POSTGRADUATE PROSPECTUS

GRADUATE SCHOOL OF THE ENVIRONMENT

50
1973 – 2023

Centre for Alternative Technology
Canolfan y Dechnoleg Amgen

Contents

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Centre for Alternative Technology
@centre_alt_tech
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Prospectus published in June 2023

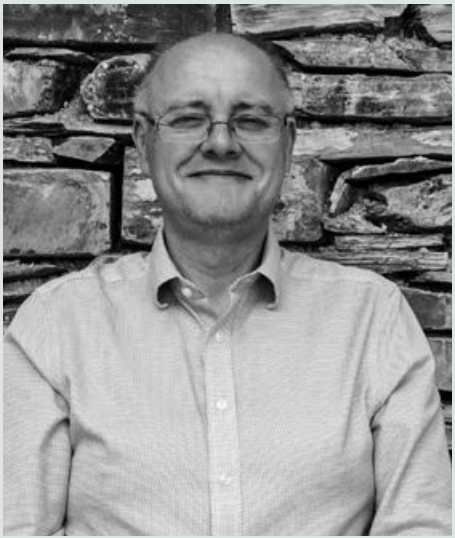
Welcome to CAT's Graduate School of the Environment

Founded in 1973, the Centre for Alternative Technology (CAT) has a unique mission, to inspire, inform and enable humanity to respond to the climate and biodiversity emergency by researching, demonstrating and teaching solutions for a changing environment. As we celebrate 50 years of working towards this goal, the impacts of climate change and environmental degradation are becoming harder to ignore, and our ability to communicate positive, holistic, practical and evidence-based solutions becomes ever more important.

The Graduate School of the Environment at CAT has a long tradition of teaching sustainability in an enriching and solutions-focused way. Since its creation, the Graduate School has produced over 2,000 committed graduates, many of whom have taken their experience of studying at CAT and used it to become environmental 'changemakers' in their workplaces, communities or personal lives. CAT's Graduate School of the Environment remains unique amongst Higher Education providers in that it has a singular focus on delivering practically based courses embracing the sustainability agenda. Our lecturers have extensive academic and practical expertise in sustainability, and we supplement this with regular guest lectures from nationally and internationally renowned thinkers, specialists and practitioners, to ensure students are equipped with the latest paradigms and practice in environmental sustainability.

We provide a fulfilling and nationally recognised university level education, whilst employing an alternative, supportive and immersive approach to your learning. Should you choose to study with us, we aim to equip you with the skills, knowledge and insights to allow you to play your part in creating the sustainable society that is needed now and for the future.

Dr Adrian Watson
Head of School



Practical Solutions for our Changing Planet

"The decisions we make today are critical in ensuring a safe and sustainable world for everyone, both now and in the future." Debra Roberts, IPCC

Radical action is needed now if we are to avoid dangerous climate breakdown.

The Intergovernmental Panel on Climate Change (IPCC) is clear: humanity must reach net-zero greenhouse gas emissions by mid-century. The earlier this is achieved, the greater our chance of limiting global temperature rise to near 1.5°C, helping prevent runaway climate change.

At the same time, we must find solutions to the 'silent crisis' engulfing the natural world. The way we have mismanaged land and sea and exploited species over the past 50 years has led to an unprecedented rate of ecosystem destruction and loss of biodiversity.

The challenge is to address these urgent issues while at the same time enhancing human health and wellbeing, and adapting our physical and social structures to cope with the climatic and environmental change that is already in the system.

For 50 years, CAT has explored sustainable solutions to environmental challenges. From early experiments with renewable energy and green building to pioneering research into creating a Zero Carbon Britain and education work in all aspects of sustainability, CAT has always been at the leading edge of working on practical, evidence-based solutions.

Postgraduate Degrees with Sustainability at the Core

CAT's postgraduate courses are respected across the world, offering a big-picture, integrated approach to sustainability.

Our unique location, practical facilities and immersive educational environment provides academic learning combined with practical experimentation, helping you to develop the knowledge, skills, inspiration and networks to make a real difference in your chosen field.

A lecture on food systems might be followed by an afternoon in the CAT gardens interviewing local food growers and producers. Or a lecture on thermal properties of different materials might be followed by an afternoon spent practically testing thermal resistance (u-values), helping reinforce your understanding and giving you skills and experience that could be helpful in the workplace. All of our courses offer this valuable combination of theory and practice.

Our mix of expert in-house staff and specialist guest lecturers provides a unique blend of expertise from academia, practice and industry. You can read more about our lecturers on pages 55 – 60.

The people that you'll be studying alongside are just as important. Nowhere else can you learn about sustainable solutions alongside people who care about the issues as much as you do. You'll meet people from across the UK and around the world from a wide variety of different backgrounds, from arts to agriculture, construction to commerce. They also bring different levels of prior knowledge, whether that is in academic studies or in their professional field.

What we hear time and again from our students is that it is this melting pot of ideas, knowledge, passion and understanding that makes CAT a truly special place to learn.

We hope you'll decide to join us.

"CAT is such a stimulating, rewarding and demanding place. I have made good friends, learnt excellent new skills, gained so much confidence and discovered materials I had no idea about, despite my advanced years. I cannot praise you all highly enough for the effort, enthusiasm, tolerance and dedication that you put into the course. Many, many thanks for that."

CAT Graduate

Flexible Learning Options

We know that many students have jobs, families and other commitments alongside their passion for sustainability. We offer flexible learning options to enable you to build your knowledge and skills without sacrificing other areas of your life.

For our **MSc and MRes courses** choose between part-time and full-time, on-site or distance learning (or a blend of the two), and decide what level of study you'd like to pursue.

Our **MArch in Sustainable Architecture Part 2** course is available through on-site learning only but you have the option to choose between full time and part-time to continue working in practice or on other commitments.

All new students start in September.

Full-time or Part-time?

Full-time study on a CAT MSc programme will take between 6 and 18 months, depending on which level of study you choose. Part-time study on a CAT MSc programme allows you to spread your taught module choices out across two years plus a 6-month dissertation for MSc students.

Studying on a CAT MRes programme will take 2 years full time or 3 years part time. The part time option allows you to spread your extended dissertation over 2 years rather than one year following your year of taught modules.

Full-time study on CAT's MArch in Sustainable Architecture course will take 22 months and part-time study will take three years allowing you to spread your learning over a longer period of time with more on-site visits.

Which Level of Study?

MArch Sustainable Architecture award requires successful completion of 240 credits.

MRes award requirements: core and optional taught modules (60 credits) + a compulsory extended research dissertation (120 credits). Our MRes in Sustainability and Adaptation is new for our September 2023 entry.

MSc awards requirements: core and optional modules (120 credits) + a compulsory dissertation (60 credits).

You can also exit an MSc early to receive a Postgraduate Diploma or Certificate. These can also be entry awards on to the programme:

Postgraduate Diploma (PGDip) awards require core and optional modules (120 credits).

Postgraduate Certificate (PGCert) awards require only core course-specific modules or depending on the course, core and some optional modules (60 credits).

You'll find information about the number of credits for each module in the courses pages and more specific details about each module on our website.

Validation and Quality Assurance

CAT is an independent alternative learning provider. Our Masters courses are validated by either the University of East London or Liverpool John Moores University.

The Graduate School's academic standards and student learning opportunities are also regularly reviewed by the Quality Assurance Agency for Higher Education (QAA).

Choosing How You Study

Our course delivery is quite different from most postgraduate degrees.

Taught modules with on-site visits offer an immersive learning experience through lectures, talks, seminars and workshops. You can choose to spend a residential study week at CAT and take the rest of the module from a distance, or MSc and MRes students take the course can take whole module completely through distance learning. Some students will come to CAT for every module, some MSc and MRes students take the course entirely by distance learning, and others do a mix of the two.

"The experience of studying at CAT taught me valuable skills for academic thinking and writing, and helped clarify my perspective on our individual and collective roles in relation to environmental change. Studying on-site at CAT was also a precious chance to engage with interesting souls and get a feel for life in an attractive area of rural Wales."

CAT student

International Students

CAT's student body is made up of a mix of students joining us to study from around the world, not just the UK. The mix of viewpoints give students a global perspective on sustainability, how it is being understood, developed, and implemented in different regions of the world.

The majority of students* studying at CAT from overseas join via distance learning as we do not currently have a license to sponsor students who requiring a visa. This means that overseas students cannot study full time on-site but will be able to access our MSc or MRes courses via distance learning or through a rich mixture of residential (usually under 6 months) and distance learning. Overseas students from outside of the UK and Ireland or without settled status who would like to study part of the course, or a module on-site will need to check their eligibility for a Standard Visitor visa with the UK Government. For more information on eligibility, visit https://www.gov.uk/check-uk-visa.

If English is not your first language, then you will need to provide evidence of your English language proficiency. An overall IELTS level of 6.5 or equivalent is required, with a minimum level of 6.0 for each component.

For more details about studying at CAT as an International student please visit https://www.cat.org.uk/courses-and-training/graduate-school/international/

Sarath from Muscat in Oman reflects on studying with us...

"Studying at CAT, sitting thousands of miles away in Muscat, I was never away from the tutors, and regular seminars allowed me to have clarity on matters instantly. Seminars are also planned at different times to allow me to select the time that suits me...I would strongly recommend studying at CAT by distance."

*Our MArch Sustainable Architecture course is highly practical and requires attendance in person at CAT. As we do not hold the required Student Sponsor licence we are unable to consider applications for our MArch course if you live outside of the UK (you are exempt from this stipulation if you already have settled or pre-settled status or are resident in Ireland).

Roshan Nageena Sabeer
2022 CAT Graduate

Roshan is a Principal Architect at Ávása Architects in Kerala, India. Having studied with us through distance learning on our MSc in Green Building course she is steering her small architecture firm to adopt and experiment with the sustainable ideas and materials she learnt about on the course to find suitable solutions for ongoing design and build projects.

