NAPTON ENVIRONMENTAL ACTION TEAM

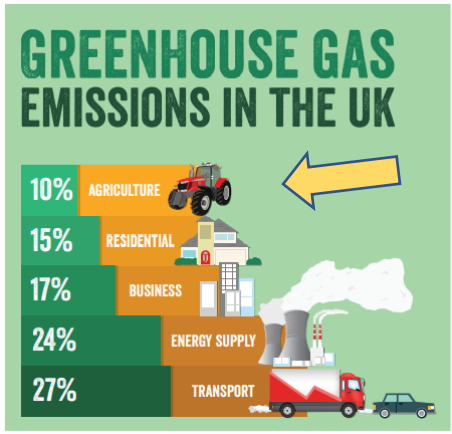
NEAT News

SPRING 2022

Farming More Sustainably

It's official – so the Defra leaflet says 'Farming is changing'. "Farmers and landowners will be rewarded for doing even more to improve the environment whilst producing high quality food and other products".

Government policies and plans for delivery to achieve 'net zero' by 2050 are gradually being put in place but much remains unclear for those asked to implement changes. There are also real concerns that on-going support will be under-funded and that lower quality imports will undermine UK producers. Pathways toward Net Zero in 2050 have been set out with initial targets for 2030. As suggested in the last edition of NEAT News 'Towards Low Carbon Travel' tackling the climate emergency involves huge changes – and so it is for farming.



Since WW2 the policy mantra has been cheap food – more recently with the addition of animal welfare. Many farmers have long worked to protect the natural environment whilst growing our food – but not withstanding their efforts, at home and abroad, natural systems have suffered massively by prioritising cheapness. Since Brexit, England has a 25 Year Environment Plan, and new Agriculture (2020) and Environment (2021) Acts all of which will have significant impacts on farmers and how they do their jobs.

NEAT News starts to explore what the legislation means, outlines projects by the Warwickshire Wildlife Trust, shows how two local farms are ahead of the game, hears from a local commercial beekeeper and looks at a new report the 'Farm of the Future: Journey to Net Zero'.

A New Path for Agriculture

The 25 Year Environment Plan[1] (2018) set the policy basis for subsequent legislation. The Plan, and the new Agriculture and Environment Acts tackling the climate and biodiversity emergencies are now centre stage. The priority is now environmental protection, alongside cheap food, animal welfare productivity and keeping farm businesses prosperous.

By adopting the 25 Environment Year Plan Government aims to achieve:

- Clean air
- Clean and plentiful water
- Thriving plants and wildlife
- Reduced risk of harm from flooding and drought
- Using resources from nature more sustainably / efficiently
- Enhanced beauty, heritage and engagement with the natural environment.

In 2020 with the Agriculture Act in place, Environment Secretary George Eustice[2] said:
"We want farmers to access public money to help their businesses become more productive and sustainable, whilst taking steps to improve the environment and animal welfare and deliver climate change outcomes on the land they manage".

National Farmers Union President Minette Batters said:
"As the first domestic legislation covering agriculture for over 70 years, this really is a landmark moment for our food and farming industry. Simply put, the Agriculture Act will set how we farm in this country for generations to come".

The Environment Act (2021) is broad in nature, setting out plans to protect and improve the natural environment. It puts in place a framework for environmental governance and legislation under a number of different themes set out in the government's 25 Year Environment Plan.

The Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024
November 2020

It is however the Agriculture Act that'll determine the support farmers can receive. In 2021, Government started a 7-year transition away from EU-based rules - currently committing to maintain annual budgets in this Parliament. The same amounts will be available to agriculture, though the way it is distributed will change.

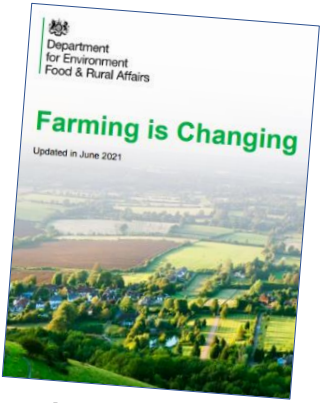
[1] HM Government: A Green Future: Our 25 Year Plan to Improve the Environment
[2] Speaking at the Oxford Farming Conference in 2020

Supporting farmers to grow the food we eat

In many countries around the world growing food has long been subsidised through taxation so that at the point of sale it is more affordable. The UK is no exception. Support under the Common Agricultural Policy and the UK's Countryside Stewardship schemes are being replaced by the 'Environmental Land Management' scheme (ELMs).

