



**Green
Skills
Roadmap**

Signposting
Opportunities
for Colleges



Together, we can do this

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Welcome



1.1 Welcome to the Green Skills Roadmap

Further education colleges are key to delivering a greener future for our region, one of social, economic, and environmental justice. Colleges in the West Midlands and Warwickshire are both challenged by the green skills revolution and presented with an opportunity.

A greener future means green jobs, green jobs need green skills, and green skills need colleges to deliver green courses. As the demand for green jobs rises, so does the need for colleges to adapt and innovate their learning and skills offer.

Recognising the imperative, this Green Skills Roadmap has been collaboratively developed by colleges in the region with the support of the UK Government's Department for Education's Local Skills Initiative Fund.


The roadmap is designed as a tool for college leaders and their Boards, curriculum and estates planners, teachers and support staff, employers, funders, partners, learners, and communities, and anyone else interested in further education and green skills.

It signposts colleges to action, institutionally, collaboratively, and in partnership with stakeholders...

It signposts a transformation in college green skills provision across the West Midlands and Warwickshire...

It signposts a better future...

Together, we can do this.



“The only positive ‘green’ future that is workable in the long term, according to the best available science, is a future that builds our human systems to work with and in support of the rest of nature, rather than against it... This means that we urgently need an economy that not only sustains the life and resources around us but regenerates nature too. Clearly this cannot be done with the economy we have, continuing with business as usual. We need a new ‘green’ economy”.

Matthew Shribman,
writing for AIMHI EARTH 12 April 2023

1.2 Using the Roadmap

The Green Skills Roadmap is an interactive tool designed to help colleges address the region's current and future green skills needs. This roadmap aims to be both practical and useful for colleges.

The **Green Skills Roadmap** serves three main purposes:

PROVIDING INFORMATION:

Each section of the Green Skills Roadmap includes links to articles and resources on the complex issue of green skills. These resources will interest college leaders, staff, governors, students, and other stakeholders. Simply click the links to learn more.

ASSESSING CURRENT COLLEGE PROVISION AND PARTICIPATION:

The roadmap evaluates the current green skills provision and participation in further education colleges in the region, divided into five sections:

- Green skills at the heart of strategy.
- Technical green skills for young people and adults.
- Green custodianship skills for young people.
- Community empowerment skills for adults.
- Sustainable leadership skills for employers.

In the 'Technical Green Skills for Young People and Adults' section, you can explore interactive dashboards displaying key data on current participation levels in technical skills programmes related to green skills jobs. These programmes are either directly related to or preparatory for future green skills jobs.

There are three dashboards available:

- Adult education.
- Apprenticeships.
- Pipeline programmes for young people aged 16–18 years.

The 'Select-a-category' feature allows this data to be broken down by the region's priority sectors.

SIGNPOSTING THE FUTURE:

Recognising that colleges are at different stages in their green skills journey, the Green Skills Roadmap provides a comprehensive list of actions or "signposts" for all colleges to follow.

These signposts are supported by a series of **best practice case studies**, showcasing how individual colleges are addressing the green skills challenge. By following these examples, much can be learned.

If all colleges follow these signposts, we can collectively enhance our contribution to green skills in the West Midlands and Warwickshire.

We hope you find the Green Skills Roadmap useful.

For more information, contact lowell.williams@collegeswestmidlands.org.uk.

The Green Skills Challenge



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2.1 What do we mean by green skills?

There is a lack of consensus on the definition of 'green skills', with various interpretations and competing views.

Drawing on the work of the European Centre for the Development of Vocational Training, the UK Parliamentary Office of Science and Technology offers the following definition:

"Green skills can be defined as "the knowledge, abilities, values and attitudes needed to live in, develop and support a society which reduces the impact of human activity on the environment". Green skills are often associated with sectors that will play a major role in reaching net zero greenhouse gas emissions by 2050, such as power, home heating, waste, and resources."

<https://researchbriefings.files.parliament.uk/documents/POST-PN-0711/POST-PN-0711.pdf>

To facilitate the creation of a useable roadmap for colleges, this roadmap organises green skills into four categories. Within each category colleges can create learning and skills programmes and can secure funding for the related activity.



Technical skills for green jobs

These encompass the practical and technical skills, often referred to as 'hard skills', necessary for securing employment in green industries or for green roles within traditional industries. For instance, a position such as an electric vehicle maintenance technician represents a green job within a green industry, while a position such as a sustainability manager in the health service, a green job in a non-green industry. Further education colleges can access funding through the adult education budget administered by the West Midlands Combined Authority, apprenticeship levy funding from employers, and government funding for young people aged 16-18 years, to provide training in technical skills for green jobs.

Green custodianship skills, particularly for young people

Young people are the leaders and custodians of the region's future sustainability and investing in their skills and knowledge is essential. AIMHI EARTH have developed a framework of 15 essential green skills. These skills include critical thinking, scientific knowledge, cultural awareness, adaptability, entrepreneurial spirit, interpersonal skills, information literacy, and embracing diversity in thinking. The majority of the region's young people aged 16-18 years in full time education study in further education colleges. Through government funding for full time study programmes, colleges can help develop the custodianship skills of all young learners, no matter what they are studying on their core programme.

Community empowerment skills, particularly for adults

Green community empowerment skills are the skills that enable individuals and groups to engage effectively in sustainability initiatives within their own communities. For example, these skills might include an understanding of environmental issues, how to use green technologies, the ability to mobilise the community and to foster collaboration with local authorities, businesses, and other organisations. By empowering individuals with these skills, communities can work together to address the region's environmental challenge at a local level. Further education colleges can design learning programmes focusing on these skills and access funding through the adult education budget, administered by the West Midlands Combined Authority, to enhance community empowerment skills.

Sustainable leadership skills, for employers

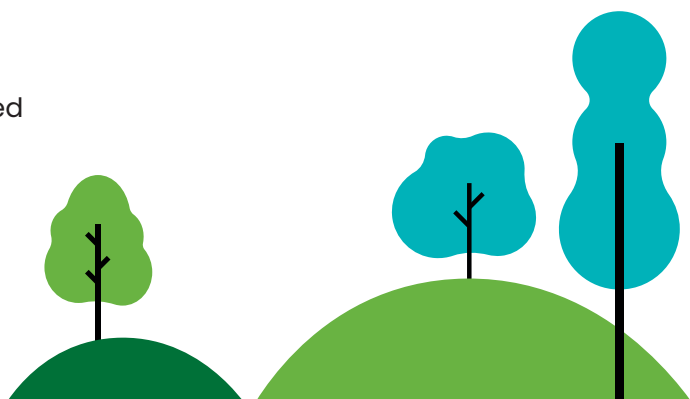
These are the essential knowledge-based and practical skills necessary for leaders and managers, particularly in small and medium-sized enterprises (SMEs), to enhance the sustainability of their business operations. These skills could encompass various areas, such as adopting energy-efficient technologies, implementing changes in working practices, enhancing automation, and initiating productivity improvements. They might extend to understanding how to access funding to support sustainability enhancements, obtaining knowledge support, and achieving green accreditation to ensure compliance with procurement frameworks. Colleges have significant links with employers across the region and have access to funding from sources such as the Local Skills Improvement Fund (LSIF) and InnovateUK .

Find out more

AIMHIEARTH 15 Green Skills
www.aimhi.earth/blog/what-are-green-skills-15-green-skills-clearly-explained

UK Research and Innovation - Colleges Catalysts for regional Business Innovation
www.ukri.org/blog/education-colleges-catalysts-for-regional-business-innovation/

West Midlands Combined Authority - Local Further Education College in the West Midlands to get £2.4m Innovate UK Funding
www.wmca.org.uk/news/local-further-education-colleges-in-the-west-midlands-to-get-2-4m-innovate-uk-funding/



2.2 Review of Economic Indicators

A cursory search of the internet results in a raft of information on the future economic impact of the transition to a green economy and the implication for skills. Whilst there is not one definitive model of this transition for the West Midlands and Warwickshire, an overarching theme of shared challenges emerges.



HM GOVERNMENT: SKILLS FOR A GREEN ECONOMY 2011

“The transition to a green economy requires a workforce with the right skills. This includes not only skills in the low carbon and environmental goods and services sector, but also those needed to help all businesses use natural resources efficiently and sustainably and to be resilient to climate change.”

[assets.publishing.service.gov.uk/
media/5a74c5c2ed915d502d6cae02/
11-1315-skills-for-a-green-economy.pdf](https://assets.publishing.service.gov.uk/media/5a74c5c2ed915d502d6cae02/11-1315-skills-for-a-green-economy.pdf)

UK PARLIAMENT POST: GREEN SKILLS IN EDUCATION AND EMPLOYMENT 2024

“Upskilling workers will be necessary to address green skills shortages, as well as increasing the workforce in key sectors. Stakeholders suggest that the quality and uptake of vocational education and training (such as apprenticeships) are important factors for developing green skills in the workforce. There is low public awareness of green skills and the available training options”.

