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SENDing Pupils to Epsom’s Mainstream Schools?

8 July 2025



The national conversation around how best to educate children with special educational needs and disabilities (SEND) has intensified, following proposals by Labour’s Stephen Kinnock to increase the number of SEND pupils placed in mainstream schools. The aim, he says, is to promote inclusion and reduce the pressure on stretched specialist placements. But as the Government looks to reshape the SEND landscape — and amid growing concerns about funding — the question for residents of Epsom and Ewell is this: should more children with SEND be placed in local mainstream schools?

The borough is home to a number of schools that already provide dedicated support for pupils with SEND. Epsom and Ewell High School hosts a Hearing Resource Base and also runs an alternative curriculum aimed at meeting the diverse needs of learners. Epsom Primary and Nursery School is one of the local institutions to benefit from Surrey County Council’s 2023 expansion of SEND provision. That county-wide investment pledged 6,000 additional specialist school places and introduced 85 new SEND resource base places within mainstream schools, part of a broader £240m commitment to address rising demand across Surrey.

The local impact of that investment is still unfolding. While there has been clear progress in infrastructure and placement availability, there is no publicly available data to confirm whether Epsom’s schools currently have the capacity to take in significantly more SEND pupils — or how those decisions might affect classroom dynamics and resource allocation.

However, concern is growing that national policy may now be moving in the opposite direction. In June 2025, reports emerged suggesting that the Treasury is pressuring the Department for Education to identify “efficiency savings” in SEND budgets, amid wider efforts to reduce public spending. According to coverage in *Schools Week* and *The Guardian*, Government ministers have privately discussed potential curbs on local authority SEND funding, with one official describing existing growth in education, health and care plan (EHCP) numbers as “unsustainable.” While no official announcement has been made, campaigners fear that this signals a shift towards cost-saving measures that could restrict access to specialist support or delay assessments.

This emerging tension between inclusion and austerity has alarmed SEND advocacy groups. They warn that increasing mainstream placements without matching increases in funding and staff training could place significant strain on already overstretched schools — and risk setting up both SEND and non-SEND pupils for failure.

Supporters of the mainstreaming model argue that it fosters an inclusive environment where all children can thrive together. They point to the benefits of breaking down stigma and allowing pupils with SEND to learn alongside peers, provided the right support mechanisms — such as teaching assistants, differentiated learning, and physical accommodations — are in place.

However, the debate is far from one-sided. Some argue that placing more SEND pupils into mainstream classrooms, especially where complex needs or behavioural challenges are involved, can stretch teaching resources and affect the learning environment for all students. There is no conclusive local data for Epsom, but nationally, parents and advocacy groups have voiced concerns that pupils without SEND may receive less teacher attention or experience disruption in classes that try to cater to a wide range of needs without sufficient staffing or training.

The reality is that the success of inclusion depends heavily on how it is implemented. A mainstream classroom with adequate resources, specialist support, and small group instruction may serve some SEND pupils well. But without those conditions — and without proper funding and planning — the risk is that no one in the classroom gets the education they need.

So far, neither Epsom & Ewell Borough Council nor Surrey County Council has issued a public position on whether more SEND pupils should be placed in mainstream settings, and there has been no formal consultation locally on the implications of national policy changes.

As families, teachers and policymakers await further clarity, it is vital to hear directly from the community. The *Epsom & Ewell Times* invites parents, educators, and students to share their thoughts. Do you believe more children with SEND should be placed in mainstream schools? What has your experience been with local provision — as a parent navigating the system, or a student learning alongside SEND peers?

This is a complex and nuanced issue, and any long-term solution must balance fairness, resources, and outcomes — not just for children with SEND, but for everyone in the classroom. Whatever direction policy takes next, one thing is certain: inclusion is not just about where children are taught, but how.

Image: Rosebery School, Epsom. Google.

Related reports:

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Epsom and Ewell Town-Twinning Association presents Cyril Frazer Awards for 2025

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The Epsom and Ewell Town-Twinning Association recently presented its annual Cyril Frazer Awards to this year's winners: Sarah Carpenter of Southfield Primary School, and the joint runners-up, Siobhan Cornell and Jo Johnstone from the French and Music departments at Wallace Fields Junior School, and Olivia Gioffredo from Epsom College.

