the last tenant left, now hosts a packed calendar of courses, from smallholding and animal husbandry to rural skills, crafts, food and cookery classes - all run by experts.

She also instigated an ambitious 24-hour lambing course on the back of the hugely popular Lambing Live programme, initially considered a risky venture by TV bosses who struggled to believe the British public would be interested.

"Our decision to move here was confirmed by the reaction to some of the courses," she



said, breaking off to wave at a line of children skipping their way towards the lambs waiting for their feed.

"We had two pensioners who came along to the lambing with waterproofs just out of the bags, still creased. They watched as the farmer, Tom Stephens, checked the ewe over and then he turned to the grandmother and said 'want to deliver a lamb?'"

Dirty, muddy world

Moments later twins Sean and Megan were born. Alongside them the woman was sitting on a stool with tears of joy streaming down her face. She's been back to visit.

Kate said: "Moments like that, where people reconnect with something primal, are so rewarding for me. At the other end of the scale, children of all backgrounds need to know that, beyond the laptop, it's a dirty, muddy world where their food comes from."

She sees no reason why the den-making, tree-climbing and bushcraft fun enjoyed by youngsters decades ago should be swamped by the internet and sometimes needless health and safety legislation. ➔



"We do these activities at the farm and the children love them. That's why I'd like to see these things in the National Curriculum and would love Gridline readers to consider how they might open up their activities to a wider local audience. It's hard, but it's so rewarding," she said.

Kate was once on the wrong end of a social media backlash when she suggested consumers should be prepared to pay more for quality food to help protect the rural economy.

"People called me a middle-class so-and-so, but I still say food is too cheap in this country and you can't have cheap food and welfare for animals. Why would anyone produce something and sell it for less than it costs to make?" she asked.

Making connections

Kate, despite a gruelling filming schedule in all corners of our fragile planet, insists local skills, innovation and strong partnerships are the keys to successful diversification.

She said: "We've worked closely with the Wildlife Trust to create 80 bird boxes, the Woodland Trust to plant 1,000 trees and the local Area of Outstanding Natural Beauty people to help us engage with the public by keeping the land productive in an environmentally friendly way.

"All around the UK there are organisations ready to help landowners diversify and reach their neighbours. The public have a huge amount of respect for farmers, but it's all about making those connections."

Aquaponic innovation

More than half of Kate Humble's year is spent shining a light on the innovation and diversification of landowners.

So it's fitting that she has become the first person in Britain to trial a new growing technique, first made popular by the Chinese thousands of years ago.

Her south-facing aquaponic solar greenhouse is home to tanks of fish that create nitrate-rich water that is then pumped back to the growing area, where spinach and pak choi thrive.

It's sustainable because it's built with super-insulated recyclable plastic from Japan, can be used all year round and needs only a fraction of the usual water usage.

Kate, pictured above in the greenhouse, said: "We are in an area near the mountains where it's hard to grow anything, so we looked at all

the options that were open to us.

"This was an idea first used by the Chinese to grow vegetables in frozen Siberia. A biomass boiler, photovoltaic panels and double-thickness plastic mean no heat is wasted and all water is high in nitrates."

Kate isn't joking when she says she'd love to see one of these greenhouses on every playground: "They can produce 30 kilos of fruit and veg a week. I'd much rather see one of these in the local park than a foodbank."



Kate and Ludo struggled for two years in a morass of mud to establish the farm, but she believes moments like those in the lambing barn have paid her back tenfold.

She added: "We left the farming to the farmer and learned from him, but I still feel like we're winging it. It was hard work increasing engagement, but in-between all the muck and dirty bits, there are little nuggets that remind you why you do it."

