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Spectrum for the Police Service of Northern Ireland

Introducing new digital services

CONSULTATION:

Publication date: 8 September 2022
Closing date for responses: 17 November 2022

Contents

Section

Annex

Overview

The Police Service of Northern Ireland (PSNI) manages its own radio communications network. The network supports approximately 20,000 users, mostly Emergency Services (Police, Fire and Ambulance) and other users, for example Northern Ireland Electricity (NIE) emergency response teams and the Department of Agriculture, Environment and Rural Affairs (DAERA).

However, the existing PSNI network has a limited data capability and cannot match the bandwidth offered by modern mobile communications technology. Therefore, the PSNI, as part of its Digital Strategy, is looking to transition to new technology to enable fast, safe and secure voice, video and data and give first responders immediate access to life-saving data, images and information in live situations and emergencies.

The PSNI aims to deliver this capability and exploit the benefits new technologies can bring to the operational environments of the PSNI and its strategic partners.

We have been working with PSNI to establish their requirements and identify possible spectrum options to support a new dedicated network which will enable a modernised communications system for the PSNI to replace their existing network. This document sets out our proposals.

What we are proposing – in brief

We are proposing to make 2 × 3 MHz of the 700 MHz band (specifically 733 to 736 MHz paired with 788 to 791 MHz) **and** 2 x 4 MHz in the 800 / 900 MHz bands (specifically 876 to 880 MHz paired with 921 to 925 MHz) available for use by the Police Service of Northern Ireland.

These bands are currently unused in Northern Ireland. We are therefore of the view that making these bands available to the PSNI would benefit the people of Northern Ireland and be a valuable and efficient use of this spectrum.

We have considered whether there are alternative use cases for this spectrum and our provisional view is that this is unlikely to be the case given the potential interference risks from supplemental downlink[1] into the 2 × 3 MHz of the 700 MHz band and the likely limited market opportunity in the 800/900 MHz spectrum.

Consequently, we believe that an alternative, higher value use is unlikely and making these bands available for the PSNI's use would therefore be an efficient use of spectrum and in line with our regulatory duties.

We invite comments on our proposals in this document by **17 November 2022**.

[1] 'Supplemental Downlink' is a technology that enhances a mobile phone network's down link capacity to support faster downloads and a greater number of users with mobile devices.

1. Background

1.1 The Police Service of Northern Ireland (PSNI) is responsible for the prevention and investigation of crime in Northern Ireland. The PSNI is an executive non-departmental public body, sponsored by the Department of Justice (Northern Ireland).

1.2 The PSNI's current radio communications network, "Barracuda", uses TETRA (Terrestrial Trunked Radio) technology (operating at 380 to 385 MHz paired with 390 to 395 MHz) and covers the whole of Northern Ireland. The existing infrastructure supports approximately 20,000 users, mostly Police, Fire and Ambulance services and other agencies, for example Northern Ireland Electricity (NIE) emergency response teams and the Department of Agriculture, Environment and Rural Affairs (DAERA).

1.3 In recent years, development in public safety radio communications has been focused on the delivery of standards-based mission critical voice, video and data services, using 4G/LTE technology.

1.4 However, the Barracuda network has a limited data capability and cannot match the bandwidth offered by modern mobile communications technology. The PSNI is looking, as part of its Digital Strategy[2], to transition to modern mobile technology to enable fast, safe, and secure voice, video and data and give first responders immediate access to life-saving data, images and information in live situations and emergencies. This new mobile broadband service will provide a foundation, underpinning the deployment of future mobile and wearable technologies, equipping 'Blue Light' responders and government agencies with multi-functional cost-effective devices.

1.5 The PSNI has been clear with us that its particular operating context means that it does not consider that sharing a commercial network, in a way that the emergency services in the rest of the UK are moving to, is a viable option for it; so, to enable this transition, the PSNI is looking for a spectrum allocation that can support a wide area dedicated network that uses modern mobile technology.