[researchbriefings.files.parliament.uk/
documents/POST-PN-0711/POST-PN-0711.pdf](https://researchbriefings.files.parliament.uk/documents/POST-PN-0711/POST-PN-0711.pdf)

ENGINEERINGUK – NET ZERO WORKFORCE NOVEMBER 2023

The report highlights the critical role of engineering solutions in decarbonising the UK economy, emphasising the need for skilled engineers, technicians, and scientists. The New Statesman summarised it as follows:

“If the UK is to achieve its goal of reaching net zero by 2050 an economic revolution is needed. Hundreds of thousands of workers will be required across multiple industries, many in entirely new roles. According to the non-profit organisation Engineering UK’s latest net-zero workforce report the energy sector alone will need to fill 400,000 roles by 2050, across areas such as grid infrastructure, wind power and solar power. In the buildings sector, retrofitting will require 70,000 heat pump installers by 2035 while electric vehicles will generate 50,000 new jobs by 2040. While energy, transport and the built environment are the main areas of decarbonisation, the entire economy will need to take part in the green transition.”

[www.engineeringuk.com/media/wlob5doo/
net-zero-workforce-2023-11-02.pdf](http://www.engineeringuk.com/media/wlob5doo/net-zero-workforce-2023-11-02.pdf)

[www.newstatesman.com/spotlight/2022/12/green-skills-
future-job-market#:~:text=In%20the%20buildings%20
sector%2C%20retrofitting,50%2C000%20new%20jobs
%20by%202040](http://www.newstatesman.com/spotlight/2022/12/green-skills-future-job-market#:~:text=In%20the%20buildings%20sector%2C%20retrofitting,50%2C000%20new%20jobs%20by%202040)



PWC GREEN JOBS BAROMETER MARCH 2024

The PWC Green Jobs Barometer, tracks the UK’s transition to a greener economy. Broken down into economic regions and sectors, the barometer measures performance through five key pillars: green job creation, wider benefits from green jobs, sunset jobs to disappear, carbon intensity of jobs, green workspaces.

The West Midlands’ overall Green Jobs Barometer ranking is 7th out of 12 regions with Scotland leading the way. The West Midlands ranks 9th out of 12 regions for green job creation and 7th out of 12 for sunset jobs to disappear.

According to the barometer, skill gaps are evident in both white-collar and blue-collar professions within the green job market. Blue-collar jobs, particularly in electric vehicle manufacturing and retrofit sectors, face skills gaps. For instance, around 75% of electric vehicle manufacturing workers may require NVQ Level 2-3 qualifications,

while the remaining 25% need higher-level qualifications. The retrofit sector requires an estimated 10,000 to 66,000 new tradespeople annually, posing a potential bottleneck. The shortage of skilled workers in sectors like retrofitting could hinder efforts to address the cost-of-living crisis, ensure energy security, and achieve net-zero goals.

Women and minority ethnic communities are underrepresented in fast-growing green sectors. Access to education and training is crucial for a just transition, along with efforts to raise awareness of green opportunities.

[www.pwc.co.uk/who-we-are/our-purpose/
building-trust-in-the-climate-transition/
supporting-a-fair-transition/green-jobs-
barometer.html](http://www.pwc.co.uk/who-we-are/our-purpose/building-trust-in-the-climate-transition/supporting-a-fair-transition/green-jobs-barometer.html)

SUSTAINABILITY WEST MIDLANDS AND ROADMAP TO 2030

“The Low Carbon & Environmental Technology sector is expected to grow dramatically in response to the need to decarbonise our economy. It already contributes £3.6 billion to GVA in the WMCA area alone, and could end up making up 10% of the entire economy. Harnessing this potential is critical”

[www.sustainabilitywestmidlands.org.uk/
roadmap-to-2030/sustainable-growth/](http://www.sustainabilitywestmidlands.org.uk/roadmap-to-2030/sustainable-growth/)

WORLDSKILLSUK & LEARNING AND WORK INSTITUTE – GREEN SKILLS REPORT

The report finds that the majority of employers, especially large organisations, currently require or anticipate needing green skills, particularly in electric vehicles, clean energies, and sustainable manufacturing.

- Six in ten employers report a green skills gap, impacting their ability to reduce emissions and manage energy costs.
- While most young people are inspired to pursue careers supporting emission reduction, they lack awareness of green skills and jobs.
- This knowledge gap, especially among young women, hinders them from fulfilling aspirations related to combatting climate change.
- There is a need for widespread information and advice on green skills, jobs, and careers.

The report finds:

“a stark disconnect between increasing employer demand for green skills, and young people’s lack of knowledge. A lack of awareness on green jobs, and what qualifications support progression to these roles, is thwarting young people’s aspirations for careers that can combat climate change and drive clean growth. In particular, this is frustrating the aspirations of young women to gain the high-quality skills businesses require to reduce emissions.”

[www.worldskillsuk.org/wp-content/uploads/2022/06/
GreenSkillsReport-2022_v3b.pdf](http://www.worldskillsuk.org/wp-content/uploads/2022/06/GreenSkillsReport-2022_v3b.pdf)



THE WEST MIDLANDS AND WARWICKSHIRE LOCAL SKILLS IMPROVEMENT PLAN – MAY 2024

The West Midlands and Warwickshire Local Skills Improvement Plan – May 2024 strives to revolutionise post-16 technical education by prioritising businesses' needs for innovation and growth. Led by regional Chambers of Commerce, the plan aims to foster a culture of collaboration and strengthen relationships between providers and businesses. Its findings include:

Engineering and manufacturing (incorporating WMCA priority growth clusters of electric vehicles and battery; aerospace)

- Skills shortages for roles like design engineers and planners, emphasising the need for 'space skills' in the aerospace sector, more electricians and more multiskilled staff.
- The need for a higher volume of broad engineering, mechanical engineering, design and development and electrification skills at levels 2 and 3.
- The need for better promotion of STEM at an earlier age.
- The need to upskill the existing workforce in electrification and for the existing automotive workforce converting to electric vehicles.

In construction (incorporating WMCA priority growth clusters: modern and low carbon utility; manufacturing of future housing):

- Skills shortages in environmental surveying, new energy technologies, carbon literacy, retrofit digital, solar installations and battery storage products.

In leadership & management

- Skills need to capitalise on opportunities related to digitisation, technological advancements, and the transition to net zero.

Skills training

- Training in a short, modular format would remove barriers of time and cost to a certain extent. It would also mean very specific skills needs could be tackled.
- Micro-credentials concept could mean those wanting to build up to a qualification over time could do so.
- Skills Bootcamps were viewed as good practice, and it was felt they could be extended to tackle technical skills in additional sectors and occupations.

www.cw-chamber.co.uk/media/13214/west-midlands-and-warwickshire-lsip-final-030823-amends-highlighted.pdf



FIND OUT MORE

HM Government: Skills for a Green Economy
<https://assets.publishing.service.gov.uk/media/5a74c5c2ed915d502d6cae02/11-1315-skills-for-a-green-economy.pdf>

UK Parliament Post: Green Skills in Education and Employment 2024
<https://researchbriefings.files.parliament.uk/documents/POST-PN-0711/POST-PN-0711.pdf>

EngineeringUK Net Zero Workforce
www.engineeringuk.com/media/318292/net-zero-workforce_engineeringuk_2022.pdf

PwC UK Green Jobs Barometer
www.pwc.co.uk/who-we-are/our-purpose/building-trust-in-the-climate-transition/supporting-a-fair-transition/green-jobs-barometer.html

WorldSkillsUK & Learning and Work Institute – Green Skills Report
www.worldskillsuk.org/wp-content/uploads/2022/06/GreenSkillsReport-2022_v3b.pdf

West Midlands and Warwickshire Local Skills Improvement Plan
www.cw-chamber.co.uk/media/13214/west-midlands-and-warwickshire-ls-ip-final-030823-amends-highlighted.pdf



2.3 Regional Aspirations

WEST MIDLANDS – HOME OF THE GREEN INDUSTRIAL REVOLUTION (HOGIR)

The West Midlands Combined Authority has set out an ambition for the West Midlands to be the Home of the Green Industrial Revolution (HOGIR). Their HOGIR prospectus highlights opportunities for the region in three key low-carbon sectors: future mobility- alternative and greener transportation methods; smart energy systems - integrated local energy systems and industrial decarbonisation; energy storage and resource management - including battery recycling and green construction techniques.

“There is forecast to be a net creation of 21,000 jobs by 2026 across key sectors. Responding to green jobs challenge will need to include upskilling of current workers, reskilling and retraining those currently in different occupations or seeking work. This provides an opportunity to grow talent inclusively ensuring those communities most disadvantaged in the labour market currently are provided with the opportunity to train in new skills.”

www.wmca.org.uk/media/4978/hogir-prospectus.pdf



Find out more:

West Midlands Combined Authority Home of the Green Industrial Revolution
<https://www.wmca.org.uk/media/4978/hogir-prospectus.pdf>



Green Skills at the Heart of Strategy



3

Green Skills at the Heart of Strategy

With climate change impacting every aspect of life, further education colleges are increasingly prioritising sustainability and green skills.

Further education colleges have a pivotal role in the region in providing the technical green skills training necessary for employment in new green jobs, while also developing broader green skills across all occupations. Colleges are key to fostering environmental stewardship among young people, empowering community groups to engage in green projects, and equipping business leaders with sustainability leadership skills.