The prizes were awarded at the Twinning Association's AGM held at Epsom Town Hall on 24 June, by the Mayor of Epsom and Ewell, and Honorary President of the Association, Cllr Robert Leach.

Sarah Carpenter, who was unfortunately not able to attend due to family illness, will receive a grant of £500 to help support French visits and learning activities planned by Southfield Park School, while the joint runners-up will each receive £250 to support their work in the fields of French education and musical study. Olivia is a talented young composer and performer, who treated the AGM to a rendition in French of one of her own songs.

Epsom and Ewell Town-Twinning Association Secretary, Diana Deavin, said:
"The Association's committee was extremely impressed by the quality of this year's submissions, and in particular by the energy and passion of the teachers at these schools. This is reflected in the fact that this year we decided to make a total award of £1000, double the amount normally presented."

The Cyril Frazer Award was established by the Twinning Association as a memorial to Cyril Frazer, who died in 2016. He was Mayor of Epsom and Ewell when it was first twinned with Chantilly in 1995 and was a founding member of the Association. As well as Twinning, one of his other great passions was singing, and he was a keen member of the Epsom Male Voice Choir.

Both elements of Cyril's life are reflected in the requirements for the award, which is available to individuals and groups within the borough who meet some or all of the following criteria:

- Applicants live or study in the borough
- The award meets a special need, such as mental or physical health
- It benefits young people
- It has cultural or educational value
- It is music or performing-arts related
- It furthers friendships or links with Chantilly
- It supports a key twinning or community event

The Mayor of Epsom and Ewell, Cllr Robert Leach, presenting the Cyril Frazer Award to Olivia Gioffredo from Epsom College.

Are paper bottles the solution asks Surrey Uni

8 July 2025

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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.

Epsom and Ewell parents taking on the child

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smartphone challenge

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Local parents are joining a national movement to delay children's exposure to smartphones, with a sold-out event next week highlighting local concerns.

Epsom & Ewell's Smartphone Free Childhood (SFC) group is hosting *The Hidden Impact of Smartphones on our Children* on Wednesday 3 July, 7.30–9pm, at St Martin's Junior School on Ashley Road. The event will feature contributions from local headteachers, youth speakers, and safeguarding experts.

The movement, which has already attracted nearly 150,000 signatories to its "Parent Pact" across the UK, encourages families to hold off giving children smartphones before age 14. Surrey parents have been among the strongest supporters of the initiative, which aims to reduce the mental health and online safety risks faced by children in a hyper-connected world.

Laura Baker, from Epsom & Ewell's SFC group, said:

"It's all about strength in numbers — if your child knows that other kids in their class won't be getting a smartphone for a few years either, the peer pressure instantly dissolves."

The event's speaker line-up includes:

- Mrs Donna Dove, Health and Wellbeing Lead and teacher at St Martin's, Epsom
- Mr Joe Hordley, Assistant Headteacher at St Andrew's, Leatherhead
- Mrs Rachel Hall, Associate Headteacher at Glyn School
- Health Professionals for Safer Screens
- Advisors from the Lucy Faithfull Foundation, addressing online safety and child protection
- Young people aged 13, 18, and 24 sharing personal perspectives on growing up in a digital age

Local MP Helen Maguire is expected to attend, and educators from more than ten primary and secondary schools across Epsom and Ewell are anticipated, reflecting the growing concern among school communities.

The organisers say school policies on smartphone use vary widely across Surrey, as staff attempt to manage the impacts of cyberbullying, mental health pressures, misogyny, and distraction in class.

Parents behind the initiative argue that urgent action is needed to protect children's wellbeing, rather than waiting for government regulation of Big Tech. The cultural conversation around children and screens has been driven by hard-hitting documentaries such as *Swiped* and dramas like *Adolescence*, adding momentum to calls for change.

Epsom & Ewell SFC hope the borough could follow in the footsteps of St Albans, Bromley, and Southwark in developing a "smartphone free childhood" community.

