Case Study

The Engine Shed and St Modan's High School, Stirling

Developing the Talent to Preserve Scotland's Built Heritage

During the school year 2018 to 2019 students from St Modan's High School in Stirling participated in a project to design and construct a shelter on their school grounds using traditional craft materials and processes. Through an SQA accredited qualification, and dedicated professional support and training, the pupils gained valuable technical knowledge and vocational skills, broadened their understanding of careers within the construction industry, all whilst contributing to the preservation of Scotland's unique craft heritage.

St Modan's High School students construct shelter on school grounds using traditional building craft techniques. *Images Courtesy St Modan's High School.*

Part of Historic Environment Scotland, the Engine Shed serves as a central hub for building and conservation professionals and the public. It exists to share knowledge about Scotland's traditional buildings, materials and skills. Opened in 2017, the refurbished and extended former military goods transfer shed now houses a learning and visitor centre, which aims to encourage a greater understanding of traditional building materials and skills – and inspire future generations to continue to care for Scotland's built heritage.

Over the past 5 years, the Engine Shed has been forging links with local schools and communities and developing its programme of formal and informal learning and outreach. From training and apprenticeships, to school workshops, teaching resources and family days, they all offer hands-on opportunities to engage with traditional crafts supported by skilled craftspeople, from masonry and woodworking, to blacksmithing and iron casting.

Since the Engine Shed opened, two reports highlighted the urgent need to support young people into engagement with traditional building craft materials and skills, and the careers they offer. The Stace Next Gen Index, published in

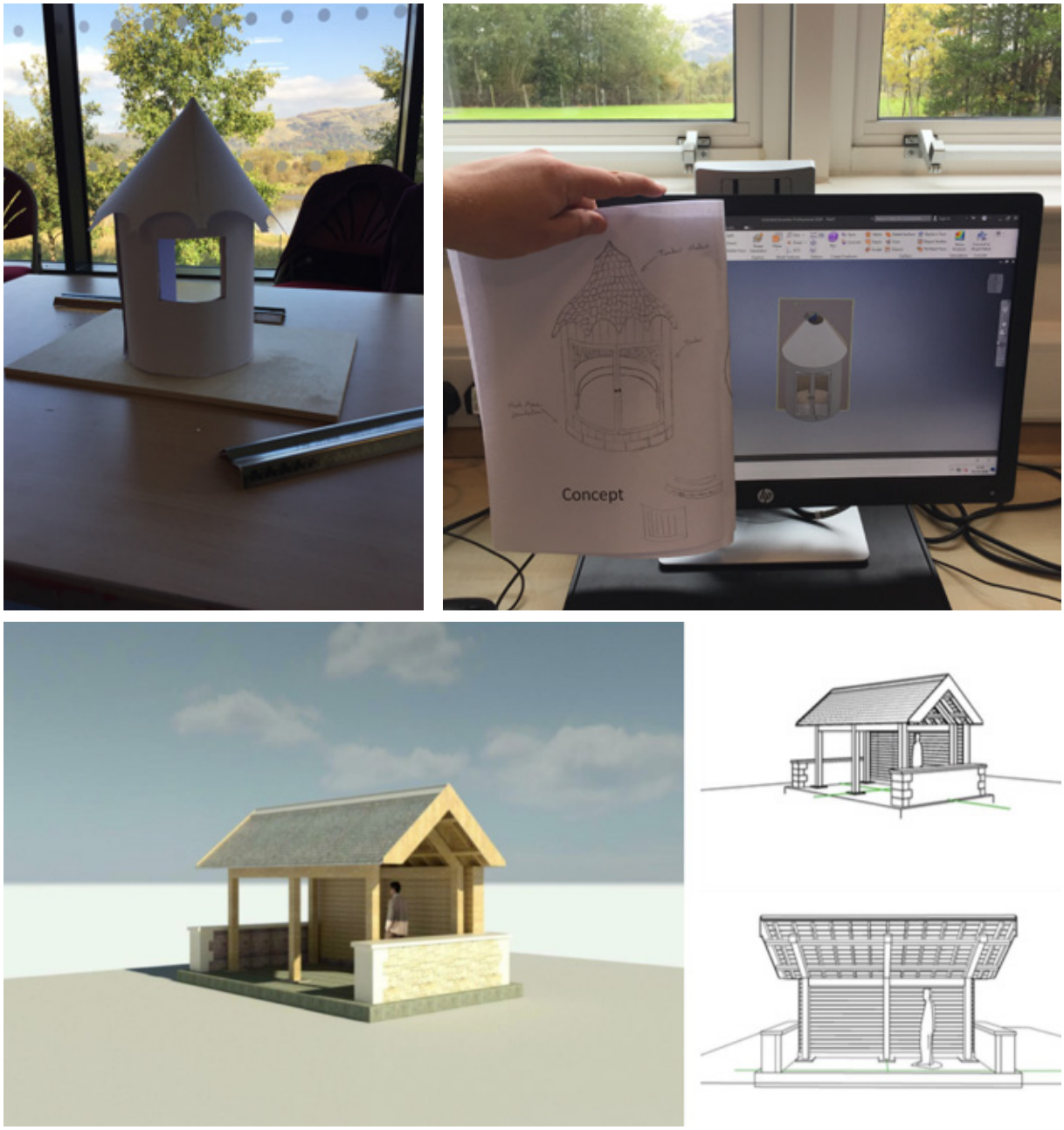
2019, showed that the construction industry were 'losing the war for talent', with only 7% of 16-18 year olds considering a career in the industry, and some 27% actively discouraged from it by parents. Alongside this the Heritage Crafts Association published their Red List of endangered crafts which highlighted iron founding, slating and flintknapping for masonry among many others that were in critical decline in the UK.