To do this, **further education colleges must put sustainability and green skills at the heart of college strategy.**

Leading colleges in sustainability and green skills are taking the following essential steps:

Public commitment: they openly commit to addressing the climate emergency and to accelerating the development of green skills in the West Midlands and Warwickshire.

Strategic integration: they embed sustainability and green skills in their mission and vision statements, identifying them as strategic priorities in their plans. These colleges create ambitious green skills business and delivery plans.

Target setting and monitoring: they set clear targets and regularly monitor their progress.

Collaborative efforts: they map out regional stakeholders in green skills and establish collaborative working relationships. They work collaboratively with schools, other colleges, universities and educational providers on sustainability and green skills.

College wide engagement: they ensure that green skills are a focal point for the entire college community. Governors are actively involved in green skills initiatives, which are integrated into all curriculum and business plans.

Staff involvement: they include green skills in all job descriptions, offer effective staff development programmes, and allocate resources for green skills leadership.

Professional development: they develop and deliver a collaborative green skills professional development, building on the successful Green Changemakers programme.



3.1 Case Studies

Green Changemakers champion sustainability across colleges

Green Changemakers, a growing body of further education staff in the West Midlands and Warwickshire, are coming together as an influential community of practitioners and rapidly redefining the part colleges play in green skills and sustainability. These Green Changemakers are active within many parts of their organisations bringing about transformational change from within.

The Green Changemaker course was designed and delivered within the regional Local Skills Improvement Fund Project funded by the Department for Education.

Only four months into the initiative, the 40 Changemakers from 17 different organisations were already active in effecting deep changes in their respective colleges, not just across the curriculum and pedagogy, but in strategy, the college environment and the student experience. With further Green Changemaker courses in the offing, and an interactive virtual tutor hub in development to give educators across the region the connectivity, resources and support to keep updated, the future of skills in the West Midlands and Warwickshire certainly looks Green.



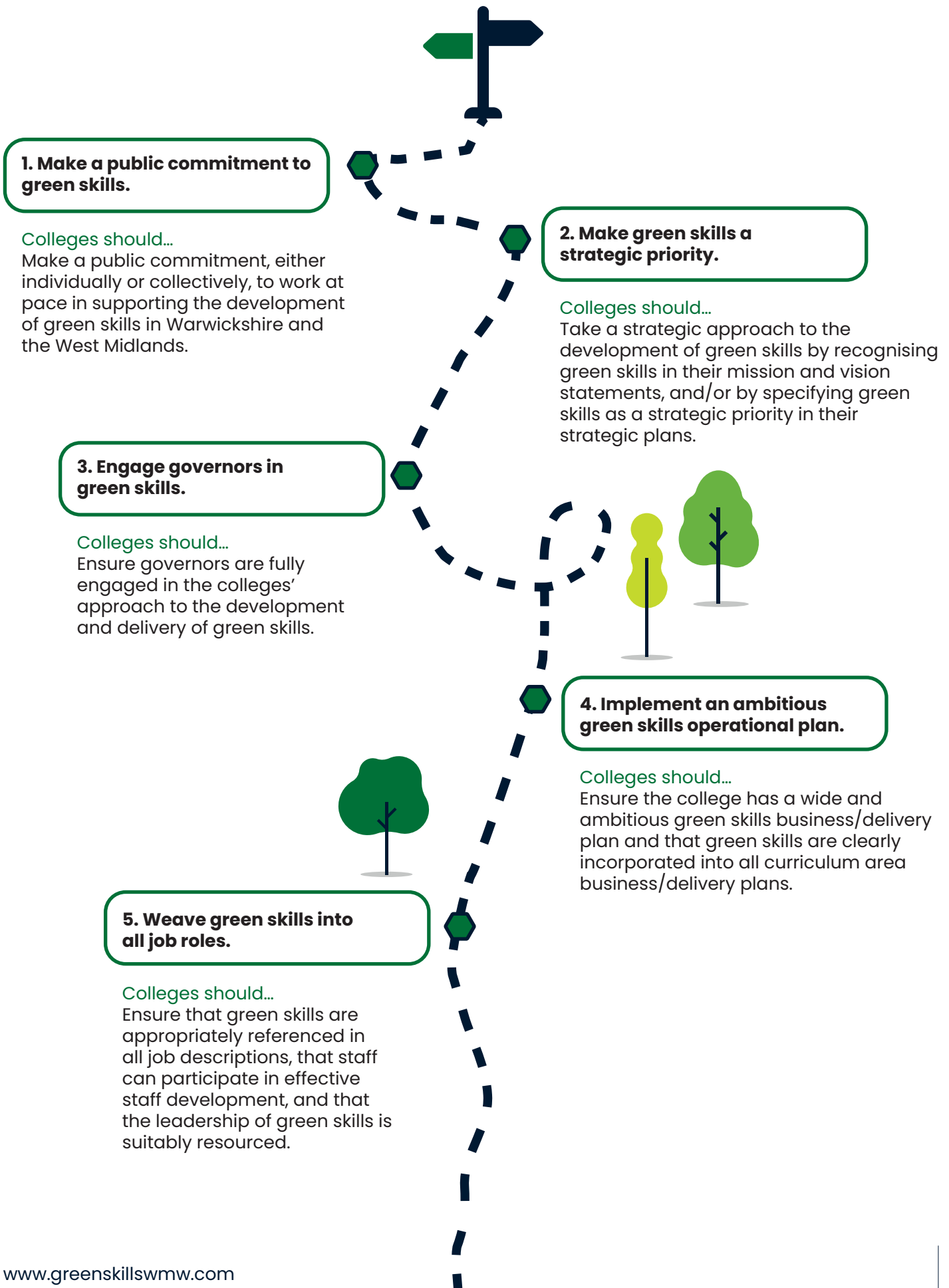
Finding your climate joy

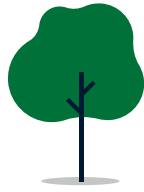
Fircroft College is deeply committed to promoting social, climate, and environmental justice, with a focused strategic goal of cultivating global sustainable citizens. This commitment is evident in the college's comprehensive climate action plan, which impacts all aspects of its operations, including curriculum development, campus management, community partnerships, and staff engagement. Embracing the concept of 'climate joy,' staff are encouraged to align their personal passions with the college's sustainability objectives, leading to the creation of individual sustainability objectives tailored to the interests of each member of staff. As a result, staff fully understand and embrace the college's sustainability mission. For example, the college's Senior Vice Principal discovered his own 'climate joy' in cycling and initiated a successful cycling project, resulting in the creation of new bike facilities at the college and national recognition for promoting cycling.



3.2 Signposting for Colleges

Green skills at the heart of strategy





6. Collaborate on a green skills professional development programme.

Colleges should...

Ensure that green skills are appropriately referenced in all job descriptions, that staff can participate in effective staff development, and that the leadership of green skills is suitably resourced.

7. Collaborate regionally around the EAUC Climate Action Roadmap.

Colleges should...

Take a common approach, regionally, to the application of the EAUC Climate Action Roadmap and participate in peer assessments of institutional progress against the roadmap.



8. Map key regional players in green skills.

Colleges should...

Ensure that green skills are appropriately referenced in all job descriptions, that staff can participate in effective staff development, and that the leadership of green skills is suitably resourced.



9. Celebrate green skills achievements widely.

Colleges should...

Seek out every opportunity to celebrate the green skills achievements of the young people, adults, apprentices, communities, and employers they support.



Technical Green Skills for Adults and Young People

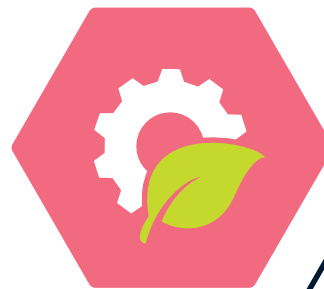




4.1 Adult Education Participation – Where are we now?

This section of the roadmap provides data on participation rates of adults on focused green skills courses funded through the adult education budget administered by WMCA over the three years spanning 2020/21 to 2022/23. The flexibility of the adult education budget and wide availability of qualifications has allowed colleges and private training providers, to develop and deliver courses for adults which are specifically focused on technical green skills.

The data is organised into sectoral categories of most relevance to the region's emerging green economy, namely automotive, construction and building services, electrical installation, energy and utilities, environmental services, and manufacturing. The data shows participation rates on focused green adult education courses in the West Midlands, per 100,000 of population, in comparison to other regions. It is disaggregated by learning aim (course), level, learner home district, age group, gender, ethnicity, and provider type. A short commentary is provided for each sectoral category.



Automotive

The West Midlands has made a good start in using the adult education budget to offer green upskilling courses for adults in the automotive sector. Predominantly, the offer consists of sector-based work academies, boot camps, and short programmes focusing on electric vehicles and charging infrastructure. The West Midlands leads the way in all regions in this initiative. Colleges serve as the primary providers of adult green skills courses in automotive. Participation is reasonably distributed across the region, with over half the learners studying at Level 3. While there is a diverse representation across different age groups and ethnicities, there is a concerning gender disparity, with only 3% of female participants in automotive green skills courses.

