

---

# 2020 Coverage Obligations - Notice of compliance verification methodology

---

**STATEMENT:**

**Publication Date:** 18 March 2020 (updated on 27 July 2021)

# Contents

---

## Section

1. Overview	1
2. The 2020 Coverage Obligations	2
3. Assessment of the 88% Geographic Coverage Obligation and the Initial Nations Requirement(s)	9
4. Assessment of the 90% Geographic Coverage Obligation and other coverage requirements	10
5. Databases for verifying compliance	19

## Annex

A1. Definitions	20
-----------------	----

# 1. Overview

The licensees of the 900 MHz and 1800 MHz bands (referred to in this document variously as the “MNOs” or the “Licensee(s)”) have agreed with Government that each will achieve 88% geographic coverage by providing additional coverage from sites in Partial Not Spots within 4 years. In addition, within 6 years each MNO will achieve at least 90% geographic coverage, including: (i) a coverage uplift of at least 1% in Total Not Spots, (ii) as far as possible, coverage from the Extended Area Service sites which the Home Office is intending to build and (iii) certain minimum thresholds concerning roads, premises and the Nations (the “**2020 Coverage Obligations**”).

The MNOs have consented to the variation by Ofcom of their relevant wireless telegraphy licences to include conditions giving effect to this agreement.

The 2020 Coverage Obligations provide that Ofcom will assess the Licensee’s compliance with the obligations after the date at which each obligation is due to have been met by reference to a document entitled “*2020 Coverage Obligations - Notice of compliance verification methodology*” which is notified to the MNOs under condition (8) of the relevant licences.

This document is the “2020 Coverage Obligations - Notice of compliance verification methodology” and is hereby notified to the MNOs accordingly.

## 2. The 2020 Coverage Obligations

### Licence conditions

- 2.1 The licences held by the MNOs which cover frequencies in the 900 MHz and 1800 MHz bands (the “**Licence**”) have been varied to include the following coverage obligations (referred to in this Notice as the “**2020 Coverage Obligations**”).

#### 2020 Coverage Obligations

##### *Definitions*

- (1) For the purposes of interpreting conditions (2)-(8) below, these terms shall have the following meaning:
- (a) “**2019 Baseline Coverage Level**” means the Licensee’s coverage footprint of the Required Service as measured by the Licensee’s predictive model on the basis of their September 2019 data as submitted to Ofcom in October 2019;
  - (b) “**2020 Baseline Coverage Footprint**” means the Licensee’s coverage footprint of the Required Service as submitted to Ofcom in January 2020 on the basis of: (i) the data submitted to Ofcom in September 2019 for the Connected Nations 2019 report and (ii) the Licensee’s forward-looking predictions for any additional site which is expected to be on-air by 30 June 2020, excluding any site which is not on-air by 30 June 2021;
  - (c) “**Available**”, for the purposes of condition (4)(a), has the meaning given in the Grant Agreement;
  - (d) “**EAS Site**” means: (i) any of the 292 extended area service sites that the Home Office is intending to build to improve coverage in remote areas and (ii) any alternative or additional extended area service site which is publicly funded in the same way whose location is specified by Government by 31 March 2024, excluding any such site the deployment of which would materially duplicate the coverage from any site in Total Not Spots for which land has already been acquired by the Licensee;
  - (e) “**Full Coverage Area**” means a geographical area within the UK falling within all the MNOs’ 2020 Baseline Coverage Footprints;
  - (f) “**Grant Agreement**” means the funding agreement entered into by Government and the SRN Entity in March 2020, as amended on 1 March 2021;
  - (g) “**Initial Coverage Deadline**” means 30 June 2024;

- (h) **“MNO”** (Mobile Network Operator) means each of EE Limited,<sup>1</sup> Hutchison 3G UK Limited,<sup>2</sup> Telefónica UK Limited<sup>3</sup> and Vodafone Limited<sup>4</sup> (collectively, the **“MNOs”**);
- (i) **“Partial Not Spot”** means a geographical area within the UK falling within at least one, but not all, the MNOs’ 2020 Baseline Coverage Footprints;
- (j) **“Required Service”** means an electronic communications network that provides with a confidence level of more than 95% a mobile telecommunications service to users (i) with a sustained downlink speed of not less than 2 megabits per second, and (ii) on which 90 second voice calls can be made without interruption. This is equivalent to providing an outdoor LTE telecommunications service at a predicted mean signal strength of at least -105dBm;
- (k) **“Road”** means all motorway, A-road, B-road, minor (non-numbered) roads and local roads excluding restricted access, private roads and cul-de-sacs;
- (l) **“Subsequent Coverage Deadline”** means, in relation to each obligation that falls due on such deadline, 31 January 2027, unless Government suspends funding in response to a "Suspension Event" (as defined in the Grant Agreement), in which case the deadline shall be extended by the number of days included within such suspension;
- (m) **“SRN Entity”** means the joint venture set up by the MNOs to run the SRN Programme;
- (n) **“SRN Programme”** means the programme agreed between the MNOs and Government in March 2020 to improve mobile coverage in rural areas;
- (o) **“Total Not Spot”** means geographical areas within the UK falling outside all the MNOs’ 2020 Baseline Coverage Footprints.

