



Northern Ireland
Assembly

Research and Information Service Briefing Note

Paper 179/12

16 August 2012

NIAR 743-12

Aidan Stennett

Mobile Infrastructure Project

Key points

- The Mobile Infrastructure Project will see £150m investment in mobile communications infrastructure to alleviate voice and basic data not-spots throughout the UK;
- The project aims to improve services for 60,000 households, and along ten main roads;
- Two roads in Northern Ireland will form part of the plan – the A2 and A29. It is not known, as yet, how many households in the region will benefit;
- The project has completed a pre-procurement phase. Four potential providers have been short-listed. A final decision is expected during November 2012.
- The exact form the project will take will depend on the outcome of this process.
- The project, which is being taken forward by the Broadband Development UK unit of the Department of Culture, Media and Sport (DCMS), will be completed in 2015.
- The Department of Enterprise, Trade and Investment have stated that they do not envisage having '*any significant role in delivering this project*'.
- A number of issues have been raised about the project:
 - From the perspective of Mobile Operators, there is a concern as to how the on-going costs will be met in unprofitable regions;
 - The operators have also argued that planning agency support would be a prerequisite for successful delivery;

- The House of Lords Select Committee on Communications argued that the project should be widened to include mobile data services and that the infrastructure sites could facilitate broadband roll-out by including fibre optic hubs.
- DCMS have stated that the project will be future-proofed.
- DCMS have stressed the need to secure the participation of all four UK mobile operators. At present Three has not confirmed whether or not it is on board with the project.

1 Introduction

The following paper provides an overview of the Mobile Infrastructure Project, outlining what the project aims to achieve, and how it will be delivered.

The paper also provides information on the project from a Northern Ireland perspective.

The final section of the paper outlines some issues that have been raised concerning the project.

2 What is the Mobile Infrastructure Project?

Announced by the Chancellor in October 2011, the Mobile Infrastructure Project (MIP) will see £150m of investment targeted at improving mobile coverage across the UK. Specifically, the MIP is aimed at improving the coverage and quality of mobile services for the *'five to ten per cent of consumers and businesses that live and work in areas of the UK where existing mobile coverage is poor or non-existent'*. This will be achieved by addressing:

- The 'majority of the premises situated in "complete" not-spot areas (approximately 60,000 premises) and,
- The 'worst affected road routes which currently traverse "complete" voice not-spots (10 roads selected).¹

The time line set for the project saw procurement begin in spring 2012, with completion scheduled for 2015. It is anticipated that businesses and consumers will experience improved mobile services from early 2013.²

The MIP is situated within the Department of Culture, Media and Sport's Broadband Delivery UK unit.

¹ DCMS *Mobile Infrastructure Project - Industry Stakeholder Engagement* (January 2012)

http://www.culture.gov.uk/images/publications/Mobile_Infrastructure_engagement_Rel_1_0.pdf

² *Ibid*

3 What is a not-spot and where are they located?

A mobile not-spot is defined as an area which is not covered by any mobile network. More specifically, the MIP seeks to address 'complete not-spots' as defined by Ofcom in its 2011 Infrastructure Report:

Here 'complete' not-spots are defined as an area where no service provision is available from any mobile operator. Ofcom measured this in two ways – outside premises and geographically – to arrive at the percentage of premises and UK geography where signal strength was deemed insufficient to make a call. The report highlights not-spots in parts of Wales, Scotland, Northern Ireland and a number of Counties in England.³

Two things are evident from this statement. Firstly, it is evident that the MIP will be delivered throughout the UK and targeted at specific areas. Secondly, the statement suggests that the focus of the MIP will be to address 'voice service' not-spots, rather than 'mobile data' not-spots.⁴ Other documentation confirms that 'basic data mobile telecommunications services' not-spots will also be addressed, basic data used in this context to refer to text messaging.⁵

A recent question in the House of Lords in October 2012 asked:

...whether the Mobile Infrastructure Project will support mobile broadband, the transmission of data and future 4G services.

To which the answer was:

...The Mobile Infrastructure Project is directed at remedying identified gaps in mobile voice and basic data coverage. The Department for Culture, Media and Sport is working to ensure that technical solutions are compatible with future technological developments, such as 4G.⁶

The UK government is intervening to address not-spots on the basis that they 'are generally in areas where it is not commercially viable for the mobile network operators to provide their services'.⁷

Figures 1 and 2 outline the geographical spread of the UK's not-spots and the ten roads that will be targeted by the MIP. Note, literature from a MIP Industry Day states

³ *Ibid*

⁴ *Ibid*

⁵ DCMS Master Site Occupation Agreement Frequently Asked Questions
http://www.culture.gov.uk/images/publications/MSOA_FAQ.pdf