> **"If we want to ensure that our historic buildings can survive, and be cared for and maintained going forward, then we need to ensure that young people are coming through who are inspired to take on a career with traditional buildings, traditional materials, and that requires young people going into traditional craft careers."**
>
> Brian Wilkinson, Activity Manager for The Engine Shed, Historic Environment Scotland

During this period St Modan's High School were investing heavily in their school, building workshops and construction spaces for vocational learning and craft training. This made the school an ideal partner for an ambitious pilot of a newly refreshed National Progression Award (NPA), Construction Craft and Technician qualification at SCQF level 4, launched by SQA.

> **"The purpose of the Construction Craft Technician is to engage with the next generation so whether they go on to become an architect, engineer, surveyor or crafts person they will have a greater understanding and appreciation of the different roles in the sector. Learning on a live project has a much greater impact than simulated training, we get to engage with the students and challenge their perceptions while developing life skills that they can take with them. We hope that this programme engages students of all backgrounds and genders to consider a career in the sector."**
>
> Graham Briggs, Project Manager, HES Conservation Directorate

Historic Environment Scotland took on the role of client, setting a brief, budget and schedule, with conservation staff delivering a tailored vocational learning experience that reflected a professional construction project, using the Royal Institute of British Architects (RIBA) plan of work. Eight pupils from St Modan's S5 and S6 took part, initially developing a grounding in traditional building crafts and their use in construction. The group went on to design and test their approach through the use of CAD drawings and model making, guided by an architectural technician.



Early concept, CAD drawings, and paper models through to technical design.
Photo courtesy St Modan's High School

The project then supported the participants to develop craft skills in carpentry, joinery, brickwork, roof tiling and stonemasonry, as it moved into the construction phase with Historic Environment Scotland Conservation staff leading those sessions. Having highly skilled professional makers and craftspeople leading the sessions was an enormous benefit to the young participants' learning not only the technical skills and knowledge, but insight into possible career pathways and progression routes.

The resulting shelter is a lasting reminder of the achievements of the participating pupils. Six of the eight completed the qualification, and all those participating were offered apprenticeship interviews with Historic Environment Scotland. Beyond the assessed skills, experiences and outcomes for participants, it's clear that the project has had positive impacts for Historic Environment Scotland and the Engine Shed themselves.

> **"The whole project has informed how we might want to go forward with our delivery of learning in future. So, we're learning lessons from it, and applying them to our strategy for learning across different age groups. So yes, it's been a great learning opportunity for everyone."**
>
> Brian Wilkinson, Activity Manager for The Engine Shed, Historic Environment Scotland

The finished shelter in use by pupils from St Modan's High School.
Photo courtesy St Modan's High School.

Around half of the pupils who took part in the project are now hoping to pursue an apprenticeship in a craft trade. The pilot will continue at St Modan's High School, as well as being extended to a further two schools in the area.

Kaye Keenan, technical conservation skills project officer at HES, who devised the pilot project, said:

> **"It's incredible to think of how far these pupils have come in such a short space of time, and it has been amazing to see the confidence they have gained, through working with traditional materials, growing on a weekly basis... Engagement with schools is the only way we can address the skills gap in the industry, and by enabling young people to participate in a live build through projects such as this we can let them see there are so many career paths available within construction, and give them a great start in whichever they wish to follow."**

The Engine Shed has remained closed since 2020, like so many other venues, as a result of the Coronavirus Pandemic, with all in-person learning paused. Scotland is beginning to open spaces and re-engage in physical participation, it's clear that engagement with our built and craft heritage can offer meaningful and enjoyable days out that raise the appreciation for our nation's history and culture. Hands on craft education can go further, providing rewarding, dynamic and exciting learning that contributes to career opportunities for the next generation of Scotland's workforce and the future preservation of its historic buildings and craft skills.

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MAKE Learn

Panel

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You can find out more about the project and read our other case studies at makemanifesto.com/makelearn

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