



Surrey Uni studies the climate friendly way to grow our lettuces

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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"

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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

Surrey expansion of SEN places

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An 'Outstanding' Surrey school could open a new satellite site at another primary- around eight miles away.

Surrey County Council has revealed plans to expand a top-rated school for children with severe learning difficulties. Woodlands School, in Leatherhead, could have a second location at Cranmere Primary and Nursery school in Esher - a mere 25-30 minute drive away.

The move would create up to 28 extra places for children with severe learning difficulties and autism, all of whom have an Education, Health Care and Plans (EHCPs).

Currently Woodlands only has room for 83 pupils - though it has been squeezing in an extra 16 thanks to temporary classrooms.

Meanwhile Cranmere Primary, which has been rated 'Good' by Ofsted, has been running under capacity for years because of falling birthrates, council documents state. The building can take 630 pupils, but numbers have dipped enough there's now space to share.

The part of the Cranmere site earmarked for the expansion will need adapting so it can properly meet the needs of Woodlands pupils, according to reports. The work is said to have been planned to take place over the summer holidays, ready for a gradual roll-out of places from October 2025.

Surrey County Council says the set-up makes sense both for families and the budget. Officers say having local specialist places means children do not have to travel far away to school.

By providing places within the state system, the council's education bill drops and saves money for the taxpayer. Should these pupils be required to attend an education provision in the independent sector, costs would equate to around £1.484m per year every year. This is compared to the average cost for state-maintained specialist places of £644k.

Staff at the new site will be employed directly by Woodlands School and numbers will grow slowly over time, depending on demand.

The council says the move is part of its wider ambition to increase high-quality specialist school places across Surrey as the number of children with EHCPs continues to rise- with a 10 per cent increase expected over the next five years.

The current stage of the consultation will close on Friday 5 September 2025

Outside Woodlands School, Leatherhead. (Credit: Google Street View)

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Prostate cancer vaccine research launched in Surrey

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In September 2025, The Prostate Project, a Guildford-based volunteer-led charity, will launch a £250,000 campaign to raise funds for a prostate cancer research project widely anticipated to be 'game-changing'.

Work has begun to develop a vaccine to prevent the return of prostate cancer in men who have undergone a radical prostatectomy, the surgical removal of the prostate. Cancer vaccines have become an exciting area of research in recent years, and this new treatment could potentially save the lives of more than 1,500 men each year in the UK alone.

The Prostate Project, based at the Stokes Centre for Urology at Royal Surrey County Hospital, has a proven track record of funding research and treatment of prostate cancer, raising more than £11 million since its formation in 1998.

During this time the charity has provided funds for research at the University of Surrey, leading directly to breakthroughs in the diagnosis and treatment of prostate and other urological cancers. The university team is one of the leading groups for immunotherapy research in the UK, and is recognised around the world for its work.

This latest initiative is part of the charity's longstanding and ongoing support for the work of Dr. Nicola Annels and Dr. Guy Simpson and their team based at the University of Surrey.

A patent has been applied for the vaccine and Dr. Simpson has already proven that it works in the similar treatment of bladder cancer. This new research is required to see if the vaccine works as effectively for prostate cancer patients.

Dr. Guy Simpson, Research Fellow Oncology at the University of Surrey explains:

'The research will focus on a 'prime-boost' vaccine strategy. The new cancer-killing virus, known as HSV5-15 developed by our team at the University of Surrey will be used as an immune 'priming' vaccine along with a prostate specific mRNA vaccine to 'boost' and maintain this immune response against the prostate.'

mRNA vaccines have already proven to be revolutionary in preventing COVID, and this technology is promising similarly effective results in treating cancer tumours.

The vaccine trains the body's immune system to recognise cancer cells so any that return after surgery can be hunted down and killed, reducing the risk of the disease coming back. Around 5,000 radical prostatectomies are performed each year in the UK, but between 20% and 50% of men who have their prostates removed will have their cancer return, resulting in them undergoing further radiotherapy and/or hormone therapy.

This treatment is costly, time-consuming and can have unpleasant side effects, and is not always completely successful.'

Prostate Project Chairman, Martin Davies, expands on the fundraising initiative:

'For over 25 years the Prostate Project has been proud to support a team that is quite rightly recognised by their peers for their work in immunology research, and this latest initiative is perhaps the most important yet. We are looking to raise £250,000, a target that we recognise as ambitious but completely achievable, especially given our past record, and the significance of the potential outcome.'

A final word from Dr. Simpson on the timescales for delivery.

'This funding will support the initial 18 month research period, but the more money that we raise will have a significant effect on timescales.'

The Prostate Project website www.prostate-project.org.uk features a comprehensive FAQ page with answers to many of the questions about the vaccine and details of how to donate.

