

GRIDLINE

The magazine for landowners

Spring 2020

Inside

The grantor in a race against time to make plants sexy

Fast lane thinking:
National Grid guru's
electric vehicle forecast

Don't risk your safety:
The coronavirus message
every grantor should read

**WIN life-changing
new skills or a £100
spending spree**

Changing *attitudes*

The social media guru educating consumers on the hard work and dedication that lies behind their weekly shop

nationalgrid

Some useful contact numbers

The Land and Acquisition Services 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 with 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 electricity wayleave payments, telephone the payments helpline on **0800 389 5113**

EASEMENT ENQUIRIES

» Email box.electricityeasements@nationalgrid.com

CHANGE OF DETAILS

» To inform National Grid of changes in ownership or contact details, telephone **0800 389 5113** for electric and **01926 654844** for gas, or email grantorservices@nationalgrid.com

ELECTRICITY EMERGENCY

» Emergency calls to report pylon damage to National Grid can be made on **0800 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 023270** (local call rate). Website: emfs.info

GAS EMERGENCY

» **0800 111 999**

DIAL BEFORE YOU DIG

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

QUESTIONS

» For questions about our power cables or other assets contact the Plant Protection Team. Cadent provide first line support for our assets – **0800 688 588** – plantprotection@cadentgas.com

Gridline is produced by **SONDER**

Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire CV32 5AE

Put a face to the name...

REGIONAL GRANTOR ASSISTANTS

- 1 Caroline Suttlng, South
- 2 Lauren Munro, East and Scotland
- 3 Becky Kearsley, West and Wales



CENTRAL COMMUNITY RELATIONS TEAM

- 4 Ellie Laycock
- 5 Jackie Wilkie
- 6 George Barnes
- 7 Thippapha Montorano
- 8 Palvinder Kalsi
- 9 Nicky Boucher
- 10 Deena Wood

How to contact National Grid if you are a grantor



Land officers provide a day-to-day point of contact for National Grid grantors. You can also contact them if you have any questions about compensation, reinstatement, maintenance or refurbishment plans in your area – the team will be happy to help.

If you have any queries, please telephone **0800 389 5113** and select from the four options below.

- OPTION 1** Electricity wayleave payments and change of name/address/ownership of land
- OPTION 2** West and Wales
- OPTION 3** East and Scotland
- OPTION 4** South

LUMP SUM PAYMENT FOR CONVERTING WAYLEAVES TO EASEMENTS

Many of National Grid's grantors currently receive annual payments in line with their wayleave agreement and the rates set by the NFU and CLA. But did you know you can convert the wayleave into an easement and receive a one-off capital payment instead?

National Grid encourages you to seek professional advice from a qualified chartered surveyor or agricultural valuer. National Grid will pay reasonable agent's fees in accordance with its published Surveyor's Fee scale together with solicitor's fees, upon completion of the easement. So there should be no need to pay an agent any of the payment rightly due to you.

If this is of interest to you or you wish to find out more about easements and the payment which you could receive then please contact us directly or through a qualified agent at box.electricityeasements@nationalgrid.com



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Welcome...

... to the latest edition of **Gridline**, which quite deliberately has a very forward-looking and, hopefully, optimistic feel to it as the nation comes together to fight an unexpected foe.

As we went to press we are in the midst of the coronavirus threat which has impacted all of us. It's at times like these that we realise the full value of the people and services they fulfil – from NHS staff to our very own National Grid teams on the front line ensuring safe and reliable energy.

Equally they rely on you, our family of grantors, who have been extremely understanding during the initial phase of the spread. Over the coming months our programme of works will likely be affected, but we will still need access to carry out certain works, which we will undertake safely and professionally. I want to thank you in advance for your flexibility in working with us during these difficult months.

Looking to a brighter future we had a cuppa and a chat with National Grid's thought leader, Graeme Cooper, on decarbonisation. His glimpse into the renewable energy crystal ball makes pretty interesting reading.

He predicts we'll soon all be buying electric cars as we currently do mobile phones, but it's his view on the role National Grid has to play in the progression that will speed the whole thing up.

Still looking ahead and we've been talking to a national organisation and gas grantor protecting the UK's wild flowers by raising low levels of awareness of the threat to our countryside.

It's also important to thank the huge majority of grantors who keep in touch with us through the well-established channels. For those who don't, please read the gas safety article on P12 and get in touch. Meanwhile, enjoy your read.

Amanda May
Land and Acquisitions Manager,
Land & Property

NEWSLINE

The latest news from National Grid and its landowner partners



Graduates worked alongside local community groups to improve the land around the Knaresborough substation

Safeguarding the Natural Grid

A project to improve biodiversity around National Grid-owned land will help achieve a focused action and environmental improvement at more than 50 sites by the end of this year.

The Graduate Natural Grid project improves the value of the company's natural assets by working with local organisations and communities to identify enhancements to the environment that can deliver a range of benefits.

Teams of graduates develop links with community leaders to come up with ideas to add to the site's natural value and reduce risks.

Working together, a sustainability action plan is developed and delivered on site and a handover arranged at the end of the project – the most recent of which is now nearing completion around Knaresborough 275kV substation in North Yorkshire.

