

# Volunteers Tackle Plastic Waste in Epsom Town Centre

7 July 2025



Plastic waste is a global menace that often ends up closer to home than we think. According to recent studies, the average person could be consuming up to five grams of microplastic every week — equivalent to the weight of a credit card — through food and drink. With plastic present in around 70% of consumer products, and evidence of its harmful impact on marine life and ecosystems, managing our plastic footprint is becoming increasingly urgent.

On Sunday 29 June, local volunteers from ASEZ WAO UK, a community group with a focus on sustainability, staged a “Rethink Plastic” event around Epsom’s Clock Tower. Around 40 volunteers, joined by members of the public, took part in a litter pick, public awareness presentations, and an upcycling workshop to highlight practical solutions to plastic waste.

Their efforts drew the support of the Mayor of Epsom and Ewell, Councillor **Robert Leach** (RA Nonsuch), who questioned the scale of modern packaging waste and praised the volunteers for helping to keep the town clean. Councillor **Steven McCormick** (RA Woodcote and Langley Vale) also lent his backing, commenting, “Wouldn’t it be great if people just used the bins?”

In total, volunteers collected around 35 bags of rubbish from the town centre. Under a pop-up gazebo, families were invited to transform discarded plastic bottles into creative items such as phone stands, piggy banks, toy cars and flowers — demonstrating how waste materials can be given a second life. A young mother taking part with her daughter described the workshop as “really good, really fun — a great idea.”

Upcycling — the process of turning unwanted materials into something of higher value — is gaining traction as one response to the growing problem of plastic pollution. However, recycling still faces challenges. For example, items such as greasy pizza boxes and disposable coffee cups often cannot be recycled through normal household collections, highlighting the importance of checking local guidelines to avoid contaminating recyclable waste streams.

Littering and plastic waste remain significant problems in the UK. The charity Keep Britain Tidy estimates that local councils spend nearly £700 million each year cleaning up litter, much of which includes plastic packaging. With plastic pollution known to damage habitats and harm wildlife, local action is seen as a vital part of tackling a wider environmental crisis.

ASEZ WAO UK says it plans to continue its local campaigns and is encouraging residents to get involved in future events. More information about their activities is available online or from volunteers active in the community.

For those inspired to act, it’s a timely reminder: our throwaway habits may have far-reaching consequences — and tackling them starts on our own doorstep.

Image: Cllrs McCormick and Leach speak out against plastic waste

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## Are paper bottles the solution asks Surrey Uni

7 July 2025



There are few excuses left for polluting our environment with plastics - and the UK can lead the charge towards a more circular future, say researchers from the University of Surrey. The comments come as the Surrey team get ready to showcase three projects tackling plastic pollution at this week’s Royal Society Summer Science Exhibition in London (1-6 July).

Surrey’s interactive display will present various themes - from replacing petroleum-based packaging, to capturing

microplastics before they enter our rivers and seas, to recycling mixed plastic waste that would otherwise end up in landfill.

One such project is SustaPack - a collaboration aiming to reduce the 1.9 billion plastic bottles produced globally every day by developing next generation paper-based alternatives. Backed by a £1 million EPSRC grant, the project is a partnership between Surrey and sustainable packaging company Pulpex Ltd. It combines AI, thermal imaging and advanced computer modelling to improve production processes, create a new biodegradable lining, reduce energy use, and extend product shelf life - bringing low-carbon, fully recyclable packaging closer to large-scale commercialisation.

Professor Joseph Keddie, Professor of Soft Matter Physics and Royal Society Industry Fellow, said:

“The high carbon footprint of plastic and glass packaging materials demands urgent change. This collaboration is about more than simply replacing plastic - it’s about designing sustainable packaging that is truly recyclable, scalable, and with a low carbon footprint. It’s a powerful example of how science and industry can join forces to address the urgent challenge of the environmental impacts of plastic.”