Construction and building services

The West Midlands has made a good start in using the adult education budget to offer green upskilling opportunities for adults in construction and building services. Numbers have risen significantly since 2021/22. Predominantly, the offer consists of boot camps and short courses focusing on retrofitting. The West Midlands stands on par with London and ahead of all other regions in this initiative. Colleges play a significant role, providing over half of the adult green skills courses in construction and building services. Participation is reasonably distributed across the region, with over half the learners studying at Level 3. While there is a diverse representation across different age groups, there is a concerning gender disparity, with only 1% of female participants in construction and building services green skills courses and an under representation of learner from diverse ethnic backgrounds at 26%.

Electrical Installation

Electrical skills are a prerequisite for the installation of green technologies across many sectors and have therefore been classified as focused green skills courses. The West Midlands has historically high levels of adult participation in electrical installation courses and leads the way in all regions in this initiative. But learner numbers are plateauing. Predominantly, the offer consists of college based one, or two years, programmes. Colleges serve as the primary providers of adult electrical installation courses. Participation is reasonably distributed across the region, with over half the learners studying at Level 3. While there is a diverse representation across different age groups, there is a concerning gender disparity, with only 4% of female participants in electrical installation courses.

Energy and utilities

The West Midlands has little adult participation in adult courses in energy and utilities and is significantly behind other regions.

Environmental services

The West Midlands has relatively little adult participation in adult courses in environmental and is behind other regions. Colleges do not provide adult programmes in environmental services.

Manufacturing

The West Midlands has relatively little adult participation in adult courses in green manufacturing, except for a handful of programmes delivered from Dudley. These are relatively new programmes with modest growth in learner numbers. While there is a diverse representation across different age groups, there is a concerning gender disparity, with no female participants and an under representation of learners from diverse backgrounds at 28%. Nationally adult education budgets are not used to support programmes in green manufacturing.

Explore the data

PowerBI dashboard.

4.2 Case Studies

Bootcamp fills the insulation skills gap

Partnering with Dyson Energy Services and Westdale Midlands Ltd, Coventry College has developed a green skills insulation technician bootcamp to address skills shortages in energy-efficient retrofit services. The bootcamp, funded through the Strategic Development Fund, offers training in various insulation measures and in giving energy efficiency advice. Learners are recruited from referral networks across the West Midlands. They undergo rigorous training and interviews with around half of bootcamp participants securing permanent employment in retrofit because of the programme.



"Attending the insulation bootcamp and then joining Dyson Energy Services has been career changing for me. Being able to help communities very similar to the one I was raised in has such a rewarding feeling – that feeling of making a difference!"

Adam Breagan, Cavity Wall Insulation Technician at Dyson Energy Services



Industry leading collaboration in hydrogen vehicle technology

North Warwickshire and South Leicestershire College has seized the opportunity presented by emerging hydrogen fuel cell technology. With a grant from the Strategic Development Fund, the college collaborated with hydrogen technology industry leaders in the development of tailored training programmes for local businesses, particularly those in logistics and transport. These include a one-day introduction to hydrogen course, a more comprehensive three-day programme covering operational skills for hydrogen vehicles, and with the support of National Express, an advanced three-day course on hydrogen vehicle systems.

"I reached out to National Express and Hydrogen Vehicle Systems as they are industry leaders in research, development, and the operation of hydrogen vehicles. Collaborating closely with employers helps us keep up to speed with the ever-evolving landscape of decarbonising transportation in the UK."

Craig Line
Emerging Technologies
Delivery Manager



4.3 Apprenticeships – Where are we now?

The development of apprenticeship standards for occupations which are specific to a green job in the green economy (referred to as 'deep green occupations' by the Institute for Apprenticeships and Technical Education) <https://occupational-maps.instituteforapprenticeships.org> is in its infancy. For this reason, participation on specific green-occupation apprenticeships is low across England.

We have, therefore, provided data of participation on apprenticeships standards in occupations **which are likely to be important to the future of the region's economy as it transitions to a greener economy**. For example, electrical skills underpin the installation and operation of many green energy technologies. If the region has a good pipeline of electrical engineers (even if currently they are not solely focused on the installation of green energy technologies) we will be better placed to meet future demand in the installation of operation of green technologies when it inevitably arrives. The same could be said of automotive, as the industry transitions to electric vehicles, and construction and building services, as the industry transitions to low carbon buildings. If we have low levels of participation in apprenticeships in careers in these sectors, then we will not be well placed to navigate the transition to a greener economy. **We are using the phrase 'pipeline apprenticeships' to describe this provision.**

The data is organised into sectoral categories of most relevance the region's future economy, namely automotive, construction and building services, electrical installation, energy and utilities, environmental services, and manufacturing. The data shows participation in green or pipeline apprenticeships in the West Midlands, per 100,000 of population, in comparison to other regions. It is disaggregated by apprenticeship, level, learner home district, age group, gender, ethnicity, and provider type. A short commentary is provided for each sectoral category.



Automotive

The West Midlands has reasonable levels of participation in pipeline apprenticeships in automotive, behind only the southwest region. Predominantly, apprentices study at level 3 in vehicle service and maintenance. Colleges are not the primary providers with over two thirds of apprentices supported by private training provider. Participation is reasonably distributed across the region. There is a concerning gender disparity, with only 6% of female apprentices, and an under representation of apprentices from diverse backgrounds at 10%.

Construction and building services

The West Midlands has relatively low levels of participation in pipeline apprenticeships in construction and building services, ahead of only London and lagging significantly behind other regions. The number of starts has fallen since 2021/2022. Predominantly, apprentices study at level 3 in plumbing, domestic heating, and property maintenance. Colleges are the primary providers supporting nearly three quarters of apprentices. Participation is reasonably distributed across the region. There is a concerning gender disparity with only 3% of female apprentices, and an under representation of apprentices from diverse backgrounds at 11%.

Electrical installation

The West Midlands has relatively low levels of participation in pipeline apprenticeships in electrical installations, ahead of only East of England and London and lagging other regions. All apprentices study at level 3 in installation and electrical maintenance. Colleges support nearly half of these apprenticeships. Participation is reasonably distributed across the region. There is a concerning gender disparity, with only 3% of female apprentices, and an under representation of apprentices from diverse backgrounds at 14%.

Energy and utilities

The West Midlands has comparable levels of participation in pipeline apprenticeships in energy and utilities with other regions. That said, numbers are low and falling. Apprentices study at levels 2, 3, and 4, in power networks, dual fuel smart meter installation, and utilities engineering.

Engineering (including electrical engineering)

The West Midlands has reasonable levels of participation in pipeline apprenticeships in engineering, behind only the southwest region. Predominantly, apprentices study at level 3 as engineering technicians and operatives. Colleges are not the primary providers supporting 26% of apprentices. Participation is reasonably distributed across the region. There is a concerning gender disparity, with only 6% of female apprentices, and an under representation of apprentices from diverse backgrounds at 12%.

Environmental services

The West Midlands has comparable levels of participation with other regions in apprenticeships in environmental services. Predominantly, apprentices study at level 2 as water process operatives, but there is provision and levels 3 and 4, and degree apprentices in environmental practitioners. Colleges do not support environmental services apprenticeships.

Manufacturing

The West Midlands has comparable levels of participation with other regions in pipeline apprenticeships in manufacturing. Apprentices study prominently at level 4 and as degree apprentices at level 6, as engineering manufacturing technicians, manufacturing engineers, and product design and development engineers. Colleges support nearly a third of these apprenticeships. Participation is reasonably distributed across the region. There is a concerning gender disparity, with 100% of female apprentices, and an under representation of apprentices from diverse backgrounds at 9%.

Explore the data

PowerBI dashboard.

4.4 Case Study

Colleges electrified through higher education partnership

The manufacturing sector in the West Midlands is crucial to the region's future economic success. With the push for a greener future, manufacturing and engineering companies are evolving towards more sustainable practices and the use of cleaner energy sources. To meet their future training needs, colleges must stay abreast of technological advancements in areas such as battery technology, electrification, and hydrogen power. Collaboration between the University of Warwick's Warwick Manufacturing Group (WMG) and West Midlands colleges has resulted in the development of a region-wide electrification strategy. The strategy includes the development and roll out of specialised training programmes to upskill over 300 college staff in areas like electro-pneumatics and lithium-ion battery recycling. Colleges are also tapping into the benefits of fellowship schemes connecting further education lecturers with higher education colleagues, and access to resources provided through the Catapult Centre.



"Higher education is often focused on providing solutions to capability challenges faced by industry. But the reality is that further education colleges do, and will continue to, play a much more important role in delivering re-skill and up-skill opportunities to industry. WMG views the support and development of colleges as critical."

Dr Benjamin Silverstone, Associate Professor, Workforce Transformation Strategy and Policy, at WMG



4.5 Young People Aged 16-19 years – Where are we now?

There are currently, no full-time study programmes for young people aged 16-19 years which are bespoke designed to support a young person progressing into a green job in the green economy.

We have, therefore, provided data of participation on full time courses **which are likely to prepare a young person to enter a deep green occupation or which are likely to be important to the future of the region's economy as it transitions to a greener economy.** For example, a young person achieving a T level qualification in Building Services Engineering for Construction, should be well placed to support the construction sector as it transitions to low carbon buildings. **We are using the phrase 'pipeline programmes for young people' to describe this provision.** We have included qualifications in science and in digital (information technology), as they contain knowledge and skills aligned with many green jobs.