Graduates from six business areas have planted a wildflower meadow and key hedgerow,

made footpath enhancements and carried out woodland management on land surrounding the site's operational boundary since last year.

They have also worked with The Conservation Volunteers (TCV) and North Yorkshire County Council's Public Rights of Way team on initiatives including the installation of new barn owl and bat boxes as well as footpath way-marking improvements.

Knaresborough is one of eight sites being worked on by the 2018 graduate intake, with more being added by our latest graduate intake.

Jonathan Miller, Graduate Environmental and Sustainability Advisor, hailed the scheme's dual-edged benefits.

He said: "The project helps our graduates develop important business skills like project management, stakeholder engagement and budgeting, and also has the long-term positive impact on the community in mind."



Nature's balance

An innovative tilting weir built by National Grid in partnership with a landowner is managing water levels to attract wading birds to an area of marshy wetland.

The collaboration, alongside Natural England, has led to the specially designed structure on the Tickenham Moor Site of Special Scientific Interest near the Causeway in North Somerset.

The weir, built by a National Grid contractor to a Dutch design, retains and raises water levels in the area to create a more reliable feeding and breeding ground for birds. Unlike traditional sluices, it can be



safely and accurately adjusted to ensure the right amount of water to support flora and fauna, creating stability for wildlife and attracting winter wildfowl and wading birds.

The project emerged from consultation on the Hinkley Connection Project and was completed ahead of the start of work on underground cables between the west end of Nailsea and Portishead substation in January.

Field Studies Council

"National Grid's support enables us to look after the buildings and grounds... so we can focus on sharing messages on why sustainability and biodiversity matter"

More than 15,000 schoolchildren of all ages visited National Grid's environmental education Centres last year, helping to spread the word about the importance of biodiversity. We caught up with Adrian Pickles, Head of the Field Studies Council-run FSC Bishop's Wood near Stourport-on-Severn, Worcestershire, to find out more.



What is the aim of the FSC Centres?

It's important the next generation has a real understanding of the environment, and our National Grid-owned centres at Bishops Wood and FSC Amersham, Buckinghamshire give real world learning through first-hand experience to children of all ages from pre-school to post-16 and adults. We have 19 centres across the UK and Ireland all bringing people of all ages closer to the natural world.

Why is it important?

We aim to help people, especially young people, learn about the environment to make informed choices about how to look after it. As a charity we must charge for our services, but we have funding support schemes to make courses more accessible. Wherever the young people come from, our day courses, workshops and residential visits take visitors outside, to experience the



(Clockwise from above) The Sitting Circle, the 'wigwam' building and the surface of the new green roof

environment and learn in fun, engaging ways.

National Grid's support lets us look after the buildings and grounds at FSC Bishop's Wood so we can focus on sharing messages on why sustainability and biodiversity matter now and into the future.

How has their support helped?

It allows us to maintain the centre under a Sustainability Action Plan for the whole site and to respond to changes and events that can happen anywhere.

The site has 30 hectares of mixed and ancient woodland and the centre buildings are all situated around a significant sub-station. The main building at FSC Bishop's Wood is a giant wooden structure based on the North American wigwam structure. It won environmental design awards when it opened in 1992 and is insulated by a grassed roof, reused newspaper and even old telephone books.

We recently we had a problem with a leaking roof caused by a cracked membrane under the



grass roof and National Grid's support during the stages of contracts, finance and practical help was vital as the membrane needed to be replaced but was buried beneath 25cm of soil.

Getting this fixed involved working with National Grid though several different levels of subcontractors who found three honeybee colonies in the roof insulation... an added challenge but we now have a sustainable 'living' green roof of which we're very proud.

What effect does the FSC have?

We aim to send learners home with a deeper understanding of their place in the natural world. Whether they learn from an artistic, historical, geographical or biological perspective, we offer something for everyone.



For more information about the FSC's work visit: field-studies-council.org

READ MORE STORIES FROM NATIONAL GRID



JOBS BOOM
National Grid research predicts 400,000 Net Zero jobs requirement
ngrid.com/2W3dUWM



POWERING THE FUTURE
The UK's first subsea power connector has enjoyed an impressive first year
ngrid.com/3clJUVv



WARM FRONT
Find out what National Grid is doing to heat the homes of vulnerable people
ngrid.com/2IDsYCD

BEACON OF HOPE

WHEN HE LEFT HIS CORPORATE JOB, THE FUTURE LOOKED UNCERTAIN. BUT, AS HUW DULLEA DISCOVERED, THERE'S NO SUBSTITUTE FOR DOING WHAT YOU LOVE IN THE BEST 'OFFICE' IN THE WORLD



Huw Dullea usually has a 20-minute commute to his 'office', but the only traffic to annoy him is the odd errant lamb. And once he gets to work, it's always breathtakingly beautiful.

A former Contract Manager at an automotive firm, he gave up the rat race 11 years ago when he took redundancy and started reassessing his options.

"I needed something I enjoyed with low, fixed overheads so if it all went wrong, I could survive. I'd always been into mountain biking, skiing and hiking so decided to go down that route, literally," he said.

Huw launched Treads and Trails, a small firm offering tailor-made guided mountain bike and hiking tours around the 200km of Brecon Beacons trails on his doorstep, and hasn't regretted a single moment.

