



ASSOCIATION
OF COLLEGES
CHARITABLE TRUST

Year one

blueprint

Creating a greener

London – green skills for

the future programme

April 2022 to June 2024



**South Thames
Colleges Group**

**LONDON
SOUTH EAST
COLLEGES**



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Introduction

JP Morgan and Chase Green Skills for the Future programme Year one October 2022 - November 2025

Project

The Association of Colleges (AoC), with funding from JP Morgan and Chase has launched a new programme to provide future generations with the sustainable construction skills they need. The creating a greener London – sustainable construction skills programme is aimed at developing innovative local approaches to the delivery of eco-friendly skills training.

The purpose of the programme is to meet the needs of students, employers and colleges in delivering green skills training through the development of practice. It aims to provide insights into how the local ecosystem can support young people from lower socioeconomic backgrounds, enabling them to access skilled employment while meeting government objectives around achieving net zero and delivering green skills to meet the demand for green jobs. Two pilot projects, South Thames College Group (STCG) and London South East Colleges (LSEC) are commissioned in the Greater London area to identify, develop and embed green skills training into existing Level 2 Construction courses to tackle green skills shortages in the homes and buildings sector.

Blueprint purpose and outcomes

This blueprint has been developed to draw on the initial findings from the pilot projects, demonstrating effective processes and procedures for establishing partnerships working to deliver green skills training in the homes and buildings sector. We are encouraging other organisations to use this blueprint in their own projects.

Green skills definition

Green skills are the specific knowledge, abilities and values needed to promote the reduction of negative environmental impact in the workplace.

Project aims and objectives

- Provide participating Level 2 construction students with green and wider employability skills, which support their progression into Level 3 study with a focus on apprenticeships and ultimately into higher skilled, better paid and more stable employment in the homes and buildings sector.
- Identify the green skills required at Level 2 for successful progression into Level 3 study and green jobs.
- Improve student understanding of the career opportunities and progression routes into green jobs in the homes and building sector.
- Support practitioners to improve their skills and knowledge in a range of green skills.
- Ensure participating students who enter employment at the end of their Level 2 qualification are better prepared to progress to potentially higher skilled, more stable employment.
- Improve local workforce planning across Greater London to deliver vital green skills training in the homes and building sector.

Framework to assess for successful outcomes

- All participating colleges and employers state that the project improved their mechanisms to identify green skills gaps in the construction sector and provided an agile approach to delivering green skills training.
- Skills matrixes are produced, mapping the green skills required at Level 2 and detailing progression routes into green jobs within the homes and buildings sector.
- 210 Level 2 construction students complete green skills training to complement their existing qualifications.
- 90% of participating students improve their understanding of green employment opportunities in the homes and buildings sector and progression pathways into these jobs.
- 80% of participants state they are more likely to consider Level 3 study as a route into higher skilled, higher paid employment because of the project.
- Three Level 2 construction courses are enhanced with newly designed and implemented training in green skills to support progression into Level 3 Apprenticeships and employment.
- 70% of participating Level 2 construction students' progress into Level 3 Apprenticeships linked to green jobs in the homes and buildings sector.
- A minimum of nine staff college practitioners improved their knowledge in a range of green skills required for employment in the homes and buildings sector across the two pilots.

Project mobilisation stage

Action	Date
<p>Project inception documents (PID, project plan, risk register, QA plan and budget) completed.</p> <p>Discussion with funder on requirements and refinements to implementation plans.</p>	21 October 2022
<p>Confirmation of details for advisory board members, chair, and internal contacts.</p> <p>Terms of reference for advisory board set.</p> <p>Impact and evaluation measures agreed.</p> <p>Development of application/assessment documents and process for pilots completed.</p> <p>Funder sign off on application/assessment documents and process.</p> <p>Launch of project planned, prepared, and agreed by funder.</p>	30 November 2022
<p>Invitations sent for advisory board membership and first meeting.</p> <p>Public launch of project including webinar details.</p> <p>Applications for pilot programmes to colleges open.</p> <p>Information and guidance webinar facilitated for London colleges.</p>	30 December 2022

Action	Date
Internal monitoring and evaluation framework established.	27 January 2023
Selection process for pilots.	17 February 2023
Successful providers commissioned. Pilot monitoring and evaluation forms established for pilots. Inception meetings held with successful pilot providers (1).	28 April 2023
First advisory board meeting held.	31 March 2023

Two pilot projects commissioned in the Greater London area to identify, develop, and embed green skills training into existing Level 2 construction courses to tackle green skills shortages in the homes and buildings sector.



Partnership approach

The pilot college groups have built on their partnerships created through the **strategic development fund (SDF) programme**, which has created a sustainable local approach to the flexible design and delivery of green skills training across the London area.

Meeting student's future career goals in green skills, and supporting them in bridging the construction skills gaps within the London area is an integral part of the programme. Working collaboratively with all internal and external stakeholders is key and the aim is to plan construction events including insight days for all students and stakeholder partners. Both college groups are experienced at developing meaningful partnerships with other colleges, employers, and local stakeholders to deliver successful projects and they both endeavour to create positive impact on students and their local communities.

Strong links need to be developed with both local and national employer input. The employers contribute to curriculum design and development through employer boards, sector skills councils and industry specialists regularly producing resources and presentations for students. They also offer career information, advice and guidance (CIAG) in pathways into the industry via T Levels, apprenticeships or directly into employment. The employer partnerships are diverse and include construction craft areas, building services and construction management areas.

Stakeholder partnerships are valuable, and by working as a collective, the meeting of Gatsby Benchmarks are implemented via presentations, on-site visits and with work experience for the student demographic. The curriculum leads are supported by central project managers who are responsible for monitoring the implementation of green skills by working closely with the external stakeholders.

To tackle the most urgent shortages, relationships with local authorities (LAs) and local political leaders were strong with regular engagement. This allowed the pilot college groups to triangulate intelligence from industry-led employer boards.

The college groups continued to work closely with the Greater London Authority (GLA) and with local employers to meet the local industry needs. Employers engage with the colleges through the Mayoral Construction Academy (MCA) Hub with local development and regeneration sites providing opportunities for outreach and visits to live construction sites and marketing suites.

Below are some of the partners of the pilot colleges:

- Smith and Byford Smith and Byford
- Jewel Group Ltd
- Axis
- Switched on London Ltd
- Mitie Ltd
- Electrical Contracting Ltd
- Engie
- Vulcan Building Services
- Bellrock
- PA Henery
- Clarion
- Structures Limited
- GLA Apprenticeship Advisory Group
- Mayoral Construction Academy (MCA)
- Building Development and Maintenance
- Retrofit Careers Hub
- Greater London Area (GLA) for Green Skills (consortium of stakeholders)
- Mace Group
- Knight Dragon
- The Engine House
- Wates Group
- Sapphire Balconies
- Peabody
- Berkeley Group
- Local Skills Improvement Plan
- London Chamber of Commerce

Careers information, advice and guidance

Careers information, advice and guidance (CIAG) planning for this project was prepared to show a vision to bring industry to life for the students and to develop sources for direct learning. A wide-reaching approach to CIAG included an internal and external approach bringing the industry in and taking learners onsite, to green projects. Working closely with the industry supported meeting the supply chain needs of the industry and therefore created a symbiotic relationship between businesses and the colleges. Where resources can be shared, industry can 'give back' time and a resource in the form of work-placement opportunities.

