



Surrey solar study shows cheapest energy source

Solar energy is now so cost-effective that, in some of the sunniest parts of the world, it costs as little as two pence to produce one unit of electricity – cheaper than power generated from coal, gas or wind. That is the finding of a new study by researchers at the University of Surrey's Advanced Technology Institute (ATI), who say solar photovoltaic (PV) technology has become the key driver of the world's shift to clean, renewable energy.

Publishing their work in *Energy and Environment Materials*, the Surrey team point out that the global capacity of installed solar power passed 1.5 terawatts in 2024 – double the figure in 2020 and now enough to supply hundreds of millions of homes.

Professor Ravi Silva, Director of the ATI and co-author of the study, said: "Even here in the UK, a country that sits 50 degrees north of the equator, solar is the cheapest option for large-scale energy generation. Simply put, this technology is no longer a moonshot prospect but a foundational part of the resilient, low-carbon energy future that we all want to bring to reality."

The study notes that the price of lithium-ion batteries has fallen by almost 90 per cent since 2010, making combined solar-plus-storage systems as cost-effective as gas power plants. Such hybrid installations allow solar energy to be stored and released when required, turning an intermittent source into a dispatchable one that helps balance grid demand.

However, the researchers warn that the next major challenge lies in connecting vast amounts of solar generation to existing electricity networks. In regions such as California and China, high solar output has already caused congestion on power lines and wasted energy when supply outstrips demand. Co-author Dr Ehsan Rezaee said: "Connecting growing levels of solar power to electricity networks is now one of the biggest challenges. Smart grids, artificial-intelligence forecasting and stronger links between regions will be vital to keep power systems stable as renewable energy use rises."

Professor Silva added that advances in materials such as perovskite solar cells could raise energy output by up to 50 per cent without using additional land. "With the integration of energy storage and smart grid technologies, solar is now capable of delivering reliable, affordable and clean power at scale," he said. "But progress depends on consistent, long-term policy support. The US Inflation Reduction Act, the EU's REPowerEU plan and India's Production Linked Incentive scheme show how clear direction can drive investment and innovation. Sustained commitment and international collaboration will be essential if we are to accelerate the world's transition to a clean and reliable energy system."

Across the UK, renewable sources supplied just over half of all electricity in 2024 – the first time that clean generation surpassed fossil fuels. Wind power dominated with nearly 30 per cent of total generation, while solar contributed about 5 per cent, equivalent to one unit in every ten generated from renewables. Biomass, biogas and hydro made up most of the rest. When nuclear is included, low-carbon sources together delivered around two-thirds of the UK's electricity.

Globally, renewables produced about 30 per cent of electricity in 2024, with wind and solar together accounting for roughly 15 per cent and expanding faster than any other energy source. The International Energy Agency expects global renewable capacity to rise by almost half again before 2030, with most new investment in solar.

While Britain's relatively low sunshine hours limit its solar potential compared with southern Europe or Asia, domestic generation costs have plunged, making rooftop and community-scale arrays increasingly popular. Planning delays and grid connection backlogs remain obstacles, but the UK Government has set a target to increase installed solar capacity fivefold by 2035.

As Professor Silva observed, solar power has crossed the threshold from promise to practicality. The next test, he said, is building the smart, interconnected systems and political consensus needed to make affordable solar energy work everywhere – even in less sunny countries like the UK.

Sam Jones – Reporter



Parabel GmbH – Solarpark Jännersdorf. CC BY-SA 3.0



Surrey inequality report challenges 'leafy county' myth

The idea that Surrey is all leafy lanes, golf courses and big houses is a myth, according to a new report. Despite being a prosperous area of the country, the county still has thousands of residents struggling with inequality, isolation and poverty.

The report, *Understanding Inequality in Surrey*, lays bare the scale of the challenge. It found that residents from Bangladeshi, Pakistani, Black African, Roma and Gypsy/Traveller communities are far more likely to live in poverty, overcrowded housing and poor health. Gypsy and Irish Traveller residents experience the worst health among working-age people, and Bangladeshi-origin residents experience the worst health among over-65s.

