Response to ICE’s Green Paper consultation: COVID-19 and the new normal for infrastructure systems

Dear Chris,

We welcome this work being undertaken by ICE and the Infrastructure Client Group, and await the publication of further research on the ‘new normal’ for infrastructure. This response has been written in consultation with ICE London Region members including those on the ICE London and South East Water Panel.

We agree with the assumptions put forward in the paper, and in the sections below, we have set out our views on some further opportunities for London’s infrastructure following the impact of COVID-19. We are happy to discuss any points outlined in further detail – please contact Edie Fairservice in the Regional Support Team who has formulated this response.

On behalf of the ICE London Committee, I would like to thank you for the opportunity to respond to this consultation.

Matthew Kuhn CEng FICE
Chair, ICE London Region
Question 1: What other factors, or combination of factors, will determine attitudes to public life as we transition to a new normal?

Whilst it is possible that COVID-19 will have a long-term impact on public life, we are yet to clearly understand what the ‘new normal’ will look like. However, there are certain factors that we know will influence the outcome of this transitional period.

One of these is demand levels, in a number of key areas. More people (London residents and those commuting into the capital) will likely be wary of a second wave of the virus, and will potentially reduce the amount that they use public transport due to the possible increased risk of being in confined spaces, where it is difficult to maintain social distancing. Demand for public transport in London is increasing slightly with the easing of lockdown restrictions, but is still at a low rate, as is TfL’s revenue; tube ridership on Thursday 4 June was just 11% compared to what it was at the same time last year.¹ This could have long-term implications for projects such as the Bakerloo Line Extension and Crossrail 2. ICE London continues to support these schemes, and believes that we should restate the case for such infrastructure projects where there is the opportunity to do so; however, demand will need to be monitored over time to better understand how and if London’s infrastructure requirements change.

It is also likely that we will see an increase in the number of people commuting by foot or bicycle, as the Green Paper has acknowledged. Given the sustainability benefits associated with this, ICE London supports improving existing infrastructure to make walking and cycling throughout the capital a more attractive transport option.

Another key area is demand for office spaces. If working from home becomes the norm for more parts of the population, businesses may consider whether large central offices are still necessary, or if smaller office spaces may be more suitable. There will be varying levels of preferences for this way of life, but we are likely to see far more people opting to stay at home to work, or increase the proportion of their time working from home, in the medium to long term.

¹ https://www.mylondon.news/news/zone-1-news/transport-london-reveals-latest-london-18366456
With more people working from home, there will likely be changing patterns in, for instance, the demand for water and therefore wastewater services, and electricity. It would be beneficial to consider what these effects are likely to be long-term; greater resilience and flexibility in our systems may mean additional infrastructure is required, but it could also mean more technology is needed to better control and manage the systems we already have. Closely monitoring these changes will be key to understanding the “new normal” and the associated infrastructure requirements of this.

Furthermore, internet connectivity will be another key factor in determining public attitudes, with the ‘digital divide’ meaning that some are able to comfortably work from home, with others finding it more difficult. Tackling digital exclusion must be a priority in future plans, to help reduce inequality and make sure everyone is connected.

Question 2: What other systemic changes, driven by lessons learned during the lockdown period, can we expect to be important as part of the new normal?

Certain lessons learned during the lockdown period could be utilised by the infrastructure sector to improve planning in the long-term. For example, the speed at which the NHS Nightingale Hospital London was completed demonstrates the potential for the rapid mobilisation of temporary assets; leading to questions around whether we can utilise other types of infrastructure in similar ways. We should seek to identify where infrastructure can improve the lives of Londoners, and consider alternative methods of provision, in the context of economic downturn, restricted funding and the need for more efficient infrastructure.

There has also been a change in carbon emissions and, in London, a significant improvement in air quality due to the lockdown period (the City of London Corporation released figures in May 2020 showing that nitrogen dioxide levels in the square mile had reduced by around 35% since the beginning of lockdown).² This clearly demonstrates the impact that life pre-coronavirus had on the environment, and there is a need to incorporate these lessons into a plan for long-term recovery, in the context of the Net Zero 2050 target.

In particular, reducing carbon emissions that arise from the built environment will require a whole life carbon approach, with potentially more robust, granular carbon budget setting.

The COVID-19 crisis has also offered the opportunity for many to upskill and retrain in the construction sector, and ICE London believes that skills will be a vital element to the capital’s long-term recovery that focuses on making London a more resilient city. The Construction Leadership Council (CLC) has published a three-stage plan to help the industry recover, which calls for increased investment in skills and training, at professional level, through vocational education and apprenticeships, and improving occupational health and safety for the workforce. ICE London welcomes these proposals, and believes that the infrastructure sector as a whole should seek to prioritise such forms of training.

**Question 3: Are our assumptions of the new priorities for infrastructure correct?**

We agree that these assumptions are correct. We have outlined some further points in relation to these below that should be considered.

**Intra-city travel**

There is a need to consider funding mechanisms in the context of reduced short-term ridership, different business strategies and financing techniques, and change in contract mechanisms to deliver projects faster and more efficiently.

**Using office space to deliver housing supply**

A place making approach that capitalizes on a local community’s assets, offers green spaces and promotes wellbeing should be central to any plans to reinvigorate city centres, as well as increased access to digital and transport connectivity.

---

A rapid review of major transport programmes to assess what needs to be rephased

This should include an assessment of air quality to capitalize on improvements linked to the lockdown period. Transport demand levels will also need to be monitored over time, to identify which infrastructure projects are needed and for when.