Another project on display is addressing the recovery of plastic particles from our water systems. Some products such as sunscreens, cosmetics and disposable wipes can release microplastics, with the UK government considering restrictions or bans on certain items to reduce this form of pollution. On average, 50% of microplastics found in the world’s wastewater treatment plants are fibres, mainly coming from laundry. If not captured, these tiny plastics can adsorb and carry pollutants circulating in the wastewater plant that are then ingested by marine life and ultimately enter the human food chain.

Surrey engineers are developing advanced membrane filtration technology designed to recover microplastics before treated wastewater is released into rivers and seas. By optimising membrane coatings and filtration conditions, the team is working to reduce clogging and improve long-term efficiency, paving the way for cleaner water and healthier ecosystems.

Professor Judy Lee, Professor in Chemical and Process Engineering, said:

“Microplastics are a serious and growing threat to water quality and human health. These tiny particles are difficult to remove once they’re in the environment and can carry harmful pollutants. Our research focuses on practical solutions that can be deployed in wastewater treatment plants to stop these pollutants at the source.”

To address the challenge of recycling plastics mixed with other materials, such as carbon fibre composites, engineers at Surrey are working to make the process more viable and commercially attractive. These composites are essential across various industries, including aerospace, transport and construction due to their lightweight, strong and versatile properties, but they are notoriously difficult to recycle.

Surrey’s research focuses on developing new manufacturing routes and enhancing the thermal, electrical and mechanical properties of recycled carbon fibre, making second-life applications practical and commercially appealing. Reducing waste and using reclaimed materials also help to lower the demand for raw resources.

Dr Iman Mohagheghian, Associate Professor (Reader) in Mechanics of Materials at the University of Surrey, and EPSRC researcher in residence fellow of the National Composites Centre, said:

“Our goal is to make recycled composites a reliable, high-value option for industry. Enhancing their performance and reducing manufacturing waste is an important step towards building a truly circular economy for advanced plastics, supporting the wider journey towards net zero.”

At the Royal Society Summer Science Exhibition, visitors can discover Plastic Alchemy - an outreach theme led by the University of Surrey’s Circular Economy Group and Fellows from the Institute for Sustainability.

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## Epsom & Ewell Biodiversity Action Plan’s five-year review ratified

7 July 2025



Epsom & Ewell Borough Council’s Environment Committee has formally endorsed the progress made on its Biodiversity Action Plan (BAP) 2020–2030, following a scheduled five-year review presented at its meeting on 24 June. The review reflects both local achievements and national legislative changes introduced through the Environment Act 2021.

The Council’s Biodiversity Action Plan, which is linked to its Climate Change Action Plan, aims to protect and enhance local habitats and wildlife, supporting wider efforts to address climate change across the borough.

## Key Achievements 2020-2025

The five-year progress report highlights a range of local initiatives, including:

- Integrating protected species considerations into the householder planning application process
- Improved grassland management across local nature reserves, Nonsuch Park, and Epsom Downs
- Establishment of an Ash Dieback Working Group to coordinate the management of diseased trees
- Enhanced mapping and management of veteran trees throughout the borough
- Creation of new ponds in Horton Country Park and Epsom Common Local Nature Reserves
- Development of new wetland habitat at Chamber Mead within Hogsmill Local Nature Reserve, delivered in partnership with the South East Rivers Trust

The review also noted Epsom Common Local Nature Reserve's continued success, having secured its 18th consecutive Green Flag Award in 2024. Additionally, recent wetland restoration projects are enabling the reintroduction of water voles to Surrey for the first time in over two decades along the Hogsmill River.

## Legislative Context

The Environment Act 2021 has introduced new statutory duties for local authorities to conserve and enhance biodiversity. Among these measures:

- Most planning permissions must now deliver at least 10% biodiversity net gain, with habitats protected for a minimum of 30 years
- Local authorities are required to produce biodiversity reports
- Mandatory Local Nature Recovery Strategies (LNRS) must be developed to support nature recovery

According to Natural England, the Environment Act marks a significant shift in legally protecting and enhancing biodiversity, setting targets in areas such as air quality, water, waste, and species recovery by 2030.

