

# GRIDLINE

*The magazine for landowners*

Winter 2017

## Inside

Heard the one about the mushroom grower?

**The grantor bringing a splash of New York to a city's waterways**

A spoonful of sugar and some dark secrets from the Civil War

**WIN A luxury two-night stay in a National Park**

## *Pampered* poultry

No turkey looks forward to Christmas, but we meet one grantor who wants them to live the high life while they can

nationalgrid

## Some useful contact numbers

The Land & Acquisition Services team are 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 wayleave payments, telephone the payments helpline on 0800 389 5113

### EASEMENT ENQUIRIES

» Email [box.electricityeasements@nationalgrid.com](mailto: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](mailto:grantorservices@nationalgrid.com)

### ELECTRICITY EMERGENCY

» Emergency calls to report pylon damage to National Grid can be made on 0800 404090. 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](http://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 688588 so that searches can be made to determine the exact position of any National Grid assets

### CUSTOMER COMMENTS

» Write to Land & Acquisition Services, National Grid House, Warwick Technology Park, Gallows Hill, Warwick, Warwickshire CV34 6DA. Or email [ld.customercomments@nationalgrid.com](mailto:ld.customercomments@nationalgrid.com)

Gridline is produced by

**SONDER**

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The waxy is fast-becoming a popular way to see the sights of Manchester from the city's canal network. We meet the man making the daily commute a little more pleasurable

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# Welcome



**Some of you may have noticed the logo on the front page of this winter edition of Gridline.**

It's there because your quarterly magazine has been named Best Stakeholder Publication in the national Institute of Internal Communication awards, and it picked up a Best Writing gong as well.

The judges said: "The first-person and on-site approach gives so much colour and insight and also demonstrates how important the grantor is to National Grid."

They added: "This is a publication for a community and it speaks well to that community. The language is inclusive and collaborative."

Those two snippets of feedback were music to my ears because as an organisation working closely with our landowners, collaboration and partnership are the key.

I'm thrilled to say that more and more of you are starting to come forward with success stories from your businesses for us to feature in future editions, so long may that continue.

This edition we're taking a look at everything from mushroom growing in Lancashire to water taxis in Manchester, sugar beet in Yorkshire and turkey farming in North Wales, so no one can ever accuse Gridline of being dull!

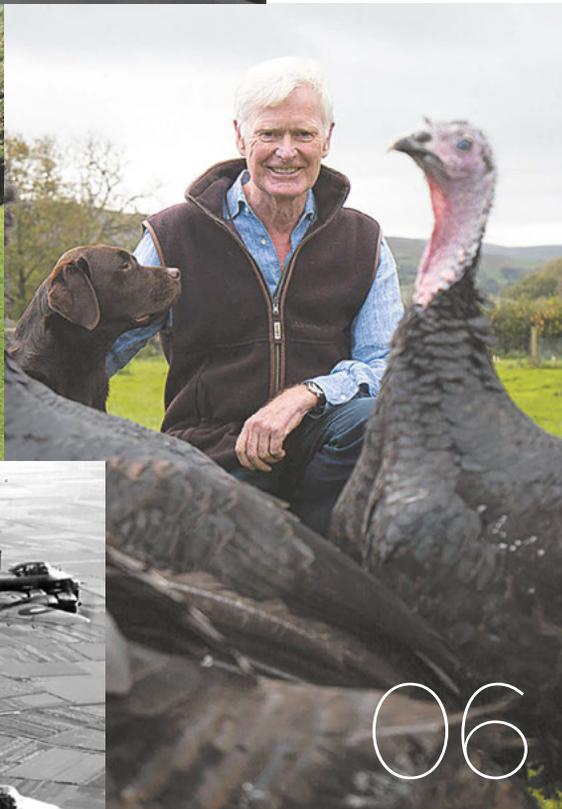
We're always on the lookout for stories of innovation or diversification, where the challenging life of being a landowner is alleviated slightly by a sideways venture that's just that little bit different, unusual or fun.

So if you've got a story to tell, our journalists and photographer would love to come and meet you to find out more.

In the meantime, enjoy the read.

*Dawn*

**Dawn McCarroll**  
Editor, Gridline



## Missing WWII bomber found

The wreck of a British WWII aircraft that helped drive the Nazis from Norway is thought to have been discovered in the North Sea.

The discovery was made during seabed surveys for the North Sea Link interconnector: a joint project between National Grid and the Norwegian electricity owner and operator Statnett to link the two countries via a 720km subsea power cable.

Experts believe the wreck to be a four-engined RAF Short Stirling heavy bomber. Nineteen went missing during missions to supply the resistance during Norway's occupation from 1940 to 1945.

The wreck was detected by sonar equipment and a remote-controlled underwater vehicle sent to the seabed to inspect it. If confirmed, the site could now be classed as a war grave.



From left to right: Catherine Stevens, Louise Blakey, Sara Hird, Rebecca Kearsley, David Knowles, Charlie Webber, Steven Hesketh, Mark Thomas, Adrian Attaway, Arran Dixon

## Towpath taskforce

Volunteers from National Grid's North West & Scotland Land team spent a day tidying up a stretch of the historic Trent & Mersey Canal in Cheshire.

Their efforts at the canal's Middlewich locks flight contributed to an ongoing maintenance programme by the Canal & River Trust.

In addition to litter picking, cutting back overgrown vegetation and weeding cobbled paths, the team also installed 35 new mooring



rings on the canalside. The Trent & Mersey Canal, engineered by James Brindley, was the country's first long-distance canal and today forms part of the Cheshire Ring, a popular waterway holiday route.

# NEWSLINE

*The latest news from National Grid and its landowner partners*

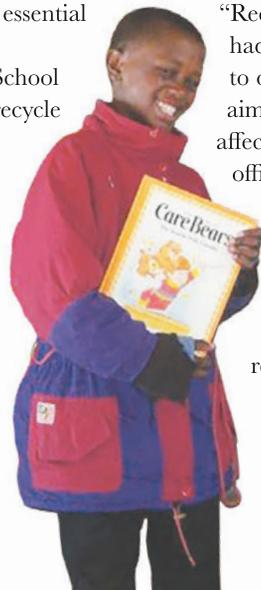
## A new chapter for African literacy

A charity dedicated to raising literacy levels in African schools has received a £500 donation from National Grid after its annual fundraising event was unavoidably disrupted by essential power line maintenance works.

The School Run is organised by School Aid, based near Beaconsfield, who recycle high-quality educational materials from British publishers and schools for disadvantaged pupils in Southern and East Africa.