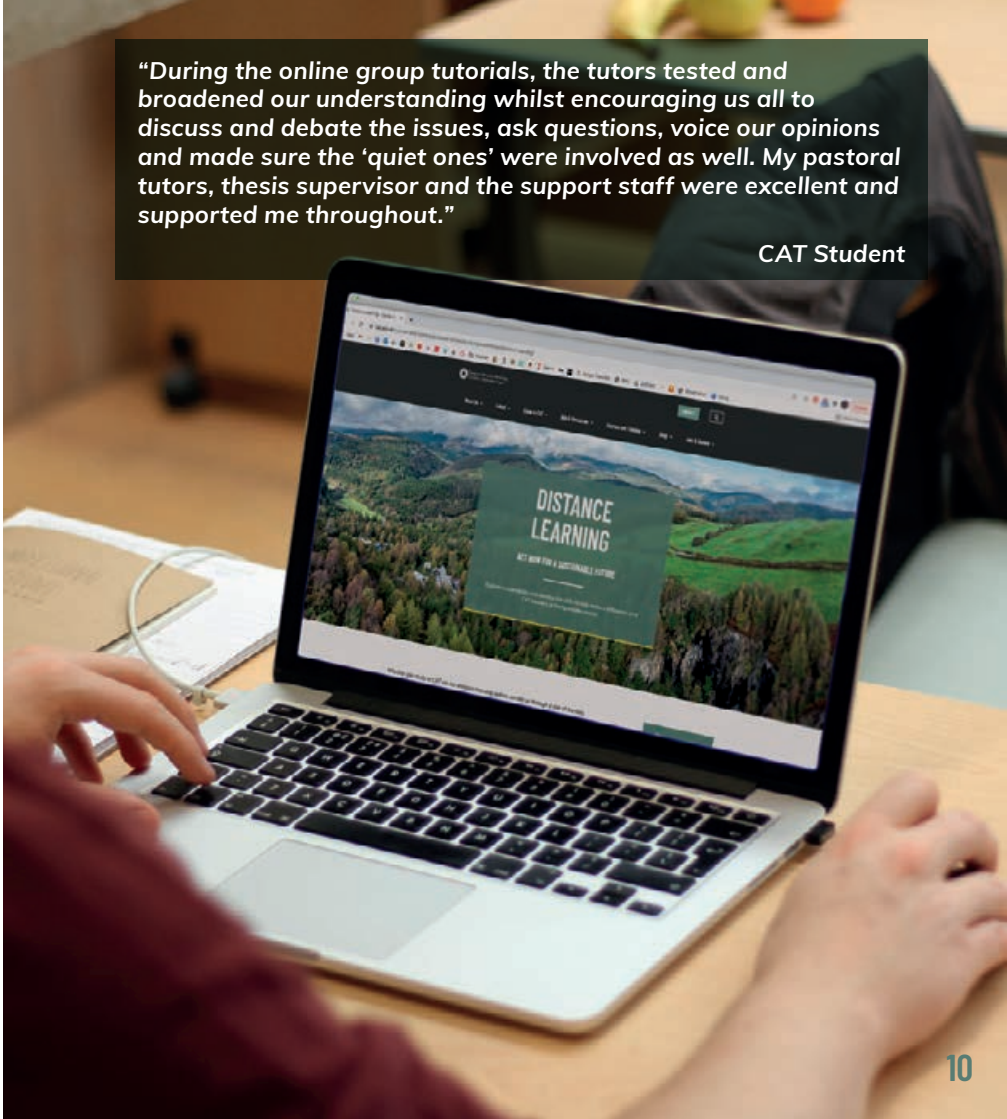
"My passion for influencing a sustainable lifestyle and search for solutions led me to CAT. I could see that CAT shared similar values regarding sustainability and everyone seemed to exhibit the same kind of passion towards doing something for the planet and making the Earth a better place. Moreover, CAT offered a flexible learning experience which allowed me to study by distance."

Studying by Distance

MSc and MRes modules studied at a distance are typically arranged as a sequence of teaching activities over an eight-week period. Students are able to set their own schedule around seminars and group work, accessing lecture notes, participating in live lectures or watching recordings and accessing supporting material via an online learning platform, discussion apps, Microsoft Teams and phone.

The online platforms help to create and continue a sense of community and allow regular interaction between CAT students, academic tutors and support staff.

With studying by distance allowing flexibility to study around current life and work commitments, MSc and MRes students can also study from anywhere in the world (with an internet connection!) allowing a very rich mix of cultural and social perspectives to be brought to the online discussions and tutorial groups.



"During the online group tutorials, the tutors tested and broadened our understanding whilst encouraging us all to discuss and debate the issues, ask questions, voice our opinions and made sure the 'quiet ones' were involved as well. My pastoral tutors, thesis supervisor and the support staff were excellent and supported me throughout."

CAT Student

Studying On-site

MSc and MRes students can study each module entirely by distance, or you can choose to join us for residential study visits as part of the module. You can choose which method you prefer on a module-by-module basis.

Residential visits are an essential element of our MArch: Sustainable Architecture course, so all architecture students attend on-site weeks, typically on a monthly basis.

On-site visits can range from 3-6 days, and are made up of lectures, seminars, tutorial time and practical sessions.

It's a chance to pack lots of learning into your visit, network with fellow students, staff and guest lectures, and really immerse yourself in studying sustainable solutions within a truly unique learning environment. Conversation flows long into the evening as staff and students debate the issues and explore solutions together.

You then return home to complete study in your own time, fitting coursework around life's other demands, and accessing learning materials via online learning platforms, just as distance learning students do.

"The whole experience was absolutely fantastic. I thoroughly enjoyed everything, from the practical studies to the student project debates and the invaluable lectures. The enthusiasm and energy that radiated from everyone was just a total BUZZ. Suffice to say, I enjoyed it so much, I didn't want to come home."

CAT Student

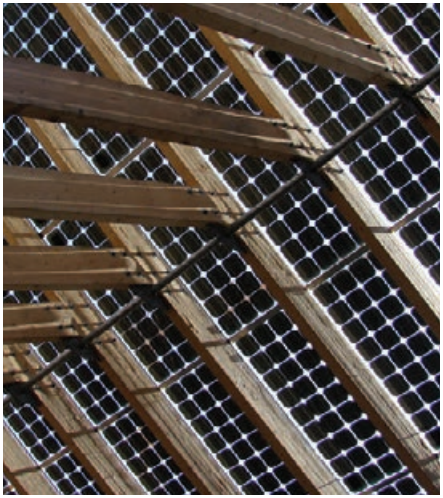
Facilities and Location

On-site residential weeks offer the chance to study in a unique learning environment.

CAT's location on the edge of the Eryri (Snowdonia) National Park, within a UNESCO Biosphere Reserve, makes it a truly beautiful and peaceful place to study and a great base from which to enjoy nature and the outdoors.

Our sustainably managed woodlands and productive organic gardens provide a place to relax and reconnect with nature, whilst also being available to students for research projects and hands-on learning.

Image © Scott Waby



A Living Laboratory

The CAT site is a living laboratory containing some of the most innovative environmentally-conscious buildings in the country, including examples made with earth, timber, straw, hemp and lime.

We have a diverse range of installed renewable and low carbon technologies, including solar photovoltaics, solar thermal panels, hydro-electricity, heat pumps, small wind turbines and efficient biomass heating.

A wide variety of habitats are also represented on and around the CAT site. With easy access to wetlands and woodlands, high mountain pastures, heathland, and riverine, coastal and transitional waters, students can have hands-on experience studying and evaluating biodiversity, land use and our ecosystem.

"I was able to use the buildings on site as real case studies, including undertaking air pressure testing and thermal imaging on the Self Build House, undertaking experiments with green roofs, using the workshop for straw bale construction and building a prototype timber frame disaster shelter on site."

CAT Student

The WISE Education and Conference Centre

On residential visits, most of your lectures and seminars will take place in the award-winning WISE building, designed by Pat Borer MBE and the late David Lea. Incorporating innovative design and materials, WISE provides an inspiring, comfortable environment in which to study. Its centre piece is a large circular rammed earth lecture theatre – a stunning example of sustainable architecture.

"When I started at CAT, I could never have imagined how much you would learn, and how it would enable me to change the course of my career to be able to work on something I really believe in, and which I feel can make a difference. "

CAT Student

Fees and Funding

Tuition Fees

Fees can be paid on a module-by-module or termly basis, allowing you to spread the cost of your studies, or you can choose to pay the whole amount up-front.

The fees below are the fees for students enrolling in September 2023.

	Home Students	Overseas Students
Full MArch course	£14,500	N/A
Full MSc (180 credits)	£8,750	£10,500
Full MRes (180 credits)	£8,750	£10,500
Alternative awards:		
Postgraduate Diploma (120 credits)	£6,800	£8,000
Postgraduate Certificate (60 credits)	£3,400	£4,000

See website for full terms and conditions: **www.cat.org.uk/fees**

Additional Costs

Enrolment Deposit – Prior to the commencement of the course, a £50 non-refundable deposit must be paid alongside the completion of the pre-enrolment form.

Masters in Sustainable Architecture – Students should also budget an estimated £300 for participation in the study visit (costs vary depending on booking choice for accommodation, meals and transport).

Sustainability in Energy Provision and Demand Management – Students on this course should budget a further estimated £250 for the purchase of data-collecting equipment, some of which will be needed during the first core module. Further information about this will be distributed to Sustainability in Energy Provision and Demand Management applicants closer to enrolment.

Accommodation and Food Costs

Accommodation is also available on-site at CAT during the residential study weeks (typically five days for MSc modules and six days for MArch modules).

The WISE building offers shared en-suite full board accommodation for £265 per person for a typical 5-night module week (this includes breakfast, lunch and evening meal).

Bunkhouse-style shared self-catering accommodation is available in our Eco Cabins, which have some self catering facilitates. This option is £115 per person for a typical 5-night module week (this doesn't include food).

For more information please visit **www.cat.org.uk/student-accommodation.**

WISE twin room

The CAT café offers affordable vegetarian, vegan and gluten-free meals (breakfast, lunch and dinner) for students during their on-site visits. Prices vary but students will be able to pre-book their meals for on-site visits alongside their accommodation if it isn't already included. We would typically advise students to budget an estimated £20-£25 per day for on-site meals.

Funding may be available to help cover these costs - see pages 17-18 for details.

Funding

CAT students may be eligible for a Postgraduate Loan to cover both tuition fees and living costs via Student Finance England or Student Finance Wales. Full-time MArch students may also be eligible for a professional undergraduate loan.

Take a look at our Fees and Funding page on the CAT website for more information on this and other sources of funding.
www.cat.org.uk/funding

The Llwyngwern Bursary

Named after the transformed slate quarry CAT calls home, the bursary is given to two postgraduate students annually from our Sustainability and Adaptation course and our Sustainability in Energy Provision and Demand Management course. It will cover 75% of their tuition costs.

Inspired by CAT's mission to inspire, inform and enable humanity to respond to the climate and biodiversity emergency, funds for the Llwyngwern bursary were kindly donated by some of CAT's members to support two new MSc students to study climate solutions on a CAT postgraduate course.

See our Fees and Funding page on the website for full details and to apply.

The Ethel and Gwynne Morgan Trust Bursary

Worth £4,500, this bursary is awarded to a new student beginning on one of our postgraduate courses, thanks to a generous donation from The Ethel and Gwynne Morgan Trust.

The Trust, whose main aims and activities focus on the advancement of education in science in Wales, will partly fund a student who would otherwise be unable to study on a postgraduate course because of their financial situation, and is aimed at those who wish to apply the knowledge and skills they learn in a practical way to help combat the climate and biodiversity crisis in Wales.

See our Fees and Funding page on the website for full details and to apply.

Rose Jessica-Maia Bursary

Introduced in 2021, the bursary was set up in memory of Rose Jessica-Maia and will enable one Masters student each year who has experienced or is experiencing mental health difficulties to have half their tuition fees paid for them. The bursary is open to applications from new students starting on the following MSc courses: Sustainable Food and Natural Resources, Sustainability and Ecology and Sustainability and Behaviour Change.

See our Fees and Funding page on the website for full details and to apply.

The Sir John Houghton Bursary

Thanks to a generous donation from the late Sir John Houghton, CAT is able to offer an annual bursary of £4,500 to a promising postgraduate student who demonstrates that they have an excellent academic record and a passion for tackling climate change.