The study also found that, while unemployment is rising more generally, racial minority groups are more than twice as likely to be unemployed compared to White British residents. Even degree-holders from minority backgrounds are still less likely to get into senior jobs or management positions than their white counterparts.

Cllr Mark Nuti, Cabinet Member for Health and Wellbeing, said: "We're in a very changing world at the moment. There is a lot going on politically in our society and people are feeling quite fragile in places. Especially when we're looking at equality, diversity and inclusion, there are people out there who are feeling very alone at the moment. We do have people that are living on the poverty line, we do have from different races [and] different ethnicities that aren't feeling part of these communities who are feeling alone - as everywhere else in the country. The most urgent action we need to do as a council, and as individuals, is to make sure that we identify where those people are and we have wraparound support for people to make sure they aren't feeling alone or feeling scared in their own home. And they do know the majority of us respect and love them, and want them to be part of our community and our county."

The fresh report comes after a 2023 peer review which praised Surrey County Council for improving its culture but also found it lacked a real understanding of how inequality shows up in local communities, prompting this study.

Cllr Robert Hughes added: "I think the image of Surrey being a county of golf courses, wealthy people and pretty villages are a small part of what Surrey is in reality."

The county boasts around 120 golf clubs - many of which are world class - alongside million-pound mansions, outstanding private schools and leafy green countryside. Yet the report exposed how 20,000 children are growing up in poverty, disabled residents are far less likely to find work, and young people with additional needs and disabilities are four times as likely to have experienced mental ill health compared to the wider population. Women are also hit harder by the cost of living, with the gender pay gap in Surrey reaching a staggering 21 per cent, well above the national average, according to the study.

Officers told a Resources and Performance Select Committee on October 2 that the study will help to alert council departments to how these disadvantages are often linked to an exacerbated socio-economic disadvantage. The new Equality, Diversity and Inclusion framework aims to bring councils, charities and communities together to make sure support actually reaches the people who need it. It looks at everything from jobs and housing to health, education and digital access.

Local groups have already started using the data to apply for funding and shape projects - a sign, councillors say, that the work is already making a difference. The data will be used to make services easier to access, tackle inequality in schools and workplaces, and build stronger communities.

Council officers admit the financial squeeze is real, but argue investing now will save money long-term. The idea is that better support means fewer people reaching crisis point and more residents able to thrive. The next stage is running focus groups with young people, disabled residents and minority communities to make sure the priorities match lived experience.

Emily Dalton LDRS

Aerial view of one of Surrey's less well of wards - Tattenham and Preston Hawe

Defibrillators delivered by drone?

A groundbreaking project testing how drones could be integrated into the UK's 999 emergency response system to deliver defibrillators to out-of-hospital cardiac arrest patients has been launched by the **University of Surrey, Air Ambulance Charity**



Kent Surrey Sussex, and the South East Coast Ambulance Service NHS Foundation Trust (SECAmb).

Funded by the **National Institute for Health and Care Research (NIHR)**, the 16-month initiative will explore how drones can rapidly deliver Automated External Defibrillators (AEDs) to the scene of an emergency — potentially saving lives where every second counts.

The research will take place in two phases. The first will simulate 999 call handling, Air Traffic Control coordination, ambulance dispatch, and drone operations to develop and refine delivery procedures. The second will involve interviews with out-of-hospital cardiac arrest survivors, family members, emergency responders and members of the public to assess perceptions of drone technology, ease of use, and any concerns.

Dr Scott Munro, Lecturer in Paramedic Practice at the University of Surrey and project co-lead, said:

“This research is the first step towards integrating drone technology into our emergency response systems. Our ultimate goal is to develop and test the procedures needed to seamlessly introduce drone delivery of AEDs into the 999-emergency system.”

Professor Kevin Munro, Director of the NIHR Research for Patient Benefit Programme, added:

“Using drones to deliver defibrillators could help emergency teams reach patients faster, improve survival after cardiac arrest, and bring cutting-edge technology directly to the NHS frontline.”

Dr Craig Mortimer, Research Manager at SECAmb, said:

“Rapid intervention is vital in managing out-of-hospital cardiac arrests. Integrating this technology into future healthcare systems represents real progress in strengthening the chain of survival and giving patients the best chance of a positive outcome.”