A qualified leader with both British Cycling and the Mountain Training Association, he's also a proud official Ambassador to the National Park Authority fully briefed in the area's flora, fauna, history and, most importantly, geography.

From the Sugar Loaf mountain – named after its resemblance to its Brazilian namesake – to Gospel Pass, the highest road pass in Wales in the Black Mountains, Huw knows the way and what you're likely to see en route.



Visit the Brecon Beacons website at beacons-npa.gov.uk

EXPERIENCE

The importance of working closely with the Park, just as National Grid has always done on various projects, was uppermost in Huw's mind as he ploughed through the mud and mountain scree into his new venture.

"The Park's support is important because they train people like me to share knowledge of the area which I then pass on to my customers, who are usually staying nearby and contributing to the local economy," he said.

"So, as well as passing on riding tips and skills as we climb and descend the mountains, I also explain where we are, what plantlife is abundant and the geology and history, so people get a complete experience."

Huw welcomes tourists from Canada, Denmark, the USA and Australia, many of them driven by a desire to "try something different".

"I'll usually ask them what they want from the ride or hike, assess their fitness and what they'd like to see, and then create a bespoke ride of between three and six hours that ticks off what they want," he said.

"Some experienced road cyclists ask me how many miles we'll be covering but in this terrain it's not about how far you go in a day – it's about what you experience in that distance."

EXHILARATED

From individuals or friends seeking an experience day to corporate groups hoping to bond their teams, Huw expands and shrinks his team to cope: "Whoever we take out, they come back exhilarated and yes, a little tired, but in a good way.

"Sometimes we'll do 50km, sometimes less, depending on the altitude. But every time there are things that thrill me... the fact that you rarely



CYCLE SHORTS

- * Huw's difficulty levels span single track to technical rocky descents.
- * He leads riding tours to The Gower Peninsular in west Wales.
- * A three-day trans-Wales ride is "not for the faint hearted".
- * His website features an outdoor blog.





PEAK PERFORMER

Mountain Leader Huw's packages also include searching for geocaches, wilderness camping in the internationally recognised Dark Sky reserve, hiking through the Beacons or Black Mountains and a full ski and snowboarding service.



Huw's National Park adventure days cater for as many mountain bikers or hikers as his customers want

see another human being and the sense of freedom at being in such incredible natural scenery."

Huw maintains his fitness to run regular tours in groups of between three and eight, with around 60% of them hailing from a line south of the Midlands looking for something unique to do during their trip to Wales.

Huw, born and bred in the Abergavenny area, is also committed to giving back to the community and countryside that plays such a crucial role in making his business what it is.

He and his team regularly marshal and man checkpoints at major events skirting the Beacons, and he donates one per cent of his annual turnover to local charities such as Mountain Rescue and Air Ambulance.

"It's important that as a local business sharing the beauty of the area and encouraging people to visit, we give something back. We're very conscious of the fact that we rely on this stunning landscape, its wildlife and constantly changing weather, for our livelihood," said Huw.

"I always appreciate how lucky I am to be doing something I enjoy for a living and it's almost more rewarding because of the job I did before. It's rare that I wake up and think 'oh no, not work' because there are so many areas of the Brecons with different weather that you can drop down from the peaks if it gets too bad. I have one of the best offices in the world."



For more information go to treadsandtrails.co.uk

THE INDIE FARMER: *My vision*

THIS GRANTOR DRAGGING THE IMAGE OF FARMING INTO THE 21ST CENTURY WANTS OTHER LANDOWNERS TO DO THE SAME





Tree of wisdom: Nigel considers his next feature

Just imagine a vision of the future where the public gladly pays a little extra for sustainably grown food sourced direct from their local farm.

It's a model already working well on the sheep, beef and arable farmland one grantor family has been running for more than 200 years.

But it's equally a message Nigel Akehurst believes the industry's elder statesmen engrossed in the endless, gruelling business of forging a living from the land, have failed to spread to today's more receptive audience.

That same tunnel vision of a generation of landowners unused to shouting about their agricultural or diversification success has been the incentive for Nigel's one-man crusade with a very clear goal... to make farming cool.

Under the superhero-like moniker of the Indie Farmer, he's harnessing the positive power of social media to offer consumers a fascinating insight into the work that has to happen before products reach our supermarket shelves.

FORCE FOR GOOD

The former economics student left the family farm close to Battle in the 1066 county of East Sussex to seek his fortune in London more than a decade ago. But he's been tempted back by the prospect of combining new-found digital skills with a love of farming he admits "must be in my DNA".

IN NUMBERS



150K

Since its launch six years ago, Nigel's website has attracted more than 150,000 visits from different users.



3 MINS

The average each visitor to the site spends on each story... each one precious time spent with the Indie Farmer brand.

"I got a degree, travelled to Argentina and New Zealand, taught English in Spain and then came back to work in sales for five years. But I always felt I wanted more," said the marketing entrepreneur.

He set up his own website and worked 'in-house' for Red Tractor, the farming industry's quality assurance watchdog, as a consultant in their marketing and communications team for nearly two years.

"I was going out meeting farmers and listening to stories about how they'd successfully diversified and it really brought me back to my roots. It was then in 2013 that I realised I could combine the two to try to be a force for good," he said.