Sir John had an illustrious career as one of the world's most eminent climate scientists, including being co-chair of the UN Intergovernmental Panel on Climate Change (IPCC) Scientific Assessment Working Group and was a former Chief Executive of the Met Office. He was also a long-term supporter of CAT's work.

On making the donation Sir John said:

"I have spent a lifetime studying the atmosphere and the climate and latterly have been concerned with the reality of human induced climate change. I now want to help the next generation tackle this serious problem, possibly the biggest the world faces."

See our Fees and Funding page on the website for full details and to apply.

Support During your Studies

During your studies at CAT, you will have access to a personal tutor and our dedicated Programme and Student Support team are also on hand to support you: from getting you set up on the Virtual Learning Environments and student email, to making you aware of important dates, deadlines, policies and procedures, and supporting any additional learning needs and disability arrangements.

CAT is committed to building a learning community founded on equality of opportunity that embraces diversity. Respecting individuality and difference, we aim to be proactive in supporting students with additional needs. Some students will have health issues which can affect their learning and require individual attention, and we will make reasonable adjustments to support these students in their learning wherever possible.

We encourage declaration of additional learning needs and/or disabilities when you apply – and then later on when you enroll – followed by disclosure of any further information before starting the course, so that appropriate support can be offered at the earliest opportunity. We also recommend you explore applying for the disabled student allowance to help you with your studies. **https://www.gov.uk/disabled-students-allowance-dsa**

If you feel that your disability or additional needs could impact your learning experience at CAT, please refer to our *Student Support and Welfare Guide* on our Current Students page. **https://cat.org.uk/download/26801/**

COVID-19

In response to the COVID-19 pandemic, we delivered Graduate School modules through a mix of on-site and distance learning following the Welsh Government guidelines in place at the time. During this time, we implemented measures to keep students and staff safe on-site which included reducing the number of students on-site at any one time and operating single occupancy accommodation.

With the cooperation of students and staff, we can now offer shared occupancy accommodation once more, allowing more students to study together on-site. We will continue to operate some of our COVID-19 safety measures, and if anything changes we will follow Welsh Government guidelines on COVID again in the future.

You can find out more about our response to COVID-19 and the safety measures we have in place for on-site teaching here:
https://cat.org.uk/courses-and-training/graduate-school/covid-19-information-for-students/

"I chose to do my modules on-site at CAT, as I generally learn better when taught in person, however since moving to online learning only because of COVID-19 I cannot praise the staff at CAT enough for aiding the transition. Staff were more than happy to assist in answering questions, just as they are in person. This extended the real community feeling we all enjoy at CAT."

CAT Student

Sustainable Architecture

MASTERS IN ARCHITECTURE

ARB Part 2

Sustainable Architecture

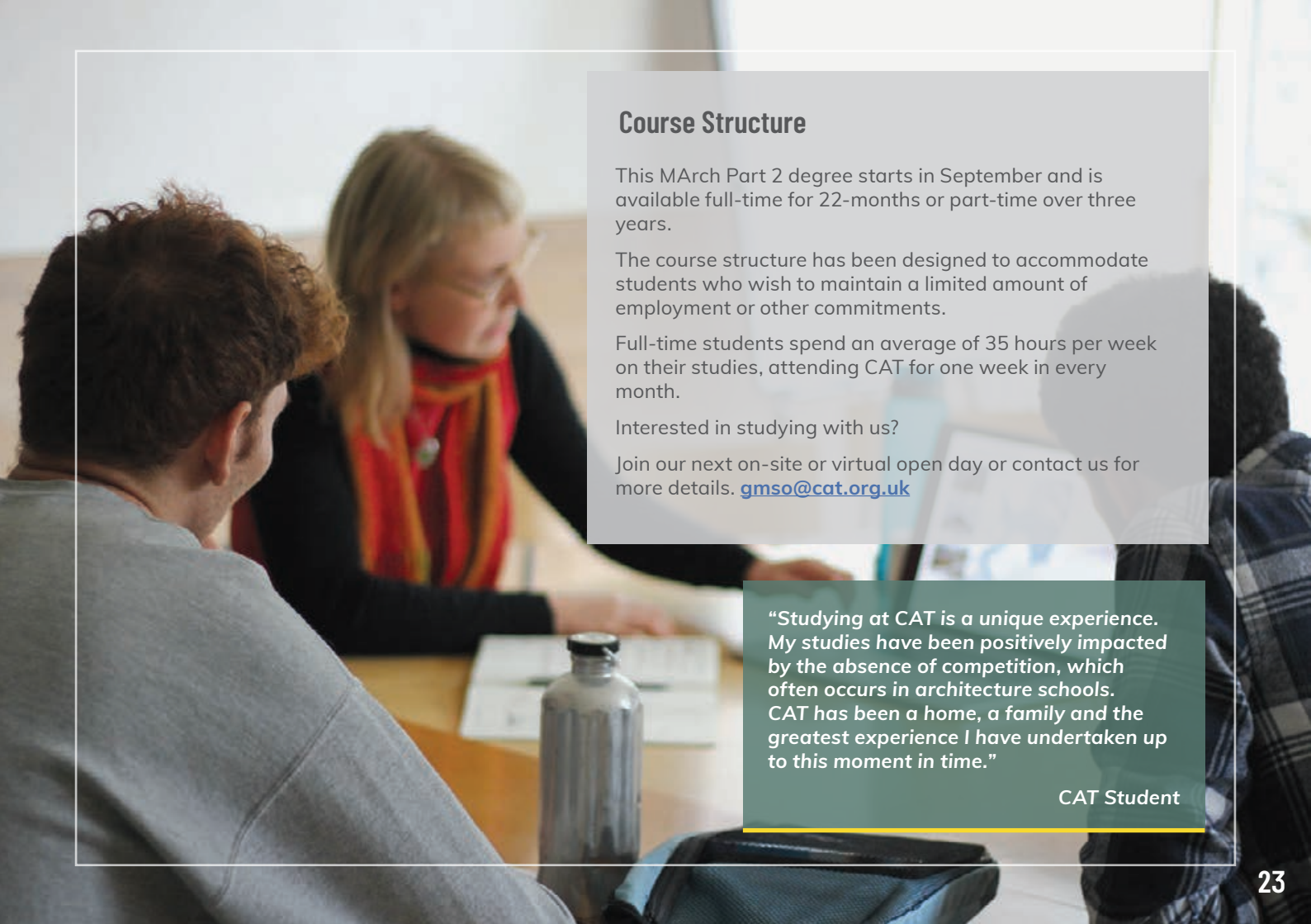
MASTERS IN ARCHITECTURE

ARB Part 2

Building design plays an important role in improving quality of life and human wellbeing whilst also helping with climate change mitigation and adaptation.

MArch: Sustainable Architecture offers architects an ARB-prescribed Part II qualification, drawing on CAT's 50 years of experience in sustainability practice.

The intensive course allows graduates to respond more quickly to the urgent need for a greater understanding of sustainability issues in the built environment.



Course Structure

This MArch Part 2 degree starts in September and is available full-time for 22-months or part-time over three years.

The course structure has been designed to accommodate students who wish to maintain a limited amount of employment or other commitments.

Full-time students spend an average of 35 hours per week on their studies, attending CAT for one week in every month.

Interested in studying with us?

Join our next on-site or virtual open day or contact us for more details. gmso@cat.org.uk

"Studying at CAT is a unique experience. My studies have been positively impacted by the absence of competition, which often occurs in architecture schools. CAT has been a home, a family and the greatest experience I have undertaken up to this moment in time."

CAT Student

Key Areas of Study

An architecture masters with sustainability at its core, the course focuses on how sustainability can be thought about in the design process in order to create buildings that are functional and sustainable as well as aesthetically pleasing.

This highly practical course allows you to combine design-based academic study with hands-on learning, expanding your critical awareness of current architectural and environmental problems to develop new insights.

You will be studying at the forefront of understanding of sustainable architecture, drawing on the skills and knowledge of in-house experts and external designers, including leading sustainable architects such as Professor Pat Borer MBE, Patrick Hannay and Chris Loyn.

You'll also have the chance to get involved in community projects, allowing you to develop real-world practical experience.

"The pattern of week-long intensive lecture and studio time in a residential setting is a great incubator for the in-depth discussion, sharing of information and experiences and peer-to-peer learning that makes CAT quite unique."

CAT Student

Core Modules

Integrated Design Project 1
Architectural Analysis Through Writing
Professional Studies
Integrated Design Project 2
Build
Research Paper
Technical Report for Final Design Project
Final Design Project

MArch exhibition space designed by the students

MArch Teaching Weeks 2023/24

Start date	Attendance Requirements
04 September 2023 (Study Visit)	Year 5 only
18 September 2023	Year 4 only
16 October 2023	Year 4 & Year 5
13 November 2023	Year 4 & Year 5
11 December 2023	Year 4 & Year 5
15 January 2024	Year 4 & Year 5
12 February 2024	Year 4 & Year 5
11 March 2024	Year 4 & Year 5
15 April 2024	Year 4 & Year 5
20 May 2024	Year 4 & Year 5
17 June 2024	Year 4 & Year 5
15 July 2024	Year 4 only

Guest speaker Patrick Hannay, Editor of Touchstone, the Journal for Architecture in Wales

Usually the on-site teaching weeks from September 2023 will allow for teaching to begin on a Monday. This can either allow for arrival at CAT on a Sunday or Monday morning. On-site teaching weeks typically run for five to six days.

In between the on-site teaching weeks, activities take place online and can include tutorials, weekly year meetings, lectures or seminars.

50 years of Sustainable Architecture

CAT's world-leading eco centre is a pioneer in researching and teaching practical solutions for sustainability. Having spent 50 years experimenting with sustainable architecture, CAT is uniquely placed to offer training in this area.

Monthly intensive residential study weeks offer an immersive learning experience – you'll be living and learning in award-winning buildings made from earth, straw, hemp and timber, all designed with environmental impact in mind.

Projects, lectures, talks, seminars, workshops and practical sessions are all part of the programme of module teaching weeks at CAT.

You will develop your skills and knowledge through practical activities, build projects and design tasks alongside studio learning, lectures, small group seminars and discussion forums, group work tasks, tutorials and written and visual learning resources.

This approach to teaching and learning provides a thorough understanding of the complex challenges that occur when theories are put into practice.

Find out more on our website www.cat.org.uk/architecture

This course is created and delivered by CAT, validated by the University of East London and prescribed by the Architects Registration Board.

Emily Smith: A coalfields remediation demonstration project in Hirwaun

Mary Holden: Inter-generational living and working in Ulverston

Centre for Alternative Technology
Canolfan y Dechnoleg Amgen

University of East London

arb
Architects Registration Board

Entry Requirements

- An undergraduate degree carrying an exemption from ARB Part 1 or a relevant undergraduate degree. If you have a relevant undergraduate degree that does not carry an exemption from ARB's Part 1 examination you will be required to successfully complete the ARB's Part 1 examination before you can register as an architect in the UK.
- Digital portfolio of work.
- IELTS 6.5 (or equivalent) is required for applicants whose first language is not English.
- This course is highly practical and requires attendance in person at CAT. If you live outside of the UK and require a student visa you cannot study this course as we do not hold the required Overseas Student Sponsor licence (you are exempt if you already have settled or pre-settled status or are resident in Ireland). You may instead wish to look at our MSc Green Building, which is available via distance learning.