1.6 We are of the view that the PSNI applications will benefit the people of Northern Ireland and be a valuable use of spectrum. We have therefore been working with PSNI to identify spectrum options that could be used to facilitate its transition to new mobile technology, using a similar site footprint to Barracuda i.e. as part of a coverage layer. To best meet this requirement and to use existing sites, we have only considered spectrum below 1 GHz as part of this consultation[3]. We have identified two bands that have the potential to meet PSNI's requirements, and we propose that both bands be made available and authorised for PSNI's use:

- 2 × 3 MHz of the 700 MHz band (specifically 733 to 736 MHz and 788 to 791 MHz); and

[2] PSNI Digital Strategy, 2021 and beyond.
[3] Spectrum for a high-capacity layer may also be required i.e. for high density / urban areas but this is not the subject of this consultation.

- 2 x 4 MHz in the 800 / 900 MHz bands (specifically 876 to 880 MHz paired with 921 to 925 MHz).

Legal framework

Ofcom's specific duties and powers related to spectrum management

1.7 Ofcom's responsibilities for spectrum management are set out primarily in two Acts of Parliament which confer on us our specific functions, powers and duties in respect of spectrum (and the other sectors we regulate): The Communications Act 2003 (the '2003 Act') and the Wireless Telegraphy Act 2006 (the 'WT Act').

1.8 Amongst our functions and powers in relation to spectrum are the making available of frequencies for use for particular purposes and the granting of rights of use through wireless telegraphy licences and licence exemptions.

1.9 Our principal duties under the 2003 Act, when carrying out our functions and exercising our powers, are to further the interests of citizens and consumers, where appropriate by promoting competition. In doing so, we are also required (among other things) to secure the optimal use of spectrum. We must also have regard to (i) the desirability of promoting competition in relevant markets; (ii) the desirability of encouraging investment and innovation in relevant markets; (iii) the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom; and (iv) the different needs and interests, so far as the use of the electro-magnetic spectrum for wireless telegraphy is concerned, of all persons who may wish to make use of it.

1.10 Additionally, in carrying out our spectrum functions, we have a duty under section 3 of the WT Act to have regard, in particular, to: (i) the extent to which the spectrum is available for use or further use for wireless telegraphy; (ii) the demand for use of that spectrum for wireless telegraphy; and (iii) the demand that is likely to arise in future for the use of that spectrum for wireless telegraphy. We also have a duty to have regard, in particular, to the desirability of promoting: (i) the efficient management and use of the spectrum for wireless telegraphy; (ii) the economic and other benefits that may arise from the use of wireless telegraphy; (iii) the development of innovative services; and (iv) competition in the provision of electronic communications services.

1.11 We have developed the proposals set out in this document having taken these statutory duties into account.

Impact assessment

1.12 This document as a whole, including its annexes, comprises an impact assessment as defined in Section 7 of the Communications Act 2003. Ofcom is an evidence-based organisation and welcomes responses to this consultation. Any comments about our assessment of the impact of our proposals should be sent to us by the closing date for this consultation.

1.13 We do not consider that our proposals have any equality implications under the Equality Act 2010 or the Northern Ireland Act 1998.

2. Spectrum options

Requirement for spectrum to support modern mobile technology

2.1 As a requirement of its Digital Strategy, the PSNI has set out that its new radio communications network should be capable of carrying secure voice, video and data and have a high degree of interoperability. The PSNI has reviewed various options on how this new network could be provided.

2.2 The PSNI considers that its specific requirements and those of its partner agencies mean it is necessary for it to own and operate its own network, as it currently does with Barracuda. Consequently, the PSNI is looking at spectrum options that would support this.

2.3 For a 4G-LTE[4] / modern mobile technology network, spectrum options are limited to those bands that are standardised (or likely to be standardised in the near future) in the 3GPP[5] specifications for mobile telecommunications. The PSNI is looking to maximise use of its existing sites and infrastructure as far as possible, particularly in rural areas, and is therefore looking at spectrum options below 1 GHz to provide a coverage layer.