The event is free to attend, but places must be booked in advance. After an initial sell-out, a limited number of extra tickets have now been released.

Booking and further information:
Laura Baker
 07704 274727
 SFC.epsom@gmail.com

Ewell students cruise to new careers

8 July 2025

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Cruise industry giants have teamed up with three colleges to highlight the sector as an exciting, rewarding career pathway for school leavers. This included 12 Travel and Tourism students at Nescot college in Ewell, who have just completed their first Cruise Career Springboard programme, allowing them to dip their toes into a potential career in the cruise sector by visiting several incredible ships, hearing from industry leaders and seeing head office and shoreside roles in action.

The Cruise Career Springboard programme was developed and masterminded by Edwina and Matthew Lonsdale at Mundy Cruising and has been supported by key industry figures, who have come together to invest in the next generation. This includes representatives from the Cruise Lines International Association (CLIA) and leaders from numerous operators including Royal Caribbean, Celebrity Cruises, Silversea, Norwegian Cruise Line, Oceania, Regent Seven Seas, Cunard, P&O, Princess, Seabourn, MSC Cruises, HX Expeditions, Uniworld, AmaWaterways, Windstar and Viva. Former Managing Director and Vice President of Celebrity Cruises, Jo Rzymowska, an inspirational speaker and Non-Executive Director at Hays Travel joined the programme to mentor the Nescot students. Participants have also benefited from the wisdom of former Managing Director of Regent Seven Seas Cruises UK, Graham Sadler, and Debbee Dale, leading trainer for the sector.

The course, which took place over nine weeks and included students from St John Bosco College in Battersea and Itchen College in Southampton, also aims to improve diversity and inclusion, introducing learners from varied backgrounds to the wide range of on-board and shore-based opportunities. This could be anything from engineering to entertainment, HR to health and safety and destination management to deck duties.

This year the students visited six cruise ships and learnt about the product offer covering expedition, luxury, mainstream and river cruise liners. They also undertook classroom work, visited and heard about operations at company headquarters and prepared for a final presentation to industry professionals where they will pitch the opportunities for career pathways in the sector. Plans are already in place to embed the learning and experience into Nescot's future delivery and to launch a Level 4 qualification in Travel & Tourism with a pathway in the cruise industry from 2026.

Julie Kapsalis, Principal and CEO at Nescot said: "This programme is very close to my heart as a cruise addict – I've recently returned from my latest fantastic adventure. It's wonderful to share my love for this sector with my students. University isn't always the right route for everyone at eighteen, particularly once the cost is factored in. With that in mind, we aim to be innovative at Nescot, working closely with businesses to show students there are other exciting options out there. This includes apprenticeships and entry level roles which can be inspiring and fun with exceptional progression pathways. The Cruise Career Springboard has offered once-in-a-lifetime experiences, expert mentorship and the chance to learn about and try roles beyond the course. It's clear that the Cruise industry offers students a world of opportunity and we're working together to help them grab it."

Edwina Lonsdale, Managing Director of Mundy Cruising and Cruise Career Springboard creator said: "Many young people look at the cruise sector and don't realise it could be a career option for them, so we set out to change that. We want a diverse, enthusiastic workforce, both at sea and shoreside so linking up with colleges made perfect sense. I've been blown away by the continued industry reaction and how many individuals and operators have come on board to help us. We're incredibly grateful, as with their support, the Springboard programme can launch more careers than ever. I have also been struck by the enthusiasm and participation of the students – they have a great future ahead of them."

Eva Williams, Travel & Tourism Student at Nescot said: "Nescot's partnership with the Cruise Career Springboard programme has been amazing! We were so lucky to visit all the different ships and have big names in the industry chatting to us. I was genuinely surprised by how many people work behind the scenes to keep everything running – whole teams making things happen without ever stepping on deck. I'd never really considered the cruise industry as a career option before, but it's definitely on my radar now. I love the idea of playing a part in helping people's dreams come true."

