Written submission: Consultation on the draft Leaving Certificate Construction Technology specification

NCCA is redeveloping Leaving Certificate Construction Technology. The aim of this consultation is to obtain the open and honest views of all stakeholders: students, teachers, parents, and other interested parties. The feedback gained from the consultation will inform the work of the development group in preparing the final specification.

NCCA would greatly appreciate your feedback on the draft specification which can be found here: Draft Leaving Certificate Construction Technology specification

When providing feedback, observations or comments, please reference the specific section and / or relevant learning outcomes.

The closing date for this consultation is 2nd May 2025 at 5pm. Please email your written submission to scconsultations@ncca.ie.

Data protection and open data section

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Respondent's details

What organisation are you submitting on behalf of?

The Passive House Association of Ireland

Are you consenting to be listed as a respondent to this consultation?

- o Yes
- o No

If yes, please enter the name you wish to have published in the final report.

Dr. Barry McCarron

Are you consenting to have the submission published on ncca.ie?

- o Yes
- o No

Rationale, Aim, and Key Competencies [Pages 2, 3 and 5]

Rationale: The rationale (Page 2) outlines the nature of Construction Technology and the role and importance of Construction Technology in realising the purpose and vision of senior cycle.

Aim: The Aim (Page 3) outlines the over-arching purpose of the subject and the relevance and expected impact of the subject on student learning.

In your opinion, do the rationale and aim capture the overarching purpose and nature of Construction Technology; the importance of the subject in realising the vision of senior cycle and the relevance and expected impact of this subject on student learning. Please provide specific feedback / observations / comments.

The rationale and aim presented in the draft specification for Leaving Certificate Construction Technology offer a timely and forward-looking vision for the subject. They recognize the critical role construction plays in shaping a sustainable, inclusive, and resilient built environment, and they appropriately highlight the need to develop both technical and transferable skills in students. However, to truly future proof the curriculum and ensure it delivers on the vision of the senior cycle, the specification would benefit from greater ambition and clarity in several key areas.

Strengths:

The emphasis on interdisciplinary, hands-on, and inquiry-based learning is a strong foundation that aligns well with how modern construction operates.

The focus on sustainability, innovation, and social responsibility is particularly welcome and reflects the increasing importance of construction as a vehicle for climate action and community wellbeing.

Recommendations for Improvement:

The current rationale and aim lack specific reference to best-practice performance standards, such as those embedded in Passive House and EnerPHit (Passive House Retrofit) design approaches. These standards are widely recognised for their rigour in delivering buildings that are energy-efficient, healthy, and comfortable—making them essential learning contexts for today's students. Retaining and embedding performance-driven content such as airtightness, thermal bridging, and heat recovery ventilation would significantly strengthen the course's relevance and align it with global best practices.

The subject should foster a clear understanding of building science and lifecycle performance, not just craft or compliance.

Senior Cycle Alignment

Construction Technology is well-placed to embody the vision of senior cycle education—supporting learner agency, critical thinking, and real-world application. However, to deliver on this promise, the subject must:

Emphasize systems thinking across environmental, social, and technical domains.
Encourage problem-solving based on measurable outcomes, such as energy use, occupant comfort, and environmental impact.
Connect students with the real-world demands of the construction supply chain, from material sourcing to sustainable site practices.
Synergies with Broader Initiatives
There is a clear opportunity to build synergy with platforms such as the Supply Chain Sustainability School Ireland, which promotes upskilling in areas like circular economy, responsible sourcing, and carbon reduction. Aligning Leaving Certificate Construction Technology with these national and international frameworks would:
Enhance employability and readiness for further training or apprenticeships. For example the Passive House movement has 27 global affiliates.
Deepen students' understanding of construction as a system that extends beyond the site to include procurement, logistics, and policy.
Broaden the subject's relevance to multiple career pathways, including architecture, engineering, project management, and retrofit coordination.
Key Competencies
The subject has strong potential to develop key competencies including:
Creative and practical problem-solving
Systems thinking and digital literacy
Collaboration, communication, and ethical reasoning
Self-management and responsible citizenship, especially in relation to sustainability and climate impact
These competencies can be even more effectively cultivated through learning experiences that reflect the real performance and sustainability challenges of the built environment, including the use of digital tools, performance modelling, and community engagement projects.