Epsom schools celebrate GCSE results

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Epsom schools have been celebrating another strong year of GCSE results, with both Glyn School and Rosebery School reporting exceptional performances from the Class of 2025.

At **Glyn School**, 86% of students achieved grade 4 or above in English and Maths, with 66% reaching grade 5 or above. Disadvantaged pupils also excelled, with 84% attaining grade 4 or better in the core subjects. Among the top performers were Joshua Ellis (eight grade 9s and three grade 8s), William Unsworth (eight grade 9s), and Frederick Browning (eight grade 9s). Twins Hamish and Oscar Donald also secured a string of solid passes, while Chelsea Football Club player Reggie Walsh managed to complete seven GCSEs alongside making his debut for the club's first team.

Students reflected on the hard work behind their achievements, with Nicholas Cooper noting: *'It was hard work but worth it,'* and Joshua Ellis adding: *'I'm really happy with my results, and I want to thank my teachers for helping me achieve them.'*

Headteacher Jo Garrod praised the determination of staff and pupils, while James Nicholson, CEO of GLF Schools, described the outcomes across the trust as "a fantastic set of GCSE results."

Meanwhile, at **Rosebery School**, the celebrations were equally jubilant. One in three exam entries was awarded a top grade 9 or 8, and half of all results fell between grades 9 and 7. Ninety-one per cent of students achieved grade 4 or higher in both English and Maths, and more than 80% reached grade 5 or above. In Maths and Science alone, Rosebery girls achieved 128 grade 9s.

Individual highlights included Iris Aryetey and Eilidh McFarlane, who each achieved ten grade 9s, while twins Grace and Hannah Black amassed a remarkable 15 grade 9s and five grade 8s between them.

The school's overall performance set new records, with an average grade of 6.4 and an Attainment 8 score of 64. Headteacher David Lach said the results placed



the cohort among the top 5% of schools nationally and praised both staff and pupils for their resilience during what he described as a "tragic and difficult academic year."

With both schools celebrating record results following last week's strong A Level outcomes, Epsom students appear to be ending the summer term on a high.

Related reports:

Epsom's boys' and girls' schools celebrate A level results

Photo: Rosebery girls celebrate. Credit: GLF Schools

Let your A level winners be creative says Epsom's Arts University

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Ahead of A-level results day and Clearing, University for the Creative Arts (UCA) has written an open letter to parents and carers asking them not to discourage their children from making the creative choice and ultimately pursuing their dreams this week.

UCA writes on behalf of the children that came before, those that didn't choose games over geography, marketing over medicine or animation over accounting due to pressure from their parents and carers, of which there are many examples posted on the online community, The Student Room. *"I'm honestly just doing linguistics for my parents. They expect me to get a 'good' degree, to get a secure job - they think working in the film industry won't get me anywhere."*

The University, which for nearly 170 years has delivered creative education, acknowledges it's only natural for parents and carers to feel uncertain when children say they want to pursue a creative subject. *"We understand the hopes and concerns that come with guiding children's higher education and subject choice. Parents and carers want the best for them - a secure future,"* says UCA's Vice-Chancellor, Professor Melanie Gray.

This is reinforced in UCAS' Project Next Generation report, which states parents want to guide their children towards the pathways that have the best capacity for earning and stability. As a result, almost half (48%) of children in the report, agreed that they feel pressure from parents to make 'good' decisions about their education.

UCA reassures in the letter that 'a creative choice is a career choice,' with the creative industries worth £124 billion a year to the UK economy and support more than 2.4 million jobs. Long-term, the sector is also part of the Government's modern Industrial Strategy - a 10-year plan backing the UK's strengths with ambitions for eight high-growth sectors, aiming to increase productivity and create jobs.

Professor Gray, adds: *"With this letter we're not reprimanding parents and carers, we're simply asking them to support their children and have confidence in them choosing what they love. We have seen time and time again, children not pursuing their creative dreams, which now more than ever, have a secure future."*

UCAS' report acknowledges parents and carers play a pivotal role in the crucial choices children make about their future. It also shows children's higher education choices are inspired by their passions. Support and reassurance, not pressure, is needed to empower children in their decision making.

Support ahead of A-level results day and Clearing is available on UCA's dedicated webpage, uca.ac.uk/clearing for parents and carers, as well as those wanting to make the creative choice. On Friday 15 and Saturday 16 August, the University also welcomes anyone to tour its campuses and ask staff and current students questions. For those not yet applied through Clearing, Staff will also make on-the-spot offers to those suitable.