---

<sup>1</sup> **EE Limited**, registered in England under company number 02382161. Registered office address: Trident Place, Mosquito Way, Hatfield, Hertfordshire, AL10 9BW.

<sup>2</sup> **Hutchison 3G UK Limited**, registered in England under company number 03885486. Registered office address: Star House, 20 Grenfell Road, Maidenhead, Berkshire, SL6 1EH.

<sup>3</sup> **Telefónica UK Limited**, registered in England under company number 01743099. Registered office address: 260 Bath Road, Slough, Berkshire, SL1 4DX.

<sup>4</sup> **Vodafone Limited**, registered in England under company number 01471587. Registered office address: Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN.

*88% coverage*

- (2) By the Initial Coverage Deadline the Licensee shall provide, and thereafter maintain, the Required Service to an area covering at least:
- (a) 88% of the geographic landmass of the United Kingdom;
  - (b) *[MNO specific value, which is 93% for EE Limited, 91% for Hutchison 3G UK Limited, 92% for Telefónica UK Limited and Vodafone Limited]* of the geographic landmass of England;
  - (c) *[MNO specific value, which is 89% for EE Limited, 91% for Hutchison 3G UK Limited and Telefónica UK Limited, 93% for Vodafone Limited]* of the geographic landmass of Northern Ireland;
  - (d) *[MNO specific value, which is 75% for EE Limited and Telefónica UK Limited, 72% for Hutchison 3G UK Limited, 76% for Vodafone Limited]* of the geographic landmass of Scotland; and
  - (e) *[MNO specific value, which is 83% for EE Limited and Hutchison 3G UK Limited, 82% for Telefónica UK Limited and Vodafone Limited]* of the geographic landmass of Wales.

In meeting these obligations, the Licensee shall ensure that:

- (i) any additional coverage relative to the 2020 Baseline Coverage Footprint is either:
  - (A) provided in Partial Not Spots;
  - (B) gained by deploying on sites located in Partial Not Spots; or
  - (C) gained by deploying on sites located in a Full Coverage Area, provided that any such coverage which is added in Total Not Spots does not exceed 0.3% of the geographic landmass of the United Kingdom; and
- (ii) any additional coverage which is provided in Total Not Spots does not limit the Licensee's ability to meet condition (4)(b)(ii) below.

*90% coverage*

- (3) By the Subsequent Coverage Deadline the Licensee shall provide, and thereafter maintain, the Required Service to an area covering at least:
- (a) 90% of the geographic landmass of the United Kingdom;
  - (b) *[MNO specific value, which is 94% for EE Limited, 91% for Hutchison 3G UK Limited, 93% for Telefónica UK Limited, 92% for Vodafone Limited]* of the geographic landmass of England;

- (c) [MNO specific value, which is 89% for EE Limited, 91% for Hutchison 3G UK Limited, 92% for Telefónica UK Limited, 93% for Vodafone Limited] of the geographic landmass of Northern Ireland;
- (d) [MNO specific value, which is 85% for EE Limited, Telefónica UK Limited and Vodafone Limited, 82% for Hutchison 3G UK Limited] of the geographic landmass of Scotland;
- (e) [MNO specific value, which is 88% for EE Limited, 85% for Hutchison 3G UK Limited and Vodafone Limited, 86% for Telefónica UK Limited] of the geographic landmass of Wales;
- (f) [MNO specific value, which is 40,000 for EE Limited, 140,000 for Hutchison 3G UK Limited, 90,000 for Vodafone Limited and Telefónica UK Limited] premises in the United Kingdom which do not fall within the Licensee's 2019 Baseline Coverage Level. Premises which are built after September 2019 will not count towards satisfaction of this requirement; and
- (g) [MNO specific value, which is 4,000 for EE Limited and Hutchison 3G UK Limited, 10,000 for Telefónica UK Limited and 8,500 for Vodafone Limited] kilometres of Roads in the United Kingdom which do not fall within the Licensee's 2019 Baseline Coverage Level. Roads which are built after September 2019 will not count towards satisfaction of this requirement.