⁶ They Work For You House of Lords – Internet: Mobile Infrastructure Project (31 October)
<http://www.theyworkforyou.com/wrans/?id=2012-10-31a.141.6>

⁷ *Ibid*

that the focus will on ‘treating as many of these outdoor complete not-spots at premises and on A-Roads as affordable with the £150 million capital funding’.⁸

Fig. 1: Premises in 200m² “Complete Not Spots” at -86dBm

Source: Ofcom

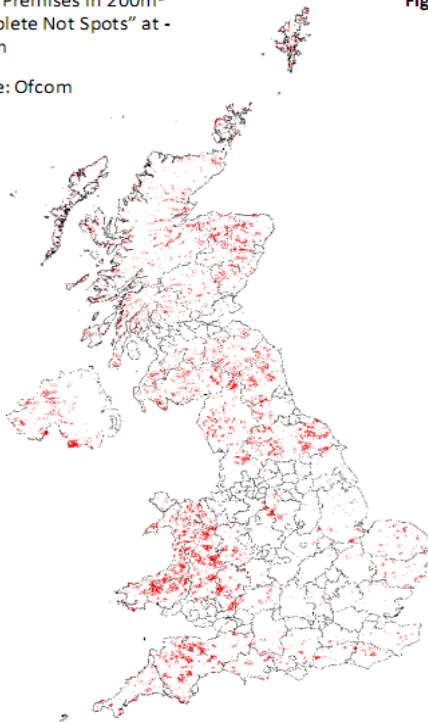
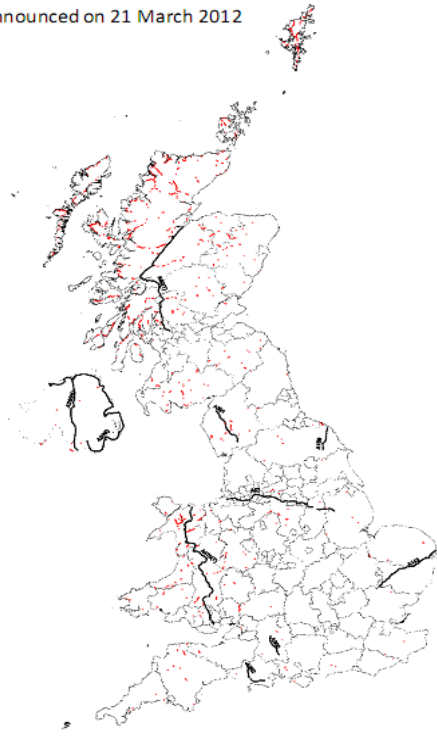


Fig. 2: Initial Ten Roads as announced on 21 March 2012

Nation	Road
Northern Ireland	A2
Northern Ireland	A29
England	A591
England	A169
England	A57
Wales	A470(T)
Scotland	A82(T)
England	A360
England	A143
England	A352

NB Red dots are 100m lengths of “not spot”. Roads are after premises coverage taken into account and subject to planning permission



4 What will the MIP deliver?

In order to address the UK’s not-spots DCMS:

*... plans to enter into an agreement with one supplier to find potential sites on which to locate infrastructure to be used by the MNOs [mobile network operators] to provide voice and basic data mobile telecommunications services in the Not Spots. The supplier will be required in addition to design, build, maintain and manage the new infrastructure. The new infrastructure to be designed and built will either be located on greenfield sites or on existing site... where there is already some communications infrastructure in place.*⁹

Two potential solutions have been posited, each is applicable to a specific context.

The first option is ‘serviced sites’, these are described as:

*...a form of passive infrastructure open to all mobile operators and into which mobile operators would install their own network equipment.*¹⁰

⁸ DCMS Mobile Infrastructure Project - Industry Stakeholder Engagement (January 2012)

http://www.culture.gov.uk/images/publications/Mobile_Infrastructure_engagement_Rel_1_0.pdf

⁹ Ibid

¹⁰ Ibid

These sites are deemed to be applicable where one location could potentially service one or more not-spot. These sites would make site facilities, power, backhaul, connectivity, cabinet, and mast space available to all mobile network operators. It is suggested that a local roaming agreement or other type of infrastructure sharing agreement between operators, rather than the installation of four sets of equipment, may be applicable here subject to competition law.