The data is organised into sectoral categories of most relevance the region's future economy, namely automotive, construction and building services, engineering, information communication technology, and science. The data shows participation in green or pipeline programmes for young people in the West Midlands, per 100,000 of population, in comparison to other regions. It is disaggregated by learning aim (course), level, learner home district, age group, gender, ethnicity, and provider type.





Automotive

The West Midlands has reasonable levels of participation in pipeline programmes for young people in automotive, behind only the east midlands and the north east. Predominantly, these programmes are at level 3 in vehicle maintenance and repair. Colleges are the primary providers of fulltime automotive programmes for young people. There is a concerning gender disparity, with only 6% of female learners, and an under representation of learners from diverse backgrounds at 23%.

Construction and building services

The West Midlands has relatively low levels of participation in pipeline programmes for young people in construction and building services, ahead of only London, the south east and the south west and significantly behind the north west and north east. Predominantly, these programmes are at level 3 across a range of disciplines including electrical installation, plumbing, trades, and survey and planning. There is modest participation in T levels. Colleges are the primary providers of fulltime construction and building services programmes for young people. There is a concerning gender disparity, with only 4% of female learners, and an under representation of learners from diverse backgrounds at 31%.

Engineering

The West Midlands has reasonable levels of participation in pipeline programmes for young people in engineering, but lags significantly behind the north east and the north west. Predominantly, these programmes are at level 3 across a range of disciplines including engineering, advanced manufacturing, and maintenance and repair engineering. There is modest participation in T levels. Colleges are the primary providers of fulltime engineering programmes for young people. There is a concerning gender disparity, with only 7% of female learners.

Information and communication technology

The West Midlands has reasonably high levels of participation in pipeline programmes for young people in information and communication technology, only lagging the north west. Predominantly, these programmes are at level 3 across a range of disciplines including in IT and creative technology, digital production and design, computing, and cyber security. There is a modest level of participation in T levels. Colleges support nearly three quarters of young people on full time programmes in information and communication technology. There is a concerning gender disparity, with only 10% of female learners.

Science

The West Midlands has reasonably high levels of participation in pipeline programmes for young people in science, lagging only the north west and Yorkshire and the Humber. Predominantly, these programmes are at level 3 across a range of disciplines including applied science, forensic science, human biology, and medical science. There is modest participation in T levels. Colleges support just over half of young people on full time programmes in science. There are high levels of female participation making up 65% of learners. Over half the learners are from diverse ethnic backgrounds.

4.6 Case Study

Construction students build sustainable careers

At Walsall College young people on construction programmes have an additional module on sustainability delivered in weekly sessions and off-site visits to prepare them for progression to jobs that demand Green Skills. They learn about the impact of climate change on society, the economy and the environment. In applying these concepts to the construction sector, students learn about the circular economy within construction and how the sector can use alternative sources of energy, reduce carbon, manage waste and increase recycling. Visits to the SparkWalsall brownfield site which is being developed by John F Hunt Regeneration Ltd highlight the implications of redeveloping a contaminated area and the financial imperative to take preventative action to reduce waste and pollution. Visits to the Persimmon Homes site at Tipton to learn about modern methods of construction as well as the more traditional methods.



“The site visit was a great insight on how land contamination is controlled around the work site and Laurence explained how it is measured and managed and what procedures are in place.”

Students enthuse about the benefit of real work scenarios:



4.7 Signposting the Colleges

Technical green skills for adults and young people

1. Address gender imbalance in participation in green skills.

Colleges should...

Take action to address the gender imbalance in adult green skills programs. This is crucial to fostering greater inclusivity and diversity.

2 Work with key stakeholders on regional priorities for adult technical green skills.

Colleges should...

Working collaboratively and with key stakeholders, agree regional priorities for adult technical green skills updating and a design regional delivery plan.

3. Develop and promote a comprehensive technical green skills programme offer for adults.

Colleges should...

With an emphasis on modular programmes, short courses, bootcamps, and sector-based work academies, develop and promote an enhanced adult technical green skills updating offer including programmes in:

- Electric and hybrid vehicle design, manufacture, maintenance, and repair.
- Electric vehicle charging.
- Air and ground source heat pump installation and maintenance.
- Building insulation and treatment.
- Building information modelling and modular construction.
- Building energy management systems.
- Hydrogen boilers.
- Retrofit advisory services and installation.
- Smart metering.
- Solar panel installation and maintenance.
- Automation and robotics.
- Battery system manufacture, installation, decommissioning and recycling.
- Electrical engineering and installation.
- Sustainable manufacturing.
- Sustainable recycling, waste, and resource management.
- Ecology services.
- Sustainable land management and precision farming.

4. Secure funding for ongoing adult participation in electrical installation.

Colleges should...

Colleges and WMCA need to ensure that funding remains available to support adult participation in electrical installation, both at level 2 and level 3, either through the WMCA adult education budget or 'free courses for jobs'.

5. Set and monitor participation targets by provider in adult technical green skills.

Colleges should...

Set targets and monitor institutional performance of participation in adult technical green skills updating programmes.

6. Through CWM set and monitor regional participation targets in adult technical green skills.

Colleges should...

Through the Colleges West Midlands dashboard, collectively set, monitor, and report on regional participation in adult technical green skills programme.

7. Partner closely with businesses in the development and delivery of adult green skills updating programmes.

Colleges should...

Partner more closely with employers in the development, delivery, and promotion of adult green skills updating programmes.

8. Set and monitor participation targets for participation of young people in pipeline programmes for green careers.

Colleges should...

Set and monitor institutional targets for the participation of young people in study programmes which are a pipeline for future careers in green occupations including:

- Construction and building services
- Engineering
- ICT
- Science.

9. Work with businesses on apprenticeships in core green occupations and those needing secondary green skills.

Colleges should...

Working closely with employers develop an apprenticeship offer focused on core green occupations and rebuild the region's apprenticeship provision in occupations requiring secondary green skills, including apprenticeship in the following sectors:

- Automotive
- Construction and building services
- Electrical installation
- Energy and utilities
- Engineering (including Electrical installation)
- Environmental services
- Manufacturing.

10. Review participation in green skills programmes at levels four and above.

Colleges should...

Carry out a future review of participation regionally in the green skills offer at levels four and above (higher technical qualification).

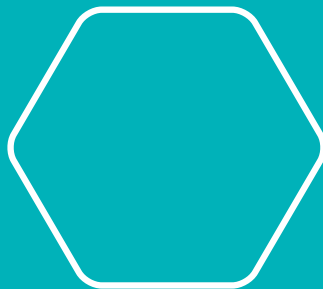
11. Investigate opportunities to develop an offer in Energy and Utilities and Environmental Services.

Colleges should...

Investigate opportunities to develop an offer in the Energy and Utilities and in Environmental Services.



Green Custodianship Skills for Young People



5



Green Custodianship Skills, Particularly for Young People

Young people are the leaders and custodians of the region's future sustainability and investing in their skills and knowledge is essential.

Extending beyond technical skills for jobs, AIMHI EARTH have developed a framework of '15 essential green skills' which can equip young people to be custodians of future sustainability.

They are:

- Critical, systems & nature-centric thinking
- Scientific understanding
- Nature connectivity
- Practical & technical "hard skills"
- Long-term thinking
- Dynamic operations & crisis management
- Historical & cultural understanding
- Monitoring skills
- Baseline fallback skills
- Pioneer & entrepreneurial skills
- Interpersonal skills & kindness
- Informational skills
- Defence skills
- Diverse thinking & non-neurotypicality
- Artistry & storytelling skills



These are the values, knowledge, experience, attitude, and abilities, needed to bring human systems into line with the rest of nature to minimise the destruction of the climate emergency and to steer a path to a healthier fairer more prosperous future for our descendants.

AimHiEarth – 15 Green Skills

Read more here:

<https://www.aimhi.earth/blog/what-are-green-skills-15-green-skills-clearly-explained>

The majority of the region's young people aged 16-18 years in full time education study in further education colleges.

Through full time study programmes, colleges can help develop the custodianship skills of all young learners, no matter what they are studying on their core programme.

And young people need better support in understanding green careers.

In 2022 WSP, with input from partners, including Engineering UK, surveyed nearly 4,000 16-23-year-olds in different stages of education to gauge their attitudes towards the future, green jobs, skills, and the future. They asked questions which helped gain an understanding of their views on climate change and careers provision.

The majority of young people expressed concerned about climate change and said they would like to learn more. But most were not confident in their understanding of the of the meaning of the phrase 'green jobs', and a minority of student in the West Midlands felt informed about green jobs available to them.

You can read the full results here:

<https://www.wsp.com/en-gb/campaigns/green-jobs-for-a-green-future>

Colleges in the West Midlands and Warwickshire could enhance young people's knowledge of green jobs and careers.

5.1 Case Study

Planet Earth Games – a winning way to engage students

In a bid to inspire and engage students in climate justice and green skills, Birmingham Metropolitan College signed up for Planet Earth Games, a student competition organised by Pearson and AoC Sport. The games involved students from all subject areas, introducing them to the seven *planet earth* themes. Students undertook projects such as carbon footprint reduction, responsible travel, waste minimisation, and garden creation, with each of the college's campuses actively involved. The college's comprehensive submission earned third place nationally and was recognised for its breadth of activities. In addition to learning green skills, students enjoyed the camaraderie and practical experiences, leading some to secure volunteer and paid positions at Sutton Park National Nature Reserve. The initiative's success has spurred ongoing activities like a gardening club, further showcasing students' commitment to sustainability.