*Coverage from the Extended Area Service Sites and in Total Not Spots*

- (4) In meeting the obligations set out in condition (3)(a), the Licensee shall ensure that any coverage required to meet such condition which is incremental to the 88% geographic coverage to be met under condition (2)(a):
  - (a) includes, as far as possible, coverage from the EAS Sites in so far as these sites are made Available by the Home Office no later than one year before the Subsequent Coverage Deadline and continue to be made Available to the Licensee for the duration of this condition; and
  - (b) the remaining additional coverage:
    - (i) is provided in areas that are Total Not Spots and are not provided with the Required Service from either sites located within the 2020 Baseline Coverage Footprint or the EAS Sites, as far as possible by deploying on any other publicly funded sites; and
    - (ii) includes, in any case, at least 1 percentage points in such areas.

*Proportionate reduction*

- (5) The obligations set out in conditions (3)(a)-(e) and (4) will be removed or proportionately reduced if the conditions described in the document “2020 Coverage Obligations - Notice of compliance verification methodology” published by Ofcom in March 2020 (and updated in July 2021) are met.

*Duration*

- (6) The obligations set out in conditions (3) and (4) will remain in force for 14 years from the Subsequent Coverage Deadline.

*Technology neutrality*

- (7) For the avoidance of doubt, the Licensee is permitted to meet the obligations set out in this Licence using any frequencies and technologies available to the Licensee.

**Assessment of compliance with the 2020 coverage obligations**

- (8) Ofcom will assess the Licensee’s compliance with the obligations set out in conditions (2) to (4) after the date at which each obligation is due to have been met by reference to the document “2020 Coverage obligations - Notice of compliance verification methodology” notified by Ofcom to the Licensee in March 2020 (and updated in July 2021). In addition to verifying compliance when these obligations fall due, Ofcom may repeat this assessment from time to time to ensure continued compliance.

**Conditionality of the 2020 Coverage Obligations**

- 2.2 The 2020 Coverage Obligations, as set out in the Licence, are conditional on the factors set out in this Notice.
- 2.3 The Licensee will not be required to comply with the 2020 Coverage Obligations if:
- a) Ofcom offers or imposes any coverage obligations as part of the selection process for awarding the licences to use the 700 MHz and 3.6-3.8 GHz frequencies; or
  - b) Government does not commit funding of £354.6m (the “**Grant Sum**”) to the SRN Programme at the outset of the programme or if, at a later date following such commitment, the Grant Agreement is terminated on the grounds that valid grant claims have not been paid or Government decides at its discretion to withdraw all future funding from the SRN Programme, unless such funding is validly withdrawn in accordance with clause 30.1 of the Grant Agreement in response to the occurrence of a “Trigger Event”, (as defined in the Grant Agreement) that is not subsequently rendered invalid under clause 30.9 of the Grant Agreement (with such clause references being references to the clauses as at the date of execution of the Grant Agreement).



- 2.4 In addition, subject to paragraph 2.6 below, the obligations set out in conditions (3)(a)-(e) and (4)(b) of the Licence will be subject to a proportionate reduction to the extent that any element of the Grant Sum is not made available, unless:
- a) funding is validly withdrawn in accordance with clause 30.1 of the Grant Agreement in response to the occurrence of a "Trigger Event" (as defined in the Grant Agreement) that is not subsequently rendered invalid under clause 30.9 of the Grant Agreement in which case these obligations will remain in place without any reduction; or
  - b) funding is reduced by mutual agreement between the parties to the Grant Agreement (e.g. where the parties agree that funding could be reduced without impacting the outcomes of the SRN Programme), in which case these obligations will remain in place without any reduction, unless otherwise determined as part of that agreement and given effect through a licence variation.
- 2.5 The Licensee will not be required to comply with the obligations in conditions (3)(a)-(e) and 4 of the Licence if in accordance with the Grant Agreement (clause 8A) the relevant funding is suspended following a "Mandatory Suspension Event" and the "Suspension Period" does not cease within three years. For the avoidance of doubt, the obligation set out in condition (4)(a) of the Licence will remain in place if such suspension is not in respect of the funding of the EAS sites.
- 2.6 The Licensee will not be required to comply with the relevant obligations in conditions (3)(a)-(e) and (4) of the Licence if Government is unable to provide funding for the costs of meeting these obligations as part of the SRN Programme, as a result of a court order or a binding decision of an administrative or regulatory body setting aside the relevant funding agreement or requiring the setting aside of it.
- 2.7 The Licensee will not be required to comply with the obligations set out in conditions (3)(f) and (3)(g) of the Licence under the following circumstances:
- a) if the MNOs collectively bring additional coverage (the Required Service) to 280,000 unique premises<sup>5</sup> by the Subsequent Coverage Deadline which did not receive the Required Service from all four Licensees in September 2019, the Licensee will not be required to comply with the obligation set out in condition (3)(f) of the Licence; and
  - b) if the MNOs collectively bring additional coverage (the Required Service) by the Subsequent Coverage Deadline to 16,000 unique kilometres of Roads which did not receive the Required Service from all four Licensees in September 2019, the Licensee will not be required to comply with the obligation set out in condition (3)(g) of the Licence.