Within a year he'd launched Indiefarmer.com which he describes as a platform for small-scale producers,



growers and livestock keepers redefining tradition and exploring new ways to farm and produce real food.

He said: "There's a lack of awareness among the public about the work that goes into ensuring they get quality food, and how and why it really is better value than the cheap mass-produced alternative.

"The British public needs to be educated about why good food costs that little bit more and why it's worth the extra. The move in recent years towards greater awareness of provenance and process is helping drive that understanding."

FOODIE HUB

Since returning to the 45-acre Hockham Farm in Boreham Street, Nigel has thrown himself into all aspects of the 140-head of cattle and 700-sheep business, and is behind a subtle change in philosophy.

He has added slower growing and commercially more viable Sussex Cattle heritage breed to his father Fred's preferred Continentals, and sells 10kg boxes of the matured beef direct to local buyers.

"They have special qualities in terms of their meat and things like that are important for the website as it strives to be regarded as a farmers' site and a foodie hub," he said.

He is adamant that every grantor who deals direct with consumers should explore how social media can help share their messages on quality and unique selling points to give them a head start on their rivals.

His website celebrates the wider community beyond

Sussex too, with regular posts about other inspirational businesses, diversification and quirky countryside videos. He's happy sharing other farmers' successes, knowing the reflected credibility and his prominence as an 'influencer' will boost his own business.

His 'can cows swim' video – check it out on YouTube – has already had 41,000 plus views, every one free advertising for the family farm.

Nigel, 40, thinks differently about farming and is always trying to make that crucial connection with the blog's core audience by reminding them of different ways to maintain that critical link with their customers... the food-buying public.

He's constantly seeking new ways of finding great content and even embarked on a six-week UK road trip on his scooter 'Veronica' to meet other like-minded farmers with stories waiting to be told.

The site has built a loyal community with a unique mix of profiles, interviews and photo stories focusing on the people who work the farmyards, fields, breweries and kitchens, but it's equally the quirky stuff that hits the sweet spot with web browsers, agricultural or otherwise.

Two of the site's most visited pages are 'the 17 classic tractors we want in our shed' and 'a beginner's guide to lambing' – proof that Nigel knows his farm-to-public audience well.

He said: "Farming is hard work but there's no reason why it can't be seen as cool. Hopefully I'm bridging the gap between landowners and public."

"Farming is hard work but there's no reason why it can't be seen as cool. Hopefully I'm bridging the gap between landowners and public"



For more information visit: indiefarmer.com

WORK WITH US TO STAY SAFE

HELP US TO HELP YOU STAY SAFE DURING THESE CHALLENGING TIMES



If you are working, remember to dial before you dig

They will observe all of the appropriate social distancing rules and we would ask that you facilitate all reasonable requests for access and maintain the minimum 2 metres social distancing policy as advised by the Government.

ASSISTANCE

Covid-19 is inevitably having an impact on availability of our field resources and we have put appropriate measures in place to ensure we have resources available. However, levels of resource will vary across the country and from day-to-day, as the virus spreads. We recognise that although a lot of construction work has been suspended, work on the land needs to continue including tasks such as fencing and drainage.

Now, more than ever before, it is vital that if you are planning any works in the vicinity of any of our assets that cross your land, that you contact us immediately on **0800 688 588** for advice and guidance prior to any works being carried out.

Do please bear with us, as for obvious reasons, we may need extra time to respond to your enquiry, as we manage the impact of Covid-19 with our own resources. Please help us by giving us as much notice as you possibly can prior to any works being carried out around our assets.

National Grid will be continuing its scheduled helicopter surveillance of the gas pipeline network.

Once again we would appreciate your assistance in maintaining a safe distance from those assets if you are carrying out work nearby in order to avoid any unnecessary requirements for National Grid engineers to have to make site visits to your property in response to aerial sightings.

As ever, if you think you have hit a pipeline please call our emergency number on **0800 111 999***.

If you are planning any works near our Gas or Electricity assets please call on **0800 688 588***.

Thank you for helping us to maintain a safe Gas and Electricity network."

Best regards

KAMILLE LIDDAR,
ASSET PROTECTION TEAM LEADER

*calls may be recorded and monitored



THE PRESSURE OF GAS FLOWING THROUGH THE PIPELINES IS 50 TIMES THAT OF THE AVERAGE CAR TYRE PRESSURE.

IF NECESSARY OR REQUESTED, A TECHNICIAN WILL VISIT THE SITE TO LOCATE AND MARK OUT THE PIPELINE, AND ADVISE ON WHAT WORKS CAN AND CAN'T BE DONE SAFELY. THIS IS A FREE SERVICE.



THE 'EAGLES'

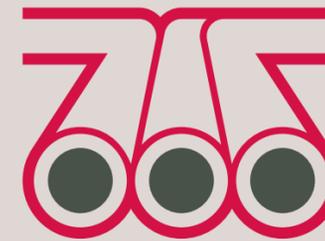
THE ELECTRICITY AND GAS LOCATION ENQUIRY SYSTEM, MANAGED BY OUR SERVICE PROVIDER CADENT, ALLOWS ANYONE TO INFORM NATIONAL GRID AND CAN LOCATE AND PROVIDE EXACT DETAILS FOR CARRYING OUT WORKS ON YOUR LAND.