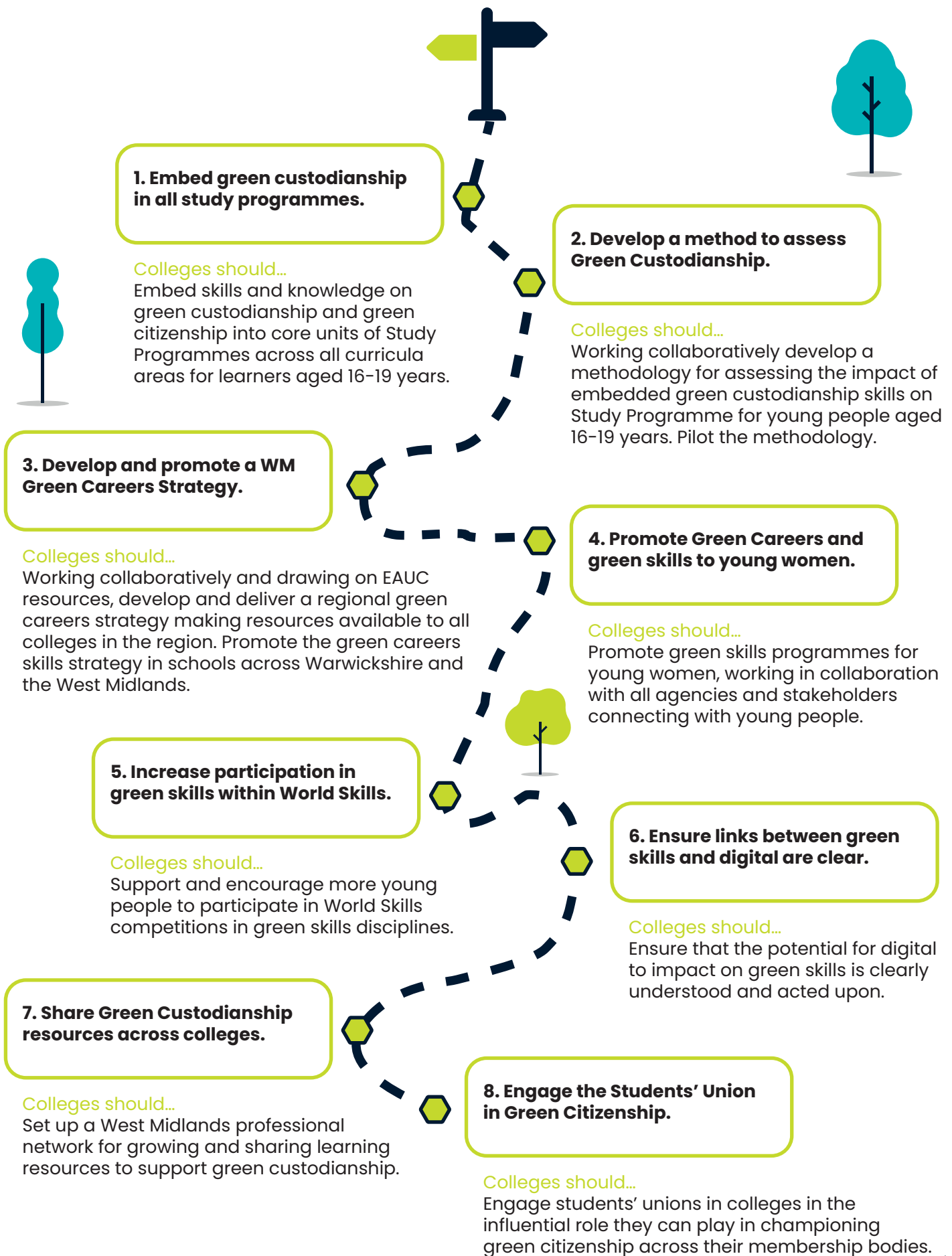
"The Planet Earth Games initiatives have helped to raise awareness of environmental sustainability among BMet's student community and encouraged them to take concrete steps towards supporting the college's drive towards sustainability."

Jason Allen, Department Director for Business & Professional, Sport and Apprenticeships



5.2 Signposting the Colleges

Green custodianship skills for young people



5.3 Find Out More

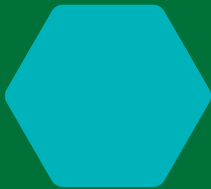
<https://www.aimhi.earth/blog/what-are-green-skills-15-green-skills-clearly-explained>

<https://www.wsp.com/en-gb/campaigns/green-jobs-for-a-green-future>





Community Empowerment Skills for Adults



Community Empowerment Skills for Adults

Colleges have a long history of providing adult education, but in recent years provision has shifted away from community-based learning.

In Opportunities for Adult Education in Neighbourhoods, co-authored by CIVIC SQUARE, Material Cultures, Scott McAulay, Architype, and The Anthropocene Architecture School, for this Green Skills Roadmap, further education colleges are invited to reconsider the role they play in their communities. Read more here [<https://greenskillswes.wpenginepowered.com/wp-content/uploads/2024/05/Opportunities-for-Adult-and-Further-Education-in-N-552028a4ed2148f5b876da0fc2242086.pdf>]

Using flexibilities in WMCA's adult education funding, colleges across the West Midlands and Warwickshire could play a critical role in community empowerment in the context of green skills and climate change.

But this might require a radical reimagining of adult education provision 'to a point at which green skills become an opportunity to foster social cohesion, flourish with nature, stimulate local enterprise, and promote educational equity.' (Opportunities for Adult Education in Neighbourhoods)

Colleges might also re-consider their relationships with neighbourhoods. Neighbourhoods are small scale enough to be tangible, impactful, and deeply participatory and could be the critical focal point of reimagined, community-focused, green skills learning provision.

What might re-imagined neighbourhood green skills learning include? Opportunities for Adult Education in Neighbourhoods argues for:

- neighbourhood trade schools.
- peer to peer learning.
- community convening.
- learning experience which weaves into everyday neighbourhood life.
- repurposing of educational infrastructures, creating the capacity for people to work together in place.

Further Education Colleges must approach their future strategies for green skills in the most ambitious and radical ways possible, taking a transformative posture and looking towards their neighbourhoods as sites for collaborative learning and knowledge exchange.

Opportunities for Adult Education in Neighbourhoods



For example, the provision of retrofit skills learning programmes for neighbourhoods might be founded upon a nuanced understanding of how built environment practices impact climate change and social outcomes.

And with significant buildings, resources, and infrastructure, there is an opportunity to make the assets that colleges have more available to communities.

For example, the maintenance and upgrade of a college's physical infrastructure could be imagined as an opportunity to practically implement green skills for learners through deconstruction, retrofit, or repair.

Might the green skills challenge present an opportunity for a renaissance in community-based learning for FE colleges in the West Midlands and Warwickshire?

6.1 Case Study

Mother gardens - empowering communities through green skills

In its commitment to social and climate justice, Fircroft College offers programmes which engage learners in sustainability and green skills projects, and which empower community groups. The 'Mother Garden' programme offers learners hands-on gardening activities to enhance their own growing spaces, promote community cohesion, and spark fresh sustainability initiatives. The programme equips learners with the knowledge and skills of Mother Gardens, enabling them to apply these principles to their community's green spaces. After completing the programme, participants regularly contribute to community food projects, establish their own Mother Gardens, and collaborate on initiatives such as urban forest communities and nature conservation. For instance, Lorna, a Fircroft Mother Garden learner, shared harvested pumpkins with her mothers' group and promoted gardening through her seed sharing.



"You not only benefit from the fresh air when you're outdoors, you are also mindful in the pursuit of growing. Socialising with other people who all had the same purpose but came from different backgrounds, was really interesting too."

Lorna, a Fircroft Mother Garden learner





6.2 Signposting the Colleges

Community empowerment skills for adults.

1. Develop programmes to support community-based sustainability initiatives.

Colleges should...

Using WMCA flexibilities in adult education funding, some colleges, working in partnership with community groups, could develop adult education programmes designed to provide adults with the skills to engage in community-based sustainability initiatives including programmes in:

- Sustainable and organic community gardens.
- Rewilding your neighbourhoods.
- Creating and caring for green spaces.
- Saving on fuel bills.
- Retrofitting green technologies on your house.
- Recycling and upcycling.
- Sustainable travel.



3. Pilot new community-based provision in green skills.

Colleges should...

With support from WMCA, pilot new and innovative community-based provision to support empowerment in green skills.

2. Partner with community groups on green skills.

Colleges should...

Partner with community groups to engage people locally in projects that support sustainability and green skills.

4. Recognise and showcase best practice.

Colleges should...

Celebrate success and showcase best practice with green skills adoption to all stakeholders using a wide range of channels.

6.3 Find Out More

Todmorden Learning Centre and Community Hub

<https://tlchub.org.uk/>

Black Mountains College

<https://blackmountainscollege.uk/about/>



Sustainable Leadership Skills for Employers



Sustainable Leadership Skills For Employers

Sustainable leadership skills for employers are the essential knowledge-based and practical skills necessary for leaders and managers, particularly in small and medium-sized enterprises (SMEs), to enhance the sustainability of their business operations.