The name of the run highlights the fact that many children in Africa have to walk at least 5km to school every day to obtain even the most basic education.

This year footpath diversions for

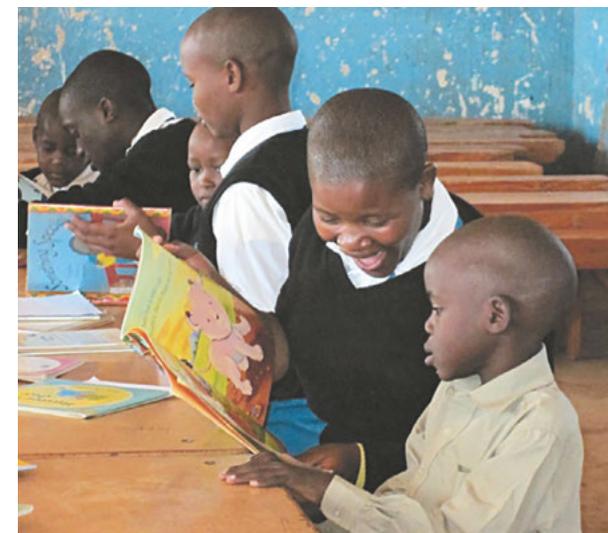


the refurbishment of the line between East Claydon and Iver meant the charity had to find an alternative venue for its event.

"Recognising the disruption our works had caused we encouraged them to apply to our Community Grant programme, aimed at organisations and charities affected by ongoing works," said land officer Tracey Long.

Tricia Hayne, the charity's African projects coordinator, said: "It was great to hear about National Grid's donation. The money will help fund future School Runs and our school reading clubs in Lesotho during 2018."

**To find out more about School Aid go to [school-aid.org](http://school-aid.org)**



# Young architects help create wetland haven

**Schoolchildren** have helped design new wetland areas in their local park and nearby land owned by National Grid.

Pupils from the primary school next to Enfield's Prince of Wales Park have made frequent visits to the community wetland to check on construction progress.

The project is being managed by Enfield Borough Council and the Wildfowl & Wetlands Trust, with funding from Thames Water. Members of the community will help with the future upkeep of the wetland, which will

provide a home for wildlife, as well as reducing flooding and pollution in local watercourses.

The area of non-operational land near National Grid's Brimsdown substation will be used for outdoor education classes. Contractors have cleared trees and vegetation and put up fencing to provide a secure area.

"This shows how we can work with partners and use our land to make a sustainable contribution to the local environment and community," said Chris Plester, National Grid's senior environmental advisor.



## Ahead of the field

**One grantor's** quest to maximise wheat yield on his farm has not only dramatically improved productivity but also resulted in a prestigious farm award.

Shaun Watson, the Farmers Weekly Arable Farmer of the Year, produced the UK's highest-yielding wheat crop of 2016 on his farm in East Holywell, Northumberland, achieving close to 13 tonnes per hectare.

Besides using the latest variable fertiliser and seed rate technology to lift poorer-performing parts of his fields, Shaun also provides the soil with liberal amounts of sewage sludge, horse manure from his livery business and compost.



© Jim Varney

## ONE-MINUTE INTERVIEW

Tracey Long, land officer, south-east



### BACKGROUND

I joined the team four years ago after working in private practice for the previous 10 years. I started my career with British Gas as an assistant wayleave officer in the East Midlands.

**CURRENT FOCUS** Assisting a project team on an overhead power line refurbishment in Buckinghamshire.

**LEISURE INTERESTS** Going to the gym, pilates and walking my dog in the countryside.

**DREAM JOB** Working as a presenter on Countryfile. I love the interesting topics they cover and that they meet such fascinating people and go to new places.

**IDEAL DINNER GUEST** Aidan Turner (Poldark). Who couldn't be intrigued by his dark good looks? And I love the series.

**HAPPINESS IS** Being in Cornwall and taking in the beautiful scenery on a lovely day with my family.



**THE SONG THAT MEANS MOST TO YOU** True by Spandau Ballet.

**MOST SCARED OF** Snakes - I'm terrified of them.

**TOP OF BUCKET LIST** To visit the Maldives, just to see if it is paradise!

**BEST ADVICE GIVEN** Always treat others as you would like to be treated yourself.



# *Herding* BIRDS

CHRISTMAS WOULDN'T BE RIGHT WITHOUT A TURKEY  
AND THE PAMPERED POULTRY REARED AT ONE  
GRANTOR'S ESTATE ARE THE FINEST MONEY CAN BUY

More than 10 million turkeys will be consumed in the UK over the festive period by families celebrating one of the most important days of the year. And even if it costs a few pounds more, most people want the best bird they can afford.

For the ultimate 'Rolls-Royce' of turkeys they need look no further than the Rhug Estate at Corwen, in Denbighshire, Wales, where the cosseted birds are grown-on and hand-finished to achieve the best-tasting turkey.

Each year Robert Wynn, the 8th Baron Newborough, supplies 1,000 of his premium Dee Valley organic turkeys – whose collective name is a rafter – to homes and top-end restaurants in this country and abroad.

The Norfolk Bronze and Hockenhull Black birds that graze the estate's organic pastures are slow-growing heritage breeds, raised to their full maturity of seven months.

"We're extremely passionate about giving them a good quality of life. They roam outdoors during the day in clover-rich pastures and are free to express their natural behaviour, foraging for insects and scratching around," said Lord Newborough (right).

Outdoor exercise and the fact they grow slowly contribute to the greater flavour and superior texture of the meat, while the deeper layer of fat in a mature turkey provides a measure of self-basting.

### CANNED LAUGHTER

In contrast, mass-produced white turkeys, which account for 90% of birds sold in the UK, spend their entire lives in hangar-like barns. They are slaughtered when they reach the right weight – which can be as little as 12 weeks – and not necessarily when they are right to eat.

Happy in their outdoor pastures the Rhug turkeys readily approach visitors, pecking at clothing and tilting their prehistoric-looking heads. The throng responds to human voices with a rising cacophony of gobbling sounds, reminiscent of the canned laughter typical of 1970s sitcoms.

"Chickens more or less do their own thing, but turkeys are inquisitive



*"It doesn't come as naturally to the dogs as herding sheep, but luckily they're eager to please me"*

and want to know your business," said poultry manager Gareth Williams, who first joined the staff 37 years ago as a shepherd.

Every evening his specially trained collies, Millie and Ruby, herd the birds into the sheds to ensure they enjoy a stress-free night, safe from foxes.