Image: Student work by UCA BA Graphic Ryon Pattison

Almost any listening environment on Earth coming to Surrey

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A new national audio hub featuring world-first acoustic facilities is being built at the University of Surrey, thanks to £2.2 million in funding from the Engineering and Physical Sciences Research Council (EPSRC). The facilities will allow researchers to simulate almost any listening environment on Earth, from a quiet living room or modern office to a vast concert hall, cathedral or bustling city street.

At the heart of AURORA³ (Anechoic and Universal Research Observation Rooms for Audio, Acoustics & AI) will be two world-class audio environments: a state-of-the-art anechoic chamber with a spherical loudspeaker array and a first-of-its-kind variable acoustics room capable of adjusting both reverberation time and physical volume at the push of a button. AURORA³ will be open to researchers from both academia and industry across the UK and globally, as well as to Surrey staff and students.

Professor Enzo De Sena, Director of the Institute of Sound Recording at the University of Surrey, and Fellow of the Surrey Institute for People-Centred AI, said:

"AURORA³ will create a national hub for excellence in sound and AI, allowing researchers to generate reproducible data, test innovations in controlled and lifelike environments, and shape technologies that benefit society."

The initiative aims to unite the Audio, Acoustics and AI (A³) research community and fuel breakthroughs in sound technology by enabling more accurate modelling of the physical and perceptual phenomena involved in real-world hearing. AURORA³ will pave the way for voice assistants and remote communications that are more robust to noise and reverberation, more immersive Virtual and Augmented Reality experiences for entertainment and virtual prototyping, and smarter hearing aid devices that better understand and adapt to the acoustic scene.

AURORA³ will be hosted at Surrey's Institute of Sound Recording - part of the School of Arts, Humanities and Creative Industries - and co-led with the University's Centre for Vision, Speech and Signal Processing (CVSSP). The facilities will also work in collaboration with the Surrey Institute for People-Centred AI, the CoSTAR



National Lab, and is backed by a consortium of 18 partners and 12 key users, including the BBC, Meta, KEF, Imperial College London, the University of Cambridge, and non-profits such as the Royal National Institute for Deaf People and the Institute of Acoustics.

Professor Enzo De Sena continued:

"Combined with the UK's deep AI talent pool and rapidly expanding computing capacity, AURORA³ provides the missing facility for audio data capture, placing the UK at the centre of global audio and acoustics research."

Image: Professor Enzo and the AURORA logo: credit Surrey University

Box Hill teacher with naked boy interest struck off

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A teacher has been struck off and banned from the profession after being found with hundreds of indecent images of children and a search history looking for naked young boys. Nicholas Heuvel worked at Box Hill School Trust in Mickleham, Dorking from September 1997 before resigning in 2017.

The school was a private boarding and day school until it merged with Reigate Grammar School and became RGS Surrey Hills in 2025.

Between January 2016 and January 2018, Mr Heuvel had up to 224 indecent images of children on his phone, including at least one of the most extreme kind. He also admitted to searching for terms including 'little boy nudists' and 'young boy speedos', between 22 October 2017 and 23 October 2017, and was given a police caution in 2021.

The Teacher Regulation Agency rejected Mr Heuvel's claim that he wasn't sexually motivated, finding no plausible innocent explanation and, on the balance of probabilities, that he was seeking gratification.

The panel, which concluded its findings on July 15 this year, said Mr Heuvel's viewing and searching for significant numbers of indecent images of children over a lengthy period of time were relevant to his position as a teacher. They said it amounted to serious misconduct and fell significantly short of the standards expected of the profession.

There was also a lack of any evidence that Mr Heuvel made any effort to report the images - which he would have known he needed to do by virtue of his role as a teacher and the safeguarding training he would have received.

David Oatley, on behalf of the Secretary of State for Education, said that the period of time with which Mr Heuvel used specific search terms to access indecent images of children was a significant factor and that the risk of repetition was high due to Mr Heuvel's lack of insight and or remorse into his actions and the impact that his actions had on children.

Mr Oatley said: "Mr Nicholas James Heuvel is prohibited from teaching indefinitely and cannot teach in any school, sixth form college, relevant youth accommodation or children's home in England. "Furthermore, in view of the seriousness of the allegations found proved against him, I have decided that Mr Heuvel shall not be entitled to apply for restoration of his eligibility to teach.

Hayley Robinson, headteacher of RGS Surrey Hills, formerly Box Hill School, said: 'We very much support the decision of the Teaching Regulation Agency to regard the safety of children as the highest priority in our profession. "We note that Nicholas Heuvel was struck off for matters unconnected with allegations about his behaviour at Box Hill School and relate to the years 2017-18, nearly a decade ago. RGS Surrey Hills is now a member of the prestigious Reigate Grammar School group of schools, where safeguarding and pupil safety and wellbeing is at the centre of everything we do."