Via the Green Academies programme (GAP) at London City Hall, an engagement hierarchy with industry was developed. This enabled a consistent commitment to the college group with the development of strategic partnerships. Stakeholders from industry and external organisations could sign up for what is realistically possible for them from a time and resource point of view.

With a foundation of engaged industry organisations on which to build an exciting, effective CIAG programme for the Green Academy Partners across London, pilot college groups were engaged in the development of a rolling CIAG programme. This included a jigsaw of activity which delivered the impact and beneficiary outputs desired through this programme and the vision of the [Local London Green Jobs and Skills Partnership](#).

A localised green skills event for Local London brought the industry to life, not just with talks and interviews, but with interactive activities and workshops designed to immerse the students in the practical application of their subjects, and in the development of the softer skills desired by employers. For this, suitable venues were being sought with engagement cross-college and beyond. The event was designed in line with the identified careers' pathways for GAP and current industry needs, showcasing and providing guidance on job and career opportunities and pathways into industry. These events were for all local London students. The stakeholders involved were:

- Employer Advisory Board
- Industry volunteers e.g. apprentices
- Subject matter experts

Alongside each of the students' study programmes, the college groups delivered their own career support programme called Career Advantage. Designed by employers, the programme provided all students with the additional employability skills they needed to stand apart from other job applicants once they left their college. Partner colleges would build on this model to provide effective, employer-led CIAG activities to ensure a minimum of 120 Level 1 and Level 2 construction students understood climate change and net zero requirements, the ways in which the industry is changing and the impact

on jobs and the progression routes into green jobs.

Activities designed in phase one included employer talks, site visits, and skills demonstrations. These are mapped to the Gatsby Benchmarks. Building on existing industry partnerships and the development of an employer pledge card, the college groups are tying in over 50 key employers to engage with them in many ways from EABs to apprenticeships.

Industry events offer the opportunity for teachers and learners alike to meet and network with employers. An event calendar was put together, and they attended relevant talks and seminars, keep up to date with advancements in industry and new materials and technologies. They include participation in:

- Future Build (March 2024)
- Digital Construction Week (April 2024)
- Skills London (November 2024)

Participation also took the form of college groups taking a stand with the Local London group and Mayoral Academy. This reached an industry audience and offered CPD opportunities to keep up to date with the latest trends and advancements in industry. Attendance of two hundred staff and students in outreach activities will benefit abilities for learning and networking.

Between November 2023 and April 2024, the aim was to allow two hundred students and staff to participate in the Local London Careers' Hubs which supported the Mayor's initiative for a Green Careers' Week. This is an opportunity for a dedicated careers fair

with a green agenda. College groups took part and provided opportunities for staff and students to network and learn from engaged employers sharing opportunities and information on pathways into work and careers in industry through planned induction and insight days to engage staff and students at the start of each term.

Embracing the Gatsby Benchmarks will ensure employers are at the forefront of influencing the training of the future workforce. This in turn will improve student outcomes and increase their chances of progressing into stable employment and we will continue to develop and grow the green skills provision at 14-16 by providing CIAG regarding the pathways to apprenticeships and employment within the construction industry.

Surveys have captured the starting point skills scan evidence for new construction students in September 2023. Over 400 students are supported and will participate in CIAG in green skills where we predict that 90% of students taking part in the survey will improve their understanding of green employment opportunities in the homes and buildings sector and the progression pathways into these jobs.



Phase one developing local collaborative partnerships and green skills planning

During the initial phase (April 2023 – August 2023), pilot projects formalised their partnership model and identified their approaches to embedding green skills into Level 2 construction courses.

Each pilot included an FE college group and local employers across the construction sector, including SMEs. They both have existing relationships based on the emerging green skills requirements across the homes and buildings sector.

The project partners met monthly, during this phase of where they completed the following tasks:

- mapping of existing qualifications to green skills needs
- mapping of progression pathways and job outcomes for Level 2 learners
- identifying green skills to be delivered at Level 2 mapped to Level 3 requirements
- agreed approach to delivering green skills at Level 2
- mapping CIAG activities to raise awareness of green jobs
- developing CIAG and green skills delivery plans.

At the end of phase one, projects produced a skills matrix which detailed opportunities to embed green skills within existing Level 2 Construction courses. The skills matrix mapped to Level 3 progression outcomes and green jobs, and it formed the basis of delivery for the further two phases.

Applicants demonstrated their understanding of the levels of engagement needed and they have evidenced how they will ensure partners will stay engaged and committed throughout the lifetime of the funded project, and beyond.



Indicators used to measure success against outcomes	Planned deadline dates	Measured outcomes and evidence
Action	Target date	Outcome
<p>Monthly Progress meeting with pilot project colleges.</p> <p>Pilots submit their delivery plans.</p>	28 May 2023	<p>Pilot colleges attended progress meeting with AoC and confirmed their completion of their starting point actions.</p> <p>Pilot project colleges submitted their completed delivery plan and shared with the funder within the desired timeline. The rationale of the delivery plan has been developed to align with the overarching aims of the project, of where students will be able to take advantage of green CIAG activities and gain a thorough understanding of the jobs and opportunities in the homes and building sector, as well as the career pathways into the world of work.</p> <p>The delivery plans included:</p> <ul style="list-style-type: none"> • key deliverables • planned Timings • budget breakdown • plan of communications.
Colleges submit their baseline data needed for monitoring and evaluation.	23 June 2023	<p>Both college groups submitted their baseline student data which included the following:</p> <ul style="list-style-type: none"> • current Level 2 construction provision and what, if any, green skills are currently delivered • destination and progression outcomes for Level 2 construction students over the past five academic years • practitioners' skills and knowledge in green construction skills.

Action	Target date	Outcome
<p>Pilots to start work on skills matrix.</p> <p>AoC to work closely with pilot college groups to establish their approach to embedding green CIAG and technical skills within current construction courses.</p> <p>Pilot to submit plans for CIAG in phase two (included in progress reporting).</p>	23 July 2023	<p>Pilot colleges developed a skills matrix, detailing opportunities to embed green skills within existing Level 2 Construction courses of which were mapped to Level 3 progression outcomes and green jobs. Opportunities to link these skills and embed further training at Level 3 were also identified to ensure the full breadth of progression pathways were considered. The skills matrix will form the basis of delivery in further phases.</p> <p>Both college groups planned, prepared, and submitted their CIAG planning for this project. Highlighted was the importance of:</p> <ul style="list-style-type: none"> • decarbonising the homes and building stock • a minimum of 120 Level 1 and Level 2 students increase their understanding of the training and qualifications available to them • how this project will function as a steppingstone to stable employment • the impact these green jobs will have on the country achieving its net zero ambitions. <p>This will be achieved through a series of CIAG activity of where the college group's aims are to bring together a collective from various local stakeholders and share green skills practice and to embrace construction events, conferences, insight days, and open day events for all new students and partners from September 2023 onwards.</p> <p>Both college groups are planning encompassed delivery methodology based on an ethos of employability with a focus on preparing students for industry of where disadvantaged students will feel advantaged.</p> <ul style="list-style-type: none"> • By promoting a culture of work readiness, industry standard tolerances and behaviours as an intention and a strategic ambition of the project and beyond. • By capturing the starting point data, both college groups can implement strategies to support the students' personal social skills.