## Background

Epsom & Ewell Borough Council's Biodiversity Action Plan is a long-term strategy to safeguard and strengthen the borough's ecosystems. It works alongside the Council's Climate Change Action Plan, first launched in 2020 and refreshed for 2025-2029, which aims to reach carbon neutrality by 2035.

**Councillor Liz Frost**, (RA Woodcote and Langley Vale) Chair of the Environment Committee said: "We are committed to creating and maintaining habitats that support resilient ecosystems in our local nature reserves and green spaces across the borough. Our Biodiversity Action Plan plays a vital role in tackling climate change.

This five-year review has highlighted the vast amount of work, and wide-ranging activities, that we deliver. A prime example is Epsom Common Local Nature Reserve, a Site of Special Scientific Interest, that was awarded its 18<sup>th</sup> consecutive Green Flag Award in 2024. Also, fantastic partnership work to create wetlands is enabling the reintroduction of water voles to Surrey for the first time in over 20 years along the Hogsmill River.

Thanks to our countryside team for their passion, hard work and expertise in shaping biodiverse habitats across the borough. Also, a huge thank you to our partners and volunteers, without their support we wouldn't be able to enjoy such wonderful green spaces."

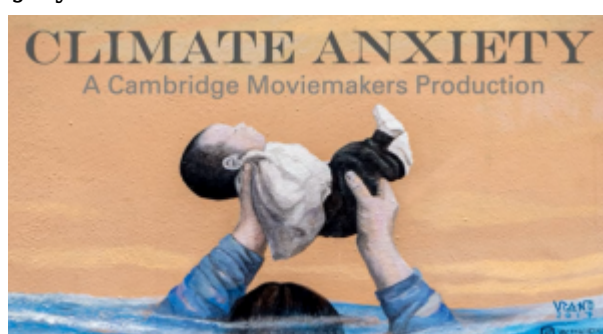
For further details, residents can view the Environment Committee's report on the Council's website or visit the Department for Environment, Food & Rural Affairs (DEFRA) for information about biodiversity net gain measures.

Image: Comma Butterfly

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# Green Thinking Takes the Spotlight at Epsom Picturehouse

7 July 2025



*Cinema-goers in Epsom are being invited to watch, reflect, and act, as a national eco-film initiative gains local traction.*

A new strand of community-focused cinema, “Green Screen,” has arrived at Epsom Picturehouse, offering audiences more than just a night at the movies. Instead, it aims to foster conversation and local action around the pressing issue of climate change.

Following its Epsom debut on Earth Day earlier this year — hosted by The Woodland Trust and focusing on the conservation of Langley Vale Wood — the next Green Screen event is set for **Wednesday 9th July 2025 at 8pm**, this time in partnership with **Extinction Rebellion Epsom & Ewell**.

The evening features three short films tackling different aspects of the climate crisis. First up is *#ClimateScam?* (40 mins), a documentary from Cornwall Climate Care which addresses climate change denial and misinformation. It’s followed by *Climate Anxiety* (17 mins), a film from Cambridge Movie Makers exploring the psychological toll of environmental collapse. Finally, *Plan Z: From Lab Coats to Handcuffs* (23 mins), produced by A2Y Productions, tells the story of scientists who risk their careers and freedom by engaging in direct environmental activism.

But it’s not all on-screen. After the screenings, the audience will be invited to stay for a 40-minute panel discussion and Q&A featuring local voices — a doctor, a scientist, an engineer, and a community organiser — all bringing their perspectives to the urgent environmental questions raised by the films.

Joe Stroud of Epsom Picturehouse said:

“We’re proud to see Green Screen take root in Epsom. It’s a strand that thrives when communities take ownership — the films are the catalyst, but it’s the community that brings together their perspectives, expertise, and passion.”

