

DRAFT INFRASTRUCTURE INVESTMENT PLAN

Consultation response – November 2020



Response

1a. Do you support the inclusion of natural infrastructure in our definition of infrastructure?

- Yes

1b. Do you agree with the wording proposed for the revised definition?

“The physical and technical facilities, natural and other fundamental systems necessary for the economy to function and to enable, sustain or enhance societal living conditions. These include the networks, connections and storage relating to the enabling infrastructure of transport, energy, water, telecoms, digital and internet, to permit the ready movement of people, goods and services.

They include the built environment of housing; public infrastructure such as education, health, justice and cultural facilities; safety enhancement such as waste management or flood prevention; natural assets and networks; and public services such as emergency services and resilience.”

- Yes

1c. N/A

2a. Do you agree that the steps proposed in the common investment hierarchy are the right ones?

- Yes

2b. We support the intentions within the common investment steps. However, we don't necessarily agree with the use of the term hierarchy. We agree that the opportunity for reuse and repurposing should be considered before committing to new build. However, just because reuse/refurb is possible does not mean it is automatically the right option – eg if it would lead to higher carbon emissions on a whole life basis than new build. It allows creates questions around government priorities which could affect the market. The determining factor here needs to be a whole life carbon analysis and whole life cost comparison. Whilst some enhancements can be applied to existing buildings it will not change the impact of poor massing, orientation, thermal bridging etc and the measures required to create good internal environments in respect of daylight, overheating risk etc. that is inherent in good passive design solutions.

We would be interested in the research behind the proposal to prioritise re-use over new build. Surely this should be justified on a project by project basis backed up by an appropriate level of whole life assessments. Perhaps the hierarchy should include local community social and economic benefits – aligned with dashboard indicators. We would welcome the Scottish Government to provide any additional thoughts on how ACE members could help provide support to guiding these steps and collaborating further.

3a. Do you agree that a dashboard of indicators is the best approach to enable informed decisions to be taken about the long-term trade-offs and choices in our infrastructure investments? Please provide the reasons for your response.

The dashboard of indicators provides a well-informed framework into future infrastructure investments and their outcomes. We are very pleased to see the Scottish Government has included the importance of place and access to green and blue space, something that is crucial to our well-being and society. However, they seem to have set productivity as a separate theme from place, from our understanding Productivity and Place is very heavily linked as shown in our report on Productive Placemaking.

The inclusion of the UN SDG's is a very welcome one however we ask that the Scottish government consider the inclusion of connectivity which is vital to Scotland's economy and productivity. This should be built into all forms of transport infrastructure investment and adaptation to help support our islands and highlands. This could be in terms of green and blue space maintenance along major transport routes. We recommend that the government consider aspects of the recent Australian Infrastructure Plan and Audit (from 2016 and 2019 respectively) which emphasise the need for more sustainable and equitable infrastructure, particularly in sectors such as energy, transport and telecommunications, to support inclusive economic development.

Whilst it is welcome that there is joined up approach to indicators through the SDG's, we are yet to be fully convinced there are more than a tick box exercise and how they will be acted upon by local authorities or public sector boards. There needs to be some careful consideration to making these align and provide value for money.

3b. What outcomes (and/or indicators) do you think should be included in developing a common assessment framework for prioritising infrastructure investment?

The covered outcomes/indicators are already very comprehensive however we believe there should also be consideration to more on the impact of design and place on mental health, how developers and the Scottish government can collaborate to deliver on this with sustainable best practice case and the connection of communities. Community engagement is also key within developing new or dated infrastructure.

Whole life cost assessments should be a priority when developing this framework, and the factors included in them. We should prioritise our ambitious net zero targets into whole life assessments while supporting carbon capture on re-use projects. We also need to spend more time in houses going forward with alternative working practices. Greater emphasis to be on what a new build is like and make more allowance for 'office' areas within. Needs to be a greater emphasis on build quality and building to last with increased occupancy time.

As an extension to the above point and linked to chapter 5, investigate further the opportunity of repurposing existing commercial space that is no longer required, particularly with older and inefficient buildings home to local authority and public services, and consider how these spaces could be used for community or third sector organisations. The case for this has only been built further by the results of the COVID-19 pandemic, in which we have seen a decrease in urban centres and city transport.

3c. Are there existing tools or methodologies you are aware of which you think the Scottish Government could draw on or adopt in developing its framework?

ACE has helped develop the 5 capitals model of value. The discussion paper, written with the full input of the members of ACE's sustainability group, explores how the five capitals model can help define values in infrastructure which are not purely financial – i.e. the natural, human, social and manufactured capitals. In our model, innovation is considered an enabler that sits across the capitals; to achieve a different outcome we simply need to do things differently. This has been built on by the Construction Innovation Hub's Value toolkit, which goes further in its consideration of building value. This should deeply be looked into by the Scottish Government.