"It doesn't come as naturally to the dogs as herding sheep, but luckily they're eager to please me and they know once the turkeys are put to bed they'll get their tea," he laughed.

Lord Newborough inherited the 12,000-acre estate from his father in 1998, transforming it from a low-input low-output farm into a sustainable and completely organic enterprise, with a focus on high animal welfare. The farm also sells beef, lamb, chicken, goose and bison and has a farm shop, bistro and roadside takeaway.

Around 8,000 acres are farmed organically and after additional diversification into areas such as green energy and event hosting the business now employs 115 people and has an annual turnover of around £9 million.

"After the food scares of the 1990s, organic farming seemed the right thing to do from a sustainability and animal health point of view," Lord Newborough explained.

"There are no quick fixes for organic farmers and it's all about prevention rather than cure when it comes to disease or pests. But the farming is more rewarding and it helps that I don't take no for an answer."

Lord Newborough believes his organic turkeys are raised to even higher standards than their free-range counterparts.

"We are certified by the Soil Association, so customers know where the meat comes from and how the birds are treated and fed. Our



Millie rounds up the turkeys under the watchful eye of Gareth

## Organic turkeys



The turkeys go inside overnight to keep them safe from foxes and other predators

birds also live in smaller flocks, have better access to air and water, and more space in their houses than non-organic birds,” he said.

“Above all it’s critical to take the stress out of the production of your meat by having happy and content animals.”

### ORGANIC PROVENANCE

The turkeys arrive as day-old ‘poult’ in June and are reared under heat for around three weeks to acclimatise them to light and cooler temperatures before going outside.

They are not routinely drenched or injected and are raised without antibiotics. Eating fertiliser-free organic grassland and organic feed means they also receive a higher amount of nutrient-rich dry matter that also translates into the meat. Because the bird has less water content, there is less shrinkage in the oven and cooking times are typically reduced by 1 hour 20 minutes for a larger turkey.

When the time comes, the turkeys make the short journey to a local abattoir where they are humanely slaughtered and dry-plucked by hand. They are then game-hung for 10 days to break down collagen in the muscle, tenderising the meat and adding depth of flavour.

The Rhug estate has supplied the wholesale sector since 2004 and its turkeys are on the menus of top restaurants including Marcus Wareing’s

The Berkeley restaurant and the Shangri-La in the Shard, London, as well as in delis and gastro pubs. They are also sold from Rhug’s own stall at Borough Market, by mail order and from the farm shop.

Around 16% of Rhug birds are now exported to top-end eateries and hotels in the Far East and Middle East – including, for example, the Mandarin Oriental in Hong Kong and the 7-star Burj Al Arab in Dubai.

“Everything’s imported in these countries and they place a high value on the organic provenance,” said Lord Newborough.

### POP-UP TIMER

Like sprout growers, turkey farmers have a once-in-the-year opportunity to maximise sales – it’s the poultry version of the Olympics. Orders ramp up each year from late October for the office party season, with the bulk of deliveries going out on 20 and 21 December.

“Our prices are higher than in supermarkets to reflect the care and attention and the higher welfare standards we give them, as well as the higher cost of feeding them over their longer lives,” said Lord Newborough. As a final touch all Rhug Dee Valley organic turkeys are sold with a pop-up timer to enable a perfectly cooked bird.

Lord Newborough said: “After all, it’s only fitting that as much care is taken in the cooking of the bird as went into the way it was raised.”



## HOW ORGANIC SOIL COMBATS CLIMATE CHANGE

- ▶ Advocates of organic farming argue that conventional farming methods, such as deep ploughing and single crop cultivation, release carbon dioxide into the atmosphere and deplete the soil of nutrients. Nitrogen-based fertilisers add another source of greenhouse gases.
- ▶ Organic plants and soils trap atmospheric carbon dioxide, converting it by photosynthesis to carbon, a key component of a healthy soil.
- ▶ The Soil Association says that if UK farming converted to organic, at least 1.3 million tonnes of carbon would be taken up by the soil each year – the equivalent of taking nearly 1 million cars off the road.

# TURKEY TEASERS



**1 WE WERE HERE FIRST!**  
Native to the Americas, turkeys have been around for more than 10 million years. They were domesticated by the Aztecs in Mexico, from where they were introduced to Spain.



**2 SOUNDING OFF**  
Only male turkeys (stags) make a gobbling sound, females (hens) make clicking noises.



**3 MEET THE FAMILY**  
Turkeys are among 290 species in the 'gallinaceous' order of heavy-bodied ground-feeding birds such as peacocks, chickens and quail.

**4 T REX IN DISGUISE?**  
Breaking the wishbone is a post-meal tradition but the small forked bone was shared with meat-eating dinosaurs, such as T. rex, 150 million years ago.



**5 FIT FOR A KING**  
Turkeys were introduced into England from the US in 1526 by explorer William Strickland. King Henry VIII was the first English king to enjoy the delicacy.



**6 NO, IT'S NOT A NECK SCARF**  
The dangly appendage hanging over a stag's beak is called a snood. The bare skin on the entire throat and head changes colour from flat grey to shades of red, white and blue when the turkey turns aggressive or is excited.



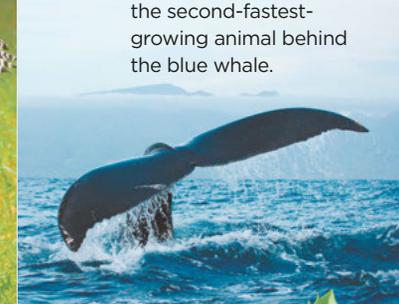
**7 A DICKENS OF A BIRD**  
Charles Dickens cemented the bird's status in Christmas Carol (1843) when Scrooge sent a prize turkey to the Cratchit home.



**8 PREPARE FOR TAKE-OFF**  
While domesticated turkeys are too heavy to fly, in the wild they can take to the air for short distances at up to 55mph. They also perch on low branches at night away from predators.



**9 QUICK GROWERS**  
The broad-breasted white turkey, selectively bred for its meat, is reputedly the second-fastest-growing animal behind the blue whale.



**10 20 JULY 1969 - THE FIRST TURKEY ON THE MOON**  
Gelatin-coated turkey cubes were among the snacks taken on the Apollo 11 moon mission, although Neil Armstrong and Buzz Aldrin's first meal after landing was bacon.