Action	Target date	Outcome
		<ul style="list-style-type: none"> • With the implementation of industry relevant expectations and standards aligned with the completion of curriculum activities, the college groups have internal intervention measures, teams, and processes in place to support their students. • By embedding employer engagement within the curriculum design, training and assessment will enhance productivity and improve local workforce planning to meet local skills needs This will ensure learners are site and work ready and enable to contribute to the local economy and workplace. • Working towards the Gatsby Benchmarks to ensure employers are at the forefront of influencing the training of the future workforce. This in turn will improve student outcomes and increase their chances of progressing into stable employment. <p>The progress and attainment of students will be monitored at monthly quality meetings within the construction departments at participating colleges. This allows to identification of any issues and areas of concern with student performance, whilst tracking the quality engagement of learners.</p> <p>Additional support will be provided to students, as required by student engagement and curriculum teams. Senior curriculum and quality staff will oversee continuous development and scrutiny of the newly designed curriculum, with employers linking industry to education with a key theme of employment as the main ambition.</p> <p>Pilot projects completed quarterly monitoring and evaluation forms, based on AoC's agreed framework. The analysis of these returns will feed into both internal and external evaluations. This included the perceptions of beneficiaries and will be tracked in relation to programme activities. Beneficiaries include:</p> <ul style="list-style-type: none"> • Students • Employers • College practitioners • Senior leaders • Local stakeholders

Action	Target date	Outcome
Colleges submit termly progress report.		<p>Participation rates, access to resources, satisfaction levels, and experience of change will be monitored.</p> <p>The submitted termly report included, but was not limited to:</p> <ul style="list-style-type: none"> • progression of work against the delivery plan • partnership approach • student engagement and reach • risks and issues • impact and evaluation reporting in line with provided framework. • progress against pilot KPIs.
London Colleges Collaboration Focus Group.	15 August 2023	Pilot project college groups met with other London college groups to showcase their individual delivery methodology.
<p>Colleges submit skills matrix.</p> <p>Production of skills matrix for outward use.</p> <p>Pilot college groups survey Level 1 and Level 2 students to gauge their understanding of the climate emergency and the future of green jobs within construction and share results.</p> <p>Advisory board meeting two.</p>	28 September 2023	<p>Both college groups provided evidence of a skills matrix from Level 2 to Level 3 pathways in green skills.</p> <p>Front facing renewable and retrofit skills matrix from Level 2 to Level 3 pathways in green skills.</p> <p>Over 400 Level 2 students have been surveyed to gauge their understanding of the climate emergency and the future of green jobs within construction, with the personal skills required to progress into industry using a starting points skills scan on the commonplace and survey monkey digital platforms.</p> <p>Pilot college groups prepared a presentation to showcase their planning and implementation stages to a diverse range of stakeholders.</p>

Phase two high quality CIAG on green skills and green jobs

To generate awareness and interest into skilled green jobs, pilot projects will have started their delivery with a series of CIAG activities to cohorts of Level 1 and Level 2 construction students. This helps to build a stronger recognition of green jobs and highlights the importance of learning these new green skills in the next phase of the programme.

Each pilot project will deliver green CIAG activities to a minimum of 120 Level 1 and Level 2 students. Activities should be co-designed and delivered by employers and college staff.

This phase of delivery will increase awareness and understanding of green employment opportunities in the buildings and homes sector and the progression pathways into these roles among Level 1 and Level 2 learners.

Pilot projects surveyed Level 1 and 2 students to gauge their understanding of the climate emergency and the future of green jobs within construction. The data collected will be used to design inclusive green CIAG activities, which take into consideration the diverse backgrounds, experiences and understanding of this cohort's needs and raise awareness of the multiple routes into green employment as well as wider green practices.

As well as discussing green skills linked to emerging technologies, sustainable practices, and buildings regulations, CIAG will also include the employability skills required for the sector such as communication, creativity, professional integrity, and general business skills.



Indicators used to measure success against outcomes	Planned deadline dates	Measured outcomes and evidence
Action	Target date	Outcome
<p>Annual Conference and Exhibition breakout session.</p> <p>Pilot projects deliver a series of CIAG activities to cohorts of Level 1 and Level 2 construction students.</p> <p>Collect and share anonymised student data for enrolled students.</p>	14 November 2023	<p>Pilot college groups have prepared presentations on engaging disadvantaged students in construction green skills for the future. As part of the presentation, attendees will be informed on the intent of the project, the implementation of their delivery methodology, and how the pilot college groups are engaging disadvantaged students in construction green skills with their CIAG strategies. The outcome of the project will enable students to access skilled, green jobs in the construction sector.</p> <p>Enrolment and induction events have taken place with green skills being included in the processes.</p> <p>Independent evaluator and pilot college management information systems (MIS) teams liaised to collate data from enrolled students inclusive of: highest level of education attained, most deprived decile to fourth decile (most deprived), age, ethnicity and vulnerability.</p>

Skills matrixes

The Skills Matrixes have been developed by the college pilot groups, with the support of their employer partners. It gives a comprehensive overview of the opportunities for progression pathways from Level 2 onwards for green skills in the construction industry and forms the basis of delivery in further phases of the pilot project.