Please apply online through our website: www.cat.org.uk/apply

Find out more

Visit our website: www.cat.org.uk/graduate-school

Contact us: study@cat.org.uk | **+44 (0)1654 705953**

Join an open day: Our on-site and virtual open days are informative and inspiring, offering time to chat with lecturers and current students. We also hold course specific Q&A sessions alongside our open days regularly throughout the year in the lead up to each September intake. Book yourself a place by visiting our website.

Masters of Research

MRes SUSTAINABILITY AND ADAPTATION

Masters of Research

MRes SUSTAINABILITY AND ADAPTATION

NEW FOR 2023 ENTRY

Focus on researching the causes and urgency of climate change, the solutions we have already, and the actions needed, on our MRes in Sustainability and Adaptation.

The course offers a holistic view of sustainability through its taught modules and allows students more time than a traditional Masters course to independently research and use the concepts of sustainability and transformational adaptation to frame an analysis of environmental and climate change policy and its implications for society.

Key Areas of Study

The programme aims to be a foundation for students wishing to move into further research roles or programmes in environmental science or sustainability, and who would like to help explore solutions to the climate and biodiversity crisis.

Taught over two years full-time or three years part-time, students will study taught modules over the first 12 months and then move onto a 120 credit extended research dissertation module. The dissertation module allows students to learn how to lead and manage their own research project on a sustainability-related, discipline-relevant topic of their particular interest, and write an extended dissertation on the findings.

Some of the topics you'll study include:

- Sustainability thinking and transformational adaptation planning
- Research philosophy, approaches, and strategy
- Analysis techniques and research design methods.

Depending on your area of research you will be able to focus on one of the following topics through your optional taught module:

- Acute resilience pathways for cities and communities
- Environmental politics and social and economic systems
- Sustainable design of buildings and environmentally responsive materials and resources
- Transformational change to meet the climate emergency
- Risk and vulnerability assessment and adaptive capacity
- Land use and food security
- Restoration ecology, environmental assessments and ecosystem services, including waste and water
- Energy provision and energy flows in buildings

Core Modules

- Introduction to Sustainability and Adaptation (15 credits)
- Sustainability and Adaptation Concepts in Practice (15 credits)
- Applied Research Design (15 credits)
- MRes Dissertation (120 credits)

Optional Modules

- Introduction to Politics and Economics of the Environment (15 credits)
- Energy Flows in Buildings (15 credits)
- Cities and Communities (15 credits)
- Energy Provision (15 credits)
- Ecosystems and Ecosystem Services (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- Food Production and Consumption (15 credits)
- Communicating Transformational Social Change (15 credits)
- Restoration Ecology (15 credits)
- International Zero CO_2 Energy (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

Entry Requirements

- We ask for a Bachelor's degree or knowledge and skills equivalent to degree standard.
- IELTS 6.5 (or equivalent) is required for applicants whose first language is not English.

Please apply online through our website: www.cat.org.uk/apply

Find out more

Join an open day: Our on-site and virtual open days are informative and inspiring, offering time to chat with lecturers and current students. Book yourself a place by visiting our website.

Visit our website: www.cat.org.uk/graduate-school

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Centre for Alternative Technology
Canolfan y Dechnoleg Amgen

University of East London

MSc Courses

SUSTAINABILITY AND ADAPTATION

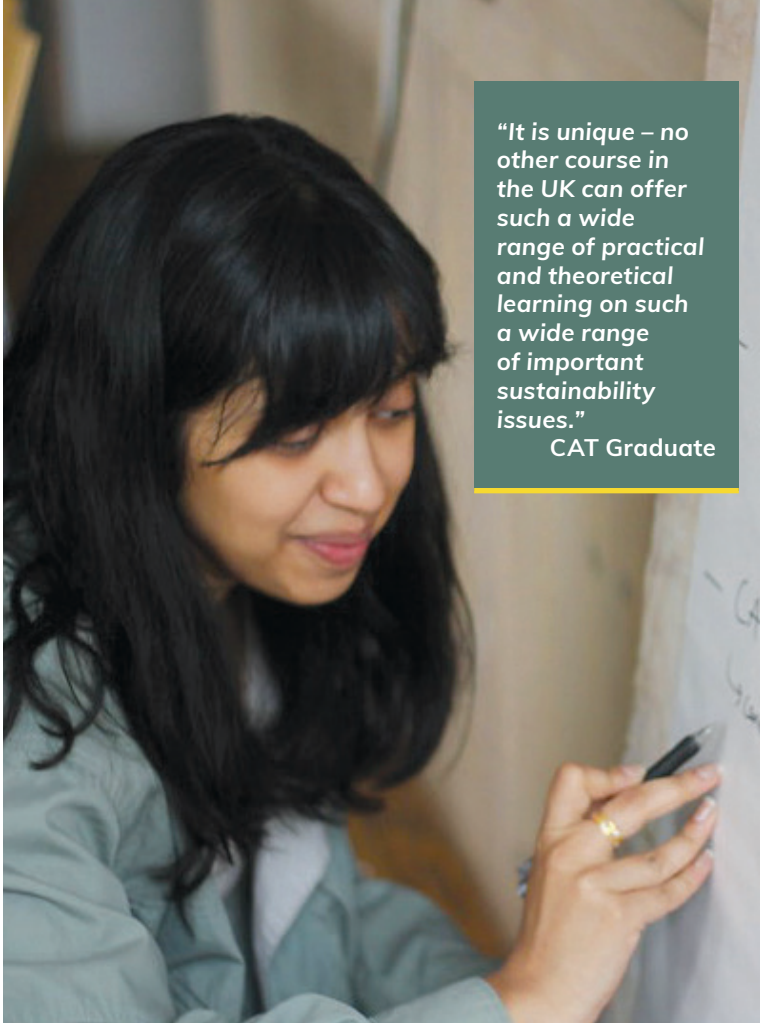
Master of Science
PG Diploma
PG Certificate

"Rapid, far-reaching and unprecedented changes in all aspects of society" are required if humanity is to prevent really dangerous levels of climate change.

UN IPCC 2018 Report on Global Warming of 1.5 °C

Immerse yourself in examining the causes and urgency of climate change, what actions are needed on an international, national, local and individual level and - crucially - what solutions we have already, on our MSc in Sustainability and Adaptation.

This course uses the concepts of sustainability and transformational adaptation to frame an analysis of environmental and climate change policy and its implications for society. With a wide range of modules, the course offers a holistic view of sustainability.



> *"It is unique – no other course in the UK can offer such a wide range of practical and theoretical learning on such a wide range of important sustainability issues."*
>
> CAT Graduate

Key Areas of Study

This is our broadest MSc, covering a wide variety of topics related to sustainability and adaptation.

Some of the topics you'll study include:

- Sustainability thinking and transformational adaptation planning
- Acute resilience pathways for cities and communities
- Environmental politics and social and economic systems
- Sustainable design of buildings and environmentally responsive materials and resources
- Transformational change
- Risk and vulnerability assessment and adaptive capacity
- Land use and food security
- Restoration ecology, environmental assessments and ecosystem services, including waste and water
- Energy provision and energy flows in buildings

Core Modules

- Introduction to Sustainability and Adaptation (15 credits)
- Sustainability and Adaptation Concepts in Practice (15 credits)
- Applied Research Design (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Introduction to Politics and Economics of the Environment (15 credits)
- Energy Flows in Buildings (15 credits)
- Cities and Communities (15 credits)
- Energy Provision (15 credits)
- Ecosystems and Ecosystem Services (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- Food Production and Consumption (15 credits)
- Communicating Transformational Social Change (15 credits)
- Restoration Ecology (15 credits)
- International Zero CO_2 Energy (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

Entry Requirements

- We ask for a Bachelor's degree or knowledge and skills equivalent to degree standard.
- IELTS 6.5 (or equivalent) is required for applicants whose first language is not English.

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SUSTAINABILITY IN ENERGY PROVISION AND DEMAND MANAGEMENT

Master of Science | PG Diploma | PG Certificate

To tackle climate change we need a transformation in our relationship with energy. Our MSc Sustainability in Energy Provision and Demand Management explores this on a local, national and international scale.

Looking at how net zero greenhouse gas emissions can be achieved through large scale investment in renewable and low carbon energy sources, you will also study the challenges to this and gain an in-depth understanding of effective energy solutions, energy efficiency and intelligent management of resources.

Key Areas of Study

On this course you will examine renewable energy provision, its application and management.

Some of the topics you'll study include:

- The science and engineering behind sustainable energy
- Global and local energy markets
- Energy and resource management
- The role of decision-makers at different levels in achieving energy security and sustainability
- Key energy technologies and new advances in energy storage, smart grids and meters
- Effective energy management through computer modelling, data collection and analysis
- Sustainable heat and electricity provision. the policies and economic backgrounds that could help or hinder the rollout of these technologies
- Justice, ethics and responsibilities in global energy provision
- Existing local, national and global thermal provision systems

Core Modules

- Introduction to Sustainability and Adaptation (15 credits)
- Introduction to Sustainable Energy Provision and Demand Management (15 credits)
- Low and Zero-Carbon Buildings (15 credits)
- Sustainable Heating and Cooling (15 credits)
- Sustainable Electricity (15 credits)
- Applied Research Design (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Introduction to Politics and Economics of the Environment (15 credits)
- Cities and Communities (15 credits)
- Energy Flows in Buildings (15 credits - recommended module depending on background and knowledge)
- International Zero CO_2 Energy (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

Entry Requirements

- We ask for a numerate Bachelor's degree or knowledge and skills equivalent to degree standard.
- Appropriate levels of numeracy and science are required for this programme.
- IELTS 6.5 (or equivalent) is required for applicants whose first language is not English.