2.4 Considering the requirements above, our initial assessment of possible spectrum bands for a dedicated 4G-LTE / modern mobile network has identified the following:

- 2 × 3 MHz within the 700 MHz band (specifically 733 to 736 MHz paired with 788 to 791 MHz); and
- 2 x 4 MHz in the 800 / 900 MHz bands (specifically 876 to 880 MHz paired with 921 to 925 MHz).

2.5 Either or both bands could be made available to the PSNI. Our proposal, set out in this consultation, is to make both bands available to the PSNI for use as part of a dedicated 4G-LTE / modern mobile technology network, on the basis that there are unlikely to be more valuable alternative uses, and that this would therefore be an efficient allocation of the spectrum.

733 to 736 MHz paired with 788 to 791 MHz

2.6 In April 2021 we concluded our award of spectrum in the 700 MHz and 3.6-3.8 GHz bands. [6] The 700 MHz spectrum awarded consists of 2 x 30 MHz blocks of paired spectrum (703 to 733 MHz and 758 to 788 MHz), and 20 MHz of unpaired spectrum in the 'centre gap' at 738 to 758 MHz.

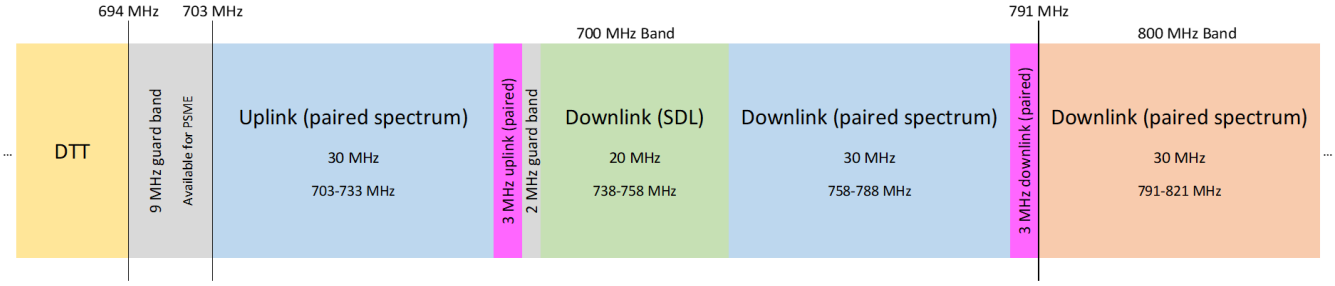
2.7 The paired spectrum in the 700 MHz band is allocated under a mobile band plan based on a Frequency Division Duplex (FDD) arrangement, with the uplink (handset) transmitting in

[4] Long Term Evolution (LTE) is a standard for wireless broadband communication for mobile devices and data terminals developed by 3GPP.
[5] The 3rd Generation Partnership Project (3GPP) is an umbrella term for a number of standards organizations which develop protocols for mobile telecommunications.
[6] Award of 700 MHz and 3.6-3.8 GHz spectrum by auction.

703 to 733 MHz and the downlink (base station) in 758 to 788 MHz. The unpaired spectrum is suitable for delivering supplementary downlink only (SDL) for mobile services and was awarded to EE Limited in Ofcom's auction held in 2021 (this spectrum was previously used for Digital Terrestrial Television (DTT) broadcasts).

2.8 The configuration of spectrum aligns with the Commission Implementing Decision (EU) 2016/687[7] of 28 April 2016 on harmonised technical conditions for the 694 to 790 MHz frequency band. Within the Decision, the bands 733 to 736 MHz (uplink) paired with 788 to 791 MHz (downlink) are identified for use by Public Protection and Disaster Relief (PPDR)[8]. The arrangement of this spectrum is illustrated in Figure 1, with the 'PPDR spectrum' identified in the purple shade. Details of the individual Mobile Network Operator (MNO) licensees following the award of the 700 MHz band and associated spectrum blocks can be found on the Ofcom website[9].