Renewables

Existing Qualifications	Micro Short Courses & Green Skills Embedded at Level 2	Green Skills Learnt at Level 2	Mapped to Apprenticeship opportunities.	Skills Developed at Level 3
L2 Tech Cert in Electrical Installation City & Guilds	Installing grid connected solar power.	Understand and apply an Energy Performance Certificate (EPC)	L3 Electrical Installation Advanced Tech Diploma	Inspecting and testing smart electrical installations to ensure safety.
L2 Diploma in Electrical Installation	Understanding Retrofit	Understand the principles of energy loss assessment.	L3 Apprenticeship Installation Electrical/Maintenance Technician	Explaining complex problems to customers
Electrical Installations Buildings: City and Guilds Diploma L2	Introduction to Green Skills Careers and Jobs	Work as a team to rectify an issue with condensation on a recent thermal insulation project.	L3 Apprenticeship Civil Engineering Technician	Understand relevant PAS 2035 standards.
L2 Diploma in Electrical Installation FT	Climate Change and Environmental Awareness	Demonstrate an understanding of installing grid connected solar power.	L3 Building Services for Construction Engineering	Understand environmental technologies.
Level 2 Electrical Installation Buildings & Structures	Understanding PV Solar Technology	Complete a technical drawing of a smart metre installation.	L3 Dual Fuel Smart Meter Installer	Understand the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy and climate change.
	Understanding EV charger points	Demonstrate an understanding of basic network security.	L3 Facilities Management Supervisor Refrigeration, Air Conditioning and Heat Pump Engineering Technician	Demonstrate knowledge of power Network
	Understanding environmental sustainability	Evaluate the risk of refrigerants including toxicity and flammability.	Apprenticeship in Domestic Electrician	Identify and explain variables that vary the energy consumption of a building and process.
	Domestic energy assessment	Understand how to measure reductions in carbon emissions	Apprenticeship in Installation and Maintenance Electrician	Assess, identify, and record the environmental impact of projects.
	Understanding Heat pump installation and maintenance		L3 Extended Construction & Built Environment	Technical drawings, product specifications, wiring schedules, testing specifications and schematics for smart metres.
	Smart construction & retrofit.		L3 Building Services for Construction Engineering	Understand environmental technologies employed in the sector such as heat recovery, low GWP refrigerants which can be used to reduce energy use.
	Smart devices for sustainability		Apprenticeship in Dual Fuel Smart Meter Installer	
	Understanding Smart Home Heating Systems		L3 Facilities Management Supervisor	
	Understanding Solar Technology & Installation		Apprenticeship in Refrigeration, Air Conditioning and Heat Pump Engineering Technician	
			L3 Smart Home Technician	
			Apprenticeship in Plumbing and Domestic Heating (Inc Gas)	
			Apprenticeship in Gas Engineering	

Skills matrixes

Renewables

Existing Qualifications	Micro Short Courses & Green Skills	Green Skills Learnt at Level 2	Mapped to Apprenticeship opportunities.	Green Skills Developed at Level 3
L2 National Diploma Plumbing (City & Guilds)	Installing grid connected solar power.	Understand and apply an Energy Performance Certificate (EPC)	L3 Apprenticeship Plumbing and Domestic Heating (Inc Gas)	Explaining complex problems to customers
	Understanding Retrofit	Understand the principles of energy loss assessment.	L3 Apprenticeship in Gas Engineering	Understand relevant PAS 2035 standards, technical and environmental legislation including flammable substances.
	Introduction to Green Skills Careers and Jobs	Work as a team to rectify an issue with condensation on a recent thermal insulation project.	L3 Apprenticeship Civil Engineering Technician	Understand the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy and climate change.
	Climate Change and Environmental Awareness	Demonstrate an understanding of basic network security.	L3 Apprenticeship Plumbing and Domestic Heating (Inc Gas)	Apply selection, planning, installation, testing, commissioning and de-commissioning, service, maintenance, fault diagnosis and repair techniques on energy efficient heating systems.
	Understanding PV Solar Technology	Evaluate the risk of refrigerants including toxicity and flammability.	L3 Building Services for Construction Engineering	Select, install, test, commission, service and maintain solar thermal systems.
	Understanding EV charger points	Understand how to measure reductions in carbon emissions	L3 Facilities Management Supervisor Refrigeration, Air Conditioning and Heat Pump Engineering Technician	Understand relevant UK and international standards, technical and environmental legislation including health & safety, electrical circuits, and flammable substances.
	Understanding environmental sustainability		L3 Extended Construction & Built Environment	Understand environmental technologies employed in the sector such as heat recovery, low GWP refrigerants which can be used to reduce energy use.
	Domestic energy assessment		L3 Building Services for Construction Engineering	Assess, identify, and record the environmental impact of projects.
	Understanding Heat pump installation and maintenance		L3 Facilities Management Supervisor	
	Smart construction & retrofit.		Apprenticeship in Refrigeration, Air Conditioning and Heat Pump Engineering Technician	
	Smart devices for sustainability			
	Understanding Smart Home Heating Systems			
	Understanding Solar Technology & Installation			

Skills matrixes

Renewables

Other regulated green pathways from Level 2 to Level 3

- Design, installation and commissioning of electrical energy storage systems
- Installation and maintenance of air source heat pump systems (non-refrigerant circuits)
- Installation and maintenance of ground source heat pump systems (non-refrigerant circuits)
- Installation and maintenance of heat pump systems (non-refrigerant circuits)
- Energy efficiency for older and traditional buildings
- Introduction to domestic retrofit
- Understanding electrical obligations for heat pump installation
- Certificate for retrofit assessors
- Domestic retrofit advice
- NVQ certificate in servicing and maintaining air conditioning and heat pump systems
- Energy efficiency for older and traditional buildings
- Award in hydrocarbon refrigeration, air conditioning and heat pump system design, commissioning, servicing and maintenance
- Diploma in refrigeration, air-conditioning, and heat pump systems
- End-point assessment for ST0322/02 refrigeration air conditioning and heat pump engineering technician

Skills matrixes

Retrofit

Green Skills Embedded at Level 2 Award in Retrofit					Green Skills Embedded at Level 2 Certificate in Retrofit					
Substantial qualification at Level 2 (on-site trades)	On Site-Green Skills	Safe working practices for working in the Retrofit. Industry	Beneficial factors of PAS 2035	Impact of PAS 2035 on the Construction Industry	Communication, legislation, and regulation	Roles and responsibilities	Principles and practices	Level 3 Green Skills Progression opportunities	Green Skills Apprenticeship opportunities	Green Skills Employment opportunities
<ul style="list-style-type: none"> Bricklaying Plastering Painting & Decorating Site Carpentry & Joinery Bench Carpentry & Joinery Multi Construction Skills 	Building Installation & Insulation Process	<p>Retrofit upgrading scheme relevant to current industry standards.</p> <p>Hierarchy of trades as well as the roles and responsibilities within retrofit.</p> <p>PAS 2035 and how these impacts on installing and preparing property retrofit systems.</p> <p>Work as a team to rectify an issue with condensation on a recent thermal insulation project.</p>			<p>Requirements of safe working practices and behaviours in the retrofit upgrading scheme.</p> <p>Knowledge of the legislation and regulations relevant to current industry standards and enable them to maintain effective working relationships for retrofit.</p> <p>Meet customers' needs and expectations in retrofit.</p> <p>Roles and responsibilities within retrofit PAS 2035/2038 requirements.</p> <p>Benefits and interactions of the retrofit roles.</p> <p>Core principles of PAS 2035 and PAS 2038 including the required safe practices and behaviors to work in the retrofit industry.</p> <p>Variations between the PAS 2035 framework and PAS 2038 framework</p> <p>Work as a team to rectify an issue with condensation on a recent thermal insulation project.</p>			<ul style="list-style-type: none"> Introduction to Domestic Retrofit Certificate for Retrofit Assessors Domestic Retrofit Advice Insulation & Building Treatments Industrial Thermal Insulation Energy Efficiency Measures for Older and Traditional Buildings Sustainability in the Workplace Insulation and Building Treatments Thermal Insulation 	<ul style="list-style-type: none"> Advanced Plasterer Advanced Bricklayer Advanced Painter & Decorator Advanced Bench Joiner Advanced Site Joiner Spray Foam Insulation and Application Insulation Building Treatments (External Wall Insulation Boarder and Finisher) Thermal Insulation (Construction) Insulation Building Treatments (Hybrid Wall Insulation) Insulation Building Treatments (Insulating Framed Sections) Insulation Building Treatments (Internal Wall Insulation) Insulation Building Treatments (Room in Roof) Insulation & Building Treatments (Construction) 	<ul style="list-style-type: none"> Retrofit Installer Retrofit Advisor Onsite Plasterer Onsite Bricklayer On site joiner On site Painter & Decorator Building Envelope Technician Retrofit Professional roles

Phase three co-design and delivery of green skills training to Level 2 students

The final project delivery phase sees employers and college practitioners develop and deliver the relevant green skills training identified in phase one to Level 2 construction students.