"ELMs is the cornerstone of the government's new agricultural policy – founded on the principle of public money for public goods"

In 2020, George Eustace in referring to 'direct payments' under the EU Common Agriculture Policy said "It makes no sense to subsidise land ownership and tenure where the largest subsidy payments often go to the wealthiest landowners."



Such payments have long been a lifeline to small family farmers. Minette Batters said "The cuts are expected to reduce the income of livestock farmers, for example, by 60% to 80% by 2024" [3]

Starting this year (2022) Government is introducing three new schemes that reward environmental benefits:

1. Sustainable Farming Incentive (SFI) followed by
2. Landscape Recovery schemes, and 3. Local Nature Recovery schemes.

Tests and trials, and a national pilot, are being run currently before full roll-out of the scheme in 2024. The devil is of course in the detail which is beginning to emerge.

Through SFI, within a few years Government wants all farmers to see producing environmental and climate change benefits as an integral part of their business, alongside food production. They suggest they will know SFI is successful when they can see:

[3] George Eustace / Minette Batters quotes – Guardian 'Environment', Nov' 2020

- large-scale adoption of the scheme across the range of farm types, locations and tenancy arrangements – with 70% of farms and farmland in the scheme by 2028
- farmers increasing their coverage in terms of both land and range of standards, and levels of ambition over time
- evidence of the ambitious outcomes we expect for the environment, climate, and animal health and welfare

The initial roll out in 2022 focuses on soil standards - one of our most important natural assets. Introduction of other new standards into SFI are planned for

- 2023 - nutrient management, integrated pest management, hedgerows


Agroforestry - Woodland Trust

- 2024 - agroforestry, low and no input grassland, moorland and rough grazing, water body buffering (strips of grassland planted up next to water) and farmland biodiversity
- 2025 - organic farming, on-farm woodland, orchards and specialist horticulture, heritage, dry stone walls

Countryside Stewardship Priorities for 'Dunsmore and Feldon'

New Countryside Stewardship (CS) agreements can be made up to 2024. Here is just a snapshot of the priorities currently promoted in our area.

- **Habitat** maintenance, restoration and improvement; **Woodland** management and planting; **Landscape** options to maintain or restore the pattern and scale of landscape.
- **Wild pollinator and farm wildlife package** - a collection of options that benefit wild pollinators, farmland birds (such as grey partridge, tree sparrow and yellowhammer) and other farm wildlife (such as arable plants, great crested newt, bats, brown hare).
- **Multiple environmental benefits** - applicants are encouraged to select options that achieve multiple environmental benefits. In Dunsmore and Feldon area, the greatest opportunity to achieve multiple objectives is by;
  - creating, expanding and enhancing areas of wetland habitat
  - restoring hedgerows and establishing buffer strips, in-field grass strips, riparian management strips, erosion and runoff control creating species-rich low-intensity grassland habitats enhancing existing woodlands and expanding woodland cover.

*to get involved in NEAT projects - email neat@gmx.co.uk *

But uncertainties abound …

It is early days, and there is considerable scepticism in the farming community around delivery of these aspirations when set against new trade deals (that could undermine UK farm viability) - and concerns that inadequate financial support will be allocated to enable the transformation needed from farmers.

With sharply rising production costs, these could lead many smaller farmers to diversify out of just food production - or to quit altogether. If ELMs is successful, over time it could begin to change local landscapes and the local economy around us as new ways become real. We need climate and biodiversity loss issues to be seriously addressed – but we also need smaller farming operations to be viable to grow the food we need.

There will likely be argument between those wanting faster change, the working farmers and growers responsible making change happen – and those uncomfortable with any change at all. Translating high level concepts into something uncomplicated and meaningful may not be easy.