**11 HEAVYWEIGHT CONTENDER**  
While the average weight of a Christmas turkey is 12lb, the heaviest on record was a stag called Tyson who tipped the scales at 86lbs - the weight of a male adult Alsatian dog.



**12 GROWING POPULARITY**  
In days gone by Christmas was celebrated by eating roast swan, pheasant, peacock or even a roasted boar's head. Turkey was a luxury item right up until the 1950s when the bird became more accessible and affordable, with the advent of refrigerators to store them.



# THE BEET GOES ON

PERFECT WITH A MORNING CUPPA OR SPRINKLED ON OUR CEREAL, THE HARDY PLANT THAT GIVES US A LITTLE LIFT EACH DAY IS EASILY TAKEN FOR GRANTED

**A**n electricity pylon and a modest roadside obelisk mark the site of the largest battle ever fought on English soil in 1644. The Battle of Marston Moor would be the turning point in the English Civil War as Oliver Cromwell's 22,000 Parliamentary cavalry routed the 17,000-strong Royalist infantry, forcing them to abandon all control in the north of England.

Almost four centuries on, we're waiting for sugar beet farmer Richard Burniston on the brow of a windswept hill overlooking the battleground, seven miles west of York.

Suddenly a giant monster breaks the horizon, a mechanical beast so ungainly, unconventional and frankly terrifying it would have sent Cromwell's soldiers fleeing back to London and ended hostilities in an instant.

The intimidating red beet harvester is 15 feet tall, nearer 50 in length, weighs 43 tonnes fully loaded with crop and costs an eye-watering £500,000... enough for a couple of Ferraris.

It's driven by Richard's 'jack of all trades' employee Alan Davey, who explains how the giant rips the beets from the soil and cuts their crowns before lifting them into the body of the harvester and on to a cleaning roller system. From there three circular cyclones separate the crop before a ring elevator lifts them vertically into the holding tank.

"It's all run by computers these days, so we could lift a 100-acre field in a day, while sowing a field that size takes around three. When I started we



Alan Davey climbs aboard the beast; and the beets are lifted into the storage tank (above right) after being ripped from the ground

didn't have this kind of kit and it took forever," said Alan, who has worked for Richard Burniston & Son for 45 years.

Richard himself is what you'd expect of a Yorkshire farmer – jovial, friendly and blunt, as his take on the anti-sugar health lobby suggested: "I know fat people who eat sugar and thin people who eat sugar, so all this talk about it being bad for you is just bunkum to keep people in jobs.

"If you eat too much of anything it's not good for you, especially if you're not active. I think sugar beet is a wonderful crop and before you ask, yes I like a spoonful in my coffee."

He and 3,600 other farmers who produce the UK's eight million tonnes a year are hopeful that October's deregulation of the European sugar market will mean the highly effective British beet industry can grow by up to 50% in the years ahead.



**NO COMPROMISE ON QUALITY**

Richard farms 400 acres of his own land – a quarter of it given over to sugar beet to fulfil a 3,000-tonne-a-year contract with British Sugar – and a further 1,000 of wheat, barley and oilseed rape on a contract basis.

“Since I left school at 15 to start at the farm in 1967 I’ve worked with sugar beet. It’s a great crop because it’s resilient and hardy. After we plant the seeds at the end of March, watch the weeds, and add some nutrients and two doses of fungicide in July and August, we tend to see 90% of them ready for harvesting from September, so it also lets you plan your diary,” he said.

“The real joy is you can leave the beets in the ground and they get bigger and bigger right through to February without compromising quality, so we can supply them to British Sugar when they need them.”

Richard exudes a genuine affection for the beet, which he regularly hand picks and checks with a little help from his trusty sidekicks, six-year-old springer spaniel Stanley and black Labrador LD (short for Lost Dog), who he found wandering the fields.

**WILDLIFE CORRIDORS**

He said: “They’re a tough plant but they can suffer in a very cold, frosty winter. In 2012 we lost around 65% of the harvest, which was a blow, so there is an element of risk if you leave the crop in the ground for too long.”

One area where he’s guaranteed success though is in the creation of wild bird sanctuaries on his patchwork of fields by replacing corridors of quinoa, sweetcorn, sunflowers and phacelia each year. “We regularly have four or five hundred little birds visiting in winter and it’s lovely.”

But it’s the sweet beets that are the mainstay of the business and an area Richard hopes he can capitalise on further as the UK becomes less dependent on imported sugar. He said: “If the demand is there and the restrictions are gone we can grow more, so it will be interesting to see how it all pans out. It’s very much a case of watch this space.”



**BITE THE BULLET**

The scene of the Battle of Marston Moor just a couple of hundred yards from Richard’s sugar beet fields has yielded some fascinating historical artefacts.

Treasure-hunting battle historians have scoured the field where National Grid pylons now stand to piece together a vivid snapshot of the past.

Richard said: “A historian found Royalists’ gunpowder pouches in a ditch. Usually you’d just dip into them but they were ripped off, which suggests they were coming under heavy fire and trying to reload as quickly as possible. Nearby he found a musket ball with teeth marks in it. You dread to think of the pain the poor chap was in. That’s where the phrase ‘to bite the bullet’ comes from.”

**GHOSTLY GOINGS-ON**

In 1886 York historian William Camidge wrote of a belief that ‘blood-stained soldiers galloped the neighbourhood’ and a 1932 book told how two friends driving across Marston Moor saw ‘three men... wearing large soft hats, dark plum-coloured cloaks and leggings’... the uniform worn by Cavaliers.

A similar sighting was reported in 1968 by tourists on a country lane who noticed ‘half a dozen tramps’ walking along a ditch and thought they were drunken actors in 17th-century costume.



© Alamy



## Sugar beet



Find out more about the business at [richardburnistonandson.co.uk](http://richardburnistonandson.co.uk) and the process at [makingsenseofsugar.com/all-about-sugar/how-sugar-is-made](http://makingsenseofsugar.com/all-about-sugar/how-sugar-is-made)

### WHAT HAPPENS NEXT?

- ▶ Once Richard knows the campaign dates for British Sugar's processing plant in Newark, he lifts the beet and can offload 19 tonnes in just over a minute.
- ▶ The crop is transported to the British Sugar processing plant in Nottinghamshire, one of four around the UK.
- ▶ The beets are washed, sliced and soaked in hot water to separate the sugar-containing juice from the beet fibre. The juice is then purified, filtered, concentrated and dried in a centrifuge to remove the molasses and leave the white crystals we sprinkle on our cornflakes.
- ▶ Little is wasted in the process, with 140,000 tonnes of beet pulp – mangle – sold back to farmers for animal feed, while the molasses used by distillers, bakers and pharmaceutical companies is recycled to extract the maximum amount of sucrose.
- ▶ The sugar itself is sold to food and drink manufacturers in the UK and Europe, who take around 420,000 tonnes of it from one plant alone every year, and 50MW of by-product energy is sold back to National Grid.