The Green Screen series is a nationwide initiative by Picturehouse Cinemas, transforming theatres into spaces of environmental learning and grassroots conversation. Events across the UK have seen audiences inspired to take local action, supported by partnerships with schools, charities, businesses, and environmental organisations.

True to its ethos, the Epsom screening will extend the invitation to connect beyond the credits. Attendees are encouraged to continue conversations in the Picturehouse’s meeting space over a free tea or filter coffee — if they bring a reusable cup.

Extinction Rebellion Epsom & Ewell, the local host for the July event, is part of the global climate action movement and is active in local campaigning and awareness-raising through non-violent action and community engagement.

Epsom Picturehouse itself is a relatively new addition to the town, having opened in June 2024. Located in Epsom Square, the six-screen venue blends modern programming with vintage touches and a strong focus on community. Its café-bar offers a menu of pizzas, toasties, cakes and drinks, helping turn cinema visits into a more social, immersive experience.

Anyone interested in organising a future Green Screen event in Epsom is encouraged to contact the venue at **epsom.marketing@picturehouses.co.uk**.

For more information about the 9th July event, readers can contact Warren Bunce of Extinction Rebellion Epsom & Ewell on **07539 069659** or by email at **epsomewell@extinctionrebellion.uk**.

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## Smarter tickets would boost bus travel

7 July 2025



Public transport in Southern England is struggling, not just because of cost or convenience, but because it has failed to keep up with the digital age, according to a new study from the University of Surrey.

In a study published in *Public Transport*, researchers simulated improvements in areas like payment convenience and real-time service updates. The study found that these tech-driven changes could boost bus ridership by over 30%.

Researchers have found that simple innovations, such as easy payment systems, e-ticketing, and mobile applications, can transform public transport, boost ridership, and improve passenger satisfaction.

The study employed a novel analytical approach, Machine Learning Influence Flow Analysis (MIFA), to understand the attitudes and behaviours of bus passengers in Southern England. The team also analysed detailed survey data, which helped them identify the key factors that influence whether people choose the bus over their private cars. These factors where: addressing issues around payment convenience and real-time information can make buses far more appealing.

Dr Wolfgang Garn, one of the authors of the study and Associate Professor in Analytics at the University of Surrey, said:

“We discovered that passengers want a seamless, hassle-free experience. If paying for a bus journey feels complicated or outdated, people are more likely to opt for driving instead. By introducing smart ticketing and contactless payments, alongside mobile apps that provide real-time updates, we can not only make bus travel easier but also more attractive. This isn’t just about technology, it’s about fundamentally changing how people view public transport.”

The study used advanced machine learning methods, including neural networks and random forests, to create predictive models from survey responses. These models enabled the researchers to identify the factors that most strongly influence bus usage decisions. By simulating improvements in passenger sentiment, such as increased satisfaction with payment methods, the MIFA framework can predict how these changes may alter people’s willingness to use buses. The results suggest that these technological enhancements could increase bus ridership by over 30%.

The findings also highlight several critical issues that undermine bus usage, including inconvenient payment processes, a lack of clear information about bus routes and fares, and concerns about reliability and security. The research recommends practical solutions such as integrated smartcard payment systems, real-time travel apps, and expanded bus lanes to reduce journey times. Together, these measures can create a public transport system that competes with the convenience of private cars.

Dr Garn continued:

“Integrated ticketing is an option that needs to be further explored. It allows passengers to travel across different public transport modes using a single ticket or system, typically a smart card, for their entire journey. This means a traveller can switch between buses, trains, trams, and other modes of transport without needing to purchase multiple tickets or navigate different payment systems – an issue that arises when governmental policies do not sufficiently guide multiple private bus transport companies. A related study I worked on demonstrated that increased frequency, low fares, and an improved bus network significantly boost bus ridership.

