

# Call for Evidence: A Review of Coherent Provision and Sustainability in Further and Higher Education

## Historic Environment Scotland

a) What do you think works well in the current further and higher education arrangements that we should keep in order to secure Scotland's inclusive social and economic recovery from the current pandemic? How can we best preserve and strengthen those features of education, research and innovation in Scotland that we most prize, in a very challenging funding environment?

Scotland has an international reputation for research and teaching, and we feel there are several existing strengths that we can build on. Even just to focus on the cross-disciplinary strengths we have in the culture sector, the [Culture Strategy for Scotland](#) rightly celebrates Edinburgh's successes with festivals and big data; Dundee's games cluster; the design, architecture, music, and screen strengths of Glasgow; and the value of the craft, music and textiles sectors in the Highlands and Islands. More broadly, clusters and regional diversification have helped to ensure Scotland punches above its weight in many industries, and help to support a generally constructive working relationship between skills and education providers, government, and business. At Historic Environment Scotland, we have not only benefited from working with such clusters, but have adopted a similar model at the Engine Shed in Stirling: Scotland's dedicated building conservation centre.

The collaborative approach demonstrated by Scotland's Innovation Centres provides another strength on which we can build. Innovation Centres, with their close working relationships with industry and business, and emphasis on the pooling of resource and expertise, should continue to be developed and supported, and extended to other sectors. When it comes to 'wicked problems' such as climate change, we will need cross-sector and interdisciplinary research and education to address these challenges. For instance, the skills and technologies necessary to adapt Scotland's buildings to address climate change span construction, architecture, engineering, and planning, as well as the hard sciences. As [work by Historic England](#) shows, climate change adaptation will also require strong knowledge of, and practical skills in, working with traditional building materials and skills: both because of the scale and scope of pre-1919 buildings across the UK, and the need to embrace low-carbon methods and materials for construction in future. Built heritage is therefore an integral part of the efforts needed to address climate change, but the remit and scope of our existing innovation centres do not currently extend far enough to incorporate such vital elements. Extending innovation centres to include public research and education facilities such as the Engine Shed would therefore help to realise additional benefits in addressing complex challenges, and more efficiently align existing infrastructures to research and education priorities.

b) What do you think colleges, universities and specialist institutions should stop doing, or do differently, in order to contribute effectively to an inclusive social and economic recovery? (You may wish to comment on teaching and skills development, sectoral and

employer needs and employability, research, innovation and knowledge exchange, widening access and equalities issues.)

We have themed our response to this question across the two areas of skills and research. Broadly, our response around skills focuses more on further than higher education, and our response on research predominantly covers higher education: however, there are areas of overlap in each.

### **Teaching & skills development and employer needs and employability**

We feel there is currently a mismatch between skills needs and provision. In our experience, young people often struggle to relate their subject choices at school to on-going education and training, or vocations they could aspire to. Academic education is still perceived by many as having greater value than vocational pathways, despite the concept of ‘parity of esteem’ and the development of Foundation & Graduate Apprenticeships. This often leads young people to undertake multiple education and training routes before becoming aware of an area of work or career that suits them. This increases inefficiency and waste in the system and often leads to industry having to train or up-skill graduates to undertake vocational tasks that have been omitted from their education. To reduce this drain on productivity there needs to be a greater focus on vocational training within a sound academic framework, with clear lines of sight from school, through FE/HE, and in to work. This should be complemented by metrics that promote and award collaboration between training and education providers, rather than encouraging compartmentalisation. In the construction sector, for instance, young learners are often discouraged from moving directly from education into an apprenticeship because the education provider needs them to complete their course to receive funding. Rather than supporting the holistic evolution of a young person’s career development, such approaches produce siloes: by the time the individual has finished their formal education a previously-made job offer is often no longer available.

Clearer routes of articulation from one level to the next, with better use of prior accredited learning and an understanding of the SCQF framework within the higher education sector would help address these issues, as would further investment and promotion of Foundation & Graduate Apprenticeship frameworks, and greater recognition of the academic value of many MA frameworks. Addressing these issues would engender greater mobility and flexibility within the system and would widen access and help with equalities issues. To facilitate this, there needs to be greater ‘read-through’ between school, further and higher education and industry. We welcome the emphasis on such an approach in the [Cumberford-Little Report](#), and feel the recommendations made there could be further supported through the Innovation Centre networks or sector skills councils, and not just the Enterprise Agencies. Greater collaboration and sharing of expertise between FEIs and HEIs, better integration of vocational training and academic learning, and a more multidisciplinary and project-based approach would create a more flexible education offer and deliver a more productive and skilled workforce for Scottish industry.