Figure 1: Configuration of the 700 MHz band



2.9 The spectrum identified for use by PPDR (in the Commission Implementing Decision) was not included in the 700 MHz award and is therefore currently unallocated. We propose to make this 2 × 3 MHz (733 to 736 MHz paired with 788 to 791 MHz) available for use by the PSNI in Northern Ireland.

Compatibility of the 2 × 3 MHz paired spectrum with Supplemental Downlink[10]

2.10 We considered a range of compatibility scenarios, including the risk of interference from PPDR handsets to 700 MHz band users. The configuration of spectrum in the 700 MHz band means that any use of the PPDR spectrum appears as another adjacent mobile use, and on this basis is considered compatible with awarded, paired spectrum.

[7] Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union.
[8] 'Public Protection and Disaster Relief (PPDR) radio communications' means radio applications used for public safety, security and defence used by national authorities or relevant operators responding to the relevant national needs in regard to public safety and security including in emergency situations;
[9] Award of the 700 MHz and 3.6-3.8 GHz spectrum bands.
[10] While the study considers PPDR, the conclusions on potential interference apply to any type of mobile use case in this spectrum.

2.11 For adjacent SDL, our analysis below shows that the only material interference risk is adjacent channel interference from an SDL base station transmitter into a PPDR base station receiver which is operating in the band 733 to 736 MHz.

Assessing the interference risk

2.12 The impact of 700 and 800 MHz MNO base station transmissions into PPDR receiver terminals and PPDR base station transmissions into MNO receiver terminals are scenarios identical to two adjacent Mobile networks, which already exists in the 700 and 800 MHz bands and so this raises no concerns, other than careful site planning that may be needed on any shared sites with any of the MNOs in 700/800 MHz bands. Similarly, the impact of PPDR or MNO terminal transmissions to neighbouring base station receivers is a common scenario and gives no cause for concern, i.e. these interference scenarios do not increase the risk of interference between MNO and PPDR beyond what would normally be experienced and managed by adjacent mobile operators. These scenarios are depicted in Figure 2 below by the black arrows (both above and below the figure).

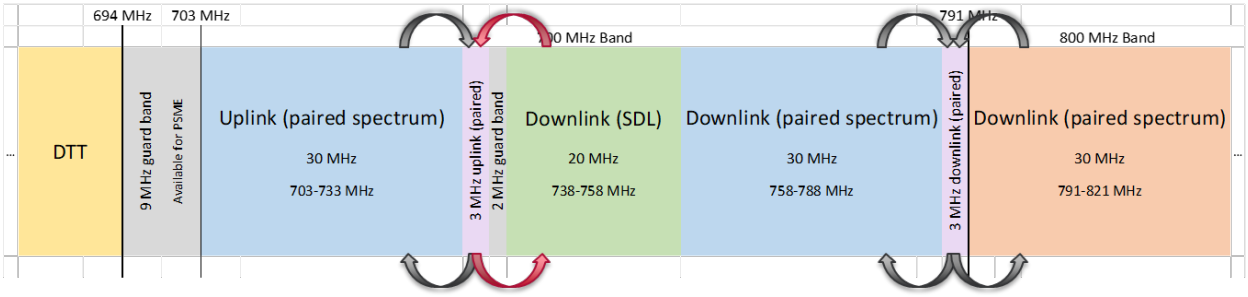
2.13 This leaves two potential interference scenarios associated with the adjacent SDL block of spectrum use:

- **Case 1:** PPDR user terminal / handset to SDL user / terminal handset
- **Case 2:** SDL base station transmission to PPDR base station receiver (i.e. uplink reception)

2.14 To assess this further we carried out an adjacent channel interference assessment for both case 1 and case 2 described above.