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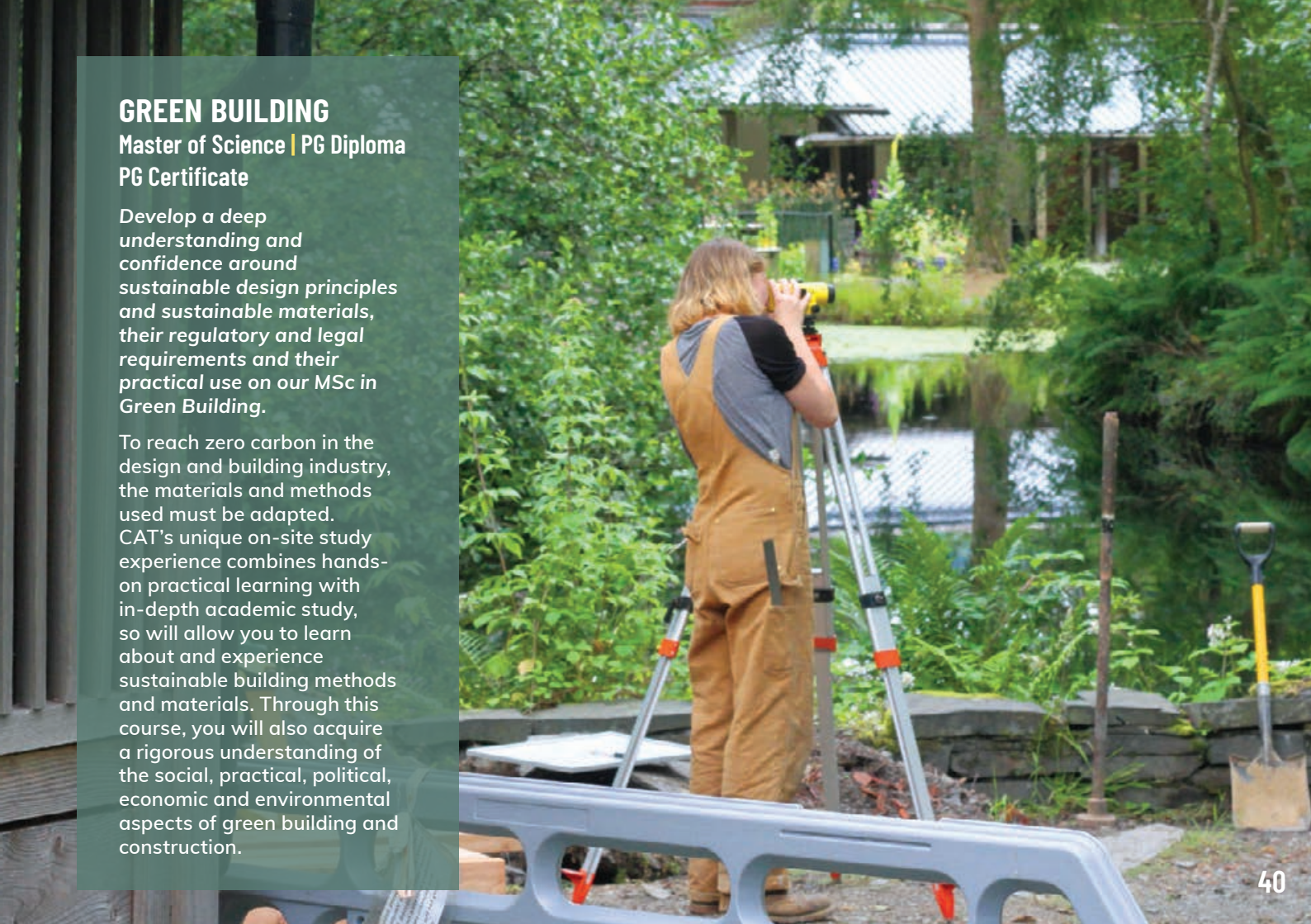

GREEN BUILDING

Master of Science | PG Diploma
PG Certificate

Develop a deep understanding and confidence around sustainable design principles and sustainable materials, their regulatory and legal requirements and their practical use on our MSc in Green Building.

To reach zero carbon in the design and building industry, the materials and methods used must be adapted. CAT's unique on-site study experience combines hands-on practical learning with in-depth academic study, so will allow you to learn about and experience sustainable building methods and materials. Through this course, you will also acquire a rigorous understanding of the social, practical, political, economic and environmental aspects of green building and construction.

Key Areas of Study

Throughout the course you will explore topics relating to building design, planning and retrofitting through understanding the theory behind the selection and use of materials, energy flows in buildings, site selection and preparation, waste management, project management and the building project life cycle.

Some of the topics you will study include:

- Sustainability thinking and transformational adaptation planning
- Building design, planning and retrofitting
- Selection and evaluation of materials and sources
- Efficient use of materials and energy
- Attitudinal and behavioural issues of energy and materials use and control
- Post-occupancy evaluation of buildings performance
- Water and waste management
- Policy and planning issues

Your MSc will end with a 60-credit dissertation which can include an individual design project comprising a technical report and critical evaluation, or a written thesis. This provides the opportunity to complete your studies by focusing on a building and design topic or project of your choosing.

Core Modules

- Introduction to Sustainability and Adaptation (15 credits)
- Sustainability and Adaptation Concepts in Practice (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- Applied Research Design (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Ecosystems and Ecosystem Services (15 credits)
- Introduction to Politics and Economics of the Environment (15 credits)
- Energy Flows in Buildings (15 credits – recommended module)
- Low and Zero Carbon Buildings (15 credits – recommended module)
- Cities and Communities (15 credits)
- Energy Provision (15 credits)
- Circular Building (15 credits – recommended module)

There are three recommended modules within your optional modules of which you must choose at least two depending on your experience and prior knowledge. Depending on your pathway through the course you will also complete the 15 credit Applied Research Design module in the year prior to starting your dissertation.

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

Entry Requirements

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SUSTAINABLE FOOD AND NATURAL RESOURCES

Master of Science
PG Diploma
PG Certificate

Develop your knowledge and understanding of the impacts of environmental change on global and local food systems and the natural world on our MSc Sustainable Food and Natural Resources.

Explore solutions that could help address some of the urgent and crucial issues that we face, looking at different approaches and competing paradigms.

Key Areas of Study

On the course you will explore a variety of topics, focusing on climate mitigation and adaptation in food and natural resources, soil health, natural climate solutions and food and land management systems.

Some of the topics you will study will include:

- The impacts of food production and the way our natural resources are perceived, managed, produced and distributed
- Social, practical, political and economic aspects of sustainable food production and natural resource management, and the effects of industry-scale farming, agriculture and materials production on ecosystems and our environment
- The impacts of economic structures and environmental change on diet, health, sustainability and community empowerment
- Underlying theory in a range of related topics, such as soil ecology and health, growing methods and comparative yields, environmental impacts of materials and design for sustainability

Core Modules

- Sustainability and Adaptation: Concepts and Planning (30 credits)
- Ecosystem Services: Land Use, Water and Waste Management (15 credits)
- Food Production and Consumption (15 credits)
- The Science of Sustainable Food Production (15 credits)
- Applied Research Design (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Introduction to Politics and Economics of the Environment (15 credits)
- Cities and Communities (15 credits)
- Theoretical Approaches to Transformational Social Change (15 credits)
- Restoration Ecology (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- Work-based Project (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

Entry Requirements

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SUSTAINABILITY AND ECOLOGY

Master of Science | PG Diploma | PG Certificate

"The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide... It is not too late to make a difference, but only if we start now at every level from local to global."

Sir Robert Watson, Chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Great industrial, economic and social changes have occurred in human society in the past 250 years, but much of this has come at the expense of the natural systems and species that keep us all alive and healthy. Even in remote environments, evidence of anthropogenic pollutants shows that nowhere remains unaffected.

Through the Sustainability and Ecology programme, you will gain a scientific understanding of the issues surrounding the protection and rehabilitation of nature whilst maintaining essential or useful ecosystem services.

Key Areas of Study

CAT is situated in a UNESCO Biosphere Reserve, with easy access to a wide range of habitats, including woodlands, wetlands, high mountain pasture, heathland and riverine, coastal and transitional wetlands – many of which are represented at CAT itself and allow for practical learning from nearby cases studies.

Some of the topics you will study will include:

- Landscape management and local habitat management practices with a view to maximising environmental sustainability benefits
- Values and limitations of habitat restoration, rewilding, species reintroduction, biodiversity, conservation, health and nature, and urban green infrastructure
- Global and local scale ecological sustainability and how it relates to the ongoing demands of modern society, the integrated nature of the systemic drivers of climate change and biodiversity loss and ecological worldviews
- Land use, biodiversity needs for conservation and ecosystem service provision
- The political and economic bases for sustainability in resource sourcing, use and management
- Behaviour change relevant to delivering transformational environmental change

Core Modules

- Sustainability and Adaptation: Concepts and Planning (30 credits)
- Ecological Assessment (15 credits)
- Restoration Ecology (15 credits)
- Applied Research Design (15 credits)
- Ecosystem Services: Land Use, Water and Waste Management (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Introduction to Politics and Economics of the Environment (15 credits)
- Food Production and Consumption (15 credits)
- Cities and Communities (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- The Science of Sustainable Food Production (15 credits)
- Work-based Project (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

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SUSTAINABILITY AND BEHAVIOUR CHANGE

Master of Science
PG Diploma
PG Certificate

It is becoming clear that major systemic, political and societal changes are needed to move us towards true sustainability and to address the serious consequences of environmental and climatic change.

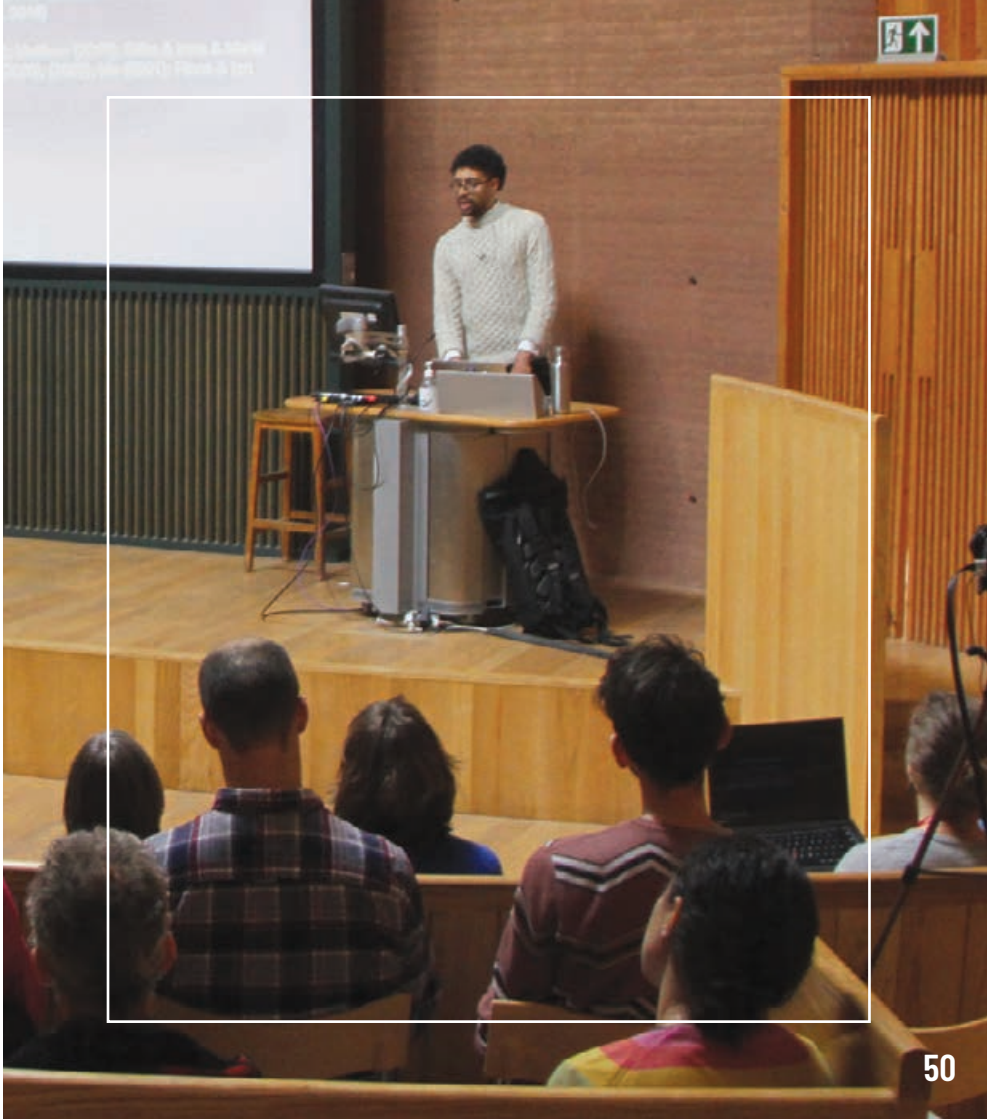
On our MSc Sustainability and Behaviour Change, you will get to grips with sustainability, social change and behaviour change theories at all levels: personal, organisational, community, institutional and governmental, drawing on theories of behavioural science, and social and systems models.