The second solution will be used in the context of a small not-spot covering a low number of customers. The documentation refers to this as a wholesale approach, it is further noted that under this approach:

...the MIP would work with an existing licence holder to not only procure the supporting infrastructure, but also the necessary network equipment to allow provision of a full mobile (voice) service. This would create a wholesale service to be re-sold by all parties.¹¹

With regard to the location of these sites, DCMS have stated:

The potential location for the sites will be determined by the radio frequency planning undertaken by the supplier appointed by DCMS. Depending on the outcome of the radio plan and proposals by the MIP provider, the types of site may range from a field to a roof top, from new sites to existing broadcast towers, and may include the use of utility infrastructure such as pylons or water towers or street furniture such as street lights or telegraph poles.¹²

They have, however, stated that existing sites will be given preference were possible.¹³

The procurement notice for the MIP, which was issued at the end of April 2012, notes:

The supplier appointed to the framework agreement will need to be capable of delivering a range of telecommunications infrastructure solutions and related requirements, including (but not limited to) the design, build, implementation and operation of telecommunications infrastructure in accordance with BDUK's requirements (which will reflect the requirements of the mobile network operators).¹⁴

The same notice states that the anticipated term of the framework will be four years.¹⁵

Following a pre-procurement phase and short-listing in June 2012, four potential providers were chosen to enter into the second phase of the procurement proceedings. These were:

¹¹ *Ibid*

¹² DCMS *Master Site Occupation Agreement Frequently Asked Questions*
http://www.culture.gov.uk/images/publications/MSOA_FAQ.pdf

¹³ *Ibid*

¹⁴ *Europa Teds –tenders electronic daily: UK London: Maintenance services of telecommunications equipment* (30 April 2012)
<http://ted.europa.eu/udl?uri=TED:NOTICE:139941-2012:TEXT:EN:HTML>

¹⁵ *Ibid*

- Airwave Solutions;
- Arqiva;
- Telefonica; and
- Vodafone.

The procurement timeline states that final contract will be awarded in November 2012. Prior to the final evaluation, a six week period (beginning August 2012) was allotted to a pre-tender engagement with MNOs. The purpose of this was to:

*To ensure the MIP procurement will deliver a commercially viable solution for MIP providers, the Mobile Network Operators and deliver the full network coverage requirements.*¹⁶

During this period all four potential providers had equal access and time with MNOs.¹⁷

5 MIP in Northern Ireland

As the figures above show Northern Ireland will benefit from MIP investment. It is not clear, however, how many premises in Northern Ireland will be affected by the project. On this, the Department for Enterprise, Trade and Investment (DETI) have stated:

*DCMS intend that the project addresses the majority of premises situated in complete not-spots areas (60,000 premises across the UK) and addresses the worst affected road routes which currently traverse 'complete' voice not-spots areas. Ten key roads have been selected to date which include the A2 and A29 in Northern Ireland. However DCMS are not yet in a position to say how many households will benefit.*¹⁸

The Department have similarly stated that it not currently possible to provide a figure for the level of funding that Northern Ireland will receive through the MIP:

*DCMS are unable to say at this moment what funding will be available to Northern Ireland. They are currently in the process of procuring a 'MIP Provider' whose first task will be to develop a radio plan for mast sites covering all not – spots across the UK. DCMS will then work with the provider to prioritise those sites against criteria that include; the number of people covered, capital and operating cost deliverability etc. It will only be after this work is completed that there will be a clearer position on the impact locally.*¹⁹

Overall, DETI does not envisage having 'any significant role in delivering this project'.²⁰

¹⁶ <http://www.culture.gov.uk/images/publications/MIP-Presentation-08MAY12.pdf>

¹⁷ *Ibid*

¹⁸ Email correspondence with DETI 06 November 2012

¹⁹ *Ibid*

²⁰ *Ibid*

6 Issues

The following section identifies issues raised by the Mobile Operators Association (MOA) response to the DCMS' engagement process, the House of Lords Communications Committee's Broadband for all – an alternative solution report, and from the press.

MOA represent the four mobile operators. In its response it notes that each of the operators will themselves be responding to the government. It does, however, point out that their submission '*represents the consensus view of the MNOs*'.

The MOA welcomed the MIP, on the basis the remaining not-spots exist because *it is uneconomic for operators to provide coverage in those locations*'.²¹ The association did, however, raise a number of points of concern:

- That the initial capital cost of servicing remote regions is only one factor that should be considered. On-going costs (such as maintenance) should also, in their opinion, be addressed. They noted too that potential revenue (from calls, texts etc.) from operating in less densely populated areas would be less than that in urban areas. Expanding on this, the MOA state:

*Even if the initial capital cost for a site are zero to the MNO, an opportunity to lose money where the running costs for a site outweigh the revenue generation it supports does not make such a site an attractive or viable commercial proposition. Covering as much of the on-going operating cost through the MIP will thus be key to the success of the projects. We believe that his this could be mitigated by a combination of measures: providing public land, whether owned by national governments or their agencies, or by local authorities or other public sector bodies at nominal or zero rent; and exempting telecoms infrastructure from business rates in areas covered by the MIP.*²²