2.15 Figure 2 summarises the interference scenarios. Arrows above the band plan describe interference paths to PPDR (shown in purple shade), and arrows below describe interference paths from PPDR. Case 1 and Case 2 scenarios are shown by the red arrows. The black arrows show the cases described in 2.12 above.

Figure 2: Interference scenarios between 2 × 3 MHz PPDR spectrum and adjacent mobile spectrum



Case 1: Interference from PPDR user terminal transmissions to SDL user terminal receiver

2.16 Our analysis of Case 1 used a simple free-space link budget to calculate the 'worst case' separation distance required between PPDR user equipment transmitting at maximum

power and an SDL user terminal receiving at the edge of SDL coverage[11]. This showed that even under this worst-case scenario a maximum separation distance of less than 100 m would be required to ensure that SDL handset receivers do not suffer interference from PPDR user equipment / handsets[12] and that this maximum separation is only necessary when both the PPDR and SDL user equipment / handsets are at the edge of their respective coverage areas at the same time.

2.17 When considering the PSNI's use of the spectrum to provide communications for emergency services, a number of mitigating factors suggest that the risk of interference into SDL is low, for example:

- It is expected that the PSNI network will be provided from different base station locations than the civil SDL network. Therefore, the likelihood that *both* the PSNI handset *and* civil SDL handset are at the edge of coverage is expected to be very low.
- In locations where the wanted civil SDL signal is higher it will be able to tolerate a higher level of interference from the PSNI handset, meaning that the required separation will reduce. Similarly, the separation distance will be reduced when the PSNI handset is not using its maximum transmit power.
- The use case for both the PSNI and civil SDL handsets is close to ground level (up to head height), so it is likely that some additional clutter or body losses will exist between the two handsets which will reduce the necessary separation distance.
- Finally, as handset transmissions are transient in both time (only transmitting when communicating) and in location (moving with the user), any potential interference is likely to be short-lived.

2.18 We conclude from our analysis that the risk of interference from PPDR handset transmissions to civil SDL reception is low and that allowing the PSNI use of this spectrum would not be expected to cause undue interference to SDL reception.

Case 2: Interference from SDL transmissions into PPDR base station receivers' reception

2.19 The potential for interference is greatest when there is a line-of-sight view of the SDL base station from the PPDR base station, and the antennas align. i.e., both base stations are above the clutter.

2.20 Therefore, we used a simple free-space link budget to calculate the separation distance required between an SDL base station transmitting at maximum licensed power and a PPDR base station with a 2 MHz guard band. This suggested that there is the potential for some interference to a PPDR base station and its uplink performance with separation

[11] Worst case geometry for Case 1 is when PPDR is at maximum power and SDL at weakest receive power. This occurs when both handsets are in close proximity and at the edge of their respective coverage areas.

[12] Based on the assumption of the PPDR handset transmitting at a maximum power of 23 dBm EIRP with out-of-band emissions that are representative of LTE 800 handsets, 6 dB transmission losses (such as body loss) at the transmitting and receiving handsets, and an I/N (interference to noise ratio) requirement of 0 dB at the civil SDL handset.

distances less than around 4 to 5 km. Our analysis was based on the SDL base station using maximum licence power transmissions but with realistic out of block emission masks[13].

2.21 The effect of interference would be to reduce the uplink throughput of a user and in some circumstance the uplink range of a PPDR base station. Our analysis suggested that some small reduction in throughput and range would be manageable. Should this not be the case then unmitigated, SDL BS could cause interference to a PPDR base station which is up to around 9km away.

2.22 There are several options available to assess and mitigate against potential interference to PPDR base stations, where SDL base stations are within close enough range to be of concern, for example, PSNI could estimate how many of the existing MNO base station sites are likely to be a potential cause of interference if SDL was added.