With UK survival rates for out-of-hospital cardiac arrest currently below 10%, the research aims to tackle one of the biggest challenges in emergency care: getting a defibrillator to the patient in time.

About NIHR

The **National Institute for Health and Care Research (NIHR)** is the UK’s largest funder of health and social care research. It invests in high-quality studies that benefit the NHS, public health and social care, supports researchers and facilities, and partners with patients and communities to improve outcomes both in the UK and globally.

Surrey University



Epsom and Ewell College Principal wins Silver at National Business Women’s Awards

Julie Kapsalis recognised for bridging the gap between boardroom and classroom.

Nescot’s Principal and CEO, Julie Kapsalis, won silver in the ‘Community Champion’ category at the National Business Women’s Awards in London last night. Julie was also a finalist for the ‘Corporate Leader of the Year’ award, highlighting how the college brings together corporates, the community and students, offering young people exciting opportunities to shine.

Under Julie’s tenure, Nescot has made business and community partnerships a primary focus, consistently opening doors for students. Examples include collaborations with the cruise industry and Epsom Downs Racecourse which have given students hands-on experience and led to new apprenticeships. Other students have gone behind-the-scenes at darts tournaments, hotels, museums, airports and at the Hampton Court Palace Garden Festival, while the art department has revitalised community spaces in Epsom with vibrant murals.



Julie Kapsalis, Principal and CEO at Nescot said: "Congratulations to the worthy and inspirational winners last night. It was great to win silver and to be in such illustrious company. The recognition reflects the hard work that goes on across Nescot, where we're always creating and taking opportunities to help our students thrive. I love my role, which I see as an enabler, and being able to make things happen. I get huge job satisfaction from bringing employers and students together so they benefit, either through an apprenticeship, a placement or even just an introduction that changes their path.

"The joy of attending awards is the connections you make and the inspirational stories you hear. Networking is key and I love meeting people, as I know that each business, community or civic connection we make has the potential to change a student's life."

Julie established a Women in Business Network, which hosts local leaders from organisations including KPMG, NatWest, Ringway, Wates and Atkins Realis. This year, she is especially proud of a partnership that Nescot has formed with the Royal Society for Blind Children which has enabled the establishment of a new Centre of Excellence for Blind and Visually Impaired students at Nescot, meaning young people from Surrey no longer need to travel outside the county for a college education.

The National Business Women's Awards aims to raise the profile of industrious, hardworking and enterprising Business Women nationally. The awards are made up of 23 categories and winners are chosen by an expert panel of judges. Find out more here.

NESCOT



Surrey Uni to open in India after UK PM's visit

Surrey joins new UK Universities in India Alliance while on UK trade mission to India

The UK's universities can be a "skills and research accelerator" for the potential of the strengthening UK-India trade partnership, which was the focus of Sir Keir Starmer's trade mission this week. This is according to Professor Stephen Jarvis, newly appointed President and Vice-Chancellor of the University of Surrey – and a participant in the trade mission.

On his return from India, where the multi-sector delegation met with Prime Minister Narendra Modi, Professor Jarvis highlighted the strong fit of the University of Surrey's 'purpose-driven' approach to education and research, and the importance of the new Universities in India Alliance, which Surrey was proud to become a founder member of during the trip.

During the visit, the University of Surrey was presented with approval in principle from IFSCA (International Financial Services Centres Authority) to proceed with opening a new International Branch Campus at GIFT City, in Ahmedabad, Gujarat State.

On the trip, the University also celebrated its network of research and education partnerships with Indian universities – including its partnership with the Indian Institute of Science, Bengaluru (IISc) – which will see both institutions partner to drive research and innovation in semiconductor chip design and medical research, with a particular focus on human health and veterinary medicine.

Professor Stephen Jarvis said:

"I was honoured to be invited to join the Prime Minister on his visit to India to celebrate the enormous potential for UK higher education to partner and collaborate in India to drive international skills development and research to solve global challenges. India is an economic and skills superpower – it has its own thriving higher education sector, but also recognises the value that Britain's globally recognised higher education sector can bring to meeting the extraordinary growth in demand for quality education in India.