Conclusion
The rationale and aim lay a solid foundation but require greater specificity and future-alignment. Consolidating the Passive House principles which have already been a feature of the current programme and fostering synergies with sustainability education platforms like the Supply Chain School would ensure this subject not only remains current, but becomes a flagship example of what a modern, climate-conscious curriculum should look like. This is a critical opportunity to inspire and equip the next generation of construction professionals who are not only technically skilled, but socially and environmentally aware. The Climate Change imperative and drivers like ESG will accelerate over this next decade.

Key Competencies: Key competencies is an umbrella term which refers to the knowledge, skills, values and dispositions students develop in an integrated way during senior cycle. These competencies are linked and can be combined; can

improve students' overall learning; can help students and teachers to make meaningful connections between and across different areas of learning; and are important across the curriculum.

The draft specification sets out examples of how key competencies can be developed in Leaving Certificate Construction Technology on pages [Pages 7 and 8]

In your opinion, does this section effectively capture the development of student key competencies in Leaving Certificate Construction Technology? Please provide specific feedback / observations / comments.

Key Competencies – Feedback and Observations
The draft specification presents a positive direction in its recognition of key competencies as central to student development in Leaving Certificate Construction Technology. The subject naturally lends itself to the cultivation of wide-ranging skills technical, analytical, ethical, and interpersonal and the examples provided on pages 7 and 8 begin to illustrate how this can be achieved. However, while the intention is clear, the section could be strengthened by offering deeper integration of competencies within real-world, high-performance construction contexts.
What's Working:
The emphasis on creativity, problem-solving, and collaboration aligns well with the practical and project-based nature of the subject.
There is recognition that students learn best when actively engaging with complex systems planning, constructing, reflecting, and evaluating outcomes.
Areas for Enhancement:
To fully capture the potential of key competency development in Construction Technology, it's important to root learning activities in current industry practice, including the performance expectations and sustainability challenges that define today's-built environment.
We suggest:
Embedding performance-based thinking within all key competencies for example, evaluating the airtightness of a construction detail not just for workmanship, but for energy impact, comfort, and long-term performance.
Incorporating sustainability and lifecycle literacy into competencies such as "Being responsible" and "Managing information and thinking." Students should explore not just how buildings are made, but how they impact communities, climate, and supply chains over time.
Strengthening the digital fluency aspect by encouraging use of building performance tools, digital fabrication, and systems modelling as core learning experiences not optional extensions.
These improvements would help bridge academic learning with the expectations of the modern construction sector, including those working toward low-energy, climate-responsive buildings and responsible sourcing and supply chain practices.

This is particularly relevant as Ireland moves to scale up deep retrofit and zero-emission buildings in response to climate and housing demands.

Conclusion
The framework for key competencies in the draft specification is well-positioned but would benefit from more authentic, applied examples that reflect the current and future realities of the construction sector. By more explicitly linking competencies to building performance, sustainability, and digital capability, the subject can help students become not only capable makers and thinkers but climate-conscious innovators, ready for both further study and the workplace. These competencies are not only vital in construction, but are transferable across careers, making the subject a powerful contributor to lifelong learning and national climate goals.

Strands of study and learning outcomes [Page 9-23]

Course overview: The course overview sets out the knowledge, skills, values and dispositions for students in four strands. The specification emphasises a non-linear, integrated approach to learning across the strands.
The details of the strands are described on pages [Pages 9 and 10] of the specification.

In your opinion, does the structure illustrate the connected nature of the strands and the development of student knowledge, skills, values and dispositions in an appropriate way? Please provide specific feedback / observations / comments.

