

Priorities for planning in Scotland – early engagement for NPF4

Submission from Mobile UK

Introduction

1. Mobile UK welcomes the opportunity to submit a response to the Scottish Government's early engagement on its priorities for planning in Scotland.
2. At the time of writing, the UK is in the midst of dealing with the Covid-19 outbreak, which has struck the country such speed and ferocity, that it has consumed almost all of our collective energies and allowed little time to think about what follows.
3. The National Planning Framework, though, is a document for the long term. This update presents a good moment to consider policies that will help spur a revival of society and the economy once the we are through the immediate crisis.
4. In the mobile sector, the most visible immediate impact of Covid-19 and the associated lockdown was the very rapid acceleration in patterns of usage and behaviour that had been emerging over many years, most notably:
 - Increased working from home (WFH)
 - Increased on-line shopping/home delivery
 - Increased consumption of on-line entertainment
 - Increased use of video-conferencing platforms for work and play
5. These factors resulted in large rises in mobile (and fixed) network traffic. For example, Vodafone stated that in the two weeks to 25th March, they saw a 30% increase in mobile and fixed internet traffic and a 42% increase in mobile voice traffic – a very large and rapid increase over a short period, with which the networks coped very well.
6. Once we emerge from 'lockdown', these levels of traffic and these ways of behaving are very unlikely to be fully reversed. Anecdotally, many employers have been surprised at how well productivity has held up during home-working. And many employees have welcomed the reduction in travel and the extra flexibility that home-working allows, (even roles which rely on large corporate systems - such as some call centre functions - have found working from home feasible.)

7. In addition to these changes in behaviour, the lockdown has seen the emergence of on-line home learning and on-line/video patient consultations. While the former is never going to be a substitute for attendance at school, there is plenty of scope for using more on-line tuition and training for the older school age groups.
8. On-line will also play a substantial role in General Practice, particularly with high risk patient groups for whom visits to a GP surgery and exposure to Coronavirus is likely to be an ever-present risk for some years.
9. There remain, nevertheless, considerable uncertainties on what the near term and long-term impacts of Covid-19 will be.
10. At an international level, all Governments will have to work collaboratively towards the twin goals of controlling the spread of the virus but also recharging the global economy, with policies that promote free trade and a diverse global supply chain. The instinct to retrench within national boundaries must be resisted. That would be very bad for economic recovery everywhere.
11. At a national level, long term policy must unavoidably pivot away from our physical infrastructure and towards our digital infrastructure. To repeat, it is very unlikely that usage and behaviours seen during the crisis – more working from home, more on-line shopping, more remote GP consultations will return to pre-crisis levels.
12. A future planning framework must place much more emphasis on the promotion of investment in our fixed and mobile digital infrastructure.

Questions raised in the NPF call for evidence

What development will we need to address climate change?

13. In order to address climate change, Scotland (and other nations) has to reduce its carbon footprint by obtaining a higher proportion energy from non-carbon sources, making more efficient use of energy networks and changing people's behaviour.
14. In recent weeks, the lockdown has enforced changes in behaviour that have resulted in large reductions in carbon emissions. While the lockdown is clearly intended as a short-term measure, we will not want to lose all the environmental gains that have accrued from the reductions in travel to work and more working from home.
15. Mobile (& fixed) telecoms services will become an absolutely vital component of the strategy for addressing climate change.
16. High quality telecommunications infrastructure minimises and reduces the need to travel. Projects such as the Shared Rural Network programme will enable more remote and home working in rural areas, reducing the need to travel to urban centres

for employment. Fewer vehicles on the road also reduces congestion and pollution concentrated around it.