"As we move towards opening our new campus in GIFT City, we're delighted to have been invited to become founding members of the nine-strong UK Universities in India Alliance. Education is an immensely important export industry for the UK, and Surrey is proud to be standing shoulder to shoulder with our fellow universities, bringing our own unique brand of purposeful education, as we seek to expand the potential for higher education to be a skills and research accelerator, benefitting both the UK and Indian economies."



Alison Barrett MBE, Country Director India, British Council, said:

"Congratulations to the University of Surrey on receiving approval in principle from IFSCA (International Financial Services Centres Authority) to establish its International Branch Campus in GIFT City, Ahmedabad, India. This reflects the UK's commitment to accessible, innovative, and inclusive education, but also demonstrates the positive impact of the National Education Policy 2020. Aligned with the shared ambition outlined in the India-UK Vision 2035, bringing Surrey's expertise to India will create exciting new opportunities for students and equip them with the skills needed to thrive in the future."

Surrey University



Image: 09/10/2025. Mumbai, India. Prime Minister Keir Starmer meets Indian Prime Minister Narendra Modi for a bilateral meeting at the Raj Bhavan. Picture by Simon Dawson / No 10 Downing Street

Surrey Uni finds gay vets face discrimination

A new study from the University of Surrey and the Royal Veterinary College has highlighted the ongoing presence of discrimination and its impact on lesbian, gay, bisexual, transgender, and other (LGBT+) veterinary professionals and students in the UK.

The research, published in *Vet Record*, analysed 130 survey responses and found that over half (55.4%) of the participants had either experienced or witnessed some form of discrimination, ranging from microaggressions to outright threats of violence. This number highlights a concerning problem for LGBT+ veterinary professionals and students and a call to action for profession to collectively work to ensure everyone can work free from discriminatory behaviour.

The findings also reported that over half of the participants were not fully "out" to everyone at their workplace or place of study underlining that not all LGBT+ veterinary professionals and students feel safe or welcome to share who they are at work or study. However, in contrast, the positive findings from the study were that those who were "out" were more likely to report feeling supported at work and by the wider veterinary community.

Participants also cited a fear of negative repercussions on their career progression and educational attainment as a reason for not disclosing their identity. The study notes that such fear can lead to stress, anxiety and a sense of disconnection from colleagues.

Dr Charlotte S. McCarroll, Associate Head of School (Education) at the School of Veterinary Medicine at the University of Surrey, said:

"For our LGBT+ family, friends and colleagues, discrimination remains a pressing issue within the UK veterinary profession. More needs to be done by our institutions for these individuals to feel supported, including increasing and promoting support networks, improving education and training on anti-discrimination laws, and firmly promoting equality, diversity and inclusion initiatives."

Dr Mat Hennessey, post-doctoral researcher in veterinary social science at the Royal Veterinary College, said:

"The findings of our study highlight the ongoing work which needs to occur, both in places of work and education, to foster inclusive environments which are supportive of all people. Creating such environments, where people can be their authentic selves without fear of discrimination, is a team effort requiring both institutional support for EDI initiatives and active engagement with the wider community."

Peter Heather MRCVS, President of BVLGBT+ said:

"Within our profession there are many employers and colleagues who remain committed allies, but as this study shows, discrimination against LGBTQ+ people in the veterinary profession persists. To combat this, leaders in our profession need to educate others and themselves about discriminatory behaviour and learn more about the benefits of open and inclusive work and

study environments that allow people to just be themselves."

Surrey University



Epsom and Ewell's NESCOT plumbs the heights

Nescot's gas and plumbing apprenticeship provision has been awarded a City & Guilds End Point Assessment (EPA) plaque for excellence in apprenticeship delivery.

Elizabeth Akinlaja, City & Guilds Business Development Manager for London, Kent & Sussex, officially presented the award to Principal and CEO, Julie Kapsalis and the plumbing team at the college this week (Monday 22 September). She said: "Congratulations Nescot, it was a pleasure presenting the City & Guilds EPA Excellence plaque to the apprenticeship team. This award is for their dedication and commitment in supporting learners on their Building Services Engineering (BSE) apprenticeship provision, which has resulted in outstanding first-time pass rates, especially in plumbing, an area facing significant skills shortages. Well-done to everyone involved for making such a positive impact!"