Where the food we consumed was produced (2019) …

55% - UK
26% - EU
4% - N' / S' America, Africa, Asia each

At farmgate prices

Some Facts

4 out of 10 Farmers are over 65yrs, with an average age 55yrs according to a 2018 report by Barclays Bank[4]. The same report said …

Only 3% of under 30's consider farming to be a desirable career, and the number of under-25s running farms had dropped by 63% over the past 10 years. This presents challenges - both in having enough people / skills to grow the food and having people with the inclination to learn and adapt to working more sustainably.

By value, <u>after</u> processing and distribution, the UK imports more than it exports in all food categories. The main food import categories were vegetables, fruit, meat and beverages. Fruit and veg' had a UK trade gap of £10.2 Billion in 2019.

[4] https://www.countryliving.com/uk/wildlife/farming

Nell Morton, Manor Farm talks ….

Introduction: Nell and Will Morton farm land in Napton Parish and adjacent to Draycote Water. They are well known locally for their 'Red Banger' organic lamb and pork. Nell writes …

Our farm at Napton is completely organic, so we don't use fertiliser or pesticides on the land. We use any hay and silage that we produce to feed our sheep, and we sell some to local farmers. We have been accepted to be on a Countryside Stewardship scheme for both Napton and Draycote [farms] which means that we are able to continue to farm in such a way that we provide for wildlife habitats. Our ethos is to farm gently in harmony with the natural environment rather than seeing the land as a factory floor.

Our sheep are outside all year apart from lambing. We lamb indoors as it means we can make sure the ewes and lambs are nearby in case of problems and we can ensure that mum and lambs are happy and well before they go out. It also means the fields can have a break so that when they go back out there is plenty of fresh grass for the sheep. It's a crazy time of year and as long as the weather is kind, really rewarding. In the past we have had awful periods of weather which has made life very difficult. Luckily, we weren't lambing when the beast from the east hit a few years ago. Some of our neighbours had new born lambs in the fields and lost dozens due to the cold and snow.

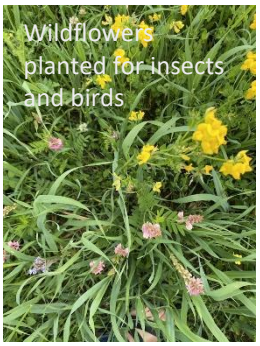
As well as veterinary visits, we are inspected yearly by both Red Tractor and 'Organic Farmers & Growers' to ensure that we adhere to the rules of animal welfare and correct organic practices. Our sheep are shorn yearly. [*Sadly*], the wool is worth less than the cost of shearing but we do this for their wellbeing.

In Napton we have hares, they are incredible, as well as buzzards nesting just below the farmyard, swallows and swifts that return every year to nest and house martins who nest in the sheds – are always entertaining when they dive-bomb us or not so charmingly use my washing for target practice!

We also have a large population of bats who fly around the garden, living in the trees and I suspect in a small hovel in the garden.

Draycote species survey 2019
- Summer Birds – 57
- Winter Birds - 52
- Bumblebees - 7
- Butterflies – 18
- Moths – 128 *!!*

Will's family has farmed the land at Draycote for over 70 years, converting the land to organic. As in Napton, I'm sure conversion has enhanced the wildlife numbers, as has being part of a Countryside Stewardship that allowed us to build nesting sites for birds along the river. At Draycote, we've developed scrapes for nesting birds and include a break crop in our rotation for wild birds to feed and to encourage insects and bees. Surveys took place in 2019 during which a wide range of different species was seen. Walking the land at Draycote we've seen up to 11 hares and no end of deer.


Wildflowers planted for insects and birds

As farmers we can feel quite isolated. We don't have much positive press and so therefore for a lot of the time we feel that we have to defend what we do. This is I believe due to misinformation and biased reporting, lumping us all together in the same boat as the corporations who practice intensive farming methods such as monoculture (vast areas growing the same crop with heavy sustained use of fertilisers and pesticides) and feedlots where animals are raised incredibly intensively.

The small family farm is becoming increasingly threatened as farming becomes less and less financially viable – costs are outstripping the prices that we get for our produce and at some point something is going to give. This is why we diversified into catering and most recently developing holiday accommodation in Draycote.


Tortoiseshell

If family farms cannot survive, the land will either be taken out of food production, reforested, used to grow bio fuels, be rewilded or built on for housing or logistics centres and we would lose the rural landscape that we have grown up with.