The structure of the course into four strands presents a welcome and necessary shift toward a more integrated, thematic, and systems-based approach to learning in Construction Technology. The move away from a strictly linear structure reflects how real-world construction projects operate where planning, materials, systems, and the environment are interconnected. This is a strength of the new draft. However, the absence of explicit references to proven performance standards such as Passive House and EnerPHit which were standout, progressive features of the previous syllabus marks a significant regression. These standards are more than aspirational they are practical, measurable, and increasingly adopted across both public and private sector projects in Ireland. Cairn homes the largest housebuilder in Ireland See (https://www.cairnhomes.com/passive-house/) Their removal undermines the subject's relevance to current and future industry needs, particularly as Ireland scales up delivery of low-energy, climate-resilient buildings. Furthermore, the course overview misses an opportunity to embed sustainability principles that extend beyond technical craft and into broader value-chain awareness. Synergies with sustainability education platforms, such as those

promoted by the Supply Chain Sustainability School Ireland, highlight the need for students to understand not only what is built, but how and from where materials are sourced, the lifecycle impact of construction activities, and the responsibilities of the entire supply chain.
These themes ethical sourcing, circular economy, carbon literacy, and social value can and should be woven into the strands in a way that prepares learners not only for site-based roles but also for leadership in a transforming industry.
Additionally, the diminished treatment of STEM-related content, particularly topics like light, sound, and thermal comfort, risks narrowing the interdisciplinary scope of the subject. These elements are essential to understanding how buildings perform and how people experience them. Their reduced emphasis weakens the course's ability to foster design thinking, performance analysis, and critical evaluation—all key senior cycle outcomes.

Strand 1: The Built Environment [Page 11]

Please provide your views on the learning set out in this strand with reference to

- clarity for planning for teaching and learning
- alignment with the rationale and aims
- opportunities for the development of key competencies and
- access and challenge for all students.

Please provide specific feedback / observations / comments.

Clarity for Planning for Teaching and Learning
Strand 1 is well-structured and introduces foundational concepts that are vital for understanding the wider context in which construction occurs. However, to make the strand more actionable for teachers, there is a need for greater specificity and depth regarding sustainability frameworks and performance-based benchmarks. Reintroducing clear references to Passive House and EnerPHit standards would enhance clarity, providing educators with well established, industry-aligned examples of energy efficiency, comfort, and indoor air quality. These frameworks serve as ideal vehicles for illustrating how design and construction choices directly affect environmental and societal outcomes.
Additionally, incorporating guidance or examples from responsible sourcing and supply chain sustainability principles such as those championed by national training programmes would help students understand the full lifecycle and social implications of construction activity, beyond the building site.

Alignment with the Rationale and Aims
This strand aligns well with the subject's overarching rationale and aims, particularly in highlighting the relationship between construction, society, and the environment. However, it currently lacks the ambition and specificity needed to

reflect Ireland's broader goals on climate action, green skills development, and housing transformation.
By embedding climate responsive design, urban resilience, and circular construction thinking, Strand 1 could play a stronger role in delivering on the subject's promise to foster socially responsible and environmentally literate learners. Synergies with sustainability learning platforms would support this, helping students see how their classroom learning connects to ethical procurement, emissions reduction, and community well-being.

Opportunities for the Development of Key Competencies
Strand 1 offers significant opportunities to develop a wide range of key competencies, including:
Critical and ethical thinking, through analysis of how the built environment affects human health, equity, and planetary boundaries.
Systems thinking, when examining how design decisions affect energy use, emissions, mobility, and material cycles.
Digital literacy and managing information, especially when enhanced by tools like digital mapping, carbon calculators, or building impact visualisations.
To realise these opportunities, students should be encouraged to explore embodied carbon, land-use efficiency, and sustainable transport integration all concepts actively promoted in sustainable construction training.

Access and Challenge for All Students
The conceptual nature of this strand makes it broadly accessible, with flexibility for teachers to scaffold content. However, deeper engagement through tools such as performance modelling software, GIS mapping, or local case studies (e.g., green retrofits or ZEB communities) could provide valuable challenges for more advanced learners. Making space for student-led investigations or local site audits could further democratise learning by allowing students to bring their own communities and experiences into the classroom.

Conclusion
Strand 1 offers a strong foundation but needs clearer alignment with contemporary sustainability frameworks and real-world performance benchmarks to fully deliver on its educational potential. By integrating the values and methodologies found in both high-performance building standards and responsible supply chain education, this strand can empower students to understand the built environment not just as a backdrop, but as a tool for climate action, equity, and innovation.

Strand 2: Design, Craft Skills, and Materials [Page 14]

Please provide your views on the learning set out in this strand with reference to

- clarity for planning for teaching and learning
- alignment with the rationale and aims
- opportunities for the development of key competencies and
- access and challenge for all students.

Please provide specific feedback / observations / comments.