Initially, employers and college staff designed the green skills training, which is now being delivered directly to students. College practitioners will continue to work with employers to deliver at least 15 green skills sessions, over 30 hours to a minimum of 105 construction students within each pilot.

Pilot projects have developed engaging activities that support Level 2 students to develop green skills which will better equip them to progress into green employment.

The colleges also ensure students develop an understanding of the broad issues related to climate change in the homes and buildings sector, such as building performance and the overarching aims of sustainable practice to ensure students progressing into green jobs have a sustainability-oriented mindset.

The skills developed through the project will support learners to progress to Level 3 study, with a focus on apprenticeships relevant to the green construction economy, and to ensure they are fully prepared to progress into stable employment.

The participating colleges are demonstrating their ability to ensure the project is embedded to make a long-term shift to greater strategic working, not just a short-term activity.



Indicators used to measure success against outcomes	Planned deadline dates	Measured outcomes and evidence
Action	Target date	Outcome
Independent evaluation interviews with participating Level 2 construction students, practitioners, pilot colleges and pilot partners.	May 2024	<p>The purpose of the site visit was to understand in more detail our partnership arrangements and stakeholder involvement in programme development and delivery and how our needs analysis is informing the content and delivery of green skills provision. We also discussed and evidenced our practitioners experience of CPD with a robust overview on the nature of course delivery and learner experience of CIAG and green skills provision to date.</p> <p>During this visit, the research team:</p> <ul style="list-style-type: none"> interviewed the senior leader with oversight/strategic knowledge of the curriculum, the college's green agenda, and employer engagement strategies interviewed the head of department. interviewed two members of staff delivering green skills programmes interviewed four students.
Year one case study production.	June 2024	Case studies have been produced from both the colleges, detailing activities, challenges, successes, and recommendations for successful local collaborative approaches to the delivery of green skills for green jobs from the colleges and students experience to date for year one of the pilot project.

Indicators used to measure success against outcomes	Planned deadline dates	Measured outcomes and evidence
Action	Target date	Outcome
Re-survey Level 1 and Level 2 students to measure the student distance travelled to see if there has been increased knowledge and interest.	June 2024	Following the second survey in December of which evaluated the current impact of green skills delivery, both colleges have re-surveyed the participating cohorts in May and received a report from the independent evaluator of which offers the opportunity to identify areas for improvement for the second year on the phase three delivery of the project. The intention is to implement resources of which will ensure that the delivery methodology has a greater impact on the next part of this phase.
Plan and host insight days (ongoing)	Ongoing	The pilot colleges have planned and held insight events ensuring that people are aware of the many new opportunities that will be on offer in the green and digital sectors. These included young people who are thinking about their future careers, as well as people currently working industry and wanting to re/upskill and of course employers.

Good practice and positive outcomes

- There has been CPD provided to improve the skills and knowledge of practitioners, so they're more confident in highlighting green skills and options across a range of skilled trades to students.
- Dedicated resources have been bought or developed to support teaching, learning and assessment in new green construction workshops.
- Senior managers, curriculum leads, and staff have worked as a team to understand the aims of the project and plans on how to deliver it which means it has been successfully implemented.
- Involvement of SMEs in the development of courses has made the courses more relevant to current industry standards.
- Employer-led masterclasses on the relevance of green skills in the current industry has allowed employers to interact directly with students and enhanced college delivery.
- The curriculum has been broadened to improve students' knowledge and awareness of the overarching green skills agenda.
- The colleges have delivered quality career information and guidance which has improved student understanding of the career opportunities and progression routes into green jobs in the homes and building sector.
- The green skills agenda has been introduced from the starting point of the induction process to the end of the academic year. This means that students are introduced to green skills at the start of their college journey.
- Students learning has been scaffolded by embedding green skills into the substantial offers in the various trades (e.g. solar panels, electrical course, heat pumps-plumbing, on site trades-retrofit).
- The pilots have worked together and with others to collaborate and share good practice. They have improved local workforce planning across Greater London to help deliver vital green skills training.
- There is wider employer engagement and work experience offered at both college pilots as a result of the project.

Case studies

Each pilot project has produced a case study detailing activities, challenges, successes, and recommendations for successful local collaborative approaches to the delivery of green skills for green jobs. They have also created a case study showcasing the impact the project has had on one of their students.



South Thames College group

case study

What was the green skills curriculum offer like at your college before the start of this project?

Awareness of the significance of green skills in the construction industry has been growing steadily during the last few years and they are beginning to take on more prominence in traditional construction provision. Different sites have also been testing the market with short micro-credential courses such as electrification of cars and sustainable waste management.

This work was consolidated and was given added momentum when the group took the lead for the South London local skills improvement plan (LSIP) and worked as a partner within the Central London LSIP. Both LSIPs consider green skills and construction to be a key London priority, have generated good amounts of labour market information and have helped shape curriculum thinking with regards to green construction.

In addition, the group's involvement in both the Mayoral Academy Programme and strategic development fund has enabled the different college sites to develop a strong local partnership approach to scoping and developing green construction training. These partnerships involve all colleges in south London, and local employers, including many SMEs. SMEs are particularly important when scoping out a retrofit offer as they represent 80% of the employers currently involved in retrofit work.

What is your college's experience of the project to date?

The project has given useful focus to our Level 2 provision, providing a framework to help us: plot in dedicated advice and guidance; monitor our students' responses to and appetite for green opportunities within the curriculum and then as progression routes; and consider how we can enrich the green offer for students through developing partnerships.

The Solar Careers Fair, in February 2024, is a good example of an event which was established to support our work on the greener construction brief. 12 employers (from a cross-section of the industry) were invited to set up career and information stalls and many brought along the latest industry gadgets for visitors to interact with. Visitors included DWP clients from across South West London, students from STCG's various sites as well as local school partners. Mark Wakeford (Chair of Evo Energy and part of the Government's Solar Taskforce Group) helped support industry involvement and delivered a short opening speech.