### **Research, innovation, and knowledge exchange**

Research is integral to our work at Historic Environment Scotland. Around a tenth of our staff undertake research as part of their roles, and through this activity we have been recognised by UKRI as an Independent Research Organisation. We work regularly with further and higher education institutions on research projects, as well as with the public and third sectors, business, and communities. We also support around 20 PhD students each year through a variety of funding models, along with hosting postdoctoral researchers or embedded master's students. Our experience of working with universities is similar to that discussed above: although there are pockets of good practice, more needs to be done to build collaborative research relationships and degree pathways focused on practical benefits.

Although both UKRI funding calls and the REF have evolved to give more weighting to the impacts of research in recent years, research funding and training provision – across both Scotland and the UK - still tends to perpetuate 'academic-level' knowledge that does not lead to clear benefits to industry or society. Although we would not wish to overlook the value of basic research or of critical thinking skills, we find higher education does not currently equip most students for the kinds of applied work that an organisation like HES requires. This is compounded by research assessment panels weighted heavily towards academic scholarship - limiting our own ability to seek additional funding for our research activity - and by a preference within HEIs for PhDs which favour academic over applied researcher development. Industry PhDs - such as NERC's CASE partnerships or the AHRC's Collaborative Doctoral Partnerships - do offer a welcome practical focus, which has been hugely beneficial to us in taking forward some of our research priorities while contributing to the upskilling of an individual researcher. Evaluation by AHRC has also shown that such studentships are more likely than traditional PhDs to lead to positive employment destinations. However, such research training pathways are limited in number and are currently the exception rather than the rule. We feel SFC could therefore consider how the funding and research training landscape in Scotland could compliment that provided by UKRI, and particularly whether SFC might pilot alternative models to traditional PhDs based around equitable partnerships between HEI and industry researchers, the use of funded research to drive practical outcomes, and the development of the research and technical skills needed by industry.

Our experiences with research and training at HEI level also suggests that existing practices can perpetuate inequality. Where courses require practical research elements that can be expensive to provide, costs are often passed on to students. As a result, students from disadvantaged backgrounds can struggle to access the training necessary to compete in the job market, leading to some sectors becoming overly homogenous and lacking in diversity. Work to profile the archaeology sector [by the Chartered Institute for Archaeologists](#), for instance, helps to show the implications of this in one particular discipline: ethnic minorities are hugely underrepresented within the archaeology sector due to the barriers placed in their way throughout formal and informal training and education (note this research is in the process of being updated but we do not foresee a significant change in its findings). In our experience, similar issues exist with courses relating to the heritage, tourism, and construction sectors, and this is likely to be similar across HE wherever practical training is seen as an addition to, rather than a central part of, a degree course. At HES we are working with SDS and others to try and address such issues through the Skills Investment Plans for Tourism and the Historic Environment. However, all too often mainstreaming equal opportunities relies on goodwill from institutions and individuals rather than systematic support through policy or funding frameworks, and requires significant in-kind or financial contributions from public bodies. As a result, current approaches to building inclusivity and accessibility are not sustainable. As above, we feel the solution is for better collaboration

between education and industry, supported by targeted engagement and input from SFC to identify and remove specific barriers. Embracing such an approach will not only help to improve opportunities for all, but ensure graduates develop the practical skills necessary to prepare them for the workforce.

### c) How can colleges, universities and specialist institutions best support Scotland's international connectedness and competitiveness in the post-pandemic, post-EU membership environment?

As a public body with internationally recognised technical and academic expertise, our experience of international working is that we often end up supporting Scotland's colleges and universities, rather than forming a mutually beneficial relationship with them. Institutions are eager to collaborate with us, and to use our reputation to enable them to gain credibility and access to new international markets for teaching and research. However, it is often not clear what the direct or immediate benefit to our organisation is from this, beyond helping another Scottish institution. If we are to make the most of our collective expertise, then there needs to be a more equitable and collaborative approach to project development for the benefit of all partners. This requires greater emphasis on the mutual benefits of international activity and mechanisms to ensure rewards are realised across a partnership. We feel SFC could assist colleges and universities to develop their thinking about maximising the total benefits of international partnership ventures, in line with Scotland's International Framework and related engagement strategies.