Box Hill School before it merged to become RGS Surrey Hills (image Google)

Former Surrey teacher avoids ban from profession

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A former science teacher and head of year at a Surrey private school has avoided a ban from the profession despite sending 'sexually explicit' messages to three colleagues.

Leishan Silva, 44, was sacked from Downsend School in Leatherhead following an internal investigation into complaints by three female staff about inappropriate and persistent behaviour.

He later admitted to the allegations during a private misconduct hearing held by the Teaching Regulation Agency (TRA) on July 11.

Messages sent by Mr Silva were categorised as "sexually motivated" by the TRA. He sent one colleague messages like "F*** me, you look amazing", "what's wrong with c***, it's natural?" and "your amazing boobs". He also suggested he would like to see one of them wear a bikini on a school trip to a water park.

Between 2018-2023, Mr Silva pursued sexual conversations with three colleagues. The social media messages displayed what the TRA panel called "a pattern of behaviour over a sustained period".

Despite finding Mr Silva's actions amounted to "unacceptable professional conduct and conduct that may bring the profession into disrepute", the panel stopped short of recommending he should be banned from teaching.

Instead, they opted to publish the findings as a warning on the government's website.

Also noted by the panel was Mr Silva's "unblemished" disciplinary record and successful teaching career prior to the allegations. The panel said there was no evidence these concerns were brought to Mr Silva's attention at an earlier stage.



His attention was drawn to these concerns retrospectively, so his poor conduct could not have been addressed earlier.

When the allegations were made by the three staff members, Downsend School launched an internal investigation, leading to a disciplinary hearing which resulted in Mr Silva being sacked from the school.

In mitigation, the panel noted Mr Silva had expressed remorse and insight regarding the harm and embarrassment he has caused to his female colleagues. He had also written apology letters to each of the colleagues. Mr Silva had told the panel that difficult personal circumstances at the time may have affected his judgment.

In isolation, the interactions with a colleague could be categorised as a 'low level concern' according to the TRA panel. But taken together, the panel said the messages showed a pattern of behaviour over a sustained period of time.

The report said: "Therefore, the cumulative effect of this repeated behaviour led to the panel's determination that Mr Silva's case amounted to unacceptable professional conduct."

Concluding, the secretary of state said: "The publication of the findings made would be sufficient to send an appropriate message to the teacher as to the standards of behaviour that were not acceptable and that the publication would meet the public interest requirement of declaring proper standards of the profession."

Stock image of empty classroom. (Credit: kieurope/ Pixabay)

Epsom Charity Hears Students' Plea: Cut the Cost of School Uniforms

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As school doors close for the summer, an Epsom-based charity has shared powerful testimony from local students who say the cost of school uniform is putting their families under severe financial strain.

The Good Company, known for running the Epsom & Ewell Foodbank and wider anti-poverty initiatives, has been working with five secondary schools in the borough through its '**Cost of the School Day**' project. Its aim: to listen directly to pupils on free school meals and help schools better understand the hidden costs that prevent some children from fully participating in school life.

"The most important takeaway for us has been listening to the voices of these students, and their personal journeys," said one participating Deputy Headteacher. "It is so powerful to hear from the students themselves."

A recurring theme across all schools was the financial pressure of uniforms — particularly the insistence on expensive, branded items.

"A problem I experienced when I was new to the school is the cost of uniform itself. It put my parents into the red," said Mike, a Year 11 student.

The findings echo national research. According to the Children's Society, the average cost of a secondary school uniform in the UK is £422 per year per child, while for primary pupils it is £287. A 2020 survey by the Department for Education found branded items account for a significant proportion of the cost, often required to be bought from a single supplier.

In response to these concerns, the UK Government introduced the Education (Guidance about Costs of School Uniforms) Act 2021, requiring schools to keep branded items "to a minimum" and ensure uniforms are affordable. But campaigners say implementation remains patchy.

Local Action, National Relevance

The Good Company's report suggests that real change comes when schools engage with students directly and respond with practical steps. Among the suggestions from students and staff were:

- Reducing the number of compulsory branded items
- Expanding second-hand uniform schemes
- Partnering with local charities to provide direct financial support
- Promoting understanding among staff about the reasons students may not always comply with uniform rules

The charity is calling on more schools to engage with its free online resources and consider reviewing their own uniform policies.

"Let's keep working together to make schools a place where all children feel they belong, no matter their financial background," said Tom Sefton, Director of Participation and Prevention at The Good Company.

More Information

Schools or individuals interested in learning more or accessing free training resources can visit: goodcompany.org.uk/cost-of-the-school-day

To donate to the charity's School Uniform Fundraiser, visit the same website and click on the pink donation button.