17. Mobile operators' investment in 5G, which will underpin IoT (Internet of Things) and machine to machine connectivity, will facilitate "smart" initiatives and bring about connected digital solutions that decrease energy consumption, travel and transport and reduce carbon and other greenhouse gas emissions.
18. High quality modern mobile connectivity will facilitate other sectors in reducing their carbon footprint, for example, through "smart" meters or "smart" infrastructure. This will see smarter motorways (which can reduce congestion), in-building and building to building connectivity (which could see less energy wasted on heating and lighting if it reduces consumption when not needed), smart industry (to make manufacturing more efficient with less wastage), smart sensors in bins so there are refuse collections only when absolutely required.
19. All these applications, which will assist in reducing greenhouse gas emissions other sectors, are underpinned by mobile connectivity both in rural and urban settings. Most UK cities already have "Smart" city programs in place to capture the various social, economic and climate change benefits that the digital revolution will bring. Governments are putting in place programs to deliver rural connectivity for the same reason.
20. Mobile infrastructure providers need supportive national policy in Scotland to drive the delivery of this connectivity, which will assist in fighting the climate change battle.

How can planning best support our quality of life, health and well-being in the future?

21. Modern mobile connectivity, 'smart' initiatives and IoT will revolutionise how we live: remote healthcare/consultations for vulnerable people, automated industry, automated transport, connected security, access to 5G connected emergency services (such as ambulances), enabling people to be safer, healthier and more prosperous. This carries significant social and economic benefit attached across every part of the country.
22. Better connectivity across the country will assist in eradicating regional & urban/rural divides. High quality rural connectivity, which the Shared Rural Network seeks to provide, facilitates home and remote working, thus reducing the need for people to relocate away from rural communities to the main urban centres for work. Rural communities have long since suffered with their young people moving away, leaving an aging population.

23. Similarly, businesses do not invest in areas with poor digital connectivity. For this reason, businesses are often forced to relocate and invest in urban areas where digital connectivity has traditionally been strong. This has impacted on rural living. Modern connectivity across all parts of the country, including rural areas assists in regenerating communities to create more resilient, vibrant and prosperous places to live, throughout Scotland.
24. Operators who deliver this kind of modern connectivity need a national planning policy that understands and adds appropriate weight to how their infrastructure facilitates and underpins these benefits.

What does planning need to do to enable development and investment in our economy to benefit everyone?

25. The Covid-19 outbreak has been a catalyst to a step change in our use of digital infrastructure and applications.
26. To repeat what we have stated in our introduction to this submission, it is very unlikely that the increases in usage and changes in patterns of behaviour will be fully reversed once 'normal' life returns. Collectively we will experience a revolution in our adoption of digital habits.
27. In sum, it is no exaggeration that, through this Covid-19 outbreak, we have all come to realise how critically important our digital infrastructure is. It is hard to imagine how the economy would have functioned at all without it, or how the lock down would have been possible.
28. In recent policy documents 'Forging Our Digital Future with 5G: A Strategy for Scotland', August 2019 and 'Realising Scotland's Full Potential in a Digital World: A Digital Strategy for Scotland', March 2017, the Scottish Government set out its ambitions, writing: *"Technology transforms the way in which we live our lives. It connects us in new and different ways. It puts more power into the hands of the users of services and offers new insights and opportunities for those who provide them. It creates a platform and a momentum for innovation and has the potential to fundamentally redefine the relationship between the public sector and the people it serves."*
29. We all now have a better understanding of what this means.
30. Without resilient fixed and mobile broadband networks the dent in the UK's economy would have been considerably greater. And it will be our digital sector that provides the engine to power the economy's revival.

31. Planning Policy must now reflect this and lean decisively towards digital infrastructure with a planning regime that recognises its critical importance (including urgent reforms of the current permitted development regime) – there is no reason why all development for telecoms should not be permitted (albeit with the retention of prior permission as to siting and design for the more material developments).

How can planning improve, protect and strengthen the special character of our places?