Key Areas of Study

Through studying local, national and global case studies of behaviour and environmental change, you will develop your own skills in leadership and communication that will enable you to implement environmental change on a variety of levels.

Some of the topics you will study include:

- Sustainability thinking and transformational adaptation planning
- Acute resilience pathways for cities and communities
- Public perceptions of environmental risk management and attitudes to behaviour change
- Cities, governance structures and policy, and interventions at community and individual level
- The skills required to facilitate the necessary behavioural changes through successful communication and engagement strategies



Core Modules

- Sustainability and Adaptation: Concepts and Planning (30 credits)
- Theoretical Approaches to Transformational Social Change (15 credits)
- Communicating Transformational Social Change (15 credits)
- Introduction to Politics and Economics of the Environment (15 credits)
- Applied Research Design (15 credits)
- MSc Dissertation (60 credits)

Optional Modules

- Buildings and People (15 credits)
- Cities and Communities (15 credits)
- Energy Provision (15 credits)
- Sustainable Materials in the Built Environment (15 credits)
- Food Production and Consumption (15 credits)
- Work-based Project (15 credits)

You can choose whether to take each of these modules entirely by distance or via a residential study week – turn to page 7 for details.

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MSc and MRes Taught Modules Summary

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Week beginning	Module Details	SA	GB	SEPDM	SE	SBC	SFNR
04 Sept 2023	Introduction to Sustainability and Adaptation	C	C	C	-	-	-
04 Sept 2023	Sustainability and Adaptation Concepts and Planning Part 1				C	C	C
02 Oct 2023	Ecological Assessment	-	-	-	C	-	-
02 Oct 2023	Buildings and People	-	-	-	-	O	-
02 Oct 2023	Energy Flows in Buildings	O	R	R	-	-	-
30 Oct 2023	Sustainability and Adaptation Concepts in Practice	C	C	-	-	-	-
30 Oct 2022	Sustainability and Adaptation Concepts and Planning Part 2	-	-	-	C	C	C
13 Nov 2023	Introduction to Sustainability in Energy Provision and Demand Management	-	-	C	-	-	-
27 Nov 2023	Cities and Communities	O	O	O	O	O	O
04 Dec 2023	Food Production and Consumption	O	-	-	O	O	C
11 Dec 2023	Low and Zero Carbon Buildings	-	R	C	-	-	-
08 Jan 2024	Theoretical Approaches to Transformational Change	-	-	-	-	C	O
08 Jan 2024	Sustainable Heating and Cooling	-	-	C	-	-	-
05 Feb 2024	Introduction to the Politics and Economics of the Environment	O	O	O	O	C	O
12 Feb 2024	Circular Building	-	R	-	-	-	-
04 Mar 2024	Energy Provision	O	O	-	-	O	-
04 Mar 2024	Ecosystems and Ecosystems Services	O	O	-	C	-	C
08 Apr 2024	Sustainable Electricity	-	-	C	-	-	-
08 Apr 2024	Communicating Transformational Social Change	O	-	-	-	C	-
15 Apr 2024	Restoration Ecology	O	-	-	C	-	O
13 May 2024	Applied Research Design Week	C	C	C	C	C	C
13 May 2024	Work Based Project	-	-	-	O	O	O
17 June 2024	Sustainable Materials in the Built Environment	O	C	-	O	O	O
24 June 2024	International Zero CO_2 Energy	O	-	O	-	-	-
24 June 2024	The Science of Sustainable Food Production	-	-	-	O	-	C

C Core
O Optional
R Recommended
- Not applicable

SA
MSc or MRes Sustainability and Adaptation

GB
MSc Green Building (at least two of the recommended GB modules should be taken)

SEPDM
MSc Sustainability in Energy Provision and Demand Management

SE
MSc Sustainability and Ecology

SBC
MSc Sustainability and Behaviour Change

SFNR
MSc Sustainable Food and Natural Resources

All MSc and MRes courses end with a dissertation module taken after the taught modules are completed. This starts in September.

Please note

All dates may be subject to change and will be confirmed with students closer to September. Depending on student numbers some modules may offer multiple study visits during the teaching week of the module to allow as many students as possible to be able to attend on-site.

Each module is usually 15 credits and will typically run for 8 weeks from the module start date. The exception to this is in the very first module some pre-recorded lectures will be made available the week prior to the start date and the Applied Research Design module is a year-long module taken in the year prior to your dissertation module. It has an optional on-site dedicated study visit in May for a group work project.

Academic Staff

Our lecturers combine academic rigour with real-world experience working with government, industry and communities to implement sustainable solutions.

Students also benefit from regular guest lectures from renowned thinkers, specialists and practitioners working in a wide range of fields related to sustainability.

Dr Adrian Watson

Head of the Graduate School. Before joining CAT, Adrian was Head of Division of Chemistry and Environmental Sciences at Manchester Metropolitan University. He has worked on the impacts of pollution on human health with the NHS and transport planners.

Tim Coleridge

Programme Leader for courses validated by UEL. Tim is an experienced architect specialising in low-energy, sustainable designs. He has taught at UCL, the University of Nottingham and Kingston University.

Dr Jane Fisher

Programme Leader for courses validated by Liverpool John Moores University. Jane specialises in freshwater and wetland ecology, and has many years' teaching and research experience, with Liverpool John Moores University.

Dr Carl Meddings

Carl is the Programme Leader for the MArch in Sustainable Architecture. He is an architect and educator with a passion for educating architects in a rapidly changing cultural and professional environment. He has taught from undergraduate level stages to masters level.

Dr Rebecca Kent

Senior Lecturer and Programme Leader. Rebecca holds a PhD in Geography from Royal Holloway University of London. She has taught at Canterbury Christ Church University, SOAS University of London, and Birkbeck University of London.

Louise Halestrap

Louise has a passion for 'live' research, including refurbishment, composting and building materials. She has worked in university, private and charity sectors on large scale composting and organics research and development.

Dr Frances Hill

With a background in physics, and a PhD in Environmental Engineering, Frances is a Programme Leader for the Sustainability in Energy Provision and Demand Management MSc. She lectures on heat transfers in buildings, and on renewable energy provision and also teaches study skills including data analysis.

Gwyn Stacey

As an architect and alumnus of the Graduate School, Gwyn returned to CAT to teach as a Senior Lecturer. Alongside teaching, he maintains a portfolio of voluntary and professional practice with a focus on low impact construction, heritage conservation and community projects.

Dr Rebecca Upton

Rebecca has a Master of Science in Environmental Psychology and is currently completing a PhD in education for sustainability focusing on transformational learning experiences that impact sustainable lifestyles choice, in collaboration with the Eden Project.

Dr Alan Owen

A Chartered Energy Engineer, Alan's research ranges from modelling sustainable energy resources in Europe to developing energy strategies in post-disaster areas of South East Asia. He primarily teaches renewable energy systems.

Dr Ruth Stevenson

Ruth is an environmental social scientist with experience in industry, consultancy and academia. Her work focuses on the intersection of energy, society and the environment in the context of community resilience and system change

Dr Sam Saville

Sam is an alumnus and former lecturer of the Graduate School who returned to teach at CAT in 2021. She returns after 10 years in academia, with research specialisms in value systems, nature-culture relations, polar and rural regions, globalisation and participative research.

Dr Ivor Davies

Ivor teaches on CAT's Green Building course where he specialises in sustainable design and building performance. He previously taught at Edinburgh Napier University and was a research fellow in the University's Institute for Sustainable Construction.

Dr Cathy Cole

With a background in oceanography, climate change, and science communication, Cathy lectures primarily on communicating transformational social change, and on our changing ocean in the context of climate change.

Visiting professor **Pat Borer MBE** teaching the benefits of rammed earth walls.

Anna Poston

Senior lecturer and tutor on the Green Building and Sustainability and Adaptation programmes. With a background in architectural design and research, she lectures in sustainable design, environmental architecture, building performance and sustainable building materials.

Bryce Gilroy-Scott

Bryce is a consultant and educator in the fields of sustainable communities, construction and energy. He is currently completing his PhD in Architectural Science at the University of Nottingham.

Guest Lecturers

Our students tell us that one of the things they appreciate most about our courses is the range of guest lectures available to them on a wide variety of topics.

From practising architects working at the leading edge of sustainable design to specialists in food, ecology, transport, planning, economics and more, we draw on expertise from academia, industry and government to provide a wide range of perspectives on environmental solutions.

Prof Kevin Anderson,
Tyndall Centre for Climate Change Research

Judy Ling Wong, CBE & Honorary President of the Black Environment Network

Recent guest lecturers include:

Prof. Kevin Anderson, Tyndall Centre for Climate Change Research

Susan Steed, Economist and co-founder of Brixton Pound

Prof. Tim Lang, Centre for Food Policy

Judy Ling Wong, CBE & Honorary President of the Black Environment Network

Rowland Keable, Director of Rammed Earth Consulting

Caroline Hickman, climate psychologist

Nick Parsons, expert on eco retrofitting

Kara Moses, facilitator of social change, nature connection

Dr Tom Crompton, Director of Common Cause Foundation

Patrick Hannay, architect and journalist

Mark Drane, architect at Urban Habitats

Mary Arnold-Forster, architect

Dr Haseeb Irfanullah, Center for Sustainable Development research fellow and Chef (The Scholarly Kitchen)

Prof. Rob Marrs, Emeritus Bulley Professor of Applied Plant Biology, University of Liverpool

Pavan Sukhdev, CEO of GIST-Impact and President of WWF International

James Moxey, Wood Knowledge Wales

Dr Giacomo D'Alisa, political and ecological economist at the Centre for Social Studies, University of Coimbra, Portugal

Dr Leon Sealey-Huggins, Global Sustainable Development Programme, University of Warwick

Prof. Dave Wilkinson, Visiting Professor in Ecology at the University of Lincoln,

David Bavin, Conservation scientist and expert in wildlife translocations

Prof. Lorraine Whitmarsh MBE, Centre for Climate Change and Social Transformations

Jasper Meade Director at PYC Group, Passive House design and construction experts

Callum Hill, JCH Industrial Ecology

Diane Hubbard, Green Footsteps Ltd.

Bill Butcher, Green Building Store

Marion Lloyd-Jones, Manchester Carbon Coop

John Cantor, heat pumps expert publishing resources and advice at Heatpumps.co.uk

Lyla June, an Indigenous public speaker, artist, scholar and community organizer

Arran Stibbe, Professor in ecological linguistics at the University of Gloucestershire

Graduates of CAT also return to us as experts in their own fields to teach and lecture on our postgraduate programmes.