The project has also provided important stimulus with regards to sharing approaches to green construction development. Some examples include delivering a 'break-out' session at the AoC Annual Conference and Exhibition in November to share initial learning points, alongside London South-East Colleges (LSEC), our project partner, hosting an insight day in February which included representatives from the government's Department for Energy Security and Net Zero as well as Solar Energy UK, an established trade association working on behalf of the solar energy sector, and arranging for our construction team to visit London South Bank Technical College to view and discuss its new green construction workshops.



How has the green skills in the construction curriculum improved?

The curriculum has taken great strides during 2023/24 and will continue to strengthen into 2024/25. Significant building works will take place over the summer to establish a solar panel fitting workshop at our Merton site and then training bays within a re-purposed workshop at our Wandsworth site. The training bays will form three sets of three (live working; fault finding; installation and maintenance) to provide hands-on learning across three systems: heat pumps, solar thermal, electrical (solar PV, EV charging and battery energy storage).

The dedicated green workshops provide a platform which has supported the group to considerably expand its planned green construction provision. This expanded provision sits within what we've branded as a 'Net Zero Training Hub'. Courses include those which are associated with the bays and solar panel workshops (Level 3 air source heat pump installation, for instance) as well as a suite of retrofit qualifications and the Level 3 in domestic energy assessment. Some of our multi-skills students have already achieved the Level 2 retrofit award, a short introductory course which we bolted onto the end of their academic year.

The new curriculum offer has been accompanied by a range of CPD opportunities for staff. This summer, for example, plumbing and electrical lecturers are attending accredited installation courses linked to air source heat pump and solar PV respectively.

Existing provision also benefits from staff undertaking dedicated CPD linked to green skills, since it means that lecturers can make up for shortfalls in existing awarding body specs (giving more emphasis to air source heat pumps and rainwater harvesting in Level 2 plumbing, for example).

Dropping in structured awareness raising sessions for green skills (phase two of the Project), in addition, means that students are able to see the relevance of acquiring green skills. This is reinforced by planning in regular trips and inviting employers in. A particularly successful event, attended by over 50 construction students in person (and over 100 more via Teams), involved a presentation from UK Power outlining its apprenticeship opportunities and upcoming application windows. Feedback from students has been positive with regards to the impact of the project and the opportunities provided within the group to allow them to extend their understanding of green skills and technology. In the most recent survey linked to the project, 52% reported that they had 'learned a lot' in this area, whilst 40% reported that they had 'learned something'.

Are there other organisations that have also been helped by this project?

The project has enabled us to enter into many useful interactions with colleagues at London South East Colleges, the second college group in London supporting the Greener London initiative.

We meet regularly with the South London Partnership's (SLP) Green Skills Academy to share resources and networking opportunities. A colleague from the SLP delivered an excellent green careers overview for construction students cross group.

There are a host of employers with whom we work to offer construction work experience placements and, as can be seen from the student case study which follows, these can lead onto paid work and often help develop students' awareness of green issues in real life work environments. Employers also attend termly panels which allow them to help us update, adapt and re-think our curriculum.

We regularly take part in webinars which help to raise the profile of the project, allowing us to share learning points and successes with other providers and stakeholders. We've agreed for example, to present project updates to the Department for Business and Trade's Sustainable Construction webinar in September.

Has this project had an impact at college level?

Because the project is cross-group, it has served to bring construction staff and lecturers together in a way which may not have happened otherwise. Students from three sites, for instance, attended the South London Green Careers Summit in the autumn term, lecturers and students from different sites will share the same CPD sessions in the summer term, information and guidance resources were designed at our Wandsworth site and then shared across campuses, lecturers will come together in the autumn of 2024/25 to be upskilled on the new green skills equipment currently being installed.

London South East Colleges

case study

What was your green skills curriculum offer before the start of this project?

Within LSEC, we have over nine thousand learners, a fifth of whom are enrolled on STEM courses. We consistently provide education to around 3,500 students on 16 to 18 study programmes with STEM learners making up just under a third of this number (1,100). Construction courses take place at our Bromley and Holly Hill campuses.

The facilities at these campuses enable the college to deliver full and part-time vocational courses in a range of levels, from entry to higher education. We already have an established construction offer based at the college's Holly Hill and Bromley Campuses.

The Bromley campus technology block houses the STEM provision, which has a developing curriculum in green technologies, including modern methods of construction, micro renewables, energy efficiency electric vehicles, automotive and EV charging.

Our work to date through the strategic development funding and multi college academy programme provides us with a rich evidence base and the infrastructure to develop high quality curriculum to enable learner progression into stable employment in the green construction sector.

Our developmental action planning (DAP) for staff to CPD with each other will be collated to meet the needs for SMEs and students with each campus having an individual curriculum manager who supported the individual projects at each college with the projects managed overall by the project manager who will ensure that all surveys, employability skills.

Our experience of the project to date

The project has given useful focus to our Level 2 provision, providing a framework to help us plot in dedicated advice and guidance, monitor our students' responses to and appetite for green opportunities within the curriculum and then as progression routes, and consider how we can enrich the green offer for students through developing partnerships. We have been able to support practitioners to improve their skills and knowledge in a range of green skills.



As an example of our growth within the green agenda, we facilitated a visit to our Bromley Campus by Robert Halfon, then-Minister of State for Skills, Apprenticeships and Higher Education. He met with staff, students, and apprentices yesterday during a visit to London Southeast Colleges' Bromley campus.

The Minister toured the college's technology block, visiting construction workshops and its newly launched Green Skills Lab. Speaking with apprentices and students studying a range of vocational qualifications, the Minister viewed the college's facilities and heard more about its courses, study programmes and skills provision.

Discussions have taken place with college leaders who talked about the green skills programmes being delivered and the work being done with employers and other colleges across the region to help address skills shortages in the expanding green industries.

Funding from the government's strategic development fund and the local skills improvement fund has helped put LSEC at the forefront of green skills training. This is helping to support businesses across the region, as well as giving local people excellent career and employment opportunities, both now and in the future.

Also attending the event was Maria Gonella, Managing Partner at Quantum. London's first renewable training facilities for Level 2 and Level 3 students were installed at colleges across the region last year, thanks to the trailblazers in the Local London Green Skills team. LSEC is one of the first in the country to have students working in these renewable training facilities and learning the green skills we need to see us into the future.

The green skills in construction curriculum improvements

Our curriculum has now been developed and designed specifically for Level 2 cohorts and mapped to Level 3 apprenticeships and T Level courses to maximise opportunities for student progression for employment into the green construction industry.

Building on existing industry partnerships and the development of an employer pledge card – the college is tying in over 50 key employers to engage with the college in many ways from upskilling and re skilling their staff to engaging in our apprenticeships programmes.

Our main improvement is that we are now growing the provision in the delivery of green skills in electrical installation courses, and this includes the delivery of domestic retrofit, air source heat pumps, solar panel installations and further smarter energy saving green technology courses with delivery taking place at our Holly Hill and Bromley campuses. We now have an innovative new training space, designed to equip people with green industry skills, has been officially opened at London Southeast Colleges' Bromley campus today. The pioneering facilities house nine renewable technology training booths, covering three key areas: air source heat pumps, solar thermal, solar PV, battery and electric vehicle charging.