These skills could encompass various areas, such as adopting energy-efficient technologies, implementing changes in working practices, enhancing automation, and initiating productivity improvements.

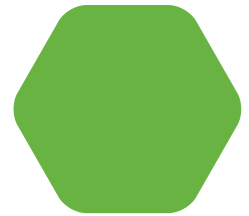
They might extend to understanding how to access funding to support sustainability enhancements, obtaining knowledge support, and achieving green accreditation to ensure compliance with procurement frameworks.

Colleges have significant links with employers across the region and have access to funding from sources such as the Local Skills Improvement Fund (LSIF) and InnovateUK.

As recognised by Rosie Peacock Lead Specialist for Innovation Skills, Innovate UK:

“Far more than being education providers, FECs are becoming increasingly important in our innovation ecosystems. As place-based anchor institutions, they have an important role to play in supporting local growth, making them well-positioned to increase the capacity and capability of local businesses.”

<https://www.ukri.org/blog/education-colleges-catalysts-for-regional-business-innovation/>



Colleges can develop short programmes in sustainability for business leaders, aligning their Innovate UK activity with sustainability leadership programmes for employers.

The Midlands is also home to many well-established networks intended to support businesses on their transition to low carbon and to facilitate peer-to-peer learning. For example, the Innovative Low Carbon Working Group is a cross-sector network whose membership consists of practitioners from universities, local authorities, businesses and voluntary organisations from across the West Midlands. The group meets quarterly and provides each member with an opportunity to propose and develop collaborative project ideas and to share good practice in relation to the low carbon and innovation agenda.

<https://innovationwm.co.uk/events/innovative-zero-carbon-working-group-business-showcase-for-circular-economy-in-the-built-environment/>

Colleges can help business, by signposting employers to these networks to ensure that businesses can learn from others in the low carbon sector.

Colleges can also signpost employers to other sources of support. For example, The Pilot Business Energy Advice Service (BEAS) is offering 4000 free energy assessments to small businesses across the West Midlands, including Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton, as well as Worcestershire and the Marches, Warwickshire and Stoke and Staffordshire.

<https://www.businessgrowthwestmidlands.org.uk/business-support/business-energy-advice-service-beas/>

7.1 Case Study

Sustainability programme transforms local NHS Trust

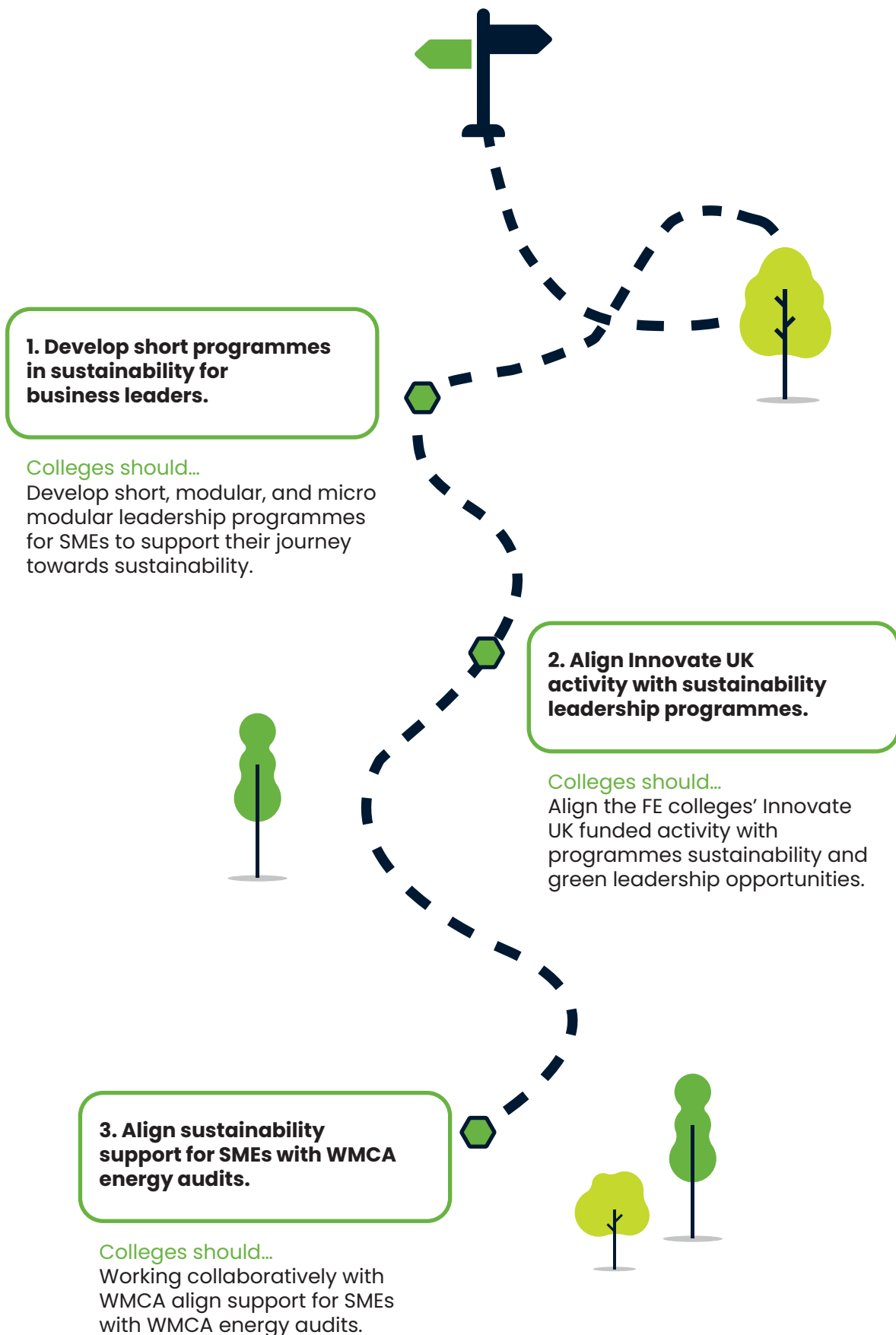
Dudley College and The Dudley Group Hospitals NHS Foundation Trust work closely together on initiatives to foster and develop the talent of the Trust's clinical and non-clinical staff. The Trust is also committed to reducing carbon emissions and becoming more sustainable, as set out in their ambitious Green Plan to 2025. Building on the partnership, the college developed a bespoke training programme for the Trust to help the Trust's staff adopt sustainable practices across their hospitals and community centres. The programme, tailored to diverse roles within the Trust, covers the principles of sustainability, carbon reduction, waste management, and green procurement. Participants work in groups to develop projects addressing sustainability challenges in their specific areas of work, leading to practical solutions implemented across the Trust's workplaces. The programme was such a success the college has now rolled it out to its own staff!!





7.2 Signposting for Colleges

Sustainable leadership skills for employers



7.3 Find Out More

Todmorden Learning Centre and Community Hub

<https://tlchub.org.uk/>

Black Mountains College

<https://blackmountainscollege.uk/about/>

<https://www.ukri.org/blog/education-colleges-catalysts-for-regional-business-innovation/>

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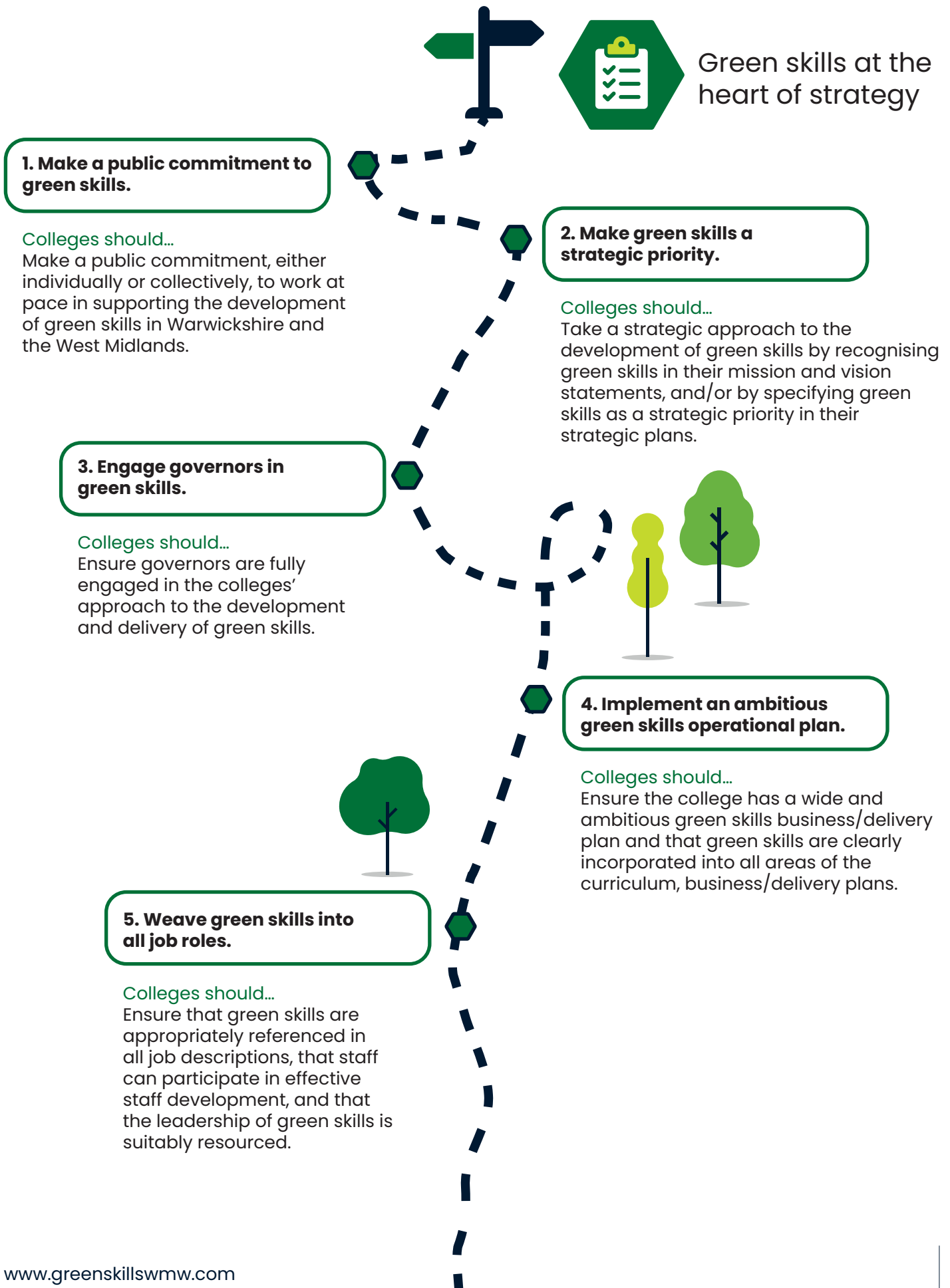
<https://www.businessgrowthwestmidlands.org.uk/business-support/business-energy-advice-service-beas/>