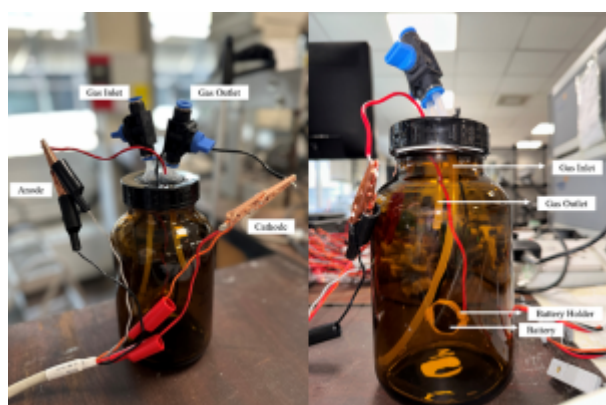
The future of bus travel in Southern England depends on embracing digital convenience and improving the passenger experience. With smart payments and better information at the heart of this transformation, buses can become the preferred mode of travel for many, not the last resort.”

Image credit: Geoff Charles, National Library of Wales. Public domain

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## Surrey battery leads

7 July 2025



Scientists at the University of Surrey have made a breakthrough in eco-friendly batteries that not only store more energy but could also help tackle greenhouse gas emissions. Lithium-CO<sub>2</sub> ‘breathing’ batteries release power while capturing carbon dioxide, offering a greener alternative that may one day outperform today’s lithium-ion batteries.

Until now, Lithium-CO<sub>2</sub> batteries have faced setbacks in efficiency – wearing out quickly, failing to recharge and relying on expensive rare materials such as platinum. However, researchers from Surrey have found a way to overcome these issues by using a low-cost catalyst called caesium phosphomolybdate (CPM). Using computer modelling and lab experiments, tests showed this simple change allowed the battery to store significantly more energy, charge with far less power and run for over 100 cycles.

The study, published in *Advanced Science*, marks a promising step toward real-world applications. If commercialised, these batteries could help cut emissions from vehicles and industrial sources – and scientists even imagine they could operate on Mars, where the atmosphere is 95% CO<sub>2</sub>.

Dr Siddharth Gadkari, Lecturer in Chemical Process Engineering at the University of Surrey, and corresponding author of the study, said:

“There’s a growing need for energy storage solutions that support our push toward renewable power while also tackling the growing threat of climate change. Our work on lithium-CO<sub>2</sub> batteries is a potential game-changer in making that vision a reality.

“One of the biggest challenges with these batteries is something called ‘overpotential’ – the extra energy needed to get the reaction going. You can think of it like cycling uphill before you can coast. What we’ve shown is that CPM flattens that hill, meaning the battery loses far less energy during each charge and discharge.”

To understand why the CPM worked so well, teams from Surrey’s School of Chemistry and Chemical Engineering and the Advanced Technology Institute used two approaches. First, they dismantled the battery after charging and discharging to study the chemical changes inside. These post-mortem tests found that lithium carbonate, the compound formed when the

battery absorbs CO<sub>2</sub>, could be reliably built up and removed – an essential feature for long-term use.

They then turned to computer modelling using density functional theory (DFT), which allows researchers to explore how the reactions unfold on the material surface. Results showed how the CPM's stable, porous structure offered the ideal surface for key chemical reactions.

Dr Daniel Commandeur, Future Fellow at the University of Surrey and corresponding author of the study, said:

“What’s exciting about this discovery is that it combines strong performance with simplicity. We’ve shown that it’s possible to build efficient lithium-CO<sub>2</sub> batteries using affordable, scalable materials – no rare metals required. Our findings also open the door to designing even better catalysts in the future.”

The discovery opens new doors for developing even better low-cost, easy-to-make battery materials. With further research into how these catalysts interact with electrodes and electrolytes, lithium-CO<sub>2</sub> batteries could become a practical, scalable way to store clean energy, while helping reduce carbon in the atmosphere.