32. Telecoms services will be vital across all parts of Scotland, including Conservation Areas, National Scenic Areas, Green Belts, National Parks etc and so LPAs should assist and be pragmatic in terms of the delivery of this within sensitive areas.
33. Infrastructure of any kind is always likely to have some level of visual impact, whether that is a road, bridge, street-light or mobile telecoms base station. This visual impact should always be balanced against the relevant social and economic benefits. MNOs work extremely hard to minimise visual impact associated with the network through sensitive siting and design and positive, holistic proactive engagement with LPAs and other local stakeholders.
34. Many rural areas are designated National Park or National Scenic Area and yet have the most difficult topography, geography and practical constraints to overcome. A means to overcoming many of these constraints (for example, lack of backhaul to connect a rural/remote site back into the network) may be to build a taller base station (so that it may get line of sight over hilly topography for a microwave dish link in the absence of fibre) or site the base station on the top of a hilltop where it can get line of sight all around the wider area. Both increased height or more prominent siting is often seen as a negative in terms of visual impact but it is a necessity in terms of rural rollout. While MNOs must do all they can to minimise this impact, the practicalities of infrastructure deployment must also be given weight, even in protected areas.
35. Green Belts will also continue to need to be connected. The rationale for Green Belt designation is to curtail the spread of built form and to protect the ‘openness’ of the countryside. However, single base stations do little to impact upon openness, nor do they constitute the spread of built form any more than what roadside lighting columns do (which are considered acceptable in a Green Belt) – for this reason telecoms infrastructure should be classed as ‘not inappropriate’ Green Belt development.
36. Mobile operators look to reduce the amount of physical built network through commercial agreements to share infrastructure like Cornerstone (Vodafone and O2) and MBNL (EE and 3) and other third parties. The Shared Rural Network programme also facilitates sharing between all four operators, with the same benefits. However, LPAs and Scottish Government must be fully understanding of all the implications of

sharing equipment in that more equipment across more operators sharing the same piece of infrastructure can require a larger, more robust structure. However, given this single shared site will negate the need for many more unshared sites in the same locale or landscape it is typically considered the most sensitive and appropriate way of deploying this infrastructure, and provide this service.

37. Conservation Areas make up many of Scotland's commercially important town and city centres. These areas are important for cultural heritage but must also be commercially and economically viable in a modern Scotland, and so will depend upon modern connectivity. For this reason, provision must be made for well sited and designed modern infrastructure within Conservation Areas, similar to how modern shop frontages and other modern developments/utilities are acceptable adjacent to more traditional and historic built form. When considering Conservation Area proposals, including ground based and rooftop based equipment, it should be considered in terms of degrees of harm. In cases of 'less than substantial harm' this must be weighed against the significant material social and economic benefits to the public and businesses.
38. While MNOs do all they can to minimise the visual impact of network rollout through well thought-out siting and design, especially in sensitive and designated protected areas, LPAs must be understanding of the constraints of telecoms infrastructure and RF, the wider implications of sharing and must be sure to balance any perceived harm against the wider significant social and economic benefits.

What infrastructure do we need to plan and build to realise our long-term aspirations?

39. Telecoms infrastructure and service must be available where people live, work, travel and play. 4G/5G (and future generation) coverage and superfast mobile broadband data capacity demand will continue to increase exponentially with the introduction of IoT (Internet of Things), machine to machine connectivity, automated transport/industry and other 'smart' applications.
40. Covid-19 has accelerated the uptake of digital goods and services. These behavioural changes will not be fully reversed once life returns to 'normal'.
41. With the necessity for, and benefits attached to, mobile connectivity we must be able to deploy the infrastructure necessary to deliver the service. This infrastructure will be required on main road and rail transport routes, in dense urban areas, in remote rural areas, in commercial/employment areas and within residential areas. Telecoms infrastructure could be in the form of rooftop based equipment, ground based poles or lattice towers or small cell technology.

42. This infrastructure must be set up in a certain way so as to deliver the services that it's meant to. Telecoms infrastructure must work within the constraining physics of RF while also the constraining practicalities of deployment.
43. Technologies such as 4G and 5G and beyond can transmit much higher volumes of data at very high speed. High speed data volume is vital with the various new applications this technology will be used for, which will provide the socio-economic benefits referred to. However, where they use higher frequencies, the radio signal cannot propagate through material or buildings as well as the lower frequencies can, nor can it travel as far. This will influence siting and design of the infrastructure. For this reason, sites will be sited directly where demand is and must be of appropriate height to clear all signal obstructions.
44. In addition, new technology is data centric, and that data demand is rising with IoT and machine to machine connectivity. This will put significant capacity strain on the network, with a requirement to build more base stations in urban areas.
45. Policy should be appropriately understanding of the practicalities and constraints of deploying this infrastructure and add appropriate weight to the benefits.