TOP OF THE CROPS

It's hailed as the latest **must-have** superfood. But **quinoa** was being grown by **pioneering** grantor Peter Fairs on his farm more than two decades ago ➤

The Incas knew it as chisaya mama - a sacred 'mother grain' - which they cherished for being a cheap, nutritious mainstay of their diet. Today the edible seeds of the quinoa plant are marketed throughout the western world as a five-star health food. Actress Gwyneth Paltrow swears by it; the United Nations declared it a super crop in 2013; and even your granny knows it's pronounced 'keen-wa'.

If Essex farmer Peter Fairs feels a certain sense of déjà vu about all this it's because he pioneered the crop in the UK long before it stole the headlines.

"I've always enjoyed fiddling about with niche crops," recalled Peter, who farms 4,800 acres at Great Tey, near Colchester, with his son Andrew.

In the 1980s he began working closely with John K King and Sons, a small cereals trading company, using seeds brought from Bolivia by plant scientist Colin Leakey. They began trials to see if quinoa could become a viable crop.

"Its nutritional potential was obvious, but the big problem was the bitter-tasting substance called saponin, which coats the seed and acts as a bird repellent while it's still on the plant," explained Peter. "In South America, farmers wash the seeds to remove the coating and dry the plant in the sun, but that wasn't practical here. The seeds also tasted revolting, so we abandoned the project."

Superfood

But it wasn't all bad news. Peter had noticed there were always pheasants and partridges in the crop, so he developed a game cover mix called Kingmix. The birds can't eat the seeds until they drop to the ground in October and November, when the rain washes off the coating, so it was an ideal slow-release crop.

"We started growing quinoa for human consumption again when all the publicity took off about it being a superfood," said Peter. "There was also a trend away from processed foods in favour of those with higher nutritional value."

"We've had a number of enquiries recently from UK food producers who can see the advantage of sourcing home-grown, great-tasting quinoa rather than importing from abroad"



Miracle food... even for astronauts

- A so-called pseudograin, quinoa is the seed of the broadleaf Goosefoot plant, not a grass at all. It is, in fact, more closely related to beetroot, chard and spinach than cereals.
- It is high in dietary fibre, as well as iron, phosphorus and magnesium, is gluten-free and easy to digest.
- As a complete protein, it has all nine essential amino acids required for human health, making it a perfect choice for vegans and vegetarians.
- It is rich in anti-inflammatory phytonutrients that combat the free radicals that are believed to cause cancer and other diseases.
- When cooked, the grains triple in size and

become almost translucent. With a fluffy texture and slightly nutty flavour, quinoa is an ideal replacement for rice or couscous, ground into a flour for baking or added to stews.

➤ Quinoa has been praised by NASA as an ideal foodstuff for inclusion in possible future long-term space missions, when crops would need to be grown on a spacecraft.

➤ The plant is drought-tolerant and capable of growing in a temperature range from -4 to 35 degrees Celsius, and altitudes of up to 4,000 metres above sea level.

➤ An annual, quinoa grows to more than a metre in height and is wind pollinated.



After being swathed and left to dry in rows, the crop is harvested



So began a painstaking process of cross-breeding and selecting a plant without the bitter taste of the Bolivian strain. The farm produced its first delicious-tasting quinoa crop in 2013 and this year the aim is to harvest 300 tonnes. The seeds are available from Hodmedod's, a retailer of UK-sourced peas, beans and grains.

The next step is to register the strain as a variety, which requires a grower to prove the selection is stable and won't revert back to its natural state.

Risk factor

On the face of it, quinoa is a highly profitable crop, yielding up to £1,600 a hectare as opposed to £1,000 a hectare for wheat. But there are hidden costs and 'hassles' said Peter.

"As a new crop, we can't use any herbicides or pesticides for a number of years until exhaustive safety tests are completed. Nor can chemical desiccants be used to dry out the crop prior to harvesting in September, so the plants are swathed and left in rows to dry.

"You need three or four days of dry weather because if too damp, there's a risk of the seeds germinating, which makes them unusable, or that they'll clog up the combine."