Nell Morton, Manor Farm

The UK is regarded as one of the most nature depleted countries on Earth and 15% of all species are now under threat from extinction.

That is a scary statistic because our natural world is a complex web of interlinked species that rely on each other. We sit at the top of the food chain, but that doesn't make us immune, it actually makes us vulnerable as we rely on so many species for our health and wellbeing.

1 in 3 mouthfuls of food we eat grows as a result of pollination by insects and if all the insects were extinct tomorrow it would plunge the world into a global food shortage. Clearly, we also rely on nature for clean air, water and healthy soils, not to mention the positive benefits to mental and physical health from interacting with nature.

In short, we face an ecological emergency and if we are not able to change human behaviours soon we may reach an irreversible tipping point where the extinction of species leads to a snowball effect resulting in the next mass extinction on Earth. For context, the last time that happened the dinosaurs were walking about. This is of course down to human activities generally.

How farming can support nature's recovery in Warwickshire

In 2017, Warwickshire Wildlife Trust (WWT) recognised that whilst the way people grow food for us to eat has impacted on wildlife, it is also integral to the solution. For nature to recover, we need farmland that grows high quality food, but also provides the things our wildlife relies on. For that to change at scale then Government farming policy needed to change.

In the meantime, five years on, there are plenty of farmers who are pioneering a new future. The foundations have been laid locally for a more sustainable farming system – but there is still a long way to go.

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The Trust successfully secured funding from Natural England to support the creation of the Arden Farm Wildlife Network in April 2018.

The Network aims to support farmers to make more space for nature, whilst maintaining productive farms for growing high quality, healthy food. **16 farmers became the founder members** - supported by an independent environmental agricultural adviser who helps facilitate the activities. The project has become a huge success with **membership growing to 46 farms who collectively farm nearly 10,500 hectares** of land across western Warwickshire. The project is farmer led, so farmers suggest ideas for subjects they would like to learn more about and the Trust identifies specialists who provide training.


Water Vole

WWT's emerging **'Team Wilder'** initiative which will enable people to act for wildlife where they live. Over the last four years, specialists from around the country have provided advice to the farmers on everything from harvest mice and water voles, through to barn owls and lapwing. The farmers have also been keen to keep up with cutting edge subjects such as regenerative agriculture, soil nutrition, cover crops and agroforestry.

Group training is delivered on farm or via Zoom. An unexpected benefit has been the role the Network plays in helping tackle rural social isolation. Farmers have valued sharing ideas, celebrating successes and reflecting on failures. By approaching training and information sharing at a landscape (rather than individual farm) scale, a more effective ecological approach can be taken. Species like barn owls operate across a landscape and catering for their needs (such as nest boxes, habitat for small mammals - their prey), delivers more impact at scale.


Owl nest box

The farmer cluster provides the perfect platform for a landscape scale approach to project work and farmers are forthcoming with suggestions on the species we should target. The Trust has secured additional funds to support tree sparrows, barn owls, tree planting and the re-creation of wild

flower meadows. These mini projects have helped foster better working relationships and deliver significant added value to the farmers participating, whilst also providing a lifeline to some of our most threatened species. The success of the Arden Farm Wildlife Network has inspired the creation of two new farm clusters in Warwickshire.

In 2022 the Network will be joined by an Upper Avon and Leam Sustainable Farming Group (including Napton and surrounding areas), and a South Warwickshire Sustainable Farming Group - thanks to collaborations with Warwickshire Rural Hub.

Each group will help bring neighbouring farmers together and allow the ability to collaborate on issues benefiting members from all three geographic areas – meaning every farmer is welcome at any group.

Warwickshire Wildlife Trust also works in partnership with Severn Trent through its STEPS[5]. The grant scheme offers farmers and land managers (owners and tenants), financial and technical support, to invest in tailored solutions to help tackle diffuse water pollution and to protect and maintain biodiversity and the natural environment.

The collaboration with Severn Trent in Warwickshire focuses on two of their drinking water catchments. Land that drains into the River Leam (including the area around Napton) and the Upper Avon which is north towards Rugby and stretches over into Northamptonshire and Leicestershire.