Working in the cruise industry allows young people to access a wide range of careers and utilise skills that cover a range of jobs and functions. As a global industry, it also offers opportunity to work with colleagues around the world and to travel. Many who join the cruise line industry might begin on ships, but then pivot into shore-based roles as their career develops, or family commitments make travel more difficult. The industry can provide a lifelong, varied and dynamic career.

Industry professionals interested in finding out more about the Cruise Career Springboard can contact Edwina Lonsdale – edwina@mundycruising.co.uk

In addition to Travel and Tourism courses, Nescot offers a wide range of college courses for school leavers and adults, including Animal Care, Business, Computing and IT, Construction, Performing Arts, Childcare, Health & Social Care and Beauty Therapy. To find out more about studying at Nescot call 020 8394 3038, visit www.nescot.ac.uk or email adviceteam@nescot.ac.uk

Image: Students from Nescot, St John Bosco and Itchen Colleges are joined on Silver Spirit by Edwina Lonsdale – Mundy Cruising, Mentors Graham Sadler and Jo Rzymowska, Peter Shanks – Silversea Cruises and Julie Kapsalis – Nescot.

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The Surrey school run or walk?

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Parents want their children to walk to school, but what holds them back?

Children are the power brokers that can shift parents' habits on the school run – and could be key to making healthier, greener travel choices the norm, according to a new report from the University of Surrey. Commissioned by Surrey County Council and delivered through the University's Institute for Sustainability Innovation Hub, the report looked at how schools across the UK and internationally are encouraging families to walk, cycle or wheel to school instead of driving.

The report's authors found that while families are generally supportive of safer, more active travel, they're often held back by concerns over road safety, time pressures and infrastructure. The most effective initiatives, the report argues, are those that bring together schools, local authorities, planners and families to tackle these issues head-on.

Professor Benjamin Gardner, lead-author of the report from the University of Surrey, said: "The school run is rarely straightforward. Families support safer, active travel, but if we want more children walking or cycling, we need to stop seeing this as just an issue for school staff and parents to deal with. Schemes and reward programmes can spark interest, but they won't bring about changes to the school run unless the wider system supports change. Parents worry about safety, time and whether their child can travel independently. We need a joined-up approach. Lasting change depends on schools, councils, planners and families working together to make walking or cycling feel like the easy and safe option."

Matt Furniss, Cabinet Member for Highways, Transport and Economic Growth at Surrey County Council, said: "We've commissioned this report to better understand how we can support and encourage parents, carers and children to travel to school sustainably. We're investing £5.5m over the next five years to improve road safety to encourage more walking, cycling and wheeling so children can take safer journeys, and to reduce pollution around schools. We're also continuing to deliver Feet First walking training and Bikeability cycling training to provide lifelong road safety skills for Surrey's school children. We're looking forward to working with our schools and others, to design tailored initiatives and infrastructure that will benefit children now and in the future."

The research team reviewed travel initiatives in the UK, Europe and beyond, including Canada, Australia and Brazil. They found that even young children can play a crucial role in influencing their parents' school run choices, especially when schools engage children through activities, lessons or competitions.

Surrey researchers conducted two focus groups with staff and caregivers at Surrey schools, analysed a range of international case studies, and reviewed both academic and grey literature. They used the COM-B model – which looks at capability, opportunity and motivation – to understand what stops or supports families from choosing active travel on the school run. The findings will help shape the Council's new School Travel Effectiveness of Planning (STEP) tool, designed to measure what's working – and what's not – in encouraging active school travel across Surrey.

About the Innovation Hub

The Innovation Hub is the delivery arm of the University of Surrey's Institute for Sustainability. It brings researchers together with local authorities, businesses and communities to co-create practical responses to real-world challenges. By supporting projects like the School Travel Plan report, the Hub helps translate research into action and strengthen partnerships that benefit both Surrey and the wider region.