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## Surrey tree planting initiative surpasses halfway mark with 768,832 trees

7 July 2025



Surrey County Council has planted over 49,000 trees and hedgerows over the past year, bringing the Surrey wide total to 768,832 since 2019. This marks a significant milestone for the council, with over half of our planned 1.2 million trees by 2030 – one for every Surrey resident – now planted in the ground.

Trees provide numerous benefits including producing oxygen, absorbing carbon dioxide, regulating the water cycle, and offering habitats for wildlife. A range of community projects have also been undertaken to support our target, including:

- **Mullard Space Science Laboratory, Dorking:** Our team conducted a tree planting workshop for staff, resulting in the planting of 20 fruit trees and three young oak trees in a new orchard area.
- **Broadwater School, Waverley:** Pupils on the school’s eco council learnt about the importance of trees. They planted 753 trees to create a reflection area and were supported by the community garden opposite the school.
- **Goldsworth Park Medical Centre, Woking:** As part of the NHS Forests scheme, which aims to transform green spaces within healthcare sites to improve health, wellbeing and biodiversity, 10 fruit trees were planted to create an orchard, with local community volunteers supporting.

**Marisa Heath, Surrey County Council Cabinet Member for Environment, said,** “I am delighted to be making significant progress towards our goal. Trees play a vital role in enhancing the appearance of Surrey’s green spaces, while also strengthening our climate resilience.

“We couldn’t do this alone, so I thank all the partners, communities, and residents who support this initiative. I encourage you to continue to do so to achieve our target for the benefit of our communities and future generations to come.”

Community groups, charities, schools, parish councils, and businesses can register to be involved in the next planting season this winter. To find out more and to register your interest, visit our **tree planting website**.



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## Supporting Bees and Pollinators in Your Epsom and Ewell Garden

7 July 2025



Expert Advice on Supporting Bees and Pollinators in Your Epsom and Ewell Garden

**Epsom and Ewell residents are being offered expert advice on how to make their gardens more welcoming for bees and other vital pollinators, thanks to insights from local academics.**

Will Wilkinson and Dr Jorge Gutierrez Merino, both from the University of Surrey, have shared practical tips for nurturing these important species. Mr Wilkinson is a lecturer and leads The Beekeeping Project at the university, while Dr Gutierrez Merino is a senior lecturer.

Their advice highlights that while honeybees are important, it's crucial to support the many other pollinator species that

are often more vulnerable.

**Key recommendations for local gardeners include:**

- **Recognise the bigger picture:** While honeybees are “kept species,” conservation efforts should also focus on other less conspicuous pollinators vital to our food web, many of which are more at risk.
- **Plant native and heritage varieties:** Opt for native plant species and traditional heritage varieties in your garden. Not all modern plants produce the quantity of pollen and nectar that pollinators require.
- **Ensure year-round food sources:** Aim for a diverse range of plants that flower across different seasons, including trees, to provide a continuous supply of food for pollinators.
- **Create a “rough patch”:** Leaving a corner of your garden unkempt, perhaps with a pile of old sticks, allows it to overgrow. This helps retain moisture and creates a humid microclimate beneficial for various invertebrates.
- **Consider #NoMowMay:** Avoid mowing your lawn throughout May. This allows native plants to flower and provides a crucial habitat for insects to thrive.
- **Review pet treatments:** If your pet regularly receives flea or worm treatments, discuss a risk-based approach with your vet instead of monthly preventative applications. Residues from some spot-on treatments have been detected in UK habitats and can negatively affect invertebrate survival.

**The Beekeeping Project at the University of Surrey**

The advice stems from work connected to The Beekeeping Project at the University of Surrey. Led by Will Wilkinson and funded by the Student-Staff Partnership Project and Forever Surrey, the initiative provides students, staff, and the wider university community with opportunities to learn about beekeeping, the environment, and develop new skills. It also aims to support student experience and mental health.