Other organisations that have also been helped by this project

New research is highlighting how a lack of knowledge and understanding of the green and digital job sector is seriously preventing people from taking up a wealth of opportunities in the sector.

- 50% of Londoners aged between 16 and 25 want to pursue a green career.
- 59% believe there is a current shortage of green and digital skills.

- 32% self-rate their level of green skills as 'low' to 'no'.
- Three quarters (76%) believe digital skills will be needed to get a decent job in the future.

The figures from the London local skills improvement fund (LSIF), reveal despite half (50%) of Londoners aged between 16 to 25-years-old admitting they want to pursue a career in the green sector, almost three in 10 (29%) have little to no knowledge of what green skills mean.

Furthermore, they felt there were large barriers to entry including not knowing where to begin (42%) and feeling that they would not be able to earn enough in the field (37%), while a third (33%) mistakenly believed there were no job opportunities where they lived. The statistics highlight a serious need for investment in education in London to prepare young adults for green and digital jobs and equip them with the knowledge to pursue those roles. The industry is in dire need of recruitment with more than a quarter (27%) of employers in the capital reporting a green skills shortage.

With many companies struggling to fill vacancies, there remains a lucrative opportunity for young Londoners training to enter this workforce. To combat the issue a new investment of £6.5m from the government's LSIF has been secured by us to lead a group of twenty-three further education, higher education, and skills providers in North East and South East London.

However, there will still be the need to introduce the local population into the importance of the green agenda especially with the delivery specialist skills gaps in local further education establishments.

We remain involved in a green skills focus group with other London colleges to implement a collaborative approach to the embedding of green skills into the construction curriculum. Through sharing good practice and by highlighting our progress to date, our aims are to ensure momentum continues with regards to raising green skills awareness across student cohorts in the London area.

This will have an impact on their career pathways and will support the bridging of the green skills gaps in the construction industry. We meet regularly with the South London Partnership's Green Skills Academy to share resources and networking opportunities; this supported good employer attendance during Green Careers Week and Employability Week.

The motivating factors are that relevant training materials will support the supply chain for green skills in the local area and beyond and it is a critical part of our strategic goals and plans to meet the needs of industry. The construction industry is moving towards this vision and colleges are critical to the supply chain and we uphold a responsible approach to enrich our curriculum.

Using the research, we developed a news story, which was issued to broadcast media across London. We offered spokespeople from both London South East Colleges and Newham College to talk about the research, along with a student case study.

The story reached over two million people via 34 radio stations across London. This included interviews with Louise Wolsey (and an LSEC student case study) on Greatest Hits radio (clip attached) and a piece on London Live TV, also featuring an interview with Louise. You can read the full story here, on our updated website: [Half of young Londoners want a "green" career - Local London Green Jobs and Skills Partnership \(locallondongreenskills.com\)](https://locallondongreenskills.com)

As you will see, this website has now been fully updated to reflect our LSIF work. It includes borough maps, which list all our partners and highlight the various projects being conducted. This website is a crucial resource, through which we can highlight both our partners' individual work and our unique collaborative projects. In terms of other PR activity, our project lead, Mark O'Reilly and Chief Strategy Officer, Louise Wolsey have developed a thought leadership article for FE Week regarding micro credentials, highlighting some of the work taking place in this area: [Why we're developing micro-credentials – and you should too \(feweek.co.uk\)](https://feweek.co.uk).

The project's impact at college level

To date, we are still growing the provision in green skills. However, our student survey does show an increase in the students' knowledge of what is meant by the green agenda within the construction industry.

Outcomes from student data taken in June 2024

How well has your course helped you to understand green technology and green skills in in construction trades?

Responses	%
I have learned a lot about green skills and technology on my course	21%
I have learned something about green skills and technology on my course	53%
I have not learned anything about green skills and technology on my course	25%

How much do you know about the following green jobs in the construction industry?

Career	Expert %	Know quite a bit. %	Know the basics. %	Heard but not sure. %	Not heard of this %
Solar Panel Installer	9	7	40	37	6
Heat Pump Installer	8	8	34	40	10
EV Charging Point Installer	9	8	27	38	17
Sustainability Manager	5	11	31	31	21
Retrofit assessor.	7	4	21	25	40
Retrofit Installer	6	3	19	27	45

South Thames College group

student case study

What was their life like before starting their course?

During secondary school, Marcus struggled with his mental health and found it difficult when leaving secondary school to find something to do (e.g. sixth form, college or an apprenticeship) which motivated him.

In 2022, at the start of his plumbing course, he was a passenger in a road traffic incident which resulted in a car chase in his local area. He was left traumatised from the incident and travel to and from college became difficult for him. He received counselling from college at the time, communicated with his teachers, and was just about able to keep on top of his studies. In late 2022 his grandmother was diagnosed with late-stage lung cancer and was admitted into hospital for palliative care. This took a further toll on Marcus's mental health. His grandmother passed away shortly after and for a period he found it difficult to focus on his education and career prospects.

From as far back as he can remember, Marcus has wanted to work in the construction industry. He has said that he felt he was 'not good at anything' until he did a plumbing Level 1 course in 2022/23. Achieving it, meant that he 'felt like I was good at something'. He has been on Level 2 multi-skills during the 2023/24 academic year.

What was their experience of the project? How did they get support with their learning?

We asked Marcus to sum up his experience of the project. The below are his own words:

"I enjoyed embedding green skills into my course. I found it interesting to learn about the new methods and technique. We learnt a variety of different green skills, some domestic, which we could implement in our home life such as rainwater harvesting which can be used to water plants, also solar power, and how it can be used to power things at home such as garden lighting. We also learned more larger scale green skills that could be implemented into the home such as air source heating, ground source heating, which are alternative methods to heat a home. We also covered solar panels on the roof to use the sun's energy and provide power to a home. We looked at commercial green skills such as hydroelectric power, wind turbines and solar energy farms.

I was fortunate enough to go on a trip to PHEX which is a plumbing and heating focused event which allowed me to see some of the green techniques in person. Throughout my course I felt incredibly supported with my studies and I was surrounded by my teachers who were passionate about teaching us green skills. I was also encouraged during my work experience to learn about how green skills are implemented in the real world."

Marcus has achieved two qualifications during the 2023/24 academic year:

- Level 2 Diploma in skills for employment in construction industries
- Level 2 City & Guilds Award in retrofit (7618-02)

What are their future aspirations now? How are they better than what came before?

Marcus summarised how he felt he had improved during the academic year:

“My time keeping improved. I also found my independent learning improved. My confidence and communication skills improved.”

He also reported that: “I definitely feel that my future aspirations have grown. I have proven to myself that when I apply myself, I can and will succeed. I have been supported by my teachers with the aim of finding employment in the construction industry and this has led me to feel less stressed. I have enjoyed my experience on this course, I’ve learned so much about the construction industry and the direction that it’s headed in. I would recommend any individual in a similar position to do this course.”