Learners on the gas engineering apprenticeship, part of the plumbing apprenticeship department at Nescot achieved a 94% first time pass rate.

The award recognises excellence in Nescot's EPA delivery, which is the final stage of an apprenticeship designed to validate an apprentice's knowledge, skills, and behaviours against the required apprenticeship standard. It signifies the high quality and standard of the college's apprenticeship training, and celebrates the plumbing apprenticeship department's successful and impactful EPA achievements.

Liz Crawley, Head of School, Construction, Engineering & Automotive at Nescot, commented: "It's fantastic to receive such amazing feedback from City & Guilds. Our plumbing team work really hard to ensure the best possible outcomes for our apprentices and local employers."

Sarah Keith, Head of Apprenticeships at Nescot, added: "I am so proud of the teamwork at Nescot across all apprenticeships. This award is a testament to the benefits of working in a strong team that supports our apprentices, employers and each other. It means that our students are fully qualified and industry ready. Well-done to the plumbing team, and everyone involved in apprenticeships at Nescot."

The EPA Excellence award showcases Nescot's commitment to apprentice success and industry standards and reflects the wide range of apprenticeship training available at the college. At Nescot, we offer apprenticeships in carpentry and joinery, commercial catering, gas engineering, plumbing and heating, electrical installation, business administration, customer service, team leading and management, marketing executive, hairdressing, early years, health play specialists as well as laboratory scientists.

Explore the range of apprenticeship courses available on the Nescot website.

Photo: (centre left to right): Nescot Principal and CEO Julie Kapsalis receiving the City & Guilds EPA Award plaque from Elizabeth Akinlaja, City & Guilds Business Development Manager for London, Kent & Sussex along with the Nescot Plumbing team. Credit NESCOT

An EPA Plaque from City & Guilds is an award given to colleges and training providers to recognise their high-quality apprenticeship delivery and the success of their apprentices. The plaque highlights consistent excellence in End-Point Assessment (EPA) performance, based on factors like high pass rates and a large number of Distinction grades achieved by apprentices. It is also a recognition of staff dedication, guidance and support offered to learners.

NESCOT



Epsom and Ewell MP calls for SEND action

Helen Maguire MP for Epsom and Ewell renewed her call for immediate government action to address the crisis in Special Educational Needs and Disabilities (SEND) services, following her attendance at both the *Fight for Ordinary SEND* rally on Parliament Square and the Westminster Hall debate on *Children with SEND: Assessments and Support*, held on 15 September 2025.

At the Parliament Square rally, Ms. Maguire met with parents and carers who shared deeply troubling accounts, including cases in which children appear to have been removed from the register for an Education, Health and Care Plan (EHCP), despite ongoing and substantial need. Families also raised concerns about long waiting lists, lack of specialist provision, and inconsistent support from local authorities.

A key piece of evidence cited by rally-attendees relates to new findings from the *Centre for Justice Innovation* (CJI). According to CJI's literature review and follow-up research:

- A very high proportion of children who are sentenced by criminal courts have identified SEND. For example, one statistic shows that **71%** of children sentenced between April 2019 and March 2020 had identified speech, language and communication needs (SLCN).
- More broadly, children with SEND are significantly overrepresented throughout the youth justice system: amongst those cautioned or sentenced for offences (including serious violence), over **80%** have been recorded as ever having special educational needs; for prolific offenders it's even higher.
- Barriers to effective diversion have been consistently highlighted: children with communication or learning difficulties are less likely to be diverted out of the formal justice system because their needs are either unrecognised or misinterpreted as behavioural problems.
- The CJI reports that data on SEND in diversion programmes is patchy, with inconsistent recording, varying assessment tools, and a lack of standardisation, which obstructs accountability and improvement.

These findings underline how failures in early identification, assessment, and support not only impact children's education but may also increase risk of contact with the justice system.