---

<sup>5</sup> For example, a premises located in an area with no coverage today which receives coverage from at least one MNO shall count as one additional premises (regardless of how many MNOs provide this increase in coverage) and a premises located in an area where one MNO provides coverage which receives coverage from other MNOs shall count as one premises, regardless of how many MNOs provide new coverage here.

- 2.8 The Licensees will, by 31 July 2020, produce a radio plan (the “**Initial Radio Plan**”) which details how they intend to comply with the obligations set out in conditions (2) to (4) of the Licence. This plan must have been approved by the Licensee’s Chief Technology Officer (or equivalent) as a plan developed on a reasonable basis to provide a level of coverage that, if delivered, would meet these obligations.
- 2.9 In assessing compliance with the obligations set out in conditions (3)(a)-(e) and (4) of the Licence, Ofcom will determine whether, if it is not possible to provide coverage in the locations specified in the Initial Radio Plan, the Licensee has made reasonable endeavours to provide coverage from alternative locations to meet these obligations in accordance with the approach set out in section 4 of this Notice. If Ofcom determines that the Licensee has made reasonable endeavours, the obligations set out in conditions (3)(a)-(e) and (4)(b) may be subject to a proportionate reduction, as further specified in section 4 of this Notice.

### **Technology neutrality**

- 2.10 In accordance with the principle of technology neutrality, the 2020 Coverage Obligations do not impose the use of any specific technology. Therefore, the obligation holders may use any of their portfolio of licensed mobile spectrum to deliver the Required Service in meeting the 2020 Coverage Obligations.
- 2.11 In this Notice, reference is made to Ofcom’s approach to monitoring and verifying compliance with the 2020 Coverage Obligations based on a service provided using current LTE technology. As set out above, it will also be open to the MNOs to meet the obligations with alternative mobile broadband technologies, such as 5G, if they wish. Should MNOs so request, Ofcom will provide an additional relevant compliance verification methodology for that technology. In order to ensure that it is consistent with this methodology, Ofcom will ensure that consistent principles are applied.

## 3. Assessment of the 88% Geographic Coverage Obligation and the Initial Nations Requirement(s)

- 3.1 This section sets out the approach that Ofcom will take for assessing compliance with the obligations set out in condition (2) of the Licence. For the purposes of this Notice, these obligations are referred to as the “**88% Geographic Coverage Obligation**” (condition (2)(a)) and the “**Initial Nations Requirement(s)**” (conditions (2)(b)-(e)).

### Use of operators’ models

- 3.2 Ofcom will assess compliance with the 88% Geographic Coverage Obligation and the Initial Nations Requirement(s) using results from the Licensee’s own predictive radio planning tools used for their own coverage planning purposes (the “**Licensee’s model**”).
- 3.3 Ofcom will require the Licensee to supply the details of the coverage provided by 4G technology, specifying which frequency band is used to predict such coverage by the Licensee’s model as a result of all on-air sites.<sup>6</sup> Ofcom envisages that it will request this information to be provided in the format used for the purposes of Ofcom’s on-line mobile coverage checker (i.e. signal strength on a grid of 100m x 100m pixels, referenced against the OSGB<sup>7</sup> national grid system).
- 3.4 To determine the levels of good quality geographic coverage predicted by the Licensee’s model, Ofcom will apply an LTE average Reference Signals Received Power (“**RSRP**”) threshold of -105 dBm (i.e. RSRP at or above this threshold with a 50% or higher confidence level). Coverage added in Total Not Spots from sites located in the Full Coverage Area, beyond the level specified in condition (2) of the Licence (i.e. 0.3% of the geographic landmass of the United Kingdom), shall not count towards compliance with the 88% Geographic Coverage Obligation.