Clarity for Planning for Teaching and Learning
While this strand outlines a structured approach to practical learning, it risks defaulting to traditional, timber-based craft practices that are increasingly out of step with modern construction. For educators to deliver meaningful, future-ready learning, the strand must place greater emphasis on Modern Methods of Construction (MMC), digital fabrication, and the application of sustainable, low-carbon materials.
Teachers would benefit from clearer guidance and exemplars that incorporate contemporary construction techniques, including off-site modular assembly, airtight detailing, and material lifecycle thinking. This would support planning that reflects both classroom realities and broader industry trends.

Alignment with the Rationale and Aims
The stated aims of the specification emphasize preparing students for the evolving world of work, fostering sustainability, and encouraging innovation. However, the current focus of Strand 2 does not fully align with these goals.
To bridge this gap, the strand should integrate:
Design for performance, not just appearance or manual precision.
Materials selection based on sustainability criteria, such as embodied carbon, recyclability, or ethical sourcing concepts actively promoted by sustainability training platforms.
Circular economy principles, allowing students to reflect on reuse, disassembly, and resource efficiency in their projects.
Such alignment would better prepare students for roles in green construction, retrofit, and sustainable design areas of significant growth and national importance.

Opportunities for the Development of Key Competencies
This strand has enormous potential to foster:
Creativity and innovation, particularly if students are given autonomy over their design choices and the tools they use.
Critical and systems thinking, when evaluating materials or construction techniques through environmental and performance lenses.
Digital and technological fluency, by incorporating CAD tools, laser cutters, or 3D printers into workshop practice.
These competencies align not only with the senior cycle's learning framework but also with the skillsets needed in Ireland's future construction workforce. However,

realising this potential requires a shift from tradition-led assessments to performance- and sustainability-informed project work.

Access and Challenge for All Students
Currently, the strand appears heavily weighted toward manual skillsets, which may alienate students who are more digitally inclined or sustainability-motivated. By broadening the definition of "craft" to include digital design, systems-based construction, and low carbon innovation, the subject can become more inclusive and engaging.
Introducing flexible project briefs would allow students of different strengths whether hands on builders, conceptual designers, or technical analysts to thrive within the same learning environment. Such diversity in approach also reflects the interdisciplinary nature of real construction teams.

Conclusion
Strand 2 must evolve beyond traditional craftsmanship and embrace the innovative, sustainable, and digital future of construction. By aligning with industry standards in MMC and sustainability, and by leveraging synergies with platforms that promote green supply chains and responsible material use, this strand can become a powerful driver of student engagement and skill development. Doing so ensures learners are not only building projects but building the mindset needed for Ireland's climate and housing challenges ahead.

Strand 3: Building Fabric [Page 17]

Please provide your views on the learning set out in this strand with reference to

- clarity for planning for teaching and learning
- alignment with the rationale and aims
- opportunities for the development of key competencies and
- access and challenge for all students.

Please provide specific feedback / observations / comments.

Clarity for Planning for Teaching and Learning
This strand forms a critical backbone of the subject, offering the opportunity to explore real-world construction systems in detail. However, its effectiveness is currently limited by the lack of direct reference to high-performance building principles, particularly those found in Passive House methodologies. Concepts such as airtightness, thermal bridging, U-values, and insulation continuity are essential to modern construction practice and should be embedded as core content, not left as optional or implied learning outcomes.

Clear, scaffolded guidance on how to teach these topics through both theoretical instruction and practical application is needed to support consistent and meaningful classroom delivery. Teachers would also benefit from teaching resources and exemplar case studies that demonstrate good practice in low-energy building fabric design.

Alignment with the Rationale and Aims
While this strand touches on important technical elements of construction, it currently falls short of the curriculum's stated ambition to prepare students for a climate-conscious, future-facing industry. To better align with the broader educational goals especially around sustainability, innovation, and performance the strand should explicitly incorporate:
Performance metrics as learning outcomes (e.g., airtightness targets, thermal modelling basics).
References to fabric-first approaches, retrofit principles, and regulatory frameworks such as NZEB.
An understanding of material sourcing and embodied carbon, which are increasingly relevant to Irish building standards and circular economy goals.
There is also potential for this strand to connect with responsible supply chain thinking, helping students consider where materials come from, how they are transported, and their wider impact echoing themes of ethical sourcing and life cycle thinking supported in industry-aligned sustainability training.