2.23 There are also several technical mitigations which would require discussion with the SDL licensee, such as reductions in transmit power of the SDL base station in the direction of the PPDR base station. This could be through local site engineering such as increased antenna down tilt, changed antenna azimuth or reduced transmit power. However, we note that as the 700 MHz band is a coverage band, we anticipate that the SDL macro-cell deployments will be above the clutter and transmitting power close to the licensed maximum. Additional filtering could also be applied to the SDL base station to reduce the emissions, which could be done in a targeted manner for relevant base stations.

2.24 Therefore, we conclude that while there is the potential for interference from SDL base station transmissions to PPDR base station receivers, where they are deployed within a few km of each other, there are some options to explore that could help mitigate the risks.

Potential for other use in Northern Ireland

2.25 Supplementary Downlink is used for downlink-only traffic to support conventional mobile networks running both uplink and downlink. Therefore, Supplementary Downlink enhances a network's capacity to provide faster downloads and supports a much greater number of users with mobile devices. As SDL increases capacity it is likely that it will be typically deployed in populated urban areas where demand is greatest.

2.26 We think that any other potential use of 733 to 736 MHz paired with 788 to 791 MHz would also more likely be intended for deployment in an urban area, although, this use would then potentially be significantly constrained due to the risk of interference from SDL transmissions, making it undesirable for practicable use. However, in rural areas there could be potential to use the spectrum, assuming adjacent band SDL is not rolled out in these areas.

[13] Based on the assumption of the SDL base station transmitting at the maximum licensed power of 64 dBm/5 MHz EIRP with out-of-band emissions that are representative of LTE 800 base stations, a realistic assumption of antenna down tilt at the transmitting and receiving base stations, and an I/N (interference to noise ratio) requirement of 0 dB at the PPDR base station.

2.27 Therefore, use of this band comes with an uncertainty and an interference risk dependant on the extent of the roll out of the adjacent band SDL. This risk of interference would therefore need to be accepted and managed by any new user.

Proposal for 733 to 736 MHz paired with 788 to 791 MHz

2.28 Due to the interference risks outlined above, we consider that there is limited opportunity for alternative use of this spectrum in Northern Ireland. However, as PSNI has a rural coverage requirement with a set of known sites, making 733 to 736 MHz paired with 788 to 791 MHz available to the PSNI may help meet this coverage requirement, if the use can be managed and planned around the adjacent band SDL sites / interference risks.

2.29 Our provisional view is that making this spectrum available for use by the PSNI would therefore be an efficient allocation of this spectrum and that an alternative, higher value use is unlikely.

Question 1

Do you agree with our provisional view that the spectrum 733 to 736 MHz paired with 788 to 791 MHz should be made available to and authorised for use by the PSNI in Northern Ireland? If you disagree with our view and consider there is a higher value use, please provide details of this alternative use, particularly considering the issue of the risk of interference from SDL.

876 to 880 MHz paired with 921 to 925 MHz

2.30 The 876 to 880 MHz paired with the 921 to 925 MHz spectrum is harmonised across Europe for Global System for Mobile Communications – Railway (GSM-R), a wireless communication standard for railway communications and applications, as originally set out in the European Commission Implementing Decision 1999/569/EC.[14] This Decision, and other related Decisions, for example Commission Implementing Decision (EU) 2018/1538[15] (which reserved 2 X 1.6 MHz of spectrum for the Future Rail Mobile Communication System – FRMCS), allows for potential to extend the band used for railway communications from 2 × 4 MHz (used for GSM-R) to 2 × 5.6 MHz in the future.

2.31 Within England, Scotland and Wales this spectrum is licensed to Network Rail for communications across the railway network in Great Britain. However, in Northern Ireland the railway operator Northern Ireland Railways (NI Rail) does not use GSM-R, and instead uses a combination of other spectrum and technology for its communication needs including the current PSNI Barracuda network. We understand that this arrangement

[14] COMMISSION DECISION (1999/569/EC) of 28 July 1999 on the basic parameters for the command-and-control and signalling subsystem relating to the trans-European high-speed rail system.
[15] COMMISSION IMPLEMENTING DECISION (EU) 2018/1538 of 11 October 2018 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands.

between the PSNI and NI Rail will continue and the new PSNI network will also carry communication services for NI Rail in the future.