To learn more about the project, read the full report at www.surrey.ac.uk/news/promoting-active-school-travel

Image: Benjamin Vautier Snow scene (Children leaving school) VA – PICRYL – Public Domain Media

Smarter tickets would boost bus travel

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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

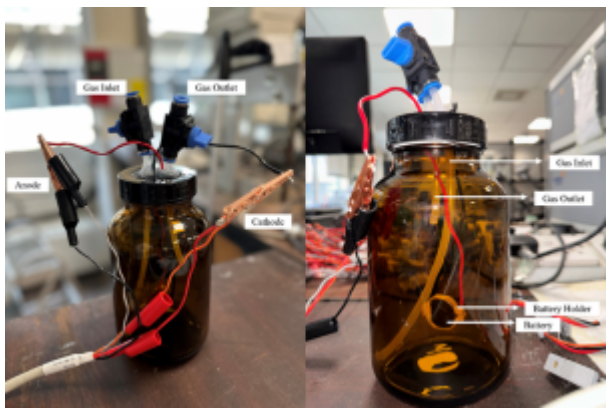
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Scientists at the University of Surrey have made a breakthrough in eco-friendly batteries that not only store more energy but could also help tackle greenhouse gas emissions. Lithium–CO_2 'breathing' batteries release power while capturing carbon dioxide, offering a greener alternative that may one day outperform today's lithium-ion batteries.

Until now, Lithium-CO_2 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_2.

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_2 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_2, 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_2 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_2 batteries could become a practical, scalable way to store clean energy, while helping reduce carbon in the atmosphere.

Yes to chocolate, tea, apples and grapes

8 July 2025



We might have another reason to enjoy our daily cup of tea or small piece of dark chocolate, as a new study from the University of Surrey has found that naturally occurring compounds called flavan-3-ols – found in cocoa, tea, apples and grapes – may improve blood pressure and the health of our blood vessels.

The research, published in the European Journal of Preventive Cardiology, analysed data from 145 randomised controlled studies, and found that regular consumption of flavan-3-ols can lead to a reduction in blood pressure readings,

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particularly in people with elevated or high blood pressure. In some cases, the average blood pressure-lowering effects were comparable to those seen with some medications.

Flavan-3-ols were also found to improve the function of the endothelium – the inner lining of blood vessels – which is crucial for overall cardiovascular health. This improvement occurred independently of blood pressure changes, suggesting a broader positive impact on the circulatory system.

Professor Christian Heiss, lead-author of the study and Professor of Cardiovascular Medicine at the University of Surrey, said:

“The findings are encouraging for those looking for accessible ways to manage their blood pressure and support their heart health through enjoyable dietary changes. Incorporating small amounts of commonly consumed foods like tea, apples, dark chocolate, or cocoa powder into a daily balanced diet could provide beneficial amounts of flavan-3-ols.

“While not a replacement for prescribed medications or medical advice, including more flavan-3-ol-rich foods in a daily routine could be a valuable addition to a healthy lifestyle, especially for those with higher blood pressure. These are findings that, although promising, require ongoing investigation.”

Surrey Uni knows the display way to San Jose

8 July 2025



A radical new approach to display screen technology could halve production costs, reduce harmful waste, and deliver brighter, more energy-efficient screens for our smartphones, smartwatches, and even certain medical devices, say researchers at the University of Surrey.

Most display screens use complex circuits made up of tiny switches called thin-film transistors (TFTs), which control when each pixel turns on or off and how bright it should be. However, building these circuits requires a lot of time, energy, water and harsh chemicals, making the manufacturing process expensive and resource-heavy.

At this year’s Display Week 2025 Technical Symposium in San Jose, California (11-16 May), Dr Radu Sporea and Dr Eva Bestelink will unveil their latest research, based on a new type of electronic component called a multimodal transistor (MMT). Originally designed as a hardware AI computing element, the MMT also has the ability to simplify display circuits while improving performance and sustainability.

Dr Radu Sporea, Associate Professor in Semiconductor Devices at the University of Surrey, said:

“Our invention challenges decades of industry practice by embracing properties usually seen as flaws. In most displays, engineers try to eliminate the energy barriers that form where metals meet semiconductors because they restrict current flow. But instead of working around them, we’ve made those barriers central to how our transistors operate.