Opportunities for the Development of Key Competencies
Strand 3 offers excellent potential for developing:
Analytical and critical thinking, particularly through evaluating different build-ups for thermal performance.
Problem-solving, as students explore how design choices affect durability, energy use, and user comfort.
Digital literacy, if supported with tools such as energy calculators, digital drawings, or thermal bridge simulation software.
Responsibility and ethical reasoning, when students consider the environmental implications of material and detailing choices.
To unlock these competencies, the curriculum should incorporate performance-based tasks such as:
Simulating a blower door test.
Analysing real or virtual buildings for cold bridges and insulation gaps.
Comparing wall build-ups in terms of energy and carbon outcomes.

Access and Challenge for All Students
This strand is conceptually rich and accessible to students of all abilities, particularly when visual aids, models, and site-based examples are used. To

further promote inclusivity and stretch higher-achieving students, a tiered or modular approach could be adopted. This might include:
Core tasks to introduce key concepts for all learners.
Advanced options such as independent fabric modelling projects or performance audits using PHPP like tools.
This structure would not only differentiate instruction but also mimic real life construction decision-making where diverse roles and responsibilities must work in sync.

Conclusion
Strand 3 is foundational to the subject's value but must be updated to reflect best practice in sustainable, high-performance construction. By embedding modern performance standards, incorporating ethical and lifecycle considerations, and allowing students to engage in real-world problem-solving, this strand can become a standout component of the course bridging academic knowledge with vocational relevance, and preparing learners to lead in a climate-responsive built environment.

Strand 4: Services and Control Technology [Page 20]

Please provide your views on the learning set out in this strand with reference to

- clarity for planning for teaching and learning
- alignment with the rationale and aims
- opportunities for the development of key competencies and
- access and challenge for all students.

Please provide specific feedback / observations / comments.

Clarity for Planning for Teaching and Learning
This strand is a vital inclusion and reflects the evolving nature of modern construction, particularly in how we design, control, and optimise building services for comfort, efficiency, and climate impact. The reference to smart systems, mechanical ventilation with heat recovery (MVHR), and renewable technologies is encouraging, but for effective delivery, greater clarity is needed around the expected depth of knowledge and performance standards.
To support teaching, the curriculum should explicitly frame these systems within industry-recognised frameworks particularly Passive House standards where airtightness, indoor air quality, and system efficiency are fundamental. Teachers would benefit from structured examples and CPD opportunities focused on how these technologies interact with building fabric and user needs, ensuring a systems-based rather than siloed understanding.

Alignment with the Rationale and Aims

This strand is arguably the most forward-looking in the entire specification and aligns closely with the subject's aim to prepare students for future construction careers. It connects directly to real-world decarbonisation goals, health and wellbeing in buildings, and energy system integration.

However, its current form falls short of aligning with the broader performance expectations of the built environment sector. Reintroducing reference points such as PHPP (Passive House Planning Package), Building Energy Ratings (BER), or Carbon Lifecycle Analysis (LCA) would significantly strengthen its relevance and ensure students understand not only how systems function but how their performance is measured and validated.

Incorporating supply chain sustainability insights such as the environmental and social impact of technology sourcing, installation practices, and energy infrastructure would further align this strand with the holistic goals of sustainable construction education.

Opportunities for the Development of Key Competencies

Strand 4 presents a rich context for cross disciplinary learning and can foster:

Energy literacy and systems thinking, as students explore the interconnectedness of energy generation, distribution, and conservation.

Digital fluency, through smart controls, automation, and system monitoring.

Scientific reasoning, especially when understanding the principles behind heat transfer, airflow, and thermal comfort.

Ethical and responsible decision-making, when considering energy sources, system longevity, and user health.

These competencies can be expanded through project-based learning that includes data monitoring, simulated building controls, or the design of smart energy solutions for case study homes or classrooms.

Access and Challenge for All Students

This strand holds strong potential for inclusive and differentiated learning. Students at all ability levels can engage meaningfully whether through foundational knowledge of system components or through advanced exploration of performance software, smart grid integration, or carbon impact assessments.

A modular or tiered approach would allow students to:

Engage with basic control technologies and their application in everyday buildings.