### SWEET SPOTS

# 60%

How much of the UK's sugar comes from British beet. The UK beet sugar industry is one of the most efficient processors of sugar in Europe

### sugar and spice and all things nice...

This phrase first appeared in a 19th-century poem called What Are Little Boys Made Of?

# 12th

The century that sugar was first introduced to England along with other tropical spices such as ginger, cinnamon and saffron. In those days it was only used by the wealthy to season savoury dishes



# 6/10

Although the British beet sugar industry supplies more than half the UK's sugar, 6 out of 10 adults think that all their sugar is imported from overseas

### fruits and spices

Beet sugar's use as a medicine dates back to 9th-century Iraq where it was combined with fruits and spices to make medicinal syrups, powders and infusions

# TIPS FOR STAYING SAFE - ALL YEAR ROUND

THIS AT-A-GLANCE SAFETY WHEEL HIGHLIGHTS SIMPLE PRECAUTIONS TO TAKE WHEN CARRYING OUT COMMON SEASONAL ACTIVITIES

## SPRING

### FISHING

- Take care when carrying carbon fibre rods, which conduct electricity and can be up to 17m in length. Designed to be shipped out parallel to the water, they should never be raised in the vertical position.
- Remember electricity can jump (called a flashover) a distance of up to 3m in the case of 400kV power lines.
- Pay attention to notices warning it is unsafe to fish and stay 30m away from all overhead lines unless a specific risk assessment has been carried out.
- If you own, lease or make waters available for fishing, you should make anglers aware of the dangers from overhead power lines through signage and other means.

## SUMMER

### HARVESTING AND OTHER FARMING TASKS

- Routine ploughing has no impact on gas pipelines, but consult National Grid prior to any excavations deeper than 0.5m.
- Avoid using tall equipment or lifting gear beneath overhead power lines and when moving long objects such as bale loaders, long boom elevators or irrigation pipes.
- Never reduce safety clearances. This includes dumping, tipping waste material, erecting temporary structures, haystacks or creating storage areas under lines.
- Do not direct jets of water or slurry at overhead power lines.
- Ground cover should not be reduced or increased, or materials stacked or stored above gas pipelines.
- Inflammable materials should never be placed near pylons or underneath power lines.



## AUTUMN

### TREE PLANTING

- Gain written approval from National Grid before planting on the easement strip above a gas pipeline or underground cable.
- Fruit bushes and currants should not be planted within 1.5m of the centre of the pipeline easement.
- Oak, beech and large trees should not be planted within 6m of pipeline, and poplar or willow not within 10m.
- Hedge plants, ornamental shrubs

and ground cover may only be planted across a pipeline to screen or mark boundaries.

- Only low-height, slow-growing species should be planted beneath power lines, and not normally within 2m of a pylon.

## WINTER

### HEDGING AND DITCHING

- No mechanical excavators should be used within 3m of a high-pressure gas pipeline.

- Take precautions when putting in new drainage using deep excavation methods, before fencing or clearing out ditches with toothed excavators.
- Take extra care when installing gate posts, which can be driven in deeper.
- 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.
- Gas marker posts are often placed at field boundaries - check their position to avoid accidental damage during hedge trimming.

## CONTACT

Before carrying out any work near overhead power lines, underground cables or gas pipelines contact the Plant Protection team on **0800 688588** who will check if there are any National Grid assets in the vicinity.



# BACK TO *the future*

.....  
ONE OF THE COUNTRY'S FIRST WATER TAXI  
SERVICES IS GOING FROM STRENGTH TO STRENGTH,  
WITH A RETURN TO A GENTLER WAY OF TRAVEL  
.....



It's been just over a year since entrepreneur Steve Cadwell realised a dream to run his bright-yellow water taxis on Manchester's Bridgewater Canal, giving people a unique perspective on many of the city's iconic landmarks.

Steve signed a three-year contract last November with The Bridgewater Canal Company Limited, part of Peel Land & Property, the National Grid grantor that owns and operates the canal in conjunction with a Trust representing eight local authorities.

The canal was built 250 years ago by Francis Egerton, the 3rd Duke of Bridgewater, to ship coal from his mines in Salford to Manchester's industrial

heartlands. It's ideal for Steve's 'waxis' because it has no locks or tunnels.

A trip on one of the water taxis is a relaxing, stress-free and fun experience. There's zero congestion on the canal and it's as quick and more comfortable than crowded buses and trams.

The canal towpaths, which once saw ponies pulling coal-laden barges, have been significantly upgraded, helping to attract an increasing number of walkers, cyclists and joggers.

## ALTERNATIVE AND SUSTAINABLE

Speaking from his boat mooring at Castlefield Basin, where the old coal warehouses are now home to on-trend bars, restaurants and flats, Steve explained how he first proposed the boats back in 2009 after a decade working in advertising in London where he relied on river transport to get around.

"I was fed up sitting in traffic travelling from our office near the Manchester Ship Canal in Salford to meetings in the city centre and it occurred to me we could make much more use of our historic waterways as an alternative and sustainable way of travelling."

Due to the recession Steve struggled to find financial backers until a friend at his local squash club heard about the project and stepped forward with three others to help with the starter capital.

The original intention was to ferry commuters on the Manchester Ship Canal (also Peel-owned) between the city centre and MediaCityUK – the new home of the BBC – but those plans were put on hold while the waterway was blocked off during construction of a £85-million rail project for HS2.