Mobile driers are used in the fields to reduce the moisture levels in the seed from 25% to 12% to prevent fungal formations, and then the seed is cleaned and moved to storage registered for food.

Rather than launch any own-brand product lines, Peter plans to forge relationships with manufacturers developing quinoa-based products.

"I'm a farmer at heart, so want to be growing and marketing the crop and not getting involved in the costs and complexities of developing new products," he said. "I've already had a number of enquiries from UK food producers who can see the advantage of sourcing the home-grown, great-tasting quinoa rather than importing from abroad."

For more information...



... and to find out more about other specialist crops, go to www.fairking.co.uk



SCHOOL'S (MUCKING) OUT FOR SUMMER

How a **partnership** between a grantor **farm** and a highly respected **school** is helping to **change young lives** with amazing results

Farmer Richard Stephens' description of the once desolate, mud-sodden farm he worked at years earlier couldn't be further from the reality today.

When he first arrived at Monkshill Farm to spearhead its unexpected renaissance, it was a joyless place, lacking in warmth and enthusiasm.

Gone are the muddy yards and crumbling farm buildings around the livery stables, replaced by a bright, clean and fully functional farm environment, with a difference.

Seven years after him taking the reins, the place has been transformed, thanks to the vision of The Royal School for Deaf Children Margate, its staff and Richard himself. Monkshill Farm is now a place of heartwarming self-discovery for every youngster and adult who visits the 300-acre site near Faversham on the north Kent coast.

Nothing is off limits, whether it's hand-rearing calves, collecting and grading the eggs or shearing the sheep, and that, says the school's Jo Meaden, is what gives every visitor a true sense of worth.

"Ben, a 14-year-old, arrived here and he'd admit he was quite unpleasant and had a problem with men because of how they'd treated his mum," she said.

"He couldn't read or write, but showed a real interest in the farm



The lads help Richard herd the geese and (far left) Billy helps apprentice Lucy Clements

"When I first got here, there was little joy or enthusiasm. The place was a sea of mud, run-down and totally inaccessible for wheelchair users"

and started coming all the time. Once treated like an adult, he grew, gained confidence and learned literacy and numeracy through working with the animals."

And Jo met up with Ben last year - he is now a plumber working in London. His is just one of many success stories that might never have happened but for the dedication of 58-year-old farm manager Richard.

"When I first got here, there was little joy or enthusiasm. The place was a sea of mud, the buildings were run-down and totally inaccessible for wheelchair users," he said.

But after his appointment, he began to raise the farm's profile by selling eggs, chickens, lambs, pigs and, more recently, geese and turkeys to local Michelin-starred restaurants.

Success stories

All visitors have various degrees of deafness, autism, Down's syndrome and physical disability, and all play an integral part in ensuring Monkshill Farm maintains its growing reputation as a lovely place to go for the day. The young volunteers forget their frustrations the second the minibus drops them off from the local authority-funded boarding school, founded in 1792 and run under the auspices of the John Townsend Trust. The youngsters, aged up to 16, are soon engrossed in their daily tasks under the

tutelage of Richard, his apprentices and the school's own learning support assistants, many trained in sign language.





What the trainee farmers said...

Mischievous student Dan gets up to some 'fowl' play under the watchful eye of pal Rob

That provided a small financial foothold from which to grow the farm and help fund some improvements, such as a student canteen and classrooms. The farm now supplies 30 outlets, but no supermarkets - Richard's views on those and the future of British farming are not for the faint-hearted.

The facelift and concreting of the main farmyard complete, teachers and the public started to see it as a powerful educational resource where young people could interact with the animals to improve their social, emotional and communication skills - without realising it.

Always learning

Its success both as a destination and educational facility has grown further still in the last two years, with a cafe and farm shop now drawing passing families, cyclists and walkers.

The farm also enables the school's Westgate College for further education to provide therapy to around 50 adults with learning disabilities each year.