2.32 Currently the GSM-R spectrum is not standardised for 4G-LTE use, however, we understand that 3GPP is working towards developing standards to support the Future Rail Mobile Communication System which will likely replace GSM-R with a more modern communication technology in the future. Our understanding is that more modern mobile technology in this spectrum is likely to be available within a few years and would allow for operation in smaller channel bandwidths down to 2.88 MHz.

Potential for other use in Northern Ireland

2.33 Given there are no plans to deploy GSM-R or FRMCS in Northern Ireland, this provides the opportunity to make this spectrum available for other purposes. In addition, given that these frequencies are used in most European countries for rail communications (as previously set out in accordance with the Commission Implementing Decision 1999/569/EC and more recently in Commission Implementing Decision 2021/1730[16]), there is limited potential to use this spectrum in Europe for non-rail applications i.e. outside of Northern Ireland. With this limitation we think that it is unlikely that applications other than GSM-R/FRMCS would be developed for the European market and therefore unlikely that the spectrum would be of interest for applications that required a wider geographical market. At the same time, however, there are no plans to deploy GSM-R or FRMCS in Northern Ireland, so there is an opportunity for the PSNI to use it there for their own specific applications.

2.34 Consequently, our provisional view is that the market opportunity for alternative use of this spectrum is small as it would be limited to Northern Ireland only, and that there is unlikely to be a practicable higher value alternative use, and hence making this spectrum available to the PSNI would support optimal use of this spectrum.

Proposal for 876 to 880 MHz paired with 921 to 925 MHz

2.35 Given the harmonised use of the band for rail and limited market opportunity, we consider that there is limited opportunity for alternative use of this spectrum. Our provisional view is that assigning the 2 × 4 MHz at 876 to 880 MHz paired with 921 to 925 MHz (with the potential to extend the allocation by 2 x 1.6 MHz immediately below these bands[17] in the future) for use by the PSNI would therefore be an efficient use of this spectrum.

[16] COMMISSION IMPLEMENTING DECISION (EU) 2021/1730 of 28 September 2021 on the harmonised use of the paired frequency bands 874,4-880,0 MHz and 919,4-925,0 MHz and of the unpaired frequency band 1 900-1 910MHz for Railway Mobile Radio.

[17] 874.4 – 876 MHz paired with 919.4 – 921 MHz

Question 2

Do you agree with our provisional view that the spectrum 876 to 880 MHz paired with 921 to 925 MHz should be made available to and authorised for use by the PSNI in Northern Ireland? If you disagree and consider there is a higher value use, please provide details of this alternative use, particularly considering the small market potential of this spectrum.

Question 3

Do you have any other comments on the proposals?

3. Summary of proposal and next steps

3.1 In looking at spectrum options for the PSNI's future communication needs we consider that the best options are 2 × 3 MHz of unallocated spectrum in the 700 MHz PPDR spectrum and the 2 × 4 MHz in 876 to 880 MHz paired with 921 to 925 MHz. In our assessment, we have considered whether there are alternative uses for this spectrum. Our view is that this is unlikely to be the case given the interference risks from SDL in the 700 MHz PPDR spectrum and the limited market opportunity in the GSM-R spectrum, and that therefore making these bands available to the PSNI would be an efficient use of this spectrum.

3.2 Currently both bands are unused in Northern Ireland. Our provisional view is that making the spectrum available for use by the PSNI would secure optimal use of the spectrum as otherwise the spectrum is likely to remain unused. We would like to hear stakeholders' views on our proposals, particularly relating to any other potentially higher value applications or services that could make use of these spectrum bands, taking into consideration the different challenges within each of these bands, as highlighted in 3.1 above.