## FIRING UP THE NORTHERN POWERHOUSE

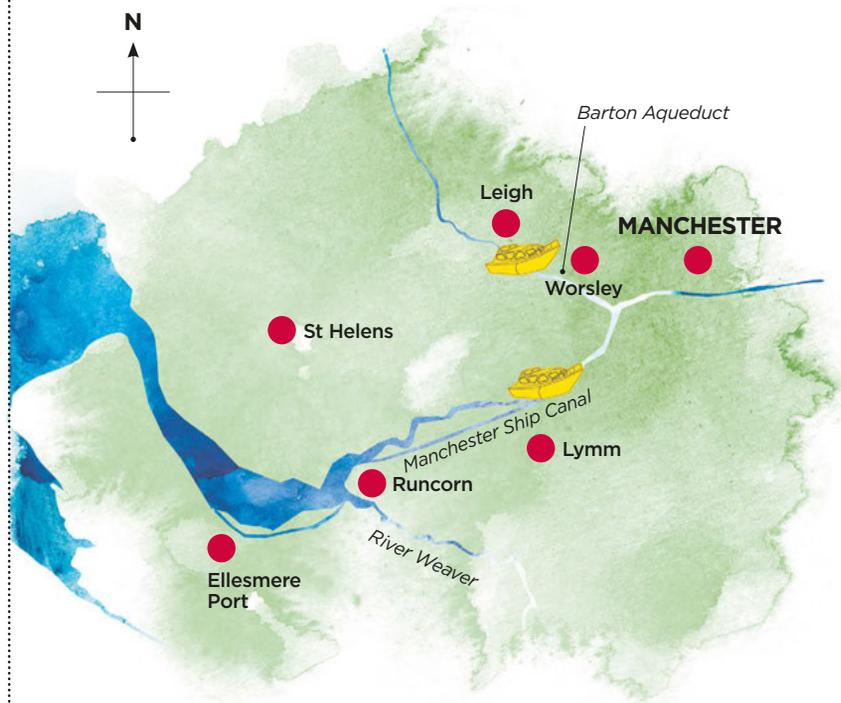
The Peel Group has owned the Bridgewater Canal and Manchester Ship Canal since 1984 and 1987 respectively. It is one of the UK's biggest property, infrastructure and transport investors. Its Ocean Gateway strategy envisages containers being shipped directly from Liverpool docks, which it also owns, through the Manchester Ship Canal to a new £138-million port and distribution hub it is constructing in Salford Quays. Transporting containers by water, it argues, also reduces traffic congestion and carbon dioxide emissions from lorries.

“Rather than lose the goodwill and momentum we’d built up over the past five years, we switched focus to the Bridgewater Canal with a greater emphasis on tourism,” Steve said.

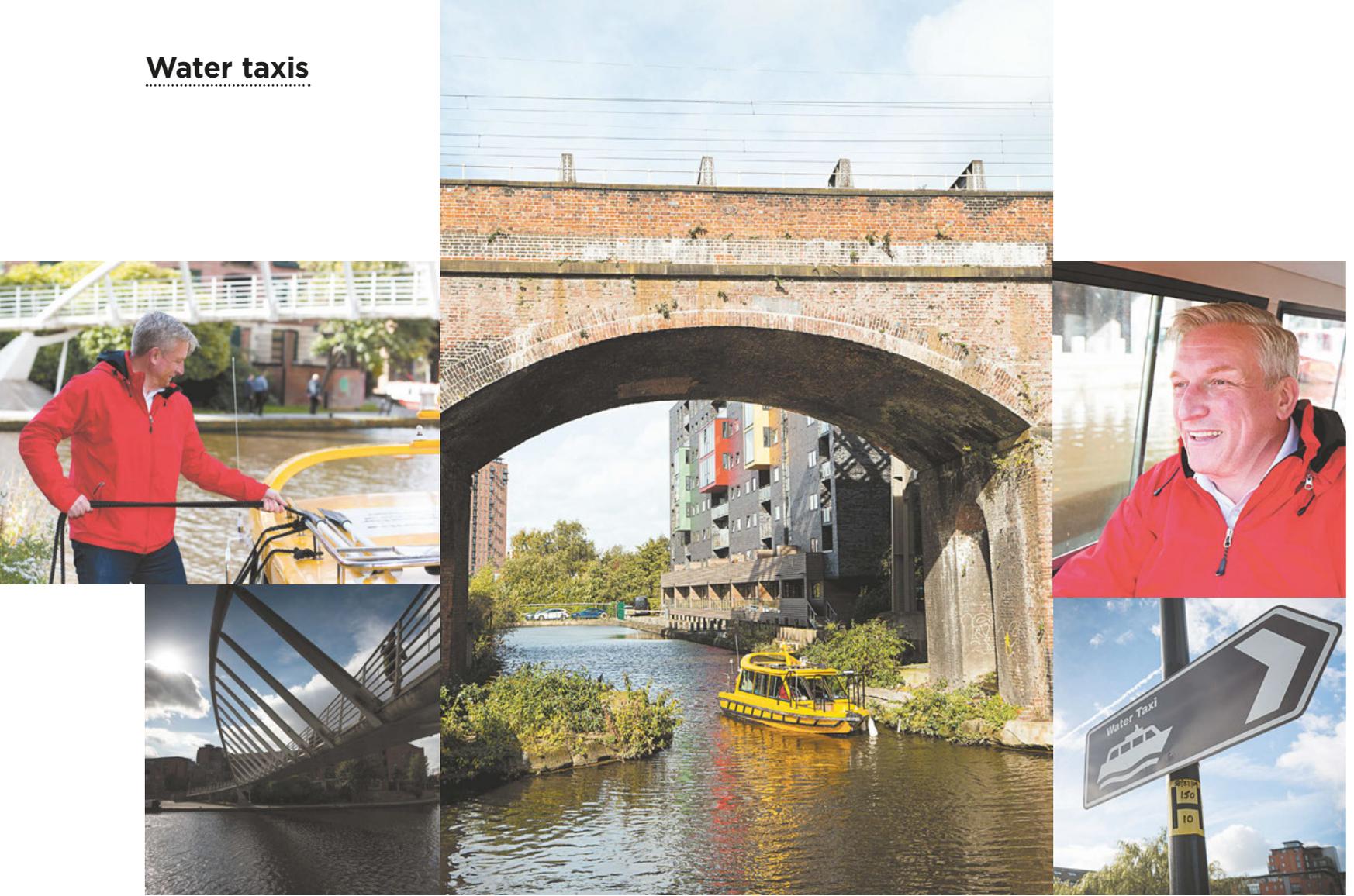
### IDEAL FOR TOURISTS

It takes 50 minutes to cover the four-mile journey from Castlefield to the Trafford Centre shopping Mecca. And it’s just a short 20-minute hop to Manchester United’s Old Trafford stadium for anybody wanting to escape matchday traffic. A second route runs to Sale Waterside, about an hour and 15 minutes away.

“Many of our foreign tourists, particularly Chinese visitors, come here for football, shopping and history,” said Steve. “They can travel with us on England’s first man-made canal, access the Museum of Science and



## Water taxis



Industry, Imperial War Museum North and Old Trafford stadium; and shop until they drop at the Trafford Centre, so it's ideal."