We have also experienced working with institutions where ambition is not matched with the capability to deliver in the international arena. This places additional strain on public bodies like HES to ensure the viability and success of the relationship. There may be a role for the SFC to boost capacity and mentor organisations to ensure that they have the resources and expertise to address key issues such as international recruitment and visa responsibilities. SFC could look to the creation of informal partnerships and mentoring relationships as a way to support this, along with a co-ordinating or formal advisory role going forward.

At the more practical level, there may be a role for SFC to better support knowledge exchange and matchmaking between institutions. International partnerships will be increasingly important if we are to tackle national and global issues, but it can be challenging for organisations to engage productively with others outside their immediate sectors. At HES, for instance, we have interests in 3D data capture, data linkage, and AI and automation, alongside strong research interests in diversity and inclusion and community-led enterprise. Although these issues are of interest to many other culture and heritage organisations internationally, they will also be of interest to other sectors and organisations, and we would welcome opportunities to engage across disciplines and borders in exploring these further. Making connections across sectors can be a challenge, however, and SFC might consider taking on a more active brokerage role – working with organisations like Scotland Europa - to promote Scotland's world-leading research across disciplines and industries. This need may become more acute in the immediate future as Britain's withdrawal from the EU is likely to cause some harm to our international relationships, and could jeopardise our ability to network as well as win funds for research and innovation.

**d) What opportunities and threats does the post-pandemic environment hold for colleges, universities and specialist institutions? For institutional leaders, how are you planning to address these challenges and opportunities?**

The sustainability of the current funding models for further and higher education may be in question if future income is constrained, whether from a decline in foreign students, reductions in research income post-Brexit, or general pressure on public spending. If resources are constrained then we would be concerned that ‘specialist’ courses, which may be expensive to deliver but vital to the future of some key sectors of the economy, will come under pressure as institutions look to lower costs. At HES, for example, we have already experienced this in relation to our work to deliver stonemasonry training: we subsidise these courses to maintain quality, but the value of the payments we receive does not cover our expenditure, and our partner colleges are not able to pass on the value of SFC credits. As a result, our costs are not being adequately covered and this could jeopardise the sustainability of such courses in future.

In relation to post-graduate training, at HES we have had to develop our own course at SCQF 11, as none of the Higher Education institutions in Scotland could deliver the content required in a format that met current funding models. Coupled with the economic pressures referred to above, further reduction in income and additional pressure on both FE/HE and our own budgets will exacerbate such issues, potentially leading to the loss of these courses and the vital skills they impart. To avoid this, we recommend that a strategic evaluation of the wider social, environmental, economic, and cultural benefits of specialist training be undertaken to understand how to meet the potentially higher costs associated with delivery. As part of that evaluation there should be consideration given to new and innovative ways of sharing resources and expertise, as well as facilitation of greater collaboration between institutions and sectoral bodies. We feel any solution is likely to require the current models of funding and support to be adapted to enable more efficient and equitable use of resources within wider public and private sector partnerships. In this we also welcome the recommendation made in the Cumberford-Little Report that better provision should be made for SMEs and micro businesses in the further education landscape. Small and micro businesses make up most of the historic environment sector, and the current system means they do not receive the support from colleges they need. We therefore agree that new funding models are needed to incentivise and create capacity for FEIs to support smaller businesses. For HES, our work at the Engine Shed, along with our role in helping to deliver the Skills Investment Plan for the Historic Environment Sector, means we would be well-placed to support the clustering of smaller businesses should any new models be established. We also feel that much more use could be made of the Engine Shed as a centre for innovation and training if current funding and provision mechanisms were revised to better support tertiary providers. We would therefore welcome opportunities to continue our conversations with SFC about how the potential value of the Engine Shed might be realised.

