5G Infrastructure – Planning for the revolution?

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The UK government has opened a public consultation until 4 November on extending permitted development rights for mobile infrastructure to support deployment of the next generation of wireless connectivity - 5G.

Faster, more responsive and reliable connections are key to a new Industrial Strategy geared towards the “Internet of Things”, consumers and businesses connecting more devices to the Internet at the same time - allowing artificial intelligence, robotics and autonomous vehicles. The aspiration is to be a world leader in 5G, driving growth, productivity and new business models with no community across the UK left behind.

5G needs more, taller and wider masts. Everybody wants futuristic connectivity untrammelled by “planning red tape”; nobody wants a dystopia of uncontrolled visual amenity impacts. The consultation explores land use planning striking the right balance.

What should be determined entirely by a local planning authority (LPA) further to a full planning application? Alternatively, how should wider scope be defined for government to grant default planning permission across England for the necessary apparatus (i.e. “permitted development rights”)? Where should even permitted development rights remain subject to prior approval from LPAs for particular matters like siting and appearance?

Operators are likely to welcome changes which standardise the consenting approach across England for what 5G will need. The acceptability of changes would be established in principle, with many specific limitations and environmental protections becoming embedded in Planning statute and the Electronic Communications Code. This is more certain than the determination of applications and imposing of conditions by planning authorities, often subject to the vagaries of local politics.

But the consultation is clear that no floodgates are being opened. Proposed departures from existing permitted development rights are incremental, with sensitivity to environmental considerations and significant in-built limitations:

- New ground-based masts exceeding 25 metres could be allowed (the current maximum height without a planning application). Views sought on the new maximum will probably elicit the most controversy in consultation responses. Unclear implications for visual impacts for some masts would be balanced against fewer being required overall because positioning them higher increases the range over which signals can travel. This could be resolved by LPAs' prior approval still being needed. But if this still substantially covers the same controversial planning considerations as a straight application for planning permission, cost and uncertainty for operators would remain largely unchanged.

- Permitted development rights might allow operators without any LPA prior approval to expand the width of existing ground-based masts by more than the current limit of a third to support the weight of 5G equipment and encourage mast sharing.

- Building-based masts need to be deployed closer to highways for dependable in-car coverage (and one day autonomous vehicles). New building-based masts on buildings up to 15 metres tall could be allowed within 20 metres of the highway under permitted development rights, without LPA prior approval.

- So as to ensure faster deployment of radio equipment housing (ranging in size from cabinets to cabins), which already falls under permitted development rights, LPA prior approval could be removed.

These planning proposals are part of wider co-ordinated government initiatives for 5G to be available in the majority of the UK by 2027. A GBP1.1bn digital connectivity package was launched in 2017, including a GBP400m Digital Infrastructure Investment Fund to help investment in new fixed and mobile networks. In 2018, the first successful wave of conditional awards were made to 13 cities and counties for GBP95m under the Local Full Fibre Network programme to fund delivering gigabit capable infrastructure. The government has also been co-ordinating a national programme of 5G testbed facilities and trials running to 2020 in a range of geographic and vertical market segments: each testbed received GBP2-5m in government grants, as part of a total investment of GBP41m from private sector and other public sector funding.

In August, the Scottish government issued its own "5G: strategy for Scotland", setting out how it would support 5G-related projects focusing on unique challenges posed by the nation's geography and dispersed population to 5G infrastructure deployment.

Deployment of 5G technology is commercially led and will require a huge amount of capital expenditure, expected to hit USD2.7trn by the end of 2020 according to Greensill. Telecoms operators are unlikely to shoulder the burden of it all. Partnerships are likely to be forged with local and regional authorities, health authorities and universities to rollout 5G networks. It is these partnerships, if structured appropriately, that could create opportunities for infrastructure equity and debt investors to deploy vast sums of capital and help reduce the burden on operators' balance sheets. Potential partners that allow for "anchor tenants" providing guaranteed usage commitments will allow potential investment and mitigate market demand risk. In turn equity investors could then introduce leverage and benefit from some market risk in the upside in premium charges for not just access but enhanced connectivity.

The future of infrastructure appears digital and interconnected. The continuing spirit of innovation within the infrastructure investor community looks to allow faster rollout and greater productivity.