The Scottish Government should work with ourselves, the Construction Leadership Council (CLC) and Construction Innovation Hub (CIH) to embed the five capitals into their appraisal and business case process. Specifically, to use the five capitals model to provide quantifiable assessment of wider benefits allowing for more robust evidence-based decision making, alongside quantitative economic appraisals.

<https://www.acenet.co.uk/media/5151/ace-five-capitals-report-2020.pdf>

4a. Do you support the planned approach to developing a new approach to assessing the contribution made by infrastructure investment to Scotland's emissions targets?

- Yes

4b. Please explain your response and support your response with evidence

We fully support the governments use of PAS 2080 within its transport contracts for managing carbon and welcome providing additional comments to this. However, net zero infrastructure is likely to be underprovided by the private sector due to market failures around finance and coordination, in particular due to the long-term, largescale and high-risk nature of infrastructure projects. To this end there is likely to be a new role for the Scottish Investment Bank. Infrastructure is long-lived and locks in emissions and resilience patterns for decades. It is therefore important when considering the carbon emissions of a project, that it takes into consideration both embodied and whole life-emissions. These are the total greenhouse gas associated with raw material extraction; the manufacture and transport of building materials; to installation, construction, operation, maintenance, and eventual material disposal.

Operational carbon emissions will make up a declining proportion of a development's whole life carbon emissions as operational carbon targets become more stringent. To fully capture the infrastructure project's carbon impact, a whole life-cycle approach is needed to capture the full embodied emissions.

We also strongly commend the governments leading response on achieving these targets and would recommend further global collaboration prior and post COP26 to share innovation and technology to support these challenges.

5a. What are your views on the accuracy and scope of the environmental baseline set out in the Environmental Report?

The baseline set out in the report is broad and expansive however there is little mention of the greater consideration use of waste 'products' to give more circular process (e.g. use of waste heat from industrial or data centre processes into a heat network).

Greater consideration should be given to 'Theoretical vs Actual' in relation to reduction in energy use, decarbonisation and sustainability. This is an area that a significant proportion of the build environment is behind the curve on.

We support the governments approach to natural capital however would like consideration of some national and project specific outcome measurements from the Enabling a Natural Capital Approach (ENCA) data-book produced DEFRA and our sister organisation EIC which could apply to the baseline. This provides around 200 sources of selected biophysical and valuation evidence for organisations to use as local natural capital metrics.

We are pleased to see incentivising reuse/repurposing rather than new build, but this also needs to look at flexible use being planned in to either remodels or new builds should direction of travel change in say teaching or healthcare, but also allow spaces to be temporarily repurposed easily, e.g. NHS Louisa Jordan.

5b. What are your views on the predicted environmental effects of the Infrastructure Investment Plan as set out in the Environmental Report?

Noting investment in resilience and adaption, particularly flood risk, it is clear that some of the funding relates to climate resilience and areas affected by rising seas levels (e.g. Leith, Edinburgh). However, there appears to be no acknowledgment of the need for stronger planning policy with respect to risk management of building on land at high risk in the first place.

There is very little mention of electrical infrastructure investment. Appreciating there is a public vs private aspect to this, there needs to much greater thought around this if decarbonisation of the grid is largely through a move to electrical supply. This will need greater joined up thinking and strategy between public and private firms, particularly where infrastructure can be implemented to benefit both (e.g. heat networks).

We encourage the government to be more ambitious on flood protection – i.e. to actually build new infrastructure that projects future areas – as part of a national resilience plan. This could for example combine new transport infrastructure with flood defence – or have more defence work on it's own right. There is still new development being built that 'ticks the box' – does just enough to pass flood risk criteria – but that's not solving the problem.

5c. What are your views on the proposals for mitigating, enhancing and monitoring the environmental effects set out in the Environmental Report?

We fully welcome the proposals and recommendations for mitigating, enhancing and monitoring the environmental effects set out in the Environmental Report.

In particular are interested in the environmental impacts arising from development proposals at the plan and project level and the supplemented by statutory requirements such as Environmental Impact Assessment and Habitat Regulations Appraisal. We also welcome proposals to develop a new, system wide infrastructure assessment and prioritisation framework and the commitment to developing an approach to enable the carbon assessment of future Infrastructure Investment Plans.

For any questions around this submission, please contact:

Gareth Lonie

Lead Policy Manager

Association for Consultancy and Engineering (ACE)