- The MOA states that it is '*crucial that the planning system reinforces and supports this agenda [the MIP], and does not threaten to hinder it*'. They argue that national and local planning policy must support the development of mobile telecommunications infrastructure.
- They also state that:

Mobile network operators are committed to maximising sharing of sites where technically and environmentally appropriate. However, this is not always possible, and as with site design, it is essential that technical, legal,

²¹ The Mobile Operators Association *Mobile Infrastructure Project Industry Stakeholder Engagement – Mobile Operators Association Response* http://www.mobilemastinfo.com/images/stories/MOA_MIP_STAKEHOLDER_RESPONSE-FINAL.pdf

²² *Ibid*

*commercial and operational factors are balance in the site selection and design process.*²³

- On the timescale envisaged, the MOA has applauded the government for its '*bold ambition*' but has cautioned '*that the timescale envisaged is optimistic*'. On this they state:

We say the timescale is optimistic because it typically takes between ten and fourteen months from selection of a suitable site to a base station becoming operational. That does not include the time before that is involved in selecting a suitable site from the range of possible sites in a particular area.

*If the timescale is to be achieved, the Government may need to set aside aspects of what might otherwise be considered best practice, in terms of the length and extent of consultation on new sites. For example, the mobile operators developed the Ten Commitments for Siting Practice... Inter alia, the Ten Commitments, the operators send annual 'rollout plans' to every local planning authority each autumn, thus allowing a long period of pre-application consultation about potential sites. If this degree of pre-application consultation were to be waived or truncated for areas covered by the MIP, this would make the timescale more achievable. For clarity, we must stress that we are to advocating the wholesale abandonment of pre-application consultation in other areas; rather we suggest that it may be modified only in areas of poor coverage. We would suggest that this would be welcomed by those communities that do not, currently enjoy adequate digital connectivity.*²⁴

The House of Lords Select Committee considered the MIP as part of a broader investigation into broad band provision. The Committee noted BDUK comments concerning the MIP:

*It is important to make that distinction—that rather than being a broadband programme [the MIP] is a voice programme.*²⁵

The Committee argues that the development of the smart phone market has seen an '*explosion in mobile data use*'. As such, the Committee recommended that:

It should be a fundamental 'design principle' of the Mobile Infrastructure Project that where mobile coverage is being widened for the purpose of eliminating voice not-spots, coverage for data is widened and enhanced at the same time.

²³ *Ibid*

²⁴ *Ibid*

²⁵ The House of Lords Select Committee on *Communications Broadband for all—an alternative vision* (July 2012) <http://www.publications.parliament.uk/pa/ld201213/ldselect/ldcomuni/41/41.pdf>

Furthermore, they noted the opportunity for the serviced sites in the proposed MIP to be used for more than mobile technology. The Committee identified an opportunity for developing fibre optic capacity at the serviced sites:

The Government should consider the potential for serviced sites constructed as part of the MIP to be used as open access fibre-optic hubs more generally, from which independent third parties could extend out their own alternative, local access networks.

DCMS stressed the importance of MNO support of the MIP project, stating:

The government is committed to improving coverage in areas where it is currently poor or non-existent. It is essential to the success of the MIP that MNOs support the government's investment in new infrastructure by providing services at or occupying the procured Serviced Sites as soon as possible, and for the medium to long term (minimum of 10 years). It is also essential that the MNOs support any service using Wholesale Access where it is uneconomic or impractical to deploy multiple sets of network equipment.²⁶

However, recent press reports suggest that Three are reluctant to commit to the project and have delayed their decision to participate until after the 4g auction in the early part of 2013. According to the Guardian:

A spokesman for Three said the company remained engaged with the process. The network, owned by Hong Kong conglomerate Hutchison Whampoa, is unhappy with the design of the 4G spectrum auction, which it feels could leave it with a less viable business than its three larger competitors.

It wants to acquire more low-frequency spectrum, which rival networks such as O2 and Vodafone were gifted in previous government airwave allocations, but is not certain of doing so. Low-frequency spectrum is valuable because it travels further and requires less masts.

If Three put its equipment on the new rural masts, its signal would work indoors but may not travel as far as its rivals' services once customers are on the move.²⁷

²⁶ DCMS *Mobile Infrastructure Project - Industry Stakeholder Engagement* (January 2012)

http://www.culture.gov.uk/images/publications/Mobile_Infrastructure_engagement_Rel_1_0.pdf

²⁷ The Guardian *Cracks appear in Osborne's plans to boost mobile phone coverage* (12 August 2012)

<http://www.guardian.co.uk/technology/2012/aug/12/mobile-phone-rural-coverage-osborne>