### On-the-ground verification

- 3.5 At the time of verifying compliance, Ofcom will undertake a verification exercise which will include drive testing in a sample of locations across different Nations. The purpose of this verification exercise is to ensure that the accuracy of the Licensee’s model is reasonable.
- 3.6 The drive testing methodology will be in line with that used for verifying coverage data submitted by MNOs in Connected Nations. As noted above, Ofcom will update this as part of overall compliance verification methodology to account for new technologies, e.g. 5G, upon the MNOs’ request.

---

<sup>6</sup> Sites that are in operation and provide mobile services to consumers.

<sup>7</sup> <https://www.ordnancesurvey.co.uk/resources/maps-and-geographic-resources/the-national-grid.html>

## 4. Assessment of the 90% Geographic Coverage Obligation and other coverage requirements

- 4.1 This section sets out the approach Ofcom will take for assessing compliance with the obligations set out in conditions (3) to (4) of the Licence. For the purposes of this Notice, these obligations are referred to as the **“90% Geographic Coverage Obligation”** (condition (3)(a)), the **“Subsequent Nations Requirement(s)”** (conditions (3)(b)-(e)), the **“Premises Requirement”** (condition (3)(f)), the **“Roads Requirement”** (condition (3)(g)), the **“EAS Coverage Requirement”** (condition (4)(a)) and the **“Total Not Spots Requirement”** (condition (4)(b)).

### The EAS Coverage Requirement (condition (4)(a))

#### Use of the operators’ models

- 4.2 At the time of verifying compliance with the EAS Coverage Requirement, Ofcom will require the Licensee to supply the details of the coverage predicted by the Licensee’s model to have coverage at the level of the Required Service from all on-air sites, including the EAS Sites but excluding those other Publicly Funded (non-EAS) sites counting towards the 1% Total Not Spots Requirement, specifying which frequency band is used to predict such coverage. This also supports an assessment of whether and how far the proportionate reduction mechanism should apply as a result of coverage available from the EAS Sites.
- 4.3 Ofcom envisages that it will request this information to be provided in the format used for the purposes of Ofcom’s on-line mobile coverage checker (i.e. signal strength and associated best server Site/Cell ID on a grid of 100m x 100m pixels, referenced against the OSGB national grid system). To determine the levels of good quality geographic coverage predicted by the Licensee’s model, Ofcom will apply an LTE average RSRP threshold of -105 dBm (i.e. RSRP at or above this threshold with a 50% or higher confidence level).
- 4.4 Ofcom will assess the extent of the UK landmass in which the Licensee will be providing the Required Service through the EAS Sites and then assess the incremental coverage deriving only from these sites by removing any areas covered by the EAS Sites where another (non-EAS) site is providing coverage at the Required Service.
- 4.5 The Licensee shall, at the same time, be required to submit the details of the number, location and technical specification of the EAS Sites, as well as any evidence for a variance in the number, location and technical specification of these sites.

#### On-the-ground verification

- 4.6 Ofcom will undertake on-the-ground testing of the Licensee’s predictions as set out in paragraphs 3.5-3.6.

- 4.7 Where evidence has been provided that any of the EAS Sites has not been made Available by reference to the Preferred Specifications, Ofcom will undertake checks to confirm this is the case.

#### **Proportionate reduction of the 90% Geographic Coverage Obligation due to the EAS coverage**

- 4.8 If coverage falls below the levels predicted in the Initial Radio Plan as a result of any of the EAS Sites not having been made Available by reference to the Preferred Specifications, the reduction in coverage from the EAS Coverage Requirement will be included in the proportionate reduction mechanism for the 90% Geographic Coverage Obligation in line with the approach set out in paragraphs 4.26-4.35 below.