“Using these effects deliberately, we’ve shown that the electronic circuits at the heart of display screens can be made with fewer components and processing steps – reducing waste, cutting costs and improving performance. And because it works with existing materials and tools, it’s a smarter, more sustainable upgrade for the screens we use every day. For the user, the reduced power requirements in operation will also mean significantly improved battery life.”

The MMT’s unique operation enables extremely compact, high-performance circuits that are particularly well suited to devices where size, energy use and image quality are critical – such as smartphones, tablets, smartwatches, automotive displays, and future wearable devices.

The technology is already showing promise in simulations, with real-world applications in AMOLED and microLED displays – two of the most advanced and rapidly growing areas of screen technology. It can also be integrated into current production lines with minimal disruption.

Dr Eva Bestelink, Senior Research Fellow at the University of Surrey’s Advanced Technology Institute, said:

“I’ve been working on this technology since my undergraduate days at Surrey, where I had the idea to develop a transistor based on neural behaviour, so seeing it evolve into something with real-world potential is incredibly rewarding. We’ve shown that it’s possible to rethink how displays are built without starting from scratch.

“The MMT lets us design circuits that perform better while also being cleaner and cheaper to make. That’s a win for manufacturers, a win for users and a win for the environment. Beyond displays, it could also have major applications in areas like microfluidics, imaging arrays and hardware AI. We’re still actively researching the AI potential, but the implication for revolutionising manufacturing is clear – especially if we’re to achieve Net Zero.”

Dr Bestelink and Dr Sporea will present their research on 15 and 16 May at this year’s Display Week 2025 Technical Symposium in San Jose, California. Their invention – the multimodal transistor (MMT), now granted a US patent – builds

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on more than two decades of pioneering research in thin-film electronics at the University of Surrey.

Image: By Redd Angelo in Technology CC0 license

Surrey SEND parents owed money

8 July 2025



Parents of children with special educational needs who were left with little choice but to use private educational psychologists may be due money back from Surrey County Council.

So far 27 families have been reimbursed for having to go private between the 2023 summer term and May 2024 due to a lack of qualified professionals able to create educational care plans.

This has resulted in £26,475 being returned to families – although it has not been a straightforward process for some parents.

The figures emerged following a recently published complaint against Surrey County Council.

The local government and social care ombudsman upheld that the authority refused to reimburse a mother who used a private educational psychologist in support of her son's education health and care (EHC) needs assessment.

The ombudsman also upheld the council delayed making payments for her son's tutor and that its communications were poor.

The ombudsman upheld further complaints about delays at Surrey County Council in completing needs assessments due to the national shortage of educational psychologists – but that it has since been satisfied with the steps being taken to resolve the issue.

Between the 2023 summer term and May 2024 Surrey County Council said it temporarily agreed to reimburse private reports due to its backlog.

The ombudsman said: "If we were to investigate this complaint it is likely that we would find fault.

"This is because the council accepted that a report from an educational psychologist was required and used the one obtained by Miss X.

"Therefore, it should have reimbursed her for the full costs. Also, when responding to Miss X's complaint, the council accepted there were delays making payments to (the child's) tutors.

"Whilst the council did apologise, this is likely to have caused Miss X distress in the form of uncertainty that wasn't remedied.

"I therefore asked the council to write to Miss X within one month to apologise and to make a payment to her for the full cost of the educational psychologist assessment she obtained and to offer a payment of £100 to remedy the distress its delayed payments to tutors caused her.

"To its credit, the council agreed."

Councillor Clare Curran, cabinet member for children, families and lifelong learning, said she was not able to comment on any individual children specifically, but the council accepted the findings from the ombudsman report and apologised to the family affected for any distress caused.

A spokesperson for the council added: "Where we used the private EP report as the sole advice during that time at the parent/carer's request we would cover the cost.

"However, if we did not use it as the sole advice then we would not reimburse."

They added that authority was now operating at over 90 per cent "timeliness" and able to meet demand.

Image: New Surrey County Council HQ, Woodhatch Place on Cockshot Hill, Reigate. Credit Surrey County Council

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Surrey in race to capture carbon

8 July 2025

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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_2) 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_2 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_2 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.

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