Take on more advanced tasks such as designing a control strategy, monitoring system outputs, or modelling energy usage in a simulated environment.

This structure ensures accessibility while offering challenge and enrichment for students with interests in engineering, sustainability, or digital innovation.

Conclusion

Strand 4 is a powerful and necessary addition to the curriculum, but to fulfil its potential, it must go beyond system awareness and embed performance verification, user-centred design, and supply chain awareness into its learning outcomes. By anchoring this strand in established frameworks like Passive House and aligning with broader sustainability education initiatives, it can equip students with the knowledge and values needed to lead Ireland's transition to a smarter, healthier, and more sustainable built environment.

Additional Assessment (AAC1) [Page 26]

Exploring the Constructed Environment

Please provide specific feedback / observations / comments on the AAC in Leaving Certificate Construction Technology with reference to how the AAC might motivate students, how it aligns to the learning outcomes in the specification and how it facilitates the development of key competencies.

The "Exploring the Constructed Environment" AAC is a welcome addition to the specification. It provides students with a meaningful and engaging way to connect their learning to the real world, fostering curiosity, observational skills, and critical thinking. This AAC has strong potential to motivate students by encouraging them to engage with their local built environment, recognise good (and poor) design, and explore how buildings impact people, places, and the planet.
However, a missed opportunity in this AAC is the lack of explicit reference to Passive House or high-performance building standards, which were a progressive and forward-thinking feature of the current syllabus. The Passive House standard provides a rich framework for students to assess buildings in terms of thermal comfort, energy efficiency, airtightness, and indoor air quality—all of which align directly with the curriculum's learning outcomes around environmental awareness, building performance, and sustainability.
Incorporating Passive House principles into this AAC would:
Deepen students' understanding of the relationship between design decisions and real-world performance.
Allow learners to benchmark local buildings against global best practices.
Facilitate meaningful application of learning outcomes around climate literacy, energy use, and modern methods of construction.
Alignment with Learning Outcomes
The AAC aligns well with the curriculum's learning outcomes, particularly those related to understanding the impact of the built environment on society, the economy, and the natural world. It allows for inquiry-based learning, promotes observational analysis, and develops evaluative thinking. These are essential in preparing students to participate in future-focused design and construction.
Development of Key Competencies
This AAC promotes a wide range of key competencies:

Critical and creative thinking as students assess and interpret buildings from various angles.
Being literate and digitally fluent through the use of mapping tools, digital photography, and potentially performance modelling.
Staying well and being responsible by evaluating buildings in terms of user comfort, accessibility, and health (e.g., air quality, daylight).
Working with others via collaborative group work and presentations.
Being able to manage information and think about systems especially when linking design choices to environmental impacts.
To fully capitalise on its potential, this AAC should explicitly invite students to explore passive design features such as orientation, envelope design, thermal bridging, and ventilation strategies. Reintegrating the Passive House lens here would provide a strong pedagogical and industry aligned foundation, ensuring students are not just aware of buildings, but critically understand what makes them healthy, efficient, and future-ready.

Additional Assessment (AAC2) [Page 28]

Craft Skills Assessment

Please provide specific feedback / observations / comments on the AAC in Leaving Certificate Construction Technology with reference to how the AAC might motivate students, how it aligns to the learning outcomes in the specification and how it facilitates the development of key competencies.

The Craft Skills Assessment (CSA) is a key component of Leaving Certificate Construction Technology, offering students a valuable opportunity to engage in hands-on, practical work. This AAC can be highly motivating for learners by providing a tangible, creative outlet that contrasts with more academic components of the curriculum. When well-structured, it helps students build confidence, dexterity, and pride in their craftsmanship skills that remain valuable in both vocational and academic pathways.
That said, the current vision for the CSA appears overly focused on traditional timber-based skills, which while important risk narrowing the scope of what modern construction entails. Given the original syllabus's progressive inclusion of Passive House standards and energy performance criteria, this new specification should push forward, not regress. There is a golden opportunity to embed elements of low-energy construction, airtightness detailing and application, and modern materials into the assessment bringing it in line with both learning outcomes and the evolving needs of the construction industry.