Further points: meeting Net Zero and promoting sustainability

In the built environment, approaches such as investment in deep retrofit will remain a priority; as will flood protection and climate resilience. This should be considered in the final version of the Green Paper.

Question 4: What other changes to infrastructure provision will be needed and what assumptions sit behind that?

ICE London welcomes the Green Paper’s recognition of the need for improved resilience to the impacts of climate change. In London, the provision of green forms of transport and supporting infrastructure to help maintain the reduced pollution levels and lower carbon emissions, such as wider pavements, improved cycle routes and electric charging points for cars, to encourage people to utilise more sustainable methods of transport, will be needed.

The lockdown period has emphasized this; in May 2020, UCL published research highlighting that two thirds of London’s pavements are not wide enough for people to observe the government’s advice to stay two metres apart. Making sure that sustainable forms of transport are available, which embed principles of inclusive design, should be key to the capital’s long-term recovery. ICE London supports measures such as the Ultra Low Emission Zone (ULEZ), and would welcome exploring further initiatives to improve air quality.

In addition, ICE London supports the review into TfL financing announced as part of the Government’s support package in May 2020, which aims to provide certainty and stability to London’s transport services.

---

4 https://www.ucl.ac.uk/news/2020/may/most-london-pavements-are-not-wide-enough-social-distancing
New ways of funding the network in the long-term will need to be considered, including after the current emergency funding package ends in September 2020. London First’s May 2020 report, Squaring the Circle, explores alternative funding options for the capital’s transport investment needs.5

**Question 5: Have we made the correct assumptions on the changes in delivery that will be required, to deliver infrastructure as part of the new normal?**

ICE London agrees with these assumptions; infrastructure funding is likely to be more constrained due to the economic downturn, and at the same time, as the Green Paper acknowledges, there will be a need to get more from infrastructure projects per pound invested, with society likely to expect to get more from infrastructure to support societal resilience. Therefore, greater productivity (in terms of unit output per unit input) will be required from projects.

Some of the things that we believe will allow projects to achieve this include procurement based on whole life value; increased digitization, utilising technological processes such as automated design, digital twin modelling and BIM (Building Information Modelling); investing in skills and training; and measuring project complexity to better understand risk levels and assurance requirements. The Green Paper should explore these different approaches, and consider how infrastructure projects can be delivered most efficiently, whilst also incorporating the principles of the United Nations Sustainable Development Goals.

More detail is required on certain points raised in the Green Paper; for example, with reference to bond funding, price and delivery certainty would be needed to ensure investor risk is minimised. The final version of the Green Paper should demonstrate how such financing options would operate in practice.

**Question 6: What are the immediate steps required to move us towards these new approaches to delivery?**

We know that in future, infrastructure delivery will be heavily reliant on effective digital systems. As a result of this, we believe that most urgently, action should be taken to accelerate the delivery of digital

---

infrastructure, such as rolling out high speed, high capacity broadband, and receiving clarification from the government about the timescales associated with delivering 5G. Fibre-optic connections could allow for much faster upload and download speeds and increased data capacity, which would be of significant benefit to digital construction and the infrastructure sector more broadly; improving applications that, for instance, remotely manage assets. This would be advantageous with more employees in the sector working from home.

Utilising innovative technologies that help civil engineers to do their jobs more effectively, will also be key to making the infrastructure sector more productive in the context of less funding. The Greater London Authority (GLA) has led this work in London, including on the “LUAR” (London Underground Asset Register) pilot commissioned by the Geospatial Commission, and the Infrastructure Mapping Application, both of which aim to improve coordination around infrastructure delivery to minimise disruption. Likewise, digital twin technology will allow civil engineers to detect the impact of decisions before they are made with more accuracy, improving efficiency in projects. Designing and building more sustainable, resilient cities will rely on these new technologies and should be considered an essential part of our recovery from the virus.

Investment in skills and training should also remain a priority, to ensure that the built environment becomes a productive, diverse and innovative sector. The London Progress Collaboration, run by the Institute of Public Policy Research (IPPR) and the GLA has launched the Reskilling for the Recovery Fund, an initiative helping small firms in the capital to recover by paying for apprenticeship training for new and existing staff. ICE London welcomes this recognition of the need to help boost skills following the impact of COVID-19, and the infrastructure sector should consider this key to its long-term recovery.

Once the pandemic has ended or been substantially controlled, there will be a need to better understand the number of people commuting into work in central London, and the mode of transport that they are using, to highlight any new capacity requirements and where infrastructure improvements need to be

---

7 https://maps.london.gov.uk/ima/
made. However, we are currently still in a period of significant uncertainty, and it is not possible to gage how things will look in the long-term.

**Question 7: What other fundamental shifts are required to deliver concrete and long-lasting change in how we operationalise to deliver infrastructure to achieve societal requirements?**

There is a need to identify new ways to train junior built infrastructure professionals remotely, where their access to offices and worksites are reduced. Working from home offers benefits, but there are advantages to being in an office environment for those in the early stages of their career, such as having the ability to network, maintain regular contact with leaders and mentors, and seek professional qualifications.

Mitigating these limitations will require leadership teams to plan effectively, so that the quality of training and development does not drop to a lower standard.

It would also be useful to re-consider any regional policy commitments, such as the Mayor’s London Plan, in the context of the pandemic. This would help to better understand any new infrastructure requirements and any opportunities there are to deliver societal change. The Mayor’s work on long-term recovery from COVID-19 in London has been welcome, and it will be important to ensure that these plans are married up with work that was being undertaken pre-COVID-19, rather than starting afresh.9

---