3.3 Our consultation closes on 17 November 2022. Following consideration of responses, we intend to publish a statement in Q1 2023 setting out our decision on the proposals and the next steps.

International coordination

3.4 In common with other services there will be a need to cooperate and coordinate with the Commission for Communications Regulation in Ireland on any spectrum management decision we make for either the 700 MHz PPDR band or the GSM-R spectrum to ensure cross-border compatibility[18]. We will take this forward, subject to the outcome of this consultation.

[18] For example, in Ireland GSM-R systems are licensed for use.

A1. Responding to this consultation

How to respond

A1.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 17 November 2022.

A1.2 You can download a response form from https://www.ofcom.org.uk/consultations-and-statements/category-1/spectrum-ni-police-service. You can return this by email to the address provided in the response form.

A1.3 If your response is a large file, or has supporting charts, tables or other data, please email it to SpectrumForPSNI@ofcom.org.uk , as an attachment in Microsoft Word format, together with the cover sheet. This email address is for this consultation only and will not be valid after we issue the Statement in Q1 2023.

A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:

Spectrum for the PSNI project team
Spectrum Group
Ofcom
3rd Floor West, Riverside House
2A Southwark Bridge Road
London SE1 9HA

A1.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:

- Send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files. Or
- Upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.

A1.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)

A1.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt if your response is submitted via the online web form, but not otherwise.

A1.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.

A1.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex A4. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.

A1.10 If you want to discuss the issues and questions raised in this consultation, please contact SpectrumForPSNI@ofcom.org.uk.

Confidentiality

A1.11 Consultations are more effective if we publish the responses before the consultation period closes. In particular, this can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish all responses on the Ofcom website as soon as we receive them.

A1.12 If you think your response should be kept confidential, please specify which part(s) this applies to and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.

A1.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A1.14 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further in our Terms of Use.

Next steps

A1.15 Following this consultation period, Ofcom plans to publish a statement in Q1 2023.

A1.16 If you wish, you can register to receive mail updates alerting you to new Ofcom publications.

Ofcom's consultation processes

A1.17 Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex A2.

A1.18 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.

A1.19 If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact the corporation secretary:

Email: corporationsecretary@ofcom.org.uk

A2. Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

A2.1 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

A2.2 We will be clear about whom we are consulting, why, on what questions and for how long.

A2.3 We will make the consultation document as short and simple as possible, with a summary of no more than two pages. We will try to make it as easy as possible for people to give us a written response. If the consultation is complicated, we may provide a short Plain English / Cymraeg Clir guide, to help smaller organisations or individuals who would not otherwise be able to spare the time to share their views.

A2.4 We will consult for up to ten weeks, depending on the potential impact of our proposals.

A2.5 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.

A2.6 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

A2.7 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish all the responses on our website as soon as we receive them. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A3. Consultation coversheet

BASIC DETAILS

Consultation title: Spectrum for Police Service of Northern Ireland – Introducing new digital services

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	☐
Name/contact details/job title	☐
Whole response	☐
Organisation	☐
Part of the response	☐

If there is no separate annex, which parts? _____

_____

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name Signed (if hard copy)

A4. Consultation questions

A4.1 This annex lists the questions we are consulting on.

Question 1

Do you agree with our provisional view that the spectrum 733 to 736 MHz paired with 788 to 791 MHz should be made available to and authorised for use by the PSNI in Northern Ireland? If you disagree with our view and consider there is a higher value use, please provide details of this alternative use, particularly considering the issue of the risk of interference from SDL.

Question 2

Do you agree with our provisional view that the spectrum 876 to 880 MHz paired with 921 to 925 MHz should be made available to and authorised for use by the PSNI in Northern Ireland? If you disagree and consider there is a higher value use, please provide details of this alternative use, particularly considering the small market potential of this spectrum.

Question 3

Do you have any other comments on the proposals?