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

NCCA is committed to protecting your privacy and does not collect any personal information about you through this written submission, other than information that you provide by your own consent. Where a respondent selects 'yes' to the question: *Are you consenting to be listed as a respondent to this consultation*, respondents are consenting to having their name / organisation's name published in the final report as respondents to the consultation.

Where a respondent selects 'yes' to the question: *Are you consenting for your submission to be published*, respondents are consenting to having their submission published on ncca.ie.

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Respondent's details

What organisation are you submitting on behalf of?

IDEA (Irish Development Education Association) Formal Education Working Group

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.

IDEA Formal Education Working Group

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.

We agree that the rationale and aim capture the 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. We value the emphasis on environmental considerations and the mentions of ethics and sustainability. We see that ethics appears in the aims but not the rationale: the language of ethical considerations could be further embedded throughout.

In the rationale, "*providing opportunities for students to develop confidence to navigate challenges and contribute to a sustainable future*" could mention **global** challenges; this links to the guiding principle of participation and citizenship.

In the section "*Students explore the interconnectedness of architectural design, construction techniques, and environmental considerations*" the importance of "*developing an awareness for their impact on the natural world, society, individual behaviours, and the economy*" is emphasised. We suggest that if wanting students to consider the impact on society, "*environmental considerations*" should be extended to include the three pillars of sustainability: environmental, social and economic.

We value the emphasis on "*critical thinking, problem-solving, creativity… communication abilities*" and suggest that "*real-world challenges*" could become **real-world and global challenges** to reinforce the push for "*a sustainable future*". We appreciate the inclusion of "*active citizenship"* but note that this could be extended to **global citizenship.**

In the aim, we are pleased to see the emphasis on equipping students to become "*responsible citizens, in ethical and sustainable ways; who will embrace life-long*

learning and sustainable living". The phrase "future challenges and opportunities" could refer to **global challenges.**

Where students are asked to draw "*insights from both the past and the present*", they could also be asked to link local and global, using case studies and examples from low-income countries, traditional contexts or the 'Global South'. "*Creative solutions that address challenges within the built environment*" could be expanded with more direction given: examples of climate adaptation and mitigation, increasing sustainable practices, ethical sourcing of materials and labour and adapting the built environment to ensure social needs are met, could support this.

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.

We agree that this section captures how key competencies can be developed in Leaving Certificate Construction Technology. Some further comments are noted below.

In the Thinking and Solving Problems section, it is good to see critical thinking mentioned; we suggest a push for "*new situations*" to include examples from a range of cultures and contexts. The "*open-minded approach"* should be expanded to "open-minded and **inclusive**".

In Participating in society we value the inclusion of "*active citizens who promote sustainable development and positive change"* and "*circular economy"* but we think "*advocating for responsible use*" could be explained further: responsible use of materials or housing? If challenging current practices, this could include exploring housing alternatives which emphasise social well-being and community development.

In the Communicating section we suggest the expansion of "*different points of view and multiple possibilities"* to include different perspectives, global realities and

multiple possibilities. A need for strong verbal communication skills could also be emphasised.

Cultivate Wellbeing, could include that by learning more about ethical and sustainability issues through Construction Technology, students have a greater sense of responsibility and connection with the wider world which helps them to become more active citizens to the betterment of their local and global community wellbeing.

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.

We appreciate the non-linear approach to the strands and can see this in the structure. Figure 3 could link knowledge, skills, values and dispositions better.

"*This approach fosters deeper critical thinking, problem-solving, and adaptability in real-world scenarios"* should include **global challenges** as so much of this specification links to sustainability, which is a global challenge that cannot be achieved in isolation.

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.

It is good to see an emphasis on sustainability and ethical considerations. We see a gap here in relation to climate change. Construction must consider both its impact on the climate (use of materials, transport, use of renewable energy, energy

efficiency in housing etc.) as well as its need to adapt buildings to a changing environment (e.g. building houses that can cope with changing temperatures, flood defences, storm proofing etc.). Climate is mentioned, but not ***changing*** **climate.** This would support alignment with the rationale and aims which emphasise sustainability and real-world challenges.

"*Structures closely connected to their site, society, climate, region, country and the plane*" - could include **culture.** "*Students appreciate how housing impacts the shaping of community identity, environmental sustainability and social cohesion*." could include economic stability: the lack of affordability or options for people continues to isolate and work against community integration and wellbeing.

"*Students appreciate the importance of the conservation of heritage sites and structures and how design challenges were resolved by previous generations through the use of locally sourced materials and skills.*" We suggest that this could be separated and expanded as follows:

- Students appreciate the importance of the conservation of heritage sites and structures and look at the social and cultural implications of these sites being lost to disrepair, mistreatment and purposeful destruction.
- Students investigate how design challenges were resolved by previous generations, and different societies, through the use of locally sourced materials and skills.