Lizzie Wynn, Off The Wall Wales

Jeff Ive, Technical Manager at Adaptavate

Ffion Thomas, PhD researching sustainable approaches to managing ash dieback disease using soil amendments such as biochar

Agamemnon Otero MBE, Founder of Repowering London

Sophie James, Freelance Assistant Architect and part of the RIBA Re-Fabricate project

Chris Woodfield, co-founder of Aber Food Surplus, a social enterprise focused on tackling food waste

Charlie Thompson, Senior Operations Geologist and Director of Thompson Geo Ltd

Shanti Srinivas, PhD student with a focus on building energy modelling

CAT Graduates

CAT Graduate Community

Our graduates have used the skills and experience gained at CAT to make a real difference, helping to bring about the changes our society needs to create a more sustainable future.

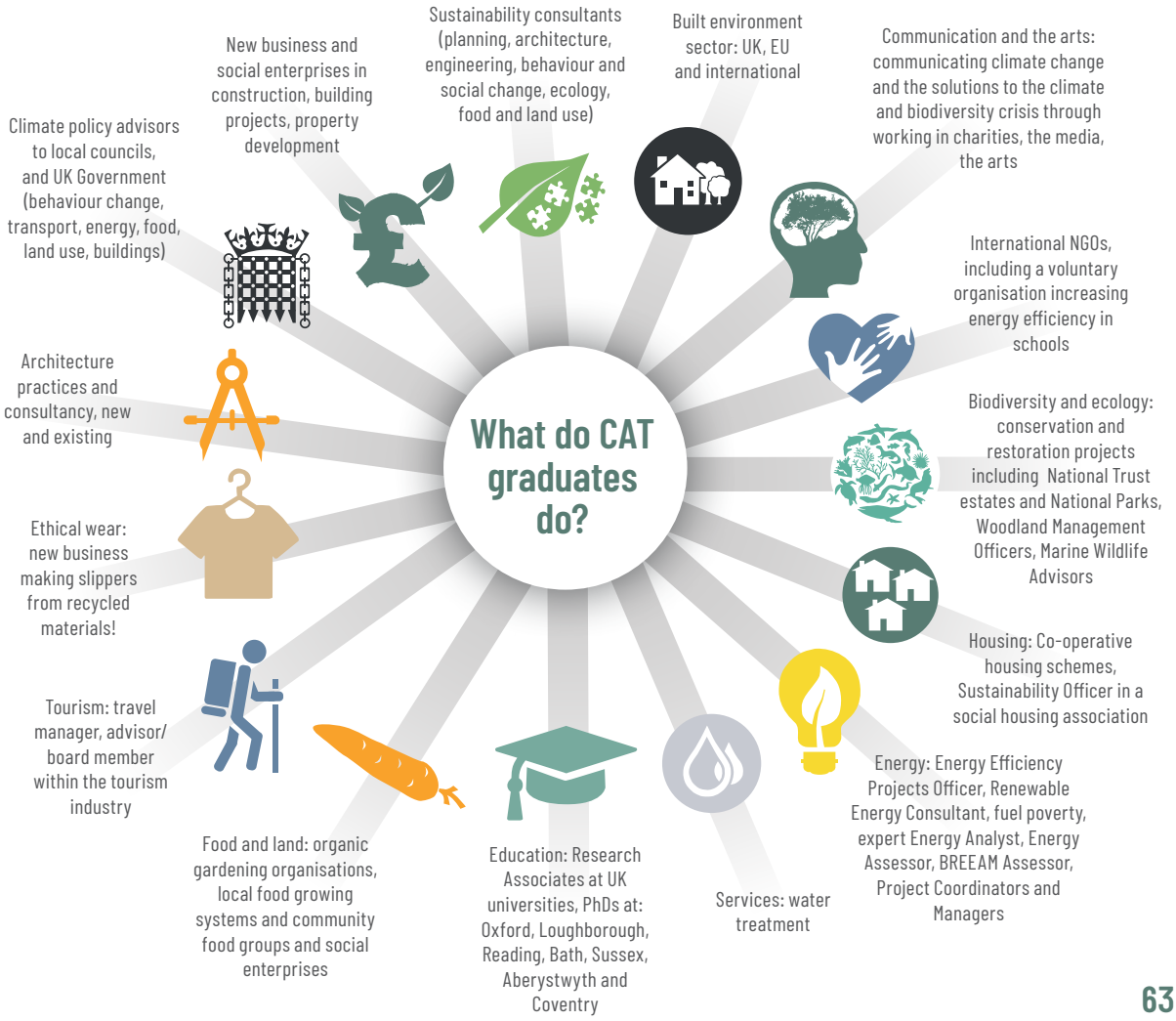
Some graduates make a positive contribution from within large organisations, and some start their own businesses to bring about the change they want to see. The courses are known for giving graduates a sense that they can make a difference, no matter how big the challenge.

With over 2,000 graduates, the CAT Graduate School network continues to grow and graduates regularly return to teach at CAT to pass on their knowledge to current students. Regular interactions through CAT's social networks also allows graduates and students to take advantage of networking and job opportunities.

> *"There is a fantastic network of alumni, and I have met friends I know I will stay in touch with for life, people I would not have met if I had not done the course."*
>
> CAT student

"One of the most important things to achieving ambitious goals is having a great team that will go the extra mile. They need to be technically well suited to the role, but most importantly, believe in what you are doing. That is exactly what we have found from a number of graduates from CAT over the last four years."

Graduate Employer

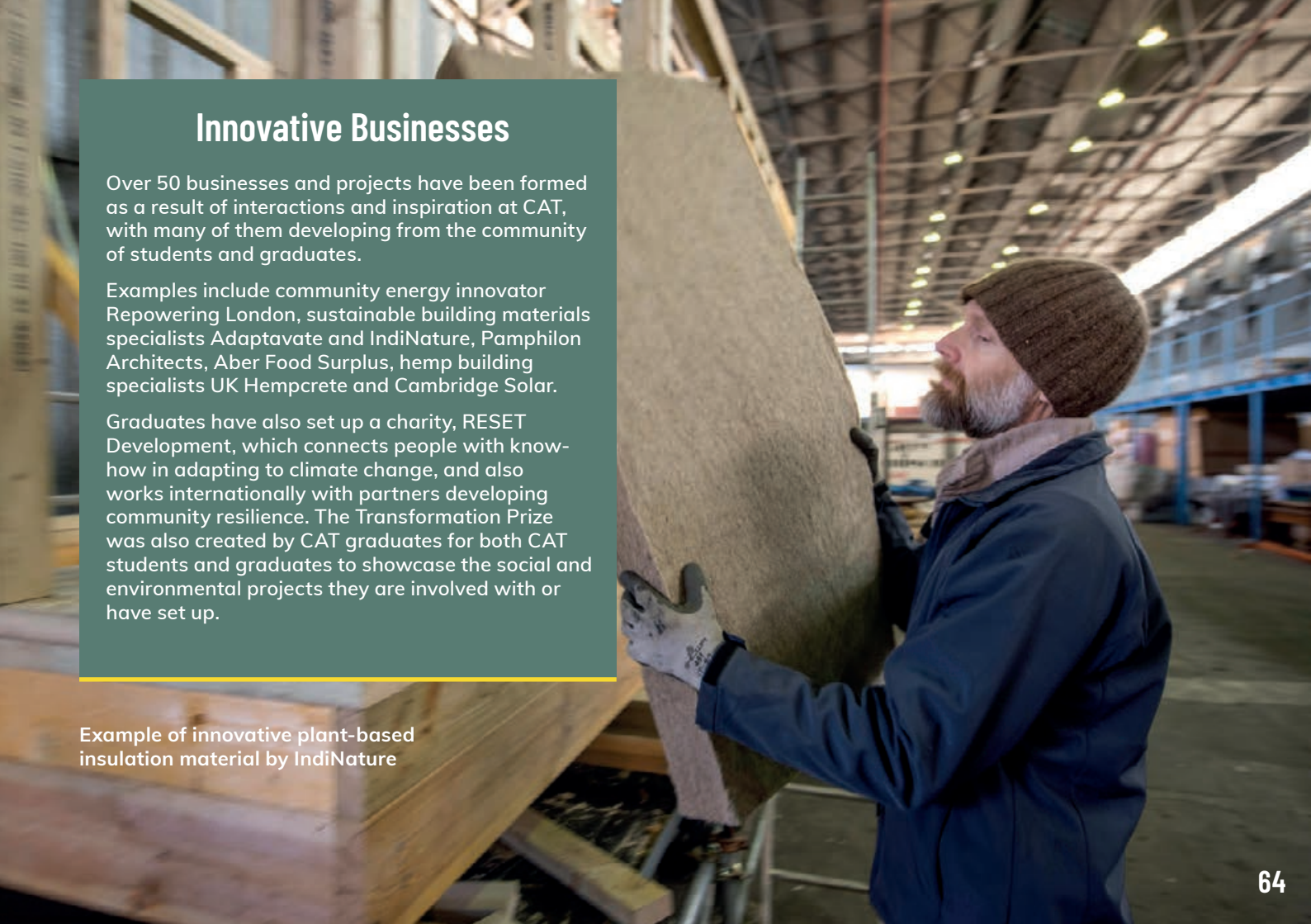


Innovative Businesses

Over 50 businesses and projects have been formed as a result of interactions and inspiration at CAT, with many of them developing from the community of students and graduates.

Examples include community energy innovator Repowering London, sustainable building materials specialists Adaptavate and IndiNature, Pamphilon Architects, Aber Food Surplus, hemp building specialists UK Hempcrete and Cambridge Solar.

Graduates have also set up a charity, RESET Development, which connects people with know-how in adapting to climate change, and also works internationally with partners developing community resilience. The Transformation Prize was also created by CAT graduates for both CAT students and graduates to showcase the social and environmental projects they are involved with or have set up.



Example of innovative plant-based insulation material by IndiNature

Adaptavate

Co-founded by CAT Graduate Tom Robinson in 2014 Adaptavate is an award winning company rethinking and redesigning the way building materials are produced, used and disposed of. They develop bio-composite materials including their products now include Breathabord' and 'Breathaplasta' that help build healthy, low carbon buildings. Having studied CAT's MSc Sustainability and Adaptation he used his practical experience in the construction industry and theory taught through the MSc programme, to focus his dissertation on developing a product that balances performance, workability and sustainability to address challenges facing traditional building materials like waste and breathability. The company now also employs many more CAT graduates.

IndiNature

Founded by two CAT graduates Scott Simpson and Euan Lochhead, IndiNature is an Edinburgh-based company that manufactures innovative plant-based insulation materials. They aim to transform the construction industry and existing damp and cold housing stock by providing a widely available safer, carbon negative solution to insulation for use in UK households and further afield.

In 2021 they received £3m in funding from the Scottish National Investment Bank to open the UK's first dedicated natural insulation factory and have since begun to manufacture IndiNature's flexible hemp insulation batt 'IndiTherm'. In January 2023 they secured a further £2m to develop the business. Scott says:

"The success of IndiNature is in a large part thanks to my time at CAT. Signing up for a CAT Masters degree was the best decision I ever made."