THIS SERVICE IS MANNED BETWEEN 8-4PM MON-FRI, THEREAFTER THERE IS AN AUTOMATED SEARCH FACILITY AVAILABLE, WITH AN INITIAL RESPONSE GIVEN WITHIN MINUTES.



ALWAYS MAKE SURE YOU CALL NATIONAL GRID BEFORE UNDERTAKING ANY WORK TO A DEPTH GREATER THAN 0.5M.



ANY LAND SEARCH SHOULD SHOW IF THERE IS AN EASEMENT IN PLACE. THIS IS A LEGAL AGREEMENT AND WILL SHOW THE ROUTE OF THE PIPELINE AND FORM PART OF THE DEED OF COVENANT TO THE PROPERTY.

REMEMBER: WHEN PLANNING WORK, PIPELINES CHANGE DIRECTION AND MAY NOT ALWAYS RUN IN STRAIGHT LINES BETWEEN GAS MARKER POSTS.



CONTACT NATIONAL GRID PRIOR TO COMMENCING DRAINAGE, CLEARING DITCHES AND FENCING WORK.

**CALL NATIONAL GRID ON
0800 688 588
OR 24-HOUR EMERGENCY LINE
0800 111 999**

OR EMAIL AT PLANTPROTECTION@CADENTGAS.COM WHICH LINKS TO OUR EAGLES PROCESS (RIGHT)
* CALLS MAY BE RECORDED OR MONITORED

STAYING IN TOUCH WITH NATIONAL GRID IS SIMPLE

In the event of an incident or an emergency we need to know who to contact.

If you believe you have National Grid assets on your land but have not received any letter from us confirming this asset, then please contact us on **01926 654844** or email us at grantorservices@nationalgrid.com





WE ARE *electric...* (OR WILL BE SOON)

NATIONAL GRID'S DECARBONISATION EXPERT ON WHY ELECTRIC CARS WILL BE THE NEW MOBILE PHONES



FACT
January was the greenest ever in terms of our electricity. Milder temperatures and a demand for electricity, coupled with high winds meant low carbon sources made up more of the mix, leading to a record low in the amount of carbon produced for every kilowatt.

Listen to Graeme Cooper for any longer than five minutes and he'll have you reaching for your calculator to put the deposit down on an electric car while getting a quote to rip out and renovate your heating system.

Like many people with a vision, he's driven and single minded. Unlike most, he explains why it's necessary with a grounded clarity that means doing anything other than acting on his advice seems like utter madness.

But National Grid's Electric Vehicles Project Manager doesn't just talk a good game... he lives in a 600-year-old home he's turned carbon neutral and proudly drives an electric car.

"The initial outlay is a lot but it starts to pay for itself very quickly," he insists with near evangelical zeal, before quickly moving on to spell out why we must act now to decarbonise the UK.

INTERPRETER
Graeme is a little different to many policy makers and shapers in that he sees himself as an interpreter with the task of taking complex and tricky corporate or political messages and making them relevant so they matter to the average person in the street.

When he's not sitting on the Government taskforce shaping the UK's future industrial strategy and the effects of carbon climate change and poor air quality on our health, he's touring the country talking to councils and financiers... in his 2p a mile electric car.

AWARENESS
The father-of-two teenage children, now in his third career, explains how the first two roles shaped his 'real world view' on how National Grid has a big part to play in the revolution that's "coming down the road very fast".

"First, I built mobile phone networks around the UK and Europe, putting phone mast equipment on pylons and National Grid gas holders. It was a technology disruptor pushed by the Government," he said.

"Then I built eight onshore wind farms worth £500 million over 11 years. They were another technology disruptor that needed significant infrastructure and a strong regulator."

That poacher-turned-gamekeeper understanding of the "enabling" power of National Grid's network will be pivotal in the next big change: "Until 2017, the dirtiest thing we did as a nation was make power but that's been overtaken by transport. Fortunately, there's

"Remember the video recorder and mobile phones? There was scepticism and then they boomed"



a growing awareness that poor air quality is killing 40,000 people a year, that climate change isn't just a myth and that the UK can benefit from cleaning up its heat and transport."

Graeme is slowly bridging the credibility gap between saving the UK's economy, the planet and lives and encouraging organisations and individuals to take the first, financially tricky steps to decarbonisation.

"Next time you're driving on a motorway, look up and count pylons. There's a synergy that means the energy network is where the road network is 60% of the time. We want to be feeding into that," he said.

He's alluding to the pub-chat phenomenon of 'range anxiety', a phrase used by non-electric vehicle (EV) owners to describe the mythical situation of being unable to charge up on a long journey.

He says a network of 54 charging sites within 50 miles of each other, giving 99.6 per cent coverage of the road network – with National Grid working in collaboration with the Distribution Networks to "provide the wires" – would end that 'blocker' to uptake in an instant.

CHARGE BUNDLE

The UK's 346 substations are another untapped resource for bus depots, taxi firms or transport hubs to relocate on traditionally cheaper land nearby to tap into the new way of transporting people and goods.