If you are a farmer, land manager or a small holder - and would like to learn more about how you could benefit from these initiatives then feel free to contact Ian Jelley, Director of Living Landscapes on ian.jelley@wkwt.org.uk

[5] STEPS - Severn Trent Environmental Protection Scheme

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Agriculture and the environment – the personal musings (and the odd rant) of a buffalo farmer.

Agriculture is a vital part of Napton, with family farms helping to shape the environment we all enjoy. It is also a very, very small part of an essential global industry - we can access food from all areas of the world, but still have the opportunity to buy produce grown or raised on our doorstep.

However, when we listen to the media – it often appears that farmers are singlehandedly destroying the planet. Global trends are portrayed as applicable to all. It is very frustrating to see data relating to international factory farming on a massive scale (and often without the same regulations as we operate under in the UK) being positioned as what happens in the UK, and particular to small farms such as ours. At the same time, while focusing on the importance of trees, the press conveniently ignores the fact that permanent grassland is one of the biggest natural sequesters of carbon.

Of course, we accept a responsibility to ensure sustainable farming is a key priority. We were asked in relation to NEAT's objectives on climate change and biodiversity loss to write about how much has changed in our approach to farming over the past two generations.

Most dramatically – a shift to buffalo in 1999 being the most significant and driven by the mad economics of the dairy industry.

We had previously made a profit in only 1 out of 24 years milking Friesians. Driven by economics, but with subsequent environmental benefit of reducing food miles - the majority of our buffalo milk is sold within 20 miles, and meat within 10 miles. Co-incidentally with a more efficient digestion system buffalo actually fart a lot less than traditional beef animals!

In many ways, the land we farm is similar to that from 2 generations ago – natural fertilisers (aka buffalo poo) are our mainstay for enriching the grass

crop. The 350 or so acres we farm continue to act as a natural sequester of CO_2, offsetting those buffalo farts and the vehicles we drive. We have well in excess of 6 miles of hedgerow and associated trees providing habitats for birds and small rodents. The bird population continues to be diverse from curlews to peewits still present (although the growth of Red Kites / Buzzards in the area raises concern over the future for the diversity of species).

A challenge for farmers and consumers alike is to be able to assess the full environmental impact of decisions (rather than just the headlines).

For example, after several years of farming organically, we have pulled back from organic certification.

Rather than having to import organic feed from Eastern Europe (the only source of large quantities of organic cereals available – over 800 miles away), the decision allowed us to buy non-soya feed cake made from ingredients grown predominantly in the Midlands. Importantly, we continue to follow organic principles of no inorganic fertilisers or antibiotics.

At the same time, packaging trials of compostable trays were suspended when we realised that a) the majority of compostable packaging available at the time was being imported from China and b) wasn't fit for purpose when dealing with frozen foodstuffs.

We continue to question what we do, with rainwater harvesting the next key area for investigation. Doing the right thing is a complex set of decisions, balancing environmental, performance and economic considerations – but continuing to question and adapt is critical for us all.

Jackie Alsop, Napton Buffalo

David Stott of Tomlow Bees talks …

Tomlow Bees has for many years provided commercial pollination services to top fruit growers in Kent - for pears, cherries and apples (March-April), before the hives are returned to Warwickshire to pollinate field beans and borage.

Later in the year the honey bees are taken to Derbyshire / Staffordshire to help pollinate the heather moors. As beekeepers, we have a dual role in providing pollination services and producing honey. The bees rarely generate a honey crop when on pollination duty in Kent - but will provide a good surplus later in the season.

Napton is surrounded by land used primarily for mixed farming, resulting in varied habitats. These encourage the presence of a wide range of insect pollinators such as bumble bees, wasps, beetles and hover flies. For the great majority of both garden plants and crops, these should be sufficient for pollination requirements, an exception being field beans.

Beekeeping has become a popular hobby in recent decades[6] with hives producing honey from many spring and summer flowering plants. The main sources of nectar in and around Napton are hawthorn, oil-seed rape, field beans, lime trees, willow herb and brambles. Late-flowering plants are important for the bees to store both pollen and honey to enable them to overwinter successfully, and hives close to the village often get a good late boost from flowers such as asters, sunflowers and ivy.

The huge reduction of wild insect populations globally is a source of concern for anyone who takes an interest in the environment.