Motivation

Students are most motivated when they see the relevance of what they're doing. Including performance-based challenges such as constructing airtight junctions, applying insulation, or assembling mock-ups that simulate thermal bridge-free construction would mirror real-world building practice. This is not only motivating but gives students a genuine taste of emerging careers in sustainable construction and retrofit.

Alignment with Learning Outcomes
The CSA currently addresses outcomes related to tool use, health and safety, and material knowledge. However, it falls short of supporting the more future-facing learning outcomes found elsewhere in the specification particularly those related to sustainability, environmental performance, and innovation.
To better align, the CSA should:
Offer students the option to build components based on Passive House detailing (e.g., window reveals, airtight connections, service void mock ups).
Include evaluation criteria based not just on finish and accuracy, but on functionality and performance logic aligning with real construction goals.

Development of Key Competencies
The CSA supports key competencies such as:
Being creative and working with tools through designing and crafting physical models.
Being responsible and safe by applying proper workshop practices.
Managing information and thinking as students plan, problem-solve, and execute detailed tasks.
However, these competencies would be significantly enriched by encouraging:
Systematic thinking (e.g., how does this detail affect the performance of the whole building?)
Sustainable decision-making (e.g., choice of materials with low embodied carbon)
Collaboration (e.g., group construction projects reflecting site team dynamics)

Final Note
To remain fit for purpose, the CSA must reflect not just the traditions of construction craft, but the innovation and precision required in modern energy-efficient building. Reinstating Passive House concepts, even as optional design pathways within the CSA, would elevate this assessment from a basic skills test to a real preparation for the next generation of construction professionals.

Supports for Successful Enactment

Please provide specific feedback / observations / comments on supports that might be needed for successful enactment of this subject specification.

To ensure the successful enactment of the Leaving Certificate Construction Technology specification, a robust, future-focused support framework is essential. While the draft curriculum offers a promising structure, its success will ultimately depend on the quality and consistency of supports made available to schools, teachers, and learners. These supports must not only address pedagogy and resourcing but also align with the evolving demands of a modern, sustainable construction sector.

1. Teacher CPD and Industry-Aligned Training

Teachers must be equipped with ongoing, practical CPD opportunities that reflect the latest construction standards, technologies, and sustainability frameworks. This includes:

Training on high-performance building principles such as airtightness, thermal bridging, and ventilation systems.

Exposure to digital construction tools, including performance modelling software, 3D design platforms, and building analysis systems.

Opportunities to engage with real-world supply chains and sustainable construction case studies to enhance classroom relevance.

Teachers should also be supported in developing the confidence to shift from traditional craft approaches to performance-based, systems-thinking pedagogy.

2. Resource Investment and Facilities Upgrade

Modern Construction Technology teaching demands specialised infrastructure and updated workshop resources, including:

Materials that reflect contemporary industry practice, such as smart membranes, recycled insulation, and low-carbon materials.

Tools and kits for simulating building performance, including airtightness testing equipment and MVHR demonstrations.

Space and support for project-based, collaborative learning environments that mirror real construction workflows.

Without adequate resourcing, especially in DEIS and rural schools, equitable access to this subject will be compromised.

3. Collaboration with Industry and Further Education

Strong partnerships with industry stakeholders and sustainability education platforms can provide:

Guest lectures, site visits, and mentorship from professionals working in energy-efficient and low-impact construction.

Transition pathways to apprenticeships, further education, or green skills micro-credentials.

Opportunities for schools to adopt real projects or retrofits as living labs, integrating local action with student learning.

These relationships ground the subject in practical relevance, while exposing students to emerging career pathways.

4. Accessible Learning Materials and Assessment Models

All learners should have access to clear, inclusive learning resources that support varied learning styles. These materials should:
Be visual, interactive, and grounded in real building performance examples.
Include digital toolkits, instructional videos, and templates aligned with the specification.
Provide assessment criteria that recognise both technical competence and critical thinking ensuring academic and vocational balance.

Conclusion
For this subject to reach its potential, it must be supported by a coherent ecosystem of training, resources, industry engagement, and curriculum materials that reflect the full complexity of modern construction. This includes embedding sustainability, digital literacy, and supply chain thinking into every aspect of delivery. With the right supports in place, Construction Technology can become a flagship subject that prepares learners for the climate-conscious construction careers of tomorrow.