Westminster Hall Debate & SEND Petition

The Westminster Hall debate *Children with SEND: Assessments and Support* took place, prompted by a petition titled "*Retain legal right to assessment and support in education for children with SEND*", which attracted over 122,000 signatures. The petition calls on the Government to maintain existing legal protections (including the EHCP process) and improve the timeliness and quality of assessments.

MPs from across parties spoke powerfully about how delays in EHCP assessment, weak enforcement, and underfunding are leaving children and families without vital support. Some remarked on whether changes being mooted to the law may reduce legal guarantees for EHCPs—something campaigners have strongly opposed.

Case Example from Helen Maguire in Debate

During the debate, Helen Maguire shared a case from her own constituency:

"Four-year-old Maeve lives in my constituency and has cerebral palsy. She requires constant care, is unable to walk, has limited



speech and has multiple ongoing medical conditions that require attention. Despite that, and despite the fact that her parents applied to Surrey County Council almost a year ago, the council has refused to even assess her for an EHCP. She started school last week, but still does not have an agreed plan in place.”

This story underlines how delays and refusal to assess are not abstract problems—they are happening now and affecting young children with complex needs.

What Must Be Done

Helen Maguire is calling on the Government to take the following measures urgently:

1. **Restore and protect the legal rights associated with EHCPs**, ensuring that children who need assessments receive them promptly, and that the process is enforced.
2. **Increase funding** to SEND services and local authorities, especially for specialist care, speech and language therapy, and other supports that are in short supply.
3. **Shorten waiting lists** and reduce the backlog of assessments, so that children are not forced to begin school (or continue schooling) without the plan and support they are legally entitled to.
4. **Ensure better data and transparency**, particularly in diversion and youth justice settings, so the over-representation of SEND children is properly understood and addressed.
5. **Improve training** among professionals in education, local government and justice system sectors so that SEND is identified and accommodated, not misinterpreted as misconduct or behavioural issues.

Helen Maguire MP said: “We are seeing families shattered by delays, by refusals to assess, by thousands of children starting school without the support they clearly need. The statistics show that without early intervention, children with SEND risk falling into a system that is not equipped for them. The Government must act now—not in months, but immediately—on funding, waiting lists, and legal rights. Our children deserve nothing less.”

Sam Jones - Reporter



Related reports:

[Surrey MPs slam SEND profiteers](#)

[£4.9 million not enough to solve Surrey's SEND problems?](#)

[Surrey sent on a U-turn on SEND by MPs?](#)

Surrey Uni studies the climate friendly way to grow our lettuces

Vertical farming has been hailed as a futuristic answer to Britain's food security challenges – but a new study led by the University of Surrey suggests the picture is more complicated.

The research, published in *Food and Energy Security*, found that while vertical farms can deliver extraordinary crop yields and use far less water than traditional fields, their carbon footprint still exceeds that of soil-based farming.



What is vertical farming?

Unlike conventional agriculture, vertical farms grow crops indoors, often in stacked trays under carefully controlled light, temperature and humidity. Plants are usually grown without soil, using hydroponic or aeroponic systems that deliver nutrients directly to their roots. This means vertical farms can operate in cities, warehouses, or disused buildings – and, crucially, they are not dependent on weather or seasons.

Proponents argue that this approach could free up farmland for nature, cut transport emissions by producing food closer to consumers, and help guarantee supplies as climate change disrupts traditional growing regions.

The Surrey-led study

The University of Surrey team compared lettuce grown in a commercial UK vertical farm with lettuce from two UK field farms – one on mineral soil and one on peat – and with Spanish farms, which supply around 95% of Britain's winter lettuce.

They found that vertical farms can produce more than 20 times the yield of field farms: around 97 kilograms of lettuce per square metre, compared with just 3.3 kilograms outdoors. Water use is also dramatically lower, at 0.9 m³/kg compared with up to 7.3 m³/kg in Spain.

But the greenhouse gas emissions are still higher. Even when powered by renewable energy, vertically farmed lettuce produced about 0.93 kg of greenhouse gases per kilogram, compared with 0.57 kg from UK field farms.