The negative impacts of parasites, viral diseases and toxic crop protection compounds on pollinators (including bees) has been much in the news. As individuals, we can all help our natural pollinators by growing nectar and pollen producing plants, keeping parts of the garden relatively wild and avoiding the use of harmful chemicals.

David Stott, Tomlow Bees

[6] Locally, Warwick and Leamington Beekeepers have around 250 members

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Farm of the Future: Journey to Net Zero

Food and farming is at the forefront of greenhouse gas emissions reduction. That is the conclusion of a recent report published by the Royal Agricultural Society of England (RASE). It also demonstrates that achieving a low-carbon future for agriculture represents quite a challenge for farmers especially at a time when they are facing rising input costs, commodity market volatility and climate change impacts.

The report accepts that whilst the primary function of farmers is to produce food, the industry plays a key role in improving natural resource, enhancing biodiversity and maintaining the countryside given that farmers are responsible for managing around 70% of the UK landmass. The 'Farm of the Future' report stresses that commercial farming operations must be maintained to ensure farm viability and a sustainable rural economy.
The Farm of the Future will need to address a number of critical issues – but there are solutions out there . These will include the following amongst others.

Soil management

Soil should be regarded as a living organism: a single handful of soil contains in excess of 500 species of fungi, more than 50km of fungal mycelium and a staggering 100 billion individual specimens of bacteria[7].

A healthy soil is vital for harnessing the power of photosynthesis and producing food for humans and livestock – and must be carefully managed and preserved. This means the addition of more organic material and non-fossil fertilisers, minimal soil cultivations, reduced compaction through use of lighter vehicles, greater use of cover crops i.e. less bare soil periods, restoration of hedgerows and agroforestry to avoid soil loss, and introducing greater plant diversity and crop rotations.

Renewable Electricity

Over the last decade many farmers have installed solar panels or wind turbines to produce green electricity – either used on farm or exported to grid. Battery storage will soon becoming a viable option enabling much more

[7] Farmers Weekly

on-farm usage – powering buildings, machines and vehicles. Other emerging forms of electricity storage include materials change, water displacement and 'green' hydrogen. There will be increased opportunities for farmers to work with rural communities wishing to invest in local solar and wind generation schemes.

Renewable Heat

Many farms have a significant heat demand – either seasonally (plant nurseries; grain driers; crop stores) or throughout the year (livestock units) – with most using oil or natural gas as a main fuel source. Currently the alternatives are biomethane gas (anaerobic digestion of plant residues, food and livestock wastes), heat pumps (ground / air source). Hydrogen is also touted as a heat fuel of the future – if made using renewable power.

Farm transport

Whilst an increase in scale of tractors has addressed the need to replace labour and improve productivity, it has also brought challenges such as soil compaction and bio-damage. Such powerful vehicles rely on high energy fuels mainly red diesel. The weight of batteries means that only smaller <50hp tractors will be electrically powered.

However, with the acknowledged importance of soil health and structure, minimum and even no-till cultivation practices are now being adopted reducing the need for the fleet of heavy, powerful vehicles. The next decade will see an influx of lighter, more flexible machines such as gantries and driverless vehicles powered by on-farm renewable electricity.

Agri-tech

The use of artificial intelligence and digitally-controlled technologies are already appearing on UK farms. In livestock units, these are used for a variety of routine operations e.g. feeding livestock, yard cleaning, housing environments, robotic milking.

On arable farms, autonomous (driverless) battery -powered vehicles are replacing heavier diesel-fuelled machines in carrying out field operations. This is coupled with the emergence of robotic vehicles and drones which plot and deliver precision treatments of crops e.g. 'per plant' weed/pest controls and targeted applications.


Tom and Dick, Small Robot Company

The 'Farm of the Future' report along with other specialist papers outlining 'low carbon farm enterprise journeys' can be found at ' Reports - RASE '.

Mike Woollacott, Greenwatt Technology Ltd

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Disclaimer:
NEAT News has been put together with good intentions to inform people about how the big issues of climate and biodiversity loss are being addressed. We hope we've got it right and treated the issues with balance – but please don't make decisions based on content without checking your facts*!*

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Warwickshire County Council

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