"The two main arguments not to buy an electric car – range and cost – are becoming increasingly weak. You can go more than 150 miles on a charge now and most people's average journey is 37 miles. The cost of leasing is currently a little more but you get it back on tax, petrol or diesel saved. Confidence is growing all the time," he said.

He believes that, just as we'd never have bought a £600 mobile phone when they first hit the high street, an EV and charge bundle package for businesses and individual buyers will be the norm in a few years' time.



"There will be Government incentives and it is definitely going to happen whether people like it or not. Remember the video recorder, mobile phones and smartphones? There was scepticism and then they boomed. It's important from National Grid's perspective that we are future-ready, that this doesn't happen solely in London and the south east and that the rural economy isn't left behind, because it's as relevant for tractors and telehandlers as cars."

CLEAN, GREEN AND CHEAP

Graeme is certain that the electric vehicle revolution is at the same stage VHS experienced when people dismissed recording films at home as something only the likes of the big film houses could do.

"We are talking with the Department of Transport and the Treasury, so the days when it takes eight to 12 minutes to charge your car by using a chargepoint and an app on your phone are coming closer," he said.

He estimates that for only a few pounds of electricity, less if it comes from renewable energy at night when energy is cheaper, we will be driving around 250 miles in the not-too-distant future.

He added: "It's cleaner, greener and you can charge when it's cheap. I'm up and down the country talking to businesses and councils, and last month I put £7.53 in my car.

"There are even some tariffs available now that pay you when there's too much electricity in the grid, so for individual drivers, transport-based and agricultural businesses it's definitely something worth considering now for the near future."



Read more of Graeme's forecasts for the big changes heading our way in the Activity section at: [linkedin.com/in/graemecooper/](https://www.linkedin.com/in/graemecooper/)

4 QUESTIONS ANSWERED



"CAN THE UK ENERGY GRID COPE WITH A HUGE INCREASE IN THE NUMBER OF ELECTRIC VEHICLES BEING PLUGGED IN FOR CHARGING?"

Yes. There are two aspects to whether we have the capacity to manage lots of EVs being plugged in at once – whether we have enough energy and whether we have sufficient capacity on the wires that carry that energy to where it's needed.

The most demand for electricity we've had in recent years in the UK was for 62GW in 2002, but since then due to improved energy efficiency such as the installation of solar panels, the nation's peak demand has fallen by roughly 16 per cent.

If we all switched to EVs, demand would only increase by around 10 per cent... still less than in 2002 and 'Smart by design' home charge points would ensure demand is spread out anyway.



"ELECTRIC VEHICLES DON'T GO FAR ENOUGH ON ONE CHARGE. AREN'T THEY ANNOYING AND INCONVENIENT?"

The sweet-spot that gives the optimal balance between cost and distance for the range of an EV is between 200 and 300 miles.

Statistically the first car in a family averages around 37 miles a day and people buy for the longest trips they do. But when we take longer trips, most of us already stop for 15 to 20 minutes at a service station to grab a drink and fill up on petrol or diesel. That would be all the time it takes to power up your EV with an ultra-rapid charger.

This is why National Grid has proposed the optimum locations to ensure nobody on the strategic road network is ever further than 50 driven miles from an ultra-rapid charge point.



"AREN'T EVS MORE EXPENSIVE THAN PETROL AND DIESEL EQUIVALENTS?"

That's true, especially for early adopters but as they become more mainstream and volumes increase, prices typically come down and we expect the upfront cost of new EVs to reduce over the next few years.

For those looking to buy used rather than new, the current growth of supply in new EVs will hit the second-hand EVs market in three or so years' time. Don't just look at the initial outlay for your car but the 'whole life cost', which means considering how well it retains its value and its running costs because EVs are depreciating less than petrol and diesel... and have fewer moving parts so have lower service costs.



"SURELY ALL YOU'RE DOING IS MOVING HARMFUL EMISSIONS FROM EXHAUSTS TO POWER STATIONS?"

The way we generate power has evolved and our energy system is getting greener all the time.

Last year, 2019, was a record-breaking year and more electricity was generated by clean sources than fossil fuels.

With the growth in onshore and offshore wind farms and the closure of a number of coal plants, transport is in fact now the most polluting thing we do as a nation.



MAKING PLANTS SEXY

THAT'S THE MISSION FOR ONE GRANTOR ORGANISATION

Richard Moyle is smiling broadly, utterly oblivious to the rain lashing across the valley as he strides purposefully towards a giant beech tree in the distance. As a child, he enjoyed picnics with his parents at this unspoiled spot on Kent's Medway Valley, which looks the same today as it did 400 years ago.

He grew up in the village of Cuxton a two-minute walk away, developing a passion for the flora and fauna around him. He left, did a botany degree, grew a career and in 2011, "came home" to Ranscombe Nature Reserve with a mission... to make plants sexy.

The Project Manager at Ranscombe Nature Reserve, one of 23 Plantlife centres working to safeguard the nation's wild flowers, plants and fungi, knows that is a challenge – but it's one the not-for-profit organisation is relishing.

"We're on the brink of a serious crisis when it comes to protecting these species, and in time if nothing is done our natural environment will collapse and the countryside will be green and grey with no other colours," he said.