### **Total Not Spots Requirement (condition (4)(b))**

#### **Use of a single model**

- 4.9 The MNOs have agreed that the SRN Entity will develop a single model within 18 months from 11 March 2020 for planning and deploying new Publicly Funded (non-EAS) Sites to deliver at least 1% coverage in Total Not Spots, and that they will each check its outputs against their own models. The MNOs will provide Ofcom with sufficient evidence for Ofcom to determine whether it considers this single model provides a reasonable basis to measure compliance with the Total Not Spots Requirement. If Ofcom concludes that the single model provides a reasonable basis for measuring compliance, at the time of verifying compliance, Ofcom will use coverage maps produced by this single model to assess whether at least 1% coverage is delivered in Total Not Spots, excluding the coverage from the EAS Sites. Ofcom will use the approach set out in paragraph 4.3 above to determine the coverage reported by the single model.
- 4.10 If the MNOs fail to provide a single model to Ofcom's reasonable satisfaction by 11 September 2021, an Ofcom compliance model will be used instead for the purpose of assessing compliance with the Total Not Spots Requirement, to be notified to the Licensee in due course following consultation.

### **90% Geographic Coverage Obligation (condition (3)(a))**

- 4.11 After the Subsequent Coverage Deadline has expired, Ofcom will assess whether the Licensee provides the Required Service from all sites in its network to an area covering at least 90% of the UK geographic landmass, including by deploying on the EAS Sites as far as possible and providing at least an additional 1% coverage in Total Not Spots. This assessment will be done by determining the coverage provided by new sites built in Total Not Spots over the relevant period on the basis of results supplied in accordance with the agreed single model, combined with the coverage predicted from all other sites in the Licensee's network on the basis of its own models, including an analysis of where EAS Sites have been deployed on.
- 4.12 Where Ofcom considers that suitable evidence has been provided to demonstrate that reasonable efforts were made to meet the Total Not Spots Requirement and the EAS

Requirement, the 90% Geographic Coverage Obligation will be subject to a proportionate reduction in line with the approach set out in paragraphs 4.26-4.35 below.

### **Premises Requirement (condition (3)(f))**

- 4.13 To assess compliance with the Premises Requirement, Ofcom will use the combined outputs of: (i) the coverage predicted from all Publicly Funded (non-EAS) Sites in accordance with the predictions of the model referred to in paragraphs 4.9-4.10 above and (ii) the coverage predicted from all other sites in the Licensee's network, including any EAS Site, in accordance with the coverage predicted by the Licensee's model.
- 4.14 Specifically, on the basis of the 2019 Baseline Coverage Level, Ofcom will determine the areas (i.e. pixels) in which the MNOs' models predict that they provide the Required Service and calculate the number of premises located in areas (i.e. pixels) where the MNOs' models show that the Required Service is not being provided at that time.
- 4.15 At the time of verifying compliance, Ofcom will require the MNOs to provide updated coverage predictions, based on the model referred to in paragraphs 4.9-4.10 above in relation to any Publicly Funded (non-EAS) Sites and their own model for all other sites. Ofcom will follow the process described above to determine the number of premises which do not receive the Required Service at that time.
- 4.16 In order to determine whether the Licensee has met the Premises Requirement, the number of premises calculated as having been brought into its outdoor coverage footprint (i.e. the number of additional premises identified as receiving the Required Service at the time of compliance) must be at least equal to the operator-specific number set out in condition (4)(f) of the Licence.
- 4.17 In the event that the Licensee has not delivered the required number of premises, Ofcom will also assess whether the collective increase in premises covered by all operators set out in paragraph 2.7a) of this Notice has been met.
- 4.18 The premises dataset that shall be used for assessing compliance with the Premises Requirement is specified in section 5 below.

### **Roads Requirement (condition (3)(g))**

- 4.19 Ofcom will assess the extent of road coverage added from the Licensee's 2019 Baseline Coverage Level to the date of compliance using the predictions of (i) the single model for verifying compliance with the Total Not Spots Requirement and (ii) the Licensee's model for the remainder of its network.
- 4.20 Ofcom will assess the additional coverage from the 2019 Baseline Coverage Level on the basis of the length of road in pixels where the Required Service is newly provided and where any Road, as defined in the Licence, is present. The roads dataset that shall be used for assessing compliance with the Roads Requirement is specified in section 5.
- 4.21 In the event that the Licensee has not met this requirement, Ofcom will also make an assessment of the combined increase in roads coverage from all mobile network operators

over the relevant period and determine whether the condition set out in paragraph 2.7b) of this Notice applies.

### **Nations Requirements (conditions (3)(b) to (e))**

- 4.22 Ofcom will determine the level of geographic coverage provided by the Licensee in each nation following the same process as that set out for the Premises and Roads Requirements. That is to say that the coverage will be determined by combining: (i) the coverage predicted from all Publicly Funded (non-EAS) Sites contributing to the Total Not Spots Requirement in accordance with the predictions of the model referred to in paragraphs 4.9-4.10 above with (ii) the coverage predicted from all the Licensee's remaining sites, including any EAS Site, in accordance with the coverage predicted by the Licensee's model. For the avoidance of doubt, a further check on the cumulative coverage added in each of the nations shall not be made in respect of these conditions.
- 4.23 The extent of the landmass in each nation shall be defined with reference to the databases set out in section 5 and assessed on the basis of the number of pixels predicted to have coverage at the level of the Required Service.