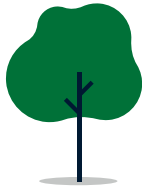
Roadmap to the Future



Roadmap to the Future

Green skills strategy





6. Collaborate on a green skills professional development programme.

Colleges should...
Ensure that green skills are appropriately referenced in all job descriptions, that staff can participate in effective staff development, and that the leadership of green skills is suitably resourced.

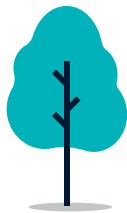
7. Collaborate regionally around the EAUC Climate Action Roadmap.

Colleges should...
Take a common approach, regionally, to the application of the EAUC Climate Action Roadmap and participate in peer assessments of institutional progress against the roadmap.



8. Map key regional players in green skills.

Colleges should...
Ensure that green skills are appropriately referenced in all job descriptions, that staff can participate in effective staff development, and that the leadership of green skills is suitably resourced.



9. Celebrate green skills achievements widely.

Colleges should...
Seek out every opportunity to celebrate the green skills achievements of the young people, adults, apprentices, communities, and employers they support.



Green Skills at the Heart of Strategy



Technical green skills for adults and young people

10. Address gender imbalance in participation in green skills.

Colleges should...

Take action to address the gender imbalance in adult green skills programs. This is crucial to fostering greater inclusivity and diversity.



11. Work with key stakeholders on regional priorities for adult technical green skills.

Colleges should...

Working collaboratively and with key stakeholders, agree regional priorities for adult technical green skills updating and a design regional delivery plan.

12. Develop and promote a comprehensive technical green skills programme offer for adults.

Colleges should...

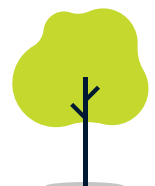
With an emphasis on modular programmes, short courses, bootcamps, and sector-based work academies, develop and promote an enhanced adult technical green skills updating offer including programmes in:

- Electric and hybrid vehicle design, manufacture, maintenance, and repair.
- Electric vehicle charging.
- Air and ground source heat pump installation and maintenance.
- Building insulation and treatment.
- Building information modelling and modular construction.
- Building energy management systems.
- Hydrogen boilers.
- Retrofit advisory services and installation.
- Smart metering.
- Solar panel installation and maintenance.
- Automation and robotics.
- Battery system manufacture, installation, decommissioning and recycling.
- Electrical engineering and installation.
- Sustainable manufacturing.
- Sustainable recycling, waste, and resource management.
- Ecology services.
- Sustainable land management and precision farming.

13. Secure funding for ongoing adult participation in electrical installation.

Colleges should...

Colleges and WMCA need to ensure that funding remains available to support adult participation in electrical installation, both at level 2 and level 3, either through the WMCA adult education budget or 'free courses for jobs'.



14. Set and monitor participation targets by provider in adult technical green skills.

Colleges should...

Set targets and monitor institutional performance of participation in adult technical green skills updating programmes.

15. Through CWM set and monitor regional participation targets in adult technical green skills.

Colleges should...

Through the Colleges West Midlands dashboard, collectively set, monitor, and report on regional participation in adult technical green skills programmes.

16. Partner closely with businesses in the development and delivery of adult green skills updating programmes.

Colleges should...

Partner more closely with employers in the development, delivery, and promotion of adult green skills updating programmes.

17. Set and monitor participation targets for participation of young people in pipeline programmes for green careers.

Colleges should...

Set and monitor institutional targets for the participation of young people in study programmes which are a pipeline for future careers in green occupations including:

- Construction and building services
- Engineering
- ICT
- Science.

18. Work with businesses on apprenticeships in core green occupations and those needing secondary green skills.

Colleges should...

Working closely with employers develop an apprenticeship offer focused on core green occupations and rebuild the region's apprenticeship provision in occupations requiring secondary green skills, including apprenticeship in the following sectors:

- Automotive
- Construction and building services
- Electrical installation
- Energy and utilities
- Engineering (including Electrical installation)
- Environmental services
- Manufacturing.

19. Review participation in green skills programmes at levels four and above.

Colleges should...

Carry out a future review of participation regionally in the green skills offer at levels four and above (higher technical qualification).

20. Investigate opportunities to develop an offer in Energy and Utilities and Environmental Services.

Colleges should...

Investigate opportunities to develop an offer in the Energy and Utilities and in Environmental Services.



Green custodianship skills for young people

21. Embed green custodianship in all study programmes.

Colleges should...

Embed skills and knowledge on green custodianship and green citizenship into core units of Study Programmes across all curricula areas for learners aged 16-19 years.

22. Develop a method to assess green custodianship.

Colleges should...

Working collaboratively develop a methodology for assessing the impact of embedded green custodianship skills on Study Programme for young people aged 16-19 years. Pilot the methodology.

23. Develop and promote a WM Green Careers Strategy.

Colleges should...

Working collaboratively and drawing on EAUC resources, develop and deliver a regional green careers strategy making resources available to all colleges in the region. Promote the green careers skills strategy in schools across Warwickshire and the West Midlands.

25. Increase participation in green skills within World Skills.

Colleges should...

Support and encourage more young people to participate in World Skills competitions in green skills disciplines.

27. Share green custodianship resources across colleges.

Colleges should...

Set up a West Midlands professional network for growing and sharing learning resources to support green custodianship.

28. Engage the students' union in green citizenship.

Colleges should...

Engage students' unions in colleges in the influential role they can play in championing green citizenship across their membership bodies.

26. Ensure links between green skills and digital are clear.

Colleges should...

Ensure that the potential for digital to impact on green skills is clearly understood and acted upon.

24. Promote green careers and green skills to young women.

Colleges should...

Promote green skills programmes for young women, working in collaboration with all agencies and stakeholders connecting with young people.



Community empowerment skills for adults.

30. Develop programmes to support community-based sustainability initiatives.

Colleges should...

Using WMCA flexibilities in adult education funding, some colleges, working in partnership with community groups, could develop adult education programmes designed to provide adults with the skills to engage in community-based sustainability initiatives including programmes in:

- Sustainable and organic community gardens.
- Rewilding your neighbourhoods.
- Creating and caring for green spaces.
- Saving on fuel bills.
- Retrofitting green technologies on your house.
- Recycling and upcycling.
- Sustainable travel.

32. Pilot new community-based provision in green skills.

Colleges should...

With support from WMCA, pilot new and innovative community-based provision to support empowerment in green skills.

33. Recognise and showcase best practice.

Colleges should...

Celebrate success and showcase best practice with green skills adoption to all stakeholders using a wide range of channels.

31. Partner with community groups on green skills.

Colleges should...

Partner with community groups to engage people locally in projects that support sustainability and green skills.



Sustainable leadership skills for employers

34. Develop short programmes in sustainability for business leaders.

Colleges should...

Develop short, modular, and micro modular leadership programmes for SMEs to support their journey towards sustainability.

35. Align Innovate UK activity with sustainability leadership programmes.

Colleges should...

Align the FE colleges' Innovate UK funded activity with programmes sustainability and green leadership opportunities.

36. Align sustainability support for SMEs with WMCA energy audits.

Colleges should...

Working collaboratively with WMCA align support for SMEs with WMCA energy audits.



Contact details

lowell.williams@collegeswestmidlands.org.uk

07728 499728

www.greenskillswmw.com