**e) What forms of collaboration within the tertiary education eco-system would best enable a coherent and effective response to these challenges and opportunities?**

As outlined above, expanding the innovation centre model to other sectors and organisations would be hugely beneficial. For the Historic Environment sector, the development of an Innovation Centre has been identified as a priority within the new Historic Environment Skills Investment Plan: a sector-wide strategy created in partnership between HES, SDS, and industry. Although this is just one form of collaboration, we feel the innovation centre model helps to provide the education eco-system with real-time feedback on the efficacy of training, education and research, and creates a dynamic force to increase productivity and added value.

We also feel SFC might reflect upon, and refine, [UKRI's approach towards infrastructure](#). Adopting infrastructure as a lens through which to understand education and research can help us to identify which organisations and resources underpin skills and innovation ecosystems, thus providing a platform on which shared prosperity can be built. An infrastructure-led approach also recognises that tertiary education and research providers can deliver multiple benefits, across multiple sectors. In our own case, as an IRO we are recognised by UKRI not just as part of the UK's cultural infrastructure, but as a part of its scientific infrastructure too: our labs and equipment help to support training and research on issues such as genomics, materials analysis, and meteorology. Understanding infrastructure in such a holistic manner would help to enhance co-operation and specialisation, ensuring efficient use of public resource rather than duplication of effort. It would also help Scotland engage on the international stage through promoting recognition of our existing expertise and co-operation with experts elsewhere. [The European Research Infrastructure for Heritage Science](#) (E-RIHS) offers one example of how such research and training infrastructures can work, and AHRC are currently leading UKRI's engagement with this project.

To further promote and grow the value of Scotland's research and training infrastructure, SFC should consider how a Scotland-specific version of IRO status, or similarly targeted support for tertiary research and education infrastructures, could be used to promote collaboration and resource sharing, and help to align research and innovation to key policy priorities. Adopting such an approach would require SFC to develop closer relationships – financial as well as discursive – with tertiary providers (including public bodies) to ensure this infrastructure is open, inclusive, and accessible. By recognising and building on the power of the entrepreneurial state as an enabling and supporting mechanism for education, academia, and industry, we feel we can make better use of the limited resources that will be available to us in the immediate future.

f) How can SFC, alongside government and other enterprise, skills and education-focused agencies, best support colleges, universities and specialist institutions to make their full contribution to Scotland's inclusive, green and education-led recovery? In particular, you may wish to draw out:

- How scarce public resources should be prioritised to drive recovery
- Particular areas of collaboration between agencies that would best support the sectors' contributions
- Adaptations to SFC's funding and accountability frameworks to promote agile and collaborative action by the sectors to build Scotland's recovery

- How SFC's funding and accountability frameworks should ensure that equality and wide access to educational opportunity are promoted as key elements of the recovery for younger people and adults
- What support SFC and government could give institutions to adapt to a changed environment

Many of the issues raised in our answers above are relevant here, and can be summarised as follows:

We feel SFC could explore ways to move away from static, two-way relationships with individual FEI/HEIs and towards support for more collaborative and dynamic relationships spanning the public and private sectors, FEIs and HEIs. Adopting mission-oriented approaches to funding, especially for the promotion of research activity, would be one way of doing this, and would align Scotland with EU efforts to promote research and innovation through the Horizon programme. At HES we were exploring ways we could pilot such approaches to our own collaborative research activity before the coronavirus outbreak struck, and we feel SFC might contemplate similar approaches to their own funding. Even using existing mechanisms, however, we feel there is value to be gained from expanding and broadening the innovation centre model. This would help to promote collaboration, integrated specialisation, and resource sharing, and help to align research and education around key policy areas such as climate change.

In our response we have also recommended ways that current frameworks could be improved to overcome siloed working and promote equality and inclusion. Integrated and holistic approaches to training and education, which reward collaboration and the end results of education rather than involvement in any specific stages, might help to do this. To support this, SFC could collaborate more closely with public sector bodies such as HES to better understand the skills, education and research needs of specific sectors, and may consider directly funding tertiary providers to deliver training where appropriate. Working with sector bodies like HES to provide targeted support for sectoral clusters of SMEs and micro businesses will also be increasingly necessary. We feel better matches between education provision, pathways to work, and existing skills gaps could be realised through closer partnership working at all levels. This might also result in new ways to deliver education and training, and give learners more targeted, practical skills alongside general subject knowledge. We look forward to working with SFC to ensure the sustainability of education and research in Scotland, and would welcome the opportunity for further conversations or engagement as your work on this theme progresses.