
GreenComp in the Field: Why Mentoring, Not Legislation, Will Decide the Future of Sustainable Construction

GreenComp, the European sustainability competence framework developed by the European Commission's Joint Research Centre, defines sustainability as more than technical knowledge. It brings together knowledge, skills and attitudes that help people understand complex environmental problems, imagine better futures and take action. The framework contains 12 competences organised into four areas: Embodying sustainability values, Embracing complexity in sustainability, Envisioning sustainable futures, and Acting for sustainability. It is intended for formal, non-formal and informal learning and can therefore be used in vocational education, apprenticeships and workplace learning as well as in classrooms.



energy renovation, circular construction and digitalisation. The recast Energy Performance of Buildings Directive (EPBD) requires new buildings owned by public bodies to be zero-emission from 2028 and all new buildings from 2030. It also introduces a stronger focus on the whole life-cycle performance of buildings. These requirements affect not only designers and engineers but also the people who install insulation, ventilation, heat pumps, controls, renewable-energy systems and other building components. A technically correct design can still underperform when details are executed poorly on site.

This is where GreenComp becomes practical. Systems thinking helps a learner understand that one construction decision can affect energy use, moisture, comfort, durability, waste and cost at the same time. Critical thinking helps workers question familiar routines when evidence shows that a different method performs better. Futures literacy and adaptability matter when technologies, materials and standards change. Collective action is equally important because sustainable performance depends on coordination between trades rather than on one worker acting alone. In this sense, GreenComp can complement technical occupational standards by helping workers understand why a task matters and how their decisions connect to the performance of the whole building.

For construction, this broader view of competence is particularly relevant. The sector is being reshaped simultaneously by decarbonisation,



Legislation can define the destination, but it cannot demonstrate every judgement required on a real construction site. A regulation may require high energy performance, for example, but it does not stand beside an apprentice and show how to maintain the continuity of an airtight layer around a difficult junction, how to avoid thermal bridges, how to protect insulation from moisture, or how to check that a heat-pump installation is commissioned correctly. These details are learned through repeated practice, feedback and observation. That makes experienced workers, trainers and workplace mentors an essential link between policy objectives and actual building performance.

The scale of the skills challenge reinforces this point. Recent European Construction Observatory analysis reports 13.8 million people employed in construction activities in the EU in 2024, with another 2.8 million in architectural, engineering and testing services. It estimates that meeting investment targets could require around 3.6 million additional workers by 2030 and that millions of new or replacement workers will need training. At the same time, participation in upskilling remains lower in construction than in many other sectors. The transition therefore cannot depend only on recruiting a new generation of already 'green-skilled' workers; it also requires systematic upskilling of the existing workforce.

European initiatives already recognise this need. BUILD UP Skills, active since 2011 and now supported through LIFE Clean Energy Transition, focuses on skills intelligence, training and qualification pathways for building decarbonisation. The construction partnership under the Pact for Skills has set an ambition to promote upskilling and reskilling for 30% of the workforce each year by 2030. Cedefop also highlights apprenticeships as particularly well placed to support the green transition because they connect education directly with the labour market. These initiatives point in the same direction: sustainability skills need to be learned where construction knowledge is actually developed and applied.

Mentoring can make that learning continuous rather than occasional. A mentor can begin by explaining the sustainability purpose of a task, demonstrate the correct method, observe the learner performing it, ask the learner to explain the consequences of alternative choices, and then provide feedback. Over time, the learner moves from copying a procedure to understanding the reasoning behind it. This is important because sustainable construction rarely involves a single 'green technique'. It involves making informed decisions when cost, time, materials, energy performance, safety and client requirements interact.

What mentoring looks like in practice

In energy renovation, a mentor can connect an apparently small site decision with its wider consequences. When fitting insulation, for example, the lesson is not simply to place a specified thickness of material. The learner should understand continuity, junctions, moisture risks and the effect of gaps on thermal performance. During an airtightness task, the mentor can explain why penetrations and interfaces are common weak points and demonstrate how they should be treated. When installing a heat pump, mentoring can connect sizing, hydraulic balance, controls and commissioning with energy use and occupant comfort. The same principle applies to material use: sorting construction waste, protecting reusable





components and avoiding unnecessary off-cuts become opportunities to discuss circularity rather than merely housekeeping rules.

From compliance to professional judgement

This distinction matters because sustainable construction cannot be reduced to a checklist. Regulations, specifications and certification systems are necessary, but construction workers frequently encounter conditions that are not identical to the drawings or training examples. Existing buildings are especially variable. A worker may need to recognise a moisture risk, identify an incompatible material, report a design conflict or stop before covering a detail that cannot later be inspected. GreenComp's emphasis on problem framing, critical thinking and adaptability supports this type of professional judgement. The aim is not to encourage workers to disregard specifications, but to help them recognise when a situation needs attention and communicate it before performance is compromised.

Mentors also need support

Experience alone does not automatically make someone an effective mentor. Skilled tradespeople may possess valuable tacit knowledge but have had little preparation in explaining it, giving constructive feedback or connecting familiar methods with newer sustainability requirements. Training the trainers should therefore combine technical updating with mentoring skills. Short, practical formats can be particularly useful: toolbox sessions, demonstration tasks, peer observation, digital micro-learning and structured conversations around real defects or good practice. The objective is to make sustainability part of normal work rather than an additional classroom subject disconnected from the site.

A practical GreenComp approach for construction VET

VET providers and construction companies can use GreenComp without redesigning an entire curriculum. Existing technical tasks can be mapped against relevant competences. Learners can be asked not only whether a task was completed correctly, but why the method is sustainable, what other building systems it affects, what could go wrong over the building's life cycle and how the team should respond. Assessment can include observation of practical work, short reflection questions and evidence from real or simulated site problems. This makes sustainability visible inside

ordinary occupational learning and gives mentors a shared vocabulary for discussing it.

The strongest model is therefore a combination of policy, technical standards, vocational education and workplace mentoring. Policy creates direction and minimum requirements. Training providers introduce concepts and methods. Employers create the conditions for good practice. Mentors make the connection at the moment when knowledge becomes behaviour. GreenComp can strengthen that connection by giving mentors and learners a common framework for values, systems thinking, future-oriented decision-making and action.

Europe's sustainable-building targets will ultimately be realised through thousands of everyday decisions: how a junction is sealed, how a system is commissioned, whether a material is wasted or reused, whether a defect is reported, and whether a younger worker understands the reason behind the method they have been shown. GreenComp provides a useful language for these decisions. Mentoring is one of the most direct ways to turn that language into professional practice.

Sources

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