Tom Robinson, co-founder of Adaptivate

Ffion Thomas

Ffion graduated in 2019 as one of the first students on our MSc in Sustainable Food and Natural Resources. Before studying at CAT Ffion had previously worked in German banks and then as Head of Risk Management and Compliance at Mitsubishi UFJ Trust. Looking for a change in her career and life Ffion was able to transfer the research, practical and analytical skills she'd gained through her career, to her studies at CAT.

During her studies, Ffion was part of the team looking at the changes to pesticide regulations in the lead up to Brexit. The important work Ffion and the team were doing reached the national press and Ffion was quoted in *the Guardian*. Her analysis highlighted that the changes could weaken the rigour of the process by which pesticides are approved and monitored in the UK.

Following on from this and the work Ffion undertook in her dissertation, she is now working towards her PhD focusing on agroecological approaches to managing ash dieback at the Centre for Agroecology, Water and Resilience at Coventry University.

"Studying at CAT was life-changing, and has enabled me to take on a new career in an area I love, but which I never thought would be feasible, given I didn't have a scientific background."

Steve Cole

Steve graduated in 2019 from our Sustainability and Adaptation course with a focus on the built environment. Before coming to CAT, Steve's background was in new-build construction, but through his studies he came to understand that it is our current stock of buildings that present the greatest challenge, so he decided to concentrate his efforts on improving existing buildings in terms of health, comfort and thermal performance.

He became self-employed setting up his company Addasu (Welsh for Adapt) working on the renovation and retrofit of buildings with a particular focus on insulation in traditional buildings, and offering informed, practical and appropriate training, advice and construction services.

Steve also attended 'Jump' in 2020, a European funded train-the trainer project in the field of ecological building where he learnt teaching methods and techniques to facilitate teaching others about sustainable construction. He hopes to use this experience to establish and grow his business, taking on apprentices to be able to keep learning and teaching others.

"I have gained confidence in what I know, and feel that I am a lot more aware of our impacts on the wider environment. The people studying alongside me at CAT made the experience as we were all trying to work together to fix a very important complex challenge."

Joe Simpson

Joe began to study CAT's Sustainability and Behaviour Change MSc in 2019 and graduated in 2021. Studying at CAT provided Joe with the opportunity to move from a background in environmental chemistry towards broader sustainability issues and social science.

Currently working as a research assistant at the Stockholm Environment Institute in York, Joe's role sits within the Sustainable Consumption and Production group which researches climate risk and the global commodity trade, particularly the food system. Through linking the environmental, social, and economic impacts of food production to the consumption activities that drive them, the group provides useful contextualised data and information for governments, policymakers, non-governmental organisations (NGOs), industry and the public.

"I applied for my role (at the Stockholm Environment Institute) shortly after I completed my dissertation with CAT, and I can definitely say without my academic experiences at CAT I would have not been successful in attaining my current position. I developed many independent research skills through my studies at CAT that I now use directly in my current role."

Sandy Stevens

Sandy began our MSc in Sustainability and Behaviour Change in 2019. She is now working towards a PhD at Aberystwyth University, pursuing further research within the area of environmental behaviour change.

"I taught English in Spain for years and have lived and worked in five different European countries. So, it was a welcome surprise to discover that CAT Master's programmes are accessible for all and that you don't need a background in climate science to join them. I had attended a CAT Zero Carbon Britain course in May 2019, as well as the conference that followed, and was really impressed with CAT. I signed up for a Graduate School open day in the month following and the rest is history!

Studying at CAT has given me the confidence to further pursue a career in research. The MSc programme taught me the importance of having a solid study ethic and so, following a successful MSc dissertation thanks to some very insightful CAT tutors, I had the confidence to face the challenge of a doctoral thesis."

Kirsty Cassels

Sustainable Architecture graduate Kirsty Cassels graduated in 2016 and began Building Together CIC with fellow CAT graduate Robert Thompson. It is a design and build community interest company that designs buildings or structures for communities or organisations, working with the members of that community to complete the build.

As a Community Interest Company, they are bound by their constitution and their profits are capped and poured back into the community. Kirsty believes that her studies at CAT played a huge part in getting her to this point. In 2019 Kirsty won the Social Entrepreneur of the Year award category at The Scottish Women's Awards.

"It is difficult to suitably express the impact my studies and time at CAT have had on my life. It is a huge part of who I am today, and who I will become. To make friends and connections with people that you can instantly relate to, who you can share your fears and ambitions about the future of the planet with, who rally round and support you and interrogate your decisions at the same time. It's a huge family and network of people that want to change the world, and who actively seek the best way to do so."

"My studies at CAT give me a huge advantage in the conventional architectural and construction industries. I have a much higher degree of influence and respect in my environmental opinions and strategies, and my clients and colleagues know, with the backing of the CAT degree, that I am an expert in environmentally nurturing buildings. It has given me this advantage over other Part 2s in the UK."

Julian Mills

Julian graduated from CAT in 2013 with a Professional Diploma in sustainable architecture. After going to work for larger sustainable architectural practices, he felt there was an element missing from the way he was creating and delivering design work. This led him to set up STUDIO/gather, a small architectural studio in Cornwall specialising in sustainable architecture.

The team at STUDIO/gather is specifically made up entirely of CAT graduates, who have all gravitated to work at a practice with an ethos of touching the earth lightly. The team is now growing to include more designers and technicians to focus on sustainable architecture principles and to design with a purpose.

As well as working on projects that satisfy the architectural itch to create new, they are also involved in the deep retrofit sector, which means they get a real cross section of projects and clients.

"CAT and the sustainable architecture course have been the foundation for who I have become as an Architect, a designer and likely a person. CAT is not just a course, it is a community and over the past 10 years is still a daily point of contact for me."

Rosie Murphy

Rosie studied on our MArch Sustainable Architecture Part 2 course and graduated in 2021. During her studies many of Rosie's projects addressed the intersection between social and environmental injustices within the built environment.

Through her university work, voluntary work and activism, Rosie aimed to raise awareness of the concurrent issues of climate and ecological degradation, as well as the racial inequalities that exist within the architectural industry and beyond.

Since finishing her studies at CAT, Rosie has become a Coordinator of the Education Group within the Architect's Climate Action Network, and also works for Matt+Fiona, a social enterprise that believes everyone should have the right to shape their built environment.

Justin Mason

Justin began an MSc in Sustainability in Energy Provision and Demand Management in 2020. Having worked in the energy sector, cement, and utilities for 30 years, the course supplemented his current knowledge and experience of electrical engineering and has given him a well-rounded overview of the issues surrounding the energy transition. The course has helped him to facilitate a move into the renewable energy sector through studying solar, wind, hydroelectric and marine engineering, heat pumps and building energy. Having set up his own independent electrical engineering consultancy, he is now engaged in consultancy work with independent organisations, varying from large turbo-machinery manufacturers to small hydroelectric generators and everything in between.

Justin says that the course allowed him to expand his network and gain openings into consultancy roles that would have otherwise not been available to him. The variety of modules allowed him to work with the local community and non-governmental organisations on specific applications of heat pumps and smart local energy networks, which gave a real flavour of the issues and application challenges of low carbon technology outside of the corporate world. Through some of the CAT modules and projects, he also gained insight into the analysis of resource opportunities, specifically in solar, wind and hydro.

"CAT gives you the space to open your mind to different ideas and perspectives in a friendly and inclusive environment, providing you with the skills and resources to be effective in the changing world. The course gave me flexibility, through part-time study, and it also gave me a choice about the topics I studied and the subjects of the assignments I worked on."

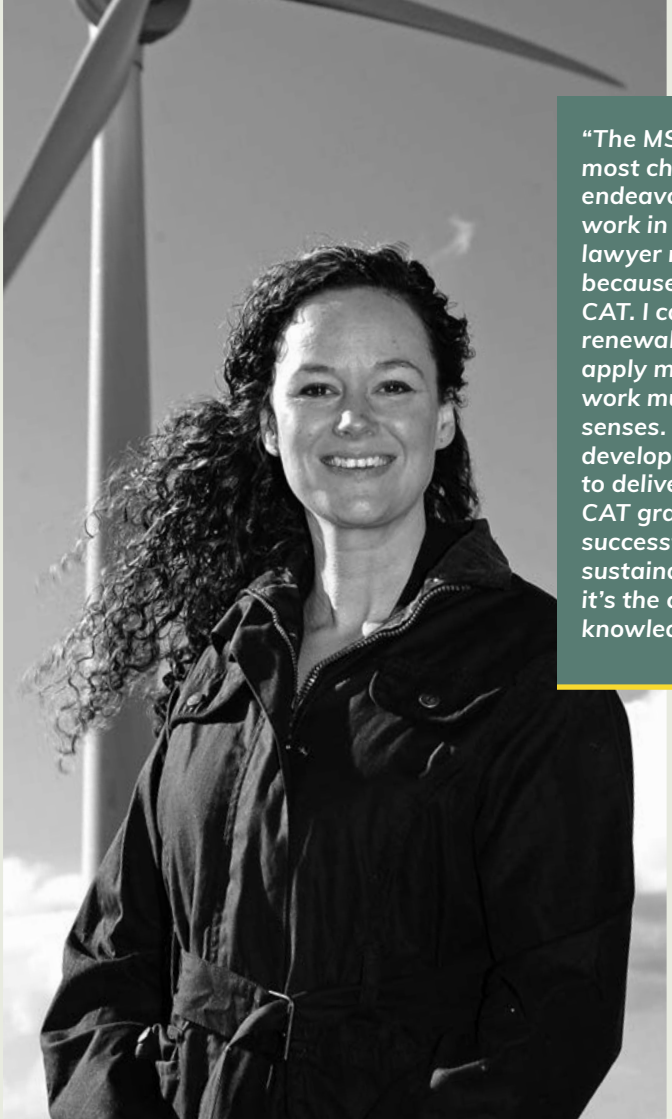
Sonya Bedford

Sonya graduated from CAT's MSc in renewable energy in 2018 and was awarded an MBE for services to community energy the same year, along with a number of other environmental awards.

As a partner at Spencer West LLP with a focus on energy, Sonya leads a team of solicitors specialising in energy policy and law. She advises industry on legal requirements for large scale renewable energy developments, including grid, infrastructure, policy, licensing and supply issues.

Sonya sits on the board of five community energy groups and is one of the founders of the innovative and ambitious Zero Carbon Wedmore group. She also sits on CAT's board of trustees.

In her spare time, she sings with a band and goes wind turbine spotting!



"The MSc at CAT was one of the most challenging and rewarding endeavours I have undertaken. My work in the energy industry as a lawyer now has a new dimension because of the learning from CAT. I can now truly understand renewable technologies and apply my learning to make my work much more valuable in all senses. Through CAT I have also developed my work in helping to deliver zero carbon projects. CAT graduates are the most successful I have met in the sustainable/energy world, I think it's the combination of technical knowledge and the CAT magic!"

For more information on career pathways and to read more CAT graduate profiles please visit www.cat.org.uk/career-pathways/

Want to find out more about our courses?

Sign up to one of our next on-site or virtual open days or apply today via our website.

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