The project has fostered interdisciplinary research, including studies into the beehive microbiome as an indicator of honeybee health, led by PhD student Kerry Barnard and Dr Jorge Gutierrez-Merino. This research investigates how bacterial communities within the hive correlate with the health and disease status of bees and other pollinators.

Through workshops, teaching materials, and practical experience, The Beekeeping Project has encouraged discussion and shared knowledge about bees, gardens, and nature, emphasising the importance of all bee species for biodiversity, ecology, and sustainability – principles central to the University of Surrey’s ethos.

Residents interested in learning more can note that Will Wilkinson and Dr Jorge Gutierrez Merino are available for interview by contacting [mediarelations@surrey.ac.uk](mailto:mediarelations@surrey.ac.uk).

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## Mole Valley Solar farm decision

7 July 2025



The biggest possible solar farm was before Mole Valley District Council last week with councillors voting to reject the eco energy project – despite warnings they could lose taxpayers hundreds of thousands of pounds on appeal.

Plans for a 55 hectare solar farm in Cobham Road in Fetcham, large enough to power about one third of all the homes in the borough, came before the council’s development management committee on April 23.

Councillors narrowly voted seven to five with one abstention to refuse the 49.5 megawatts plant arguing it was an inappropriate use of green belt land and too close to ancient woodland.

The decision went against the advice of officers who said Mole Valley’s decision would likely be overturned on appeal – and the council charged costs

Cllr Abhiram Magesh (Liberal Democrat; Mickleham, Westcott & Okewood) said: “It will end up costing the council hundreds of thousands of pounds.

“It will affect the council’s balance budget.”

He said decisions like this were “not defensible by the legal material planning consideration” and that councillors needed to use vote with their brains, “not with your heart “

“What we can be considering, is the economic impact and the financial impact to not only the wider council but the area.”

The developers, Ethical Power, had argued there was an “overriding” case that delivering renewable energy outweighed the “modest impacts” and that they were “proud to bring forward the project”.

Their spokesperson added that it represented a “unique opportunity” to “tackle climate change in Mole Valley” by contributing to energy independence and clean power.

Had the power plant been any larger it would have been classified as a nationally significant project requiring government sign off, the meeting heard.

Others challenged the environmental benefits of green energy at the expense of locally grown food and argued that the 40 year proposed life span of the site was anything but temporary.

Cllr Simon Budd (Conservative; Brockham, Betchworth, Buckland Box Hill & Headley) said: “The land that you are covering up, It’s good quality land that grows food.

“At the moment the food is grown in Fetcham and its sold in Fetcham in a farmers shop in Fetcham, you’ve got zero miles, you’ve got grain that goes off to make bread, fantastic zero miles on it.

“If you cover up land in Fetcham people have still got to eat so you’ve got to import grain.

He added: “I feel very strongly about turning what is good agricultural land into what is basically you are ruining the countryside you really are ruining it.

“The gain of a little bit of electric is not worth the loss of this land.”

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## On the Buses - Surrey going Green

7 July 2025



Following a successful bid for funding to the Department for Transport, Surrey County Council has been awarded an additional £1.7m for 12 new zero emission buses. This follows a previous allocation in 2024, taking Surrey’s total provision to over £5 million and 31 new buses in total.

Along with the 34 hydrogen buses already operating across the county, and a further 23 coming into service this Summer, this will see 88 zero emission buses operating on Surrey’s roads.

The new fully accessible vehicles use green hydrogen and have a range of up to 600 miles. They offer a smooth, quiet ride with free Wi-Fi, charging points and social seating on board.

**Matt Furniss, Cabinet Member for Transport, Infrastructure and Growth at Surrey County Council said,** “I’m delighted that Surrey will benefit from this extra funding which will help us to build upon our own significant investment in providing cleaner buses.

