

Thanks for the opportunity to comment on the latest version of Liverpool's MAA documents.

Although we welcome Liverpool's drive to incorporate a low carbon economy within their MAA, their focus on climate change mitigation is a very narrow perspective on the environmental agenda. From Defra's perspective, Liverpool should also be thinking about the wider resource efficiency agenda linked to low carbon i.e. action on waste, water, etc and adaptation to climate change.

With regard to the Economy platform, the document could look to embed adaptation to climate change into the growth plans. It isn't particularly clear or specific about what the climate change impacts could be for Liverpool as a city region and therefore what risks (and potential opportunities) the city may be facing, when considering its future development. There is no adaptation indicator amongst the KPIs, but a significant amount of the planned activity could benefit significantly from taking future climate impacts into account in planning how to take the work forward – not least given that the MAA includes plans for major developments to infrastructure and the built environment which are likely to last for a very long time.

Specific elements of the MAA which could potentially be impacted by climate change include the plans for the Superport, housing growth and regeneration and the plans in relation to transport infrastructure. All are likely to have long lifetimes and will therefore ultimately need to be resilient to a climate which may be significantly different from today's. It is not clear that the MAA will be delivered in a way that will ensure that this happens.

Specifically:

- On the Superport they need to be thinking about its location, design, and how it is built with long-term climate change impacts in mind, to ensure that it is climate resilient in the long term and remains operational (e.g. the height of harbour walls need to be built with future sea level rise/ increased storms in mind). This is potentially a really interesting project for us, as we think it could potentially provide a useful test of how big infrastructure can be built in a way that is resilient to long-term climate change.
- On housing growth, low carbon is embedded but thinking about how to make new housing developments resilient to future climate change doesn't appear to be, for example, it would be good to see how thinking on green infrastructure can be incorporated into these plans. If Liverpool starts to experience problems with urban heat in the future, green infrastructure has significant potential for future cooling alongside a range of other benefits, such as helping with urban flood resilience. This can include measures such as individual urban trees, greening of grey space, as well as the more conventional thinking around large areas of green space. Where high density urban developments are planned, planning in green space for cooling can have real potential future benefits.
- Transport infrastructure also needs to be resilient to future climate change impacts such as heat (which can, for example, melt roads, interfering with rail

travel, and result in very high summer temperatures on urban transport systems), flooding, storms, etc.

There are also other opportunities – for example as Liverpool gears itself up to develop new skills and industries around low-carbon it might also want to think about whether there are opportunities to develop a skills base in relation to adapting to climate change. The Superport in particular presents an excellent potential opportunity on this front.

Ask 3 under the Economy platform refers to agreeing a strategy and initial action plan to implement a low carbon economy; both the strategy and action plan should take account of the wider resource efficiency actions on waste, water, materials, etc that will be needed to decarbonise the whole economy to meet the ambitious long-term climate change targets.

With regard to the Transport platform, colleagues that deal with air quality policy have liaised with DfT colleagues and DfT will be sending you amendments to Ask 11.

It would be really helpful if Liverpool could give some further thought to our comments above. When Julie Hitchcock attended the Liverpool MAA meeting on 18 May, she suggested that Liverpool should consider embedding thinking on climate change adaptation in their growth plans, and they did appear to be receptive to that. We could offer to help Liverpool embed thinking on adaptation into the MAA.

I should be grateful if you could let us know how this could be taken forward. I understand that you were trying to set up a telekit between Liverpool and Defra (Julie Hitchcock) so that we could convey our thinking to them – are you still able to set this up?

Finally, thanks to policy colleagues within Defra for their comments and responding so quickly in order for us to meet CLG's deadline on this.

Carol