Have this student’s career prospects gotten better and has this had an impact on anyone else? Their family? Their community?

Marcus said: “I am happier, my parents are proud of me and I do now have a more positive outlook on my future.”

Marcus’s lecturer has confirmed that he has completed a highly successful and rewarding academic year. He helped locate his own work experience with a building services firm, for instance. The employer was so impressed with Marcus’s skills and approach, that he has now moved onto paid part-time work. The employer was particularly impressed with Marcus’s knowledge of retrofit options since they have considerable amounts of housing stock in their portfolio and large contracts with the NHS.

Are there other students like this that have also been helped? Are you continuing to help them?

As our student surveys linked to the project show, many of our Level 2 students now feel they have more understanding of and confidence about green issues and the career options open to them. At the same time, CPD provided to lecturers, thanks to the AoC project, have allowed teaching teams to provide better informed advice and guidance and begin to run bolt-on provision to enrich our students’ experience and employment prospects (the Level 2 retrofit award, for example).

We will continue to support students, either through internal progression onto full-time courses or supporting applications onto short green skills focused provision, new to the 2024/25 curriculum offer (air source heat pumps, electrical storage, solar PV). We are also setting up as a CSCS test centre in 2024/25 and will use this resource to facilitate construction site access to current and recent students.

London South East Colleges

student case study

What was their life like before starting their course?

While statistically mixed white/Black Caribbean teenage boys are one of the groups most affected by stark achievement gaps, Rhys Lambert is a young man who is determined to defy statistics.

After relocating to South East London as a child, Rhys lives in the Royal Borough of Greenwich, the 57th most income-deprived borough of the 316 boroughs in England (ONS), where in 2019, 15.9% of the borough was classed as income-deprived. Rhys went on to study at a local secondary school where he was able to achieve GCSEs in the core subjects of English, maths and science.

Like many young people in the borough, Rhys' career aspirations were determined by the role models around him, primarily trade workers. As he began to think about his future, he decided to take the advice and guidance of those around him and enrolled on a Level 2 electrical course in 2022 at London South East Colleges.

Through hard work and dedication, he passed his course in the summer of 2023 and began to think more about his next steps, finally deciding to enrol on a second Level 2 course, this time in plumbing.

Experience and support whilst on the project

It was in the autumn of 2023 that Rhys was first introduced to green skills through an induction programme set up by the college.

Throughout his City & Guilds plumbing course, Rhys had the opportunity to attend guest talks and workshops relating to sustainability and green skills, including a workshop hosted by Kier Construction at Bromley campus' Green Skills Lab. It was this event that Rhys first began to think seriously about sustainability and what that means for the construction sector. While his course focuses on traditional plumbing skills, Rhys began to see that the scope within the industry reaches further than traditional domestic or site work.

In his own words, the programme has "helped me see there is more to plumbing than fixing leaks. I would really like to learn more about some of the modern technology and activities that are still being developed. It is exciting that there will be jobs in the future that we do not even know about now."

"I didn't really know what green skills meant before, and even though I still wouldn't say I know a lot about it, I definitely understand more, and how sustainability will affect construction in the future."

As well as technical learning and gaining understanding of green skills, Rhys notes that the programme has helped him grow in confidence, especially speaking to new people and asking questions in workshops. He also notes that having the opportunity to collaborate with peers has helped him develop into a better collaborator, something that he feels is a benefit both inside and outside of college.

London South East Colleges

student case study

Future aspirations

Rhys is keen to continue learning and developing within his chosen career. Being exposed to the opportunities within the green skills sector has broadened his aspirations and given him an understanding of this growth sector.

Entering the green sector will enable Rhys, to build a career in a growth sector, enhancing his potential earning power throughout his working life, and therefore reducing the statistical probabilities of him entering the income-deprivation threshold. In turn, increased potential earning power is beneficial to Rhys' family, increasing household income.

Rhys is determined to have a successful career in construction and is willing to continue developing to ensure this aspiration becomes a reality. "I really enjoyed the sustainability workshop and learnt a lot in the. I did not really know what sustainability meant, but when we started talking about it more, I realised I knew more than I first thought, and it is about doing things to help the environment however we can."

Career prospects improvements and the impact on others

The programme has supported two core groups of students at LSEC – Level 2 learners at Holly Hill and Bromley campuses.

In total, more than forty students have taken part in various aspects of the programme, as well as more than one hundred learners taking part in a green skills induction and one other aspect or activity.

The demographic for these groups is primarily white, Black Caribbean or mixed white/Black Caribbean boys. Statistically, these groups are at the lower end of achievement, in addition, the geographic location means many learners within these groups are income-deprived.

Other students who have been helped by the project

Incorporating the green skills programme within their course exposes them to construction sub-sectors that many of them never knew existed.

LSEC are committed to enhancing the learning experience for every student, maximising learner aspirations and supporting local skills needs.

Green skills modules are being incorporated into construction courses wherever possible, and green skills are being intertwined into traditional units where appropriate. "The programme has helped me understand what green skills are and some of the jobs I could maybe do when I finish at college".

Next steps

This blueprint has been developed, drawing on the learnings from phase one, phase two and part of phase three of the programme, demonstrating effective processes and procedures for establishing partnership working to deliver green skills training in the homes and buildings sector.

Dissemination

Each pilot project has produced a case study detailing activities, challenges, successes, and recommendations for successful local collaborative approaches to the delivery of green skills for green jobs.

Pilots have also inputted an external facing report at the end of each project phase. The resources produced as part of the project, including skills matrixes developed in phase one and examples of green skills delivery are shared with the sector, to support wider adoption of pilot activities, evidencing the need to create green skills pipelines from Level 2 upwards across a range of sectors. All details, resources and case studies can be found on the dedicated project page: [Creating a Greener London – Sustainable Construction Skills](#)

Pilot colleges have supported national dissemination which has been facilitated through a series of webinars, where pilots will continue to share lessons and examples of innovative practice. The webinars draw on the pilot case studies and allow participants to ask questions and develop their plans for delivering green skills.

Pilots have and will continue to host insight days within their college setting, to enable colleges not directly involved in the programme to learn from pilot delivery. Insight days have and will include discussions with staff on the process of establishing local partnerships, how they identified the relevant green skills for Level 2 courses, findings from CIAG activities, examples of green skills delivery and student participation and feedback.

Ten insight days will be hosted between the two pilot projects.

Dissemination also includes speaking at AoC events and conferences, including AoC Annual Conference and Exhibition and our Sustainability in FE conference.

Longitudinal study

An independent evaluator has been commissioned to undertake a theory-based review of the programme outcomes from project commencement to June 2027. Monitoring will include data analysis of Level 2 progression outcomes, earnings measured using longitudinal educational outcomes (LEO) data, and green construction job vacancies within Greater London.

Contact us

Thank you to the college pilots and JP Morgan and Chase for making the programme possible.

For more information on the programme please see our dedicated website [Creating a Greener London – Sustainable Construction Skills](#) or alternatively contact the Project Delivery Lead Phil.Parle@aoc.co.uk