*“Introducing these buses to our fleet is expected to deliver an estimated carbon saving of c112,000 tonnes over the life of the buses, which is great news for Surrey residents and for everyone else travelling in and out of our county.*

*“We’ve also invested £6.3m in more ultra-low and zero emission community transport minibuses, £9m in bus priority measures to ensure Surrey buses turn up on time, and £1.4m in improving information for passengers at bus stops.*

*“Our Surrey LINK card gives young people half-price bus travel and we’ve expanded our on-demand Surrey Connect bus services to cover areas where there are limited fixed bus routes, giving more options to travel by bus for all residents right across Surrey, particularly in our rural areas.”*

**Richard Telling, Managing Director of Falcon Buses said,** “Through the partnership working with Surrey County Council (SCC), who have been awarded Department for Transport (DfT) ZEBRA 2 funding, we are now enhancing our roll out of zero Emission buses, introducing 21 electric buses into our fleet.

*“Financial investment from Falcon Buses, together with SCC and DfT has enabled us to place orders with Alexander Dennis for the supply of their brand new Enviro 200 EV next generation bus and we will see electric buses operating on a number of our services from Spring 2026. Exciting times are ahead for Falcon operating new technology with electric buses, and we look forward to our customers coming on the journey with us.”*

**Simon Rowland, CEO of White Bus said,** “We are incredibly excited about our new electric vehicle fleet coming later this year. Not only is White Bus providing greener, cleaner vehicles, but also giving our passengers the additional comfort of quieter vehicles. Our 446 and 555 will be the first routes to use the new Yutong E10s, and they will be branded in the green Flightline livery as part of other service improvements in partnership with Surrey County Council and Heathrow. Our thanks to DfT and Surrey County Council for their support in helping White Bus make the transition to a greener future.”

Related report:

£12 million bus boost for Surrey

Image: 465 Enviro Bus in Dorking High St: Arriva436 Creative Commons Attribution 3.0 Unported license

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## Surrey in race to capture carbon

7 July 2025



A unique carbon capture technology developed by researchers at the University of Surrey could offer a more cost-effective way to remove carbon dioxide (CO<sub>2</sub>) from the air and turn it into clean, synthetic fuel.

A study published in Applied Energy demonstrated that the Dual-Function Material (DFM) process - which combines carbon capture and conversion - could match or outperform more established industry methods. Under optimal conditions, it was shown to remove carbon at a cost of US\$740 per tonne, with the potential to drop below \$400 as materials improve.

Dr Michael Short, Associate Professor of Process Systems Engineering at the University of Surrey and lead author of the study, said:

“For the first time, we’ve been able to demonstrate it can be financially competitive to use DFMs for direct air capture (DAC) - all the while creating clean fuel like methane in the process.

“Using green hydrogen from renewable electricity and carbon from the atmosphere, our system can help to replace fossil feedstocks in sectors like steel manufacturing. If a steel mill uses this fuel, it could effectively have zero net emissions - offering a sustainable path to decarbonise industries that are otherwise hard to electrify.”

Using superstructure optimisation - an advanced modelling technique - the team tested a wide range of configurations to identify the most cost-effective design for capturing 10,000 tonnes of CO<sub>2</sub> per year - a scale comparable to other commercial systems.

With further improvements in material performance and catalyst cost, researchers suggest it could hold promise for large-scale deployment and can be integrated with existing industry infrastructure.

Dr Melis Duyar, Associate Professor in Chemical and Process Engineering at the University of Surrey, said:

“Recycling carbon in this way is a powerful idea, with potential to create many new value chains and enable energy independence by embedding renewable energy into the production of conventional fuels and chemicals.”

The Intergovernmental Panel on Climate Change (IPCC) warns that limiting global warming to 1.5°C will require not only cutting emissions but also removing billions of tonnes of CO<sub>2</sub> from the atmosphere this century.

In the lead up to Net Zero target deadlines, the technology offers a promising and economically viable route to help achieve that goal - while helping us to reduce overreliance on fossil fuels.