"If plants were to die out at this reserve, bee numbers would dwindle, insects disappear and we'd lose the linnets and skylarks, and then the peregrine falcons. If species die out, our countryside would lose its robust ecosystems which is why we're trying to make them as rich and diverse as possible."



DISAPPEARING

The organisation, with Prince Charles as its patron, works tirelessly to ensure its reserves protect the most vulnerable plants, such as the hairy, green flowering Interrupted Brome rescued from near extinction and now flourishing in this beautiful 620-acre pocket of Kent.

The Ranscombe reserve welcomes 60,000 people a year to its 10 miles of footpaths, watched over by a team of volunteers who maintain the woods and grassland in this part of the Kent Downs Area of Outstanding Natural Beauty throughout winter to ensure summer's explosion of colour.

Richard said: "We have more than 420 plant species, from the culturally important poppies that carpet the valleys in crimson to the rare stinking chamomile.

"Their presence means insects thrive. We have incredible White Admiral butterflies and fallow deer, but this kind of robust and diverse wildlife corridor that's a life support for all our wildlife is in real danger of disappearing unless we act now. And that's not scaremongering. It's fact."

PARTNERSHIP

Since its launch 30 years ago, Plantlife has grown into a powerful conservation lobby in Whitehall and internationally to raise the profile of wild flowers, celebrate their beauty and protect their future.

It has connected 20,000 children to nature by hands-on visits to its 4,500 acres of reserves, of which the flagship Ranscombe and the organisation's Wiltshire headquarters are both National Grid gas grantors.

That grantor connection and vibrant partnership approach with other conservation groups could be the difference between a plant and its associated wildlife "hanging on" or flourishing, insisted Richard.

"We offer bespoke specialist advice about plants, planning and botanical surveys and work with landowners on projects and long-term land management. Enhancing understanding of arable and meadow management means the benefits filter down to the public and

FACT

The paths around the Ranscombe reserve were once trodden by one of the area's most famous fellows, Charles Dickens, and described in his book *The Pickwick Papers*.

Plants such as blackthorn (left), corncockle and the bumblebees' favourite Viper's-bugloss grow freely at the Ranscombe reserve.



A BURST OF COLOUR THAT MAY SOON BE GONE



© Image copyright D Moyle

STINKING CHAMOMILE

A scarce plant with beautiful daisy-like flowers. Like many plants of arable farmland, it has all but vanished from the countryside but can still be found at Ranscombe.



© Image copyright Plantlife

BLUEBELL

A plant which prefers the damp climate of north-west Europe, so it is well at home in Britain where we have up to half of the world's population of bluebells.

WILD COLUMBINE

A true wild flower, although it is related to garden columbines. The name comes from "columba", the Latin for dove, as the flowers resemble a group of tiny birds.



© Image copyright Plantlife

ROUGH POPPY

One of the rarest species of poppy, it can be recognised by its crimson flowers with four, sometimes five, petals and bristly, egg-shaped seed-pods. It can often be found carpeting the valleys at Ranscombe throughout summer.



© Image copyright Bob Gibbons

we can reverse the gradual loss of our countryside," he said.

The organisation's influence in protecting coastal, woodland, heathland, arable and grassland is gradually growing through its charitable activities and awareness projects, such as the ground-breaking Road Verge Campaign which now has almost 90,000 signatures to its name.

Richard said: "Its aim is to make sure wild flowers thrive on the UK's verges by sharing management guidelines with local councils so they don't mow everywhere. That's a quick win which is starting to reap rewards.

"There's nothing more incredible than seeing a verge or arable farmland covered in a riot of colour, and we're committed to making people aware of how simple changes to management can deliver spectacular results. A 'less and later' two-cut approach would replenish the seed bank, restore diversity, save councils money and provide pollinator habitat estimated to equal the size of five major cities combined."

He added: "Countryside programmes always focus on animals because they run around and are cute, but we are determined to make plants sexy. And we need to start now, before it's too late."



IN NUMBERS



3,495

Unique species on Plantlife's 23 nature reserves



15,800

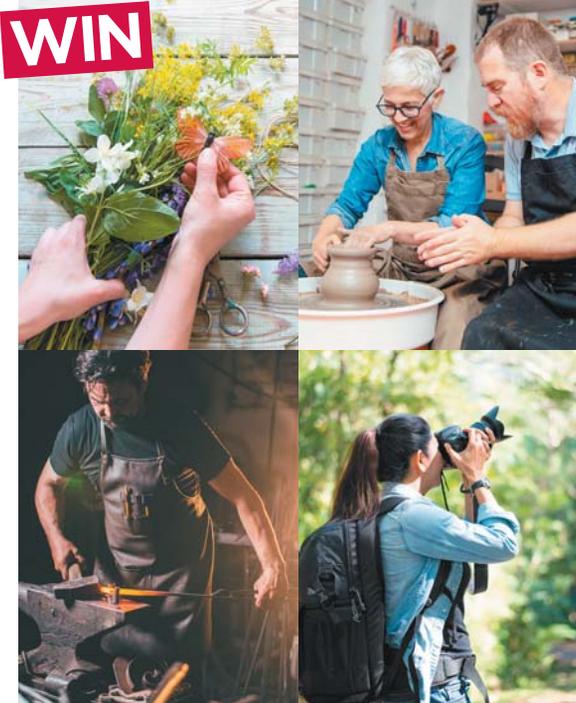
Acres of meadow created or restored



For more information visit: plantlife.org.uk

LASTWORD

Start summer in style with these two great prizes



WIN

GET CREATIVE AND LEARN SOMETHING

From blacksmithing to shoemaking and magic to photography, it's never too late to try something completely different.