In September Steve launched his long-anticipated service on the Manchester Ship Canal between bustling MediaCityUK and Manchester's corporate hub of Spinningfields.

The service runs from 7am to 7pm with the trip taking under 30 minutes. Weekly and monthly commuter tickets are available and Steve claims it is the most direct route into the city, as well as providing great access to The Lowry theatre, Imperial War Museum North and EventCity.

### CONNECTIVITY

Unable to find a UK boat builder who could meet his deadline, Steve sourced his two boats from a Chinese firm and the engines were fitted in Liverpool.

Seating 12 people in comfort, the boats are capable of 25mph but are limited to 4mph on the Bridgewater and 7mph on the Ship Canal. Their bright-yellow colour is identical to that of New York taxis.

In the future Steve hopes to take his boats another four miles on the Bridgewater Canal to Worsley where the £30-million RHS Garden Bridgewater project is due to open in 2019 on land once owned by the Duke. That would also enable passengers to experience one of the wonders of the waterway world as they pass

### A TALE OF TWO WATERWAYS

- ▶ The Bridgewater Canal opened in 1761 to transport coal from mines at Worsley to Manchester. It was the first canal not to follow a natural watercourse.
- ▶ It was later extended from Manchester to Runcorn and from Worsley to Leigh, boosting its length to 39 miles.
- ▶ The mines closed in 1887 and all commercial traffic ceased on the canal in 1975, but it remains popular for leisure boats and is part of the Cheshire Ring network of canals.
- ▶ The 36-mile-long Manchester Ship Canal, the largest river navigation canal in the world, opened in 1894.
- ▶ Its completion enabled the Port of Manchester to become Britain's third largest port, despite being 40 miles inland.
- ▶ The Port ceased operations in 1984, but Salford Quays is now home to high-tech industries, new flats, retail, leisure, sports facilities and museums.

through the Barton Swing Aqueduct, built in 1893 to take barges over the Ship Canal.

When the Metrolink extends to the Trafford Centre in 2020 Steve sees an opportunity for passengers to switch to his boats for the approach into Worsley.

"Good connectivity with public transport is vital for us and it's great that Transport for Greater Manchester is now integrating our services in its own schedules," said Steve.

### LASTING LEGACY

Other plans include developing an app that would allow passengers to access GPS-tracked tours and longer term, to swap his petrol engines for hydrogen fuel cells.

"The technology isn't far off and, ultimately, it would be great to run a service on water where the only by-product is water," he enthused.

Steve hopes his waxis will leave a lasting legacy by becoming increasingly part of the fabric of the city.

He said: "As a nation we have turned our backs on the waterways for far too long, but they are now very much reinventing themselves for a more environmentally aware 21st century."



For more information on the waxis service, including timetables and destinations, go to [manchesterwatertaxis.com](http://manchesterwatertaxis.com)

# WAIT FOR THE PUNCHLINE!

.....  
WHY DID THE FUNGI LEAVE THE PARTY?  
BECAUSE THERE WASN'T MUSHROOM!  
GRANTOR WILLIAM DEARDEN HAS HEARD THEM ALL BUT INSISTS  
GROWING OUR BREAKFAST STAPLE IS NO LAUGHING MATTER  
.....

# Mushroom grower

Time, and mushrooms it seems, waits for no man. In the hour it's taken William Dearden to explain the growing process perfected by his family over three decades, the tiny pinheads of what will one day join bacon and eggs on thousands of breakfast plates have already pretty much doubled in size.

The Lancashire-based part owner of Thornton Meadow Mushrooms fields the usual 'fun guy' and his 20 growing sheds not having much room jokes with a weary smile. Because beneath that tolerance of a well-worn punchline is a genuine passion for the product, epitomised by his almost sub-conscious brushing away of soil from their smooth white surfaces as he talks.

"They're beautiful when they're just about ready to pick," insisted the father-of-two, who has developed the business with his two brothers since their father handed over part of the Lancaster farm, which has been in the family for a century, in 2015.

"The humble mushroom can't be beaten because it's so versatile in cooking. My favourite is when it's fried with a knob of butter and garlic," he revealed.

For 365 days a year William and a team of 20 pickers harvest around 650 tonnes of Agaricus

## IN NUMBERS



85-95%

A mushroom's average water content, which explains why they shrink to nothing



10,000

The number of varieties of mushrooms, with Agaricus bisporus, or the white mushroom, the most common

bisporus mushrooms – the UK's bestselling clean, white-capped variety – from the warm, dark sheds on their half-acre plot.

"There used to be a couple of hundred growers around the country when we started but most fell by the wayside as it got harder to survive," he said.

"That's why we're proud to be continuing a tradition, even if the rise in overheads does make it increasingly tough."

## SQUEEZED

When the family first started growing decades ago it was "a licence to print money," joked William – but the rising cost of hiring pickers and competition from more mechanised businesses has made life harder.

"It's tough because growing mushrooms is labour intensive and we've also been squeezed by supermarkets, but we have a very good relationship with Morrisons now and they take around 90% of what we produce," he said.

Thornton Meadow, set on Conder Side Farm by the meandering river that shares its name, has steered a deliberate course of remaining small and retaining a loyal, predominantly Polish, workforce.

They are all part of a process that begins with tonnes of compost and pre-prepared peat and lime being laid into the kind of artisan, weathered pine trays that wouldn't look out of place in the coolest of London restaurants or eateries.

## FIRST FLUSH

Each of the sheds, built from scratch on the former meadow, houses around 20 racks and every rack is home to six vertically stacked trays full of mushrooms in their various stages. From spores to threads to pins they finally break to form caps, which are picked when they reach a diameter perfect for salad and pizza, usually around 30mm.

The entire process, which starts with the peat receiving around 14 litres of water per square metre to stop it colonising or solidifying, takes around three



Temperature is regulated throughout the growing process until William is satisfied they are ready

## A FEW YOU MAY KNOW...



### Porcini

One of the most popular in the UK, prized as an ingredient in soups, pasta and risotto. Low in fat and digestible carbs, they are also high in protein, vitamins and minerals.



### Red-capped scaber stalk

Their main distinguishing feature is the small, rigid projections (scabers) that give a rough texture to their stalks. Not one for the kitchen.



### Oyster

Popular for cooking, torn up instead of sliced, especially in stir-fries or sauteed because they are consistently thin and cook more evenly than uncut mushrooms.