Father-of-three Richard is well aware he is a lucky man, able to do the job he's loved for almost six decades while also giving something back: "Not many people leave here without being moved by what they've seen. The youngsters have a sense of importance because if they don't feed the calves, give them hay or milk, the animals die. They are the stars and get to know the public who visit

"I love animals and my favourites are the cows. Working here makes me feel really confident and knowing I can do things I never could before is great."
DH (Dan), 16

"One day I'd like to use the things I've learned in a job because there isn't much on the farm that I can't do now."
Rob, 16

"I live on a farm because I'm a day boy at the school, but this is like my second home. It's a very happy place because animals are much nicer than humans."
Billy, 16

- there are no barriers here - and can see they are respected."

Success for some of the 50-plus youngsters who work their wellies off each year might be paid employment or simply enjoying a family meal without a scene.

Jo, a teacher at the school for 25 years, said: "The young people see it as the highlight of their week. The farm is very real and the students are always learning by reading instructions, calculating feed or interacting with Richard and his team. They're encouraged to look after the animals, understand the value of caring for them while enjoying an outside environment."

The Education Centre offers a wide range of land-based and catering accredited courses for the school's deaf learners and other students from local schools and colleges.

With the farm now spanning several hundred acres, Richard is adamant he couldn't make it work without the help of his 50-strong weekly team of volunteers.

He said: "There's nothing they're not allowed to do. By the end of their time here, we're sad to see them go, but the change in each person is incredible."

For more information...



... about The Royal School for Deaf Children Margate visit www.rsdc.org.uk

Lastword

Your chance to enter two great competitions

WIN!

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Take your pick from one of 47 beautiful National Park retreats for a relaxing two-night break, with breakfast, for two.

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For the chance to win a romantic stay or fun adventure, simply answer the question on the right to be entered into the Gridline prize draw.

The answer appears somewhere in this edition, so it couldn't be easier to enter. Take a few minutes out to win a weekend to remember.



Q How long does it take for an observer to safety check a suspension pylon?

Email your answer, name and contact details to gridline@summersault.co.uk or send to Summersault Gridline Luxury Break Competition, Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire CV32 5AE.

Closing date for entries is 23 October 2015.



Sheron's shot is spot on

Photographer Sheron Vowden ran for her camera to capture the stunning contrast of yellow flowers against the Peacock

butterfly to win our 'summer colours' competition. She said: "I thought 'you can't get much more colourful than that!'."



WIN!

A £150 SPREE AT JOHN LEWIS

Snap up those Christmas presents early by sending in your pictures – as high resolution as possible – on the theme of 'winter's coming'.

Email them to gridline@summersault.co.uk before 23 October 2015 to enter the draw.



HAPPY HENRY

Delighted grantor Henry Biggs is heading off for a luxury spa break after winning Gridline's getaway break competition in the last edition.

The landowner, from Tibberton, Worcestershire, correctly stated that 100,000 people visit the Newport Wetland Reserve every year.

He said: "Thank you Gridline, not just for a good and interesting read, but also for the added bonus of a luxurious night away."



Send us a story

It couldn't be easier. Call 01926 656325 or email gridline@nationalgrid.com

COMPETITION TERMS AND CONDITIONS: LUXURY BREAK: The winner will be the first entrant selected at random who correctly identifies the answer (to be featured in the next edition) and who is a National Grid grantor at the time of the draw. The editor's decision is final and no correspondence will be entered into. Gridline reserves the right to change the prize without prior notice. The prize is not transferable and cannot be exchanged for cash. Closing date is 23 October 2015. **PHOTO:** The winning image will be the one judged to be the most visually appealing, original and relevant to the theme and will feature in the next edition. The winner must be a National Grid grantor. The editor's decision is final and no correspondence will be entered into. Gridline reserves the right to change the prize without prior notice. The prize is not transferable and cannot be exchanged for cash. The closing date is 23 October 2015.

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