Energy and materials the key hurdles

Much of the carbon burden comes from the heavy energy demands of lighting and climate control, as well as the jute fibre plugs used to support plant roots. Researchers estimate that swapping these for alternatives such as coconut coir could cut the land footprint of vertical farms by more than 95%.

Michael Gargaro, Postgraduate Researcher at Surrey's Centre for Environment and Sustainability and lead author of the study, said:

"Vertical farming has the potential to transform food security in the UK, particularly as climate change and seasonal drought place growing pressure on traditional agriculture. Our research shows that while the technology can bring far higher yields and reduce water use, it currently comes with a higher carbon cost. The challenge now is to make vertical farming more energy-efficient and better integrated with renewable systems, so that it can become a truly sustainable solution."

Dr Zoe M Harris, Director of the Centre and Co-Director of the Institute for Sustainability, added:

"With around 95 per cent of lettuce imported from Spain during the winter months, advances in vertical farming make it possible to secure a year-round supply of fresh produce while freeing up land for restoration. But to viably compete with field farming, vertical farms must cut their energy use and rethink the materials they rely on."

Can vertical farms really feed the UK?

The study concludes that vertical farms are not yet the most sustainable option for lettuce. But with further innovation – particularly in energy efficiency and material use – they could become an essential part of Britain's food system. For now, they remain a promising supplement to, rather than a replacement for, traditional farming.

The research was funded by the Biotechnology and Biological Sciences Research Council (BBSRC) and the Engineering and Physical Sciences Research Council (EPSRC).

New Centre at Nescot gives vision impaired students "the best of both worlds"

A new Centre of Excellence for vision impaired young people has opened at the North East Surrey College of Technology (Nescot) in Ewell.



The initiative is run by the Royal Society for Blind Children (RSBC), which has until now only operated its post-16 education hub at Dorton College in Orpington, Bromley. The Surrey launch marks the charity's first step in expanding its unique "hybrid" model of education beyond London.

A hybrid model of learning

The RSBC approach combines mainstream college life with specialist support tailored to blind and partially sighted students aged 16 to 25. Lessons at Nescot are shared with RSBC staff in advance, allowing them to adapt materials into Braille, large print, coloured text or raised diagrams.

Students also take specialist sessions in Braille, mobility and assistive technology, supported by dedicated Learning Support Assistants. The aim is not only academic success, but building the confidence and independence to prepare for adult life.

Under the model, learners divide their time between their local college and the RSBC hub. It is a system that has delivered strong results in Orpington, where 98% of students achieve good educational outcomes despite half having previously experienced unsuccessful placements elsewhere.

Partnership with Nescot and Surrey County Council

Julie Kapsalis, Principal and Chief Executive of Nescot, said:

"We are delighted to partner with RSBC to host the new Centre of Excellence. Our college community is enriched by its diversity, and we believe all young people should be able to access quality education and support. This partnership is a fantastic step forward."

RSBC Education Director and Executive Principal Josie Grainger-Francova added:

"Young people with vision impairment are so often excluded from the full education experience. Combining RSBC's specialist expertise with Nescot's broad curriculum and inclusive environment, we're creating a blueprint for what high-quality, person-centred provision should look like. We're proud to be expanding and supporting even more young people to thrive."

From Surrey County Council, Eamonn Gilbert, Assistant Director for SEND Commissioning, said:

"The new Centre of Excellence marks a significant step forward in how we support learners with visual impairments in Surrey. RSBC's proven track record, combined with Nescot's welcoming and ambitious culture, creates an exciting new post-16 offer for young people with visual impairments."

A student view

For learners like 19-year-old Lee Roake, the new centre is already making a difference. He said:

"It's so much more convenient for me to travel to Nescot – previously, I had to commute four hours a day to college. It's a really inclusive space and I'm supported to be as independent as possible. It's nice to meet people who are similar to me, too. For me, it's the best of both worlds."

About the organisations

The Royal Society for Blind Children is the only specialist post-16 education provider for vision impaired young people in London and the South East. More details: www.rsbc.org.uk

Nescot, based in Ewell, provides a wide range of further and higher education courses from vocational training to degree-level programmes. More details: www.nescot.ac.uk