This would support opportunities for the development of key competencies and access and challenge for all students, whilst aligning with the aim.

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.

It is great to see the inclusion of "*all design decisions impact both locally and globally… the need for ethical decision-making in the sourcing, processing, use and reuse of materials*". We suggest that re-use should be emphasised to link with 2.1 on life-cycle of materials. We also suggest that labour considerations, including worker's rights, are included as well as the concepts of renewable/non-renewable materials. Although sustainable use of materials is included, it would be good to see a point on using fewer resources, and reducing consumption. This would support alignment with the rationale and aims which emphasise sustainability and ethics.

"*Evaluate how the sustainable use of materials can protect the environmen*t" - this is an interesting concept as many would argue that no use of materials *protects* the environment; instead, certain use has less of an impact. It is important to emphasise having as little impact on the environment as possible, without promoting the idea that construction of the built environment could 'protect' the environment on its own. We suggest that this is changed to "*Evaluate how the sustainable use of materials can* ***reduce impact on*** *the environmen*t"

We suggest that plastic should be mentioned as a specific example, to emphasise issues with its extraction, non-renewable nature and non-biodegradable properties, as well as issues with plastic pollution and single-use culture.

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.

It is good to see "*energy-efficient, resilient, sustainable*" mentioned. This could further support the rationale with mention of a **changing world and changing climate**. It could also include the ethical considerations for materials such as cobalt in batteries, or solar panels with mixed, non-recyclable materials which are destined for landfill and inefficient to breakdown due to cost etc.

"*Students develop an awareness of the fragility of the environment and the importance of using resources economically in the construction, heating, lighting and operation of buildings*" - this could be expanded beyond simply using

resources economically/minimally, to considering the type of resources and energy used (e.g. renewable/non-renewable) and whether materials are durable or will need to be replaced after a short time. If the Aim includes contributing to a sustainable future, it is vital that this goes beyond economic use.

We are particularly pleased with the inclusion of "*Resilient design - mitigate climate-related risks such as flooding, storms and extreme temperatures*" and "*discuss solutions that minimise resource consumption, reduce carbon emissions, and promote biodiversity*" and see this as vital in a local and global context.

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.

We are pleased to see the inclusion of "*Students learn how the provision of renewable energies ensures that buildings have a light ecological footprint on the earth*". It is important to note that social and ethical considerations must also be made: while renewable energies can be better for the environment, they can be incredibly harmful for social sustainability, namely forced/slave labour, including labour of minors. They can be produced at scale with materials which are not possible to break down or reuse meaning that they end up in landfill or incineration, often in different countries to where they are used. One of the key considerations with a light ecological footprint is the design to consume less energy that is not only reliant on low-energy technology.

We value an emphasis on "*minimum environmental degradation"* and "*waste management systems*" and suggest the inclusion of reusing alternatives, such as grey-water systems.

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.

We see the Exploring the Constructed Environment component as a great opportunity for students to display evidence of their learning whilst developing the key competencies. As the SEC will set the common brief for these projects, we would love to see these set in the context of global issues, such as adapting to the impacts of climate change, exploring waste management systems or considering the use of materials and renewable energy. This could also link to community spaces or housing alternatives such as co-housing models. This links with universal design in strand 1 (built environment).

This is an excellent opportunity for students to develop key competencies. This could include a 'connecting global to local section' encouraging students to link their work to their lives and their communities, whilst also considering the bigger picture.

Within the description of what students will do in this assessment (bullet points in AAC1), there could also be an aim of including ethical and sustainability considerations within their design and solutions. Both elements are mentioned in the aims and rationale so including it here would be consistent and solidify this continued learning.

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.

We see this as a good opportunity for students to display evidence of their learning whilst developing the key competencies. We would value an emphasis from the SEC in this prescribed task on renewable materials, sustainable design and social/ethical considerations.

Supports for Successful Enactment

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

This specification gives clear guidance on how skills and competencies should be developed throughout this course. We are pleased to see sustainability and the environment considered throughout. We would like to see more emphasis on ethical considerations with support for teachers on how to apply this to this subject.

To further support teachers, Appendix 2: Glossary of terms should be extended to provide definitions of terms such as sustainability, ethical, active citizenship etc. to support non-specialists of citizenship or ethics education.

This is the link to the ESD to 2030 strategy which may further support some of our suggested changes:
https://www.gov.ie/pdf/?file=https://assets.gov.ie/228330/c69895a6-88f0-4132-b6d1-9085a9c31996.pdf#page=null