Gridline is offering a Creative Collection Virgin Experience Day voucher to share the joy of tea blending, pottery making and a choice of many other days out to the grantor who correctly answers the question below in our draw. There's even a beer and cider tasting tour for the less artistic.

Q How many National Grid-connected charging sites does electric car expert Graeme Cooper want to see?

Email your answer, name and contact details to gridline@madebysonder.com – or send your entry to Sonder Experience Day competition, Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire, CV32 5AE to arrive no later than 1 September 2020.



WIN

Enter our photo competition and you could win a £100 gift voucher

This wonderful picture of Fell Ponies' horseplay earned Marlyn McInnes from Perthshire the prize this time... so now we're after yours with the theme "a brighter future".

Send your high resolution shot to gridline@madebysonder.com by 1 September 2020 for a chance to win a £100 high street shopping voucher of your choice.

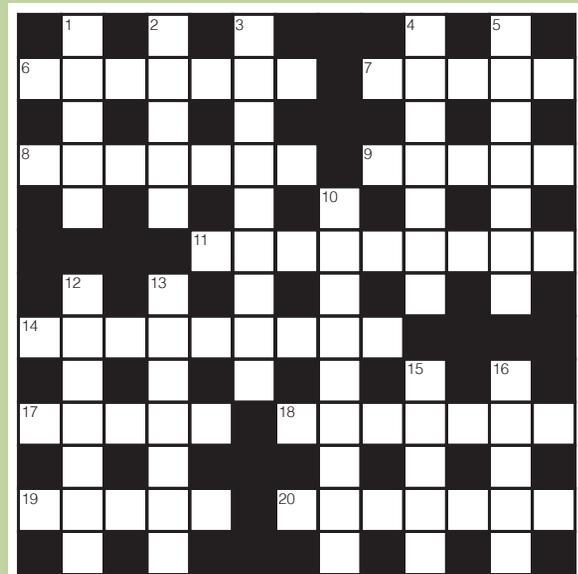
JUST FOR FUN CROSSWORD

ACROSS

- 6 Highly intelligent aquatic mammal which uses sonar to detect objects in clouded water (7)
- 7 Heroine of two books by Lewis Carroll (5)
- 8 Name of several kings of Spain, the last of whom was ousted by the declaration of a Republic in 1931 (7)
- 9 Wine district of France, bordering the Gironde, north of Bordeaux (5)
- 11 Spasmodic type of dance accompanied by jazz music (9)
- 14 Northern sea, lying between Iceland and the Scandinavian mainland (9)
- 17 In plants, the undeveloped seed (5)
- 18 Elder of the Wright Brothers who pioneered air flight around the turn of the century (7)
- 19 Piece of unwrought metal, cast in a mould (5)
- 20 French nineteenth-century composer who wrote the "Symphonie Fantastique" (7)

DOWN

- 1 Outdoor game, played on a green, known in England at least since the thirteenth century (5)
- 2 Town in Surrey with a famous racecourse (5)
- 3 Star of the Muppet Show (4,5)
- 4 Musical term, meaning "with brisk movement" (7)
- 5 Sea creature with a round or oval body and eight arms (7)
- 10 Scottish seaport at the head of Loch Ryan (9)
- 12 Substance which dissolves another (7)
- 13 Bird which winters in Africa and visits Europe and is distinguishable by its deeply forked tail (7)
- 15 String instrument of the violin family (5)
- 16 An early type of computer



© Brainwarp

SOLUTION: ACROSS - 6 Dolphin, 7 Alice, 8 Allonso, 9 Medoc, 11 Jitterbug, 14 Norwegian, 17 Orville, 18 Orville, 19 Ingcor, 20 Bethoz
DOWN - 1 Bowls, 2 Epsom, 3 Miss Piggy, 4 Allegro, 5 Octopus, 10 Stranraer, 12 Solvent, 13 Swallow, 15 Viola, 16 Algol

COMPETITION TERMS AND CONDITIONS: EXPERIENCE DAY: The winner will be the first entrant selected at random who correctly identifies the answer and is a National Grid grantor at time of draw. Editor's decision is final. No correspondence will be entered into. Gridline reserves the right to change the prize without notice. It is not transferable and can't be exchanged for cash. National Grid always seeks feedback and opinions from stakeholders they interact with to better understand stakeholder requirements. By entering the competition you permit BMG Research to contact you on behalf of National Grid Gas/Electricity Transmission. Closing date: 1 September 2020. **PHOTO:** Winning image will be the most visually appealing and relevant to theme and will feature in the next edition. The winner must be a National Grid grantor. Editor's decision is final. No correspondence will be entered into. Gridline reserves the right to change the prize without notice. It is not transferable and can't be exchanged for cash. Closing date: 1 September 2020. The winners' names will be published.

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