Pickers gather the first flush of mushrooms as they grow rapidly in the first fortnight

## Mushroom grower

### ... AND SOME ODD ONES YOU WON'T



**BLEEDING TOOTH** Inedible, it gets its name from the deep-red liquid that bubbles and oozes from the surface. It looks like it's actually sweating blood!



**VEILED LADY** Also known as the bamboo fungus or long net stinkhorn, it's native to the rich woodland soils of Asia, Africa, the Americas and Australia.



**MYCENA CHLOROPHOS**

Bioluminescent, they emit a pale-green light in the forests of sub-tropical Asia.

**LIKE US**

Mushrooms are more closely related in DNA to humans than to plants.

weeks, with mushrooms doubling in size every day in the latter stages.

William said: "We keep the substrate moist so the roots can form and by day five you start to see bits of fungus called pins forming on the surface. The humidity is still high and the lights low until now, but then we vent the shed to lower the compost temperature and the process changes from a vegetative state to a generative one."

It's at this point, around 11 days in, that he points out the change in size of the tiny mushroom heads that have formed in clusters in around 45 minutes. "It's perfect for people who aren't that patient," he laughed.

The trick though is in waiting to achieve the best results from three separate picking phases a few days apart, called flushes. The first flush routinely brings in 460lbs of mushrooms for every tonne of compost, while the second – four days later and usually better quality – yields 300lbs.

Once the third 'bonus flush' has been taken from the shed, whose growing cycles are all staggered to ensure a continuous harvest, the trays are steamed and sterilised ready for the process to begin again.

**ANOTHER FAVOURITE**

The family business grows only the closed cup mushrooms with some special orders for the flat mushrooms: capped mushrooms that are allowed to 'blow' or explode to show their black gills and commonly stuffed with cheese as a pub starter.

William hasn't ruled out a return to producing his other favourite, the mild, velvety oyster mushroom, which grows sideways rather than upwards through blocks of sawdust covered in holed plastic.

He admitted: "They are quite niche and are easier to grow, but the British market likes the Agaricus because it can be used in so many dishes from around the world. To be honest I'm very fond of them too."



*Suillus*

Found in the Northern Hemisphere, they thrive near pine trees and are highly prized, particularly in Slavic countries where they are generally referred to as butter mushrooms.



*Shiitake*

Commonly used in Asian cuisine, it is available fresh but is often found in a dried version that needs a little warm water to rehydrate. Rich, full-bodied flavour, almost steak-like.



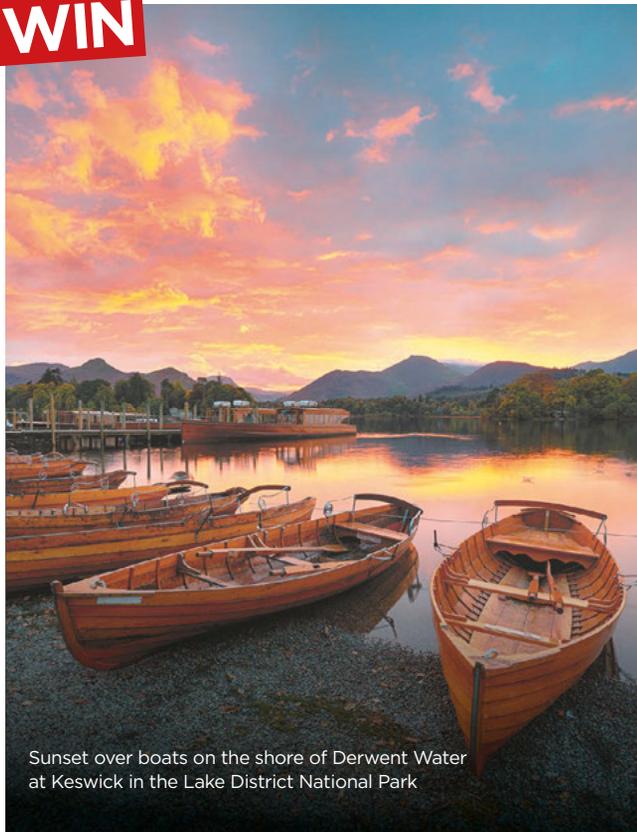
*Rough stemmed bolete*

Largely edible and often pickled in brine or vinegar, they are also used in mixed mushroom dishes, fried or steamed in Finland.

# LASTWORD

Your chance to win two new-year treats

**WIN**



Sunset over boats on the shore of Derwent Water at Keswick in the Lake District National Park

## A TWO-NIGHT NATIONAL PARK MINIBREAK FOR TWO

Peace and tranquility in the midst of one of Britain's unspoilt National Parks awaits the winner of this Gridline competition.

It couldn't be easier to join last edition's short-break winners, Kath Almond from Croston in Lancashire and Judith Arthur from Newcastle upon Tyne, and have the chance to escape the daily routine.

Answer the question below and send it to Gridline with your name and contact details and you'll be put in the hat.

### Q At what depth should National Grid be consulted when carrying out excavations?

Email your answer, name and contact details to [gridline@madebysonder.com](mailto:gridline@madebysonder.com)

Alternatively, send your entry to Sonder National Park break competition, Victoria Court, 8 Dormer Place, Leamington Spa, Warwickshire CV32 5AE to arrive no later than 15 February 2018.

DID YOU KNOW?



# 52%

*of electricity generation from June to September 2017 was met by low-carbon sources, such as nuclear power, and by renewables, including solar and wind, compared to just 35% four years ago, National Grid reports*



## SHARE YOUR STORY

Around 40,000 grantors read award-winning Gridline, so why not share your story of diversification, innovation or success against the odds, or to celebrate a lifetime of being a landowner?

Remember: quirky is good

[gridline@nationalgrid.com](mailto:gridline@nationalgrid.com)

## A £150 SHOPPING SPREE NEAR YOU

**WIN**



Spent up after Christmas? Take a picture to be in with a shot of winning a £150 Love2shop voucher to spend at hundreds of high-street stores.

James Robinson from South Cumbria took this shot on his farm for last edition's 'love the land' themed competition and won a personalised weather station.

Send us a high-resolution image of a 'stunning or unusual landscape' near you to be in with a chance of winning this time. Also, please tell us in a few words why it inspires you.

Send your high-resolution picture with your name to [gridline@madebysonder.com](mailto:gridline@madebysonder.com) before 15 February 2018.

**COMPETITION TERMS AND CONDITIONS NATIONAL PARK BREAK** The winner will be the first entrant selected at random who correctly identifies the answer 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 15 February 2018. **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 15 February 2018

**nationalgrid**