### **Monitoring/Oversight of deployment**

- 4.24 As set out in paragraph 2.8 above, by 31 July 2020, the Licensees will produce an Initial Radio Plan which details how they intend to comply with conditions (2) to (4) of the Licence, alongside deployment on the EAS Sites.
- 4.25 Ofcom will consider the Licensees' Initial Radio Plan and comment on whether, in its view, the overall plan has been developed on a reasonable basis to deliver a level of coverage that, if delivered, would meet the 2020 Coverage Obligations.

### **Proportionate threshold reductions in duly justified cases**

- 4.26 The 90% Geographic Coverage Obligation, the Total Not Spots Requirement and the Subsequent Nations Requirement(s) will be subject to proportionate reductions, to be determined by Ofcom in accordance with the approach set out in paragraphs 4.34 - 4.36, if:
- a) Publicly Funded (non-EAS) Sites - both these conditions are satisfied in respect of these
- i) If actual deployment on any of the Publicly Funded (non-EAS) Sites provides less coverage than the level reasonably estimated by each individual MNO as set out in the Initial Radio Plan; and
  - ii) if actual deployment on alternative sites or in alternative locations which have been reasonably identified by the MNOs in accordance with paragraphs 4.27-4.32 in order to provide a comparable level of coverage to the Public Funded (non-EAS) sites does not, despite reasonable efforts, prove to be possible or results in less coverage than reasonably estimated in the Initial Radio Plan; or

- b) EAS Sites – any of the EAS Sites have not been made Available by reference to the Preferred Specifications.

## Reasonable endeavours

- 4.27 If Ofcom considers that the Licensee has not met the 90% Geographic Coverage Obligation, the Total Not Spots Requirement, the EAS Requirement and/or the Subsequent Nations Requirement(s) after the Subsequent Coverage Deadline has expired, Ofcom will determine whether the Licensee has made reasonable efforts to meet these obligations based on the evidence provided by the Licensee.
- 4.28 Ofcom will take account of all relevant evidence available and/or provided to it, which, as applicable, Ofcom would expect to include but need not be limited to the matters set out below.
- 4.29 Ofcom will take account of whether actual deployment on any of the Publicly Funded (non-EAS) Sites provides less coverage than the level reasonably estimated by each individual MNO as set out in the Initial Radio Plan and if actual deployment on alternative sites or in alternative locations which have been reasonably identified by the MNOs in order to provide a comparable level of coverage does not, despite reasonable efforts, prove to be possible or results in less coverage than reasonably estimated in the Initial Radio Plan.
- 4.30 Ofcom would expect that, where it has not been possible to build any Publicly Funded (non-EAS) Sites as set out in the Licensee's Initial Radio Plan, the Licensee would provide evidence to demonstrate that:
  - a) the Licensee has made reasonable efforts to deliver these sites;
  - b) it has nevertheless not been possible to deliver the sites for reasons outside the Licensee's reasonable control;
  - c) the Licensee has made reasonable efforts to build a proportionate number of alternative sites to deliver comparable coverage to those sites that were not possible to deliver (see also paragraph 4.32j)); and
  - d) it has similarly nevertheless not been possible to deliver the alternative sites for reasons outside the Licensee's reasonable control.
- 4.31 Ofcom would also expect that, where it has not been possible to achieve coverage as originally predicted in the Licensee's Initial Radio Plan from any EAS Sites which have not been made Available (by reference to the Preferred Specifications), the Licensee would provide evidence of this and of the coverage that had been estimated in the Licensee's Initial Radio Plan as deriving from these sites.
- 4.32 Evidence provided by the Licensee in relation to the matters set out in paragraph 4.30 above could include but need not be limited to the evidence set out below:



### **Inability to obtain required planning permission**

- a) Evidence that, notwithstanding reasonable engagement by the Licensee with relevant authorities, the Licensee had not been able to secure planning permission for the sites it had originally envisaged in its Initial Radio Plan;
- b) Evidence that the original application for a mast (height typically between 20-25 meters, unless there was a specific reason to consider that a higher mast could have been appropriate<sup>8</sup>) was reasonable in light of reasonable planning assumptions informed by any relevant local and national planning policy, including any relevant local development plan and that due regard had been given to the processes defined in the Code of Practice (where one exists) and that due effort had been made in the original site selection process to secure a site that limited the impact on any immediately neighbouring communities;
- c) Evidence that in the course of the planning application process, the Licensee had considered making any reasonable adjustments that had been requested by the local planning authority (for example any minor changes in height or positioning that would not significantly have impacted coverage, or any camouflaging requests that did not significantly impact costs);
- d) If the application was rejected, evidence as to whether the Licensee had considered any grounds for appeal, and if not, the Licensee's reasons for not doing so;
- e) Evidence of reasonable efforts made by the Licensee to obtain planning permission for alternative sites that could provide a similar level of coverage (subject to the considerations above);

### **Inability to secure relevant landlord agreements at reasonable prices**

- f) Evidence submitted by the Licensee which shows that, having exercised all rights available to the Licensee (such as rights under the Electronic Communications Code, including commencing legal proceedings for test cases or for sites of strategic importance or particular value to the SRN Programme) and negotiated in good faith with any relevant third parties, the cost of site acquisition and/or rental had exceeded reasonable costs taking into account prevailing market conditions at the time of the acquisition and the valuation principles set out in the Electronic Communications Code;
- g) Evidence of any efforts made by the Licensee to identify and acquire alternative sites that could provide a similar level of coverage;

---

<sup>8</sup> Specific reasons could include, for example, evidence that a taller mast could have resulted in overwhelming coverage advantages to key areas while not having a significantly greater impact to neighbouring communities than a shorter mast, and that planning approval had been given in similar circumstances.

### Excessive costs

- h) Evidence to demonstrate that despite timely requests to any relevant parties (such as utilities companies) the overall costs, including for power and backhaul for a site and wayleaves, were in the round significantly above typical rural costs at the time the decision not to build a site was taken;<sup>9</sup>
- i) Whether alternative means of provision had been explored to determine the most cost-effective solutions (e.g. fixed link or fibre link, or power supplied by generator or renewable technologies) affecting sites identified in the Initial Radio Plan (significantly beyond typical rural costs) but considered inappropriate on the basis of evidence that the associated costs would be disproportionate;

### Alternative sites could not be reasonably found

- j) Where evidence provided in relation to points set out above in paragraph 4.30 is provided by the MNOs and reasonably deemed by Ofcom to be relevant, evidence of what reasonable attempts had been made to acquire alternative site locations to provide coverage. Reasonable attempts would be likely to include the iterative redevelopment of the Initial Radio Plan such that it provided for the required coverage levels; a maximum of two further attempts to acquire such alternative sites per each failed site as determined by an updated radio plan (with attempts made either within or beyond the initial nominal location); and evidence that such sites could not reasonably be secured (for example for the same reasons as per the points set out above in paragraph 4.30).

### SRN Oversight Committee/Independent Reviewer

- 4.33 Ofcom will also have particular regard to the views expressed by the SRN Oversight Committee and any independent reviews commissioned by Government/the MNOs throughout the course of the delivery period, including instances where the SRN Oversight Committee / independent reviewer indicates that the 90% threshold is unlikely to be met despite reasonable endeavours (in its view) to deliver coverage having being made by the Licensee(s) and any views expressed by the SRN Oversight Committee/Independent assessor as to whether building any specific site is likely to involve disproportionate costs.

### Proportionate reduction to certain obligations in conditions (3) and (4) of the Licence

- 4.34 In the event that the Licensee has failed to meet the obligations in conditions (3)(a) (90% Geographic Coverage Obligation), (3)(b) to (e) (Subsequent Nations Requirements) or (4)(b) (Total Not Spots Requirement) of the Licence and Ofcom has determined that it has

---

<sup>9</sup> In assessing the evidence provided by the Licensee in relation to the overall costs, Ofcom would normally expect to take account of: (i) the costs incurred by the Licensee in the past in rural areas; (ii) the costs envisaged at the time the SRN Programme commenced; and (iii) the costs experienced through the life of the SRN Programme. For the avoidance of doubt, examples of sites with underlying outlier costs shall not be deemed as representative of typical rural costs.

made reasonable endeavours to meet them in accordance with paragraph 4.27 of this Notice, these obligations will be reduced on the following bases:

- a) if the number of Publicly Funded (non-EAS) Sites the Licensee has been able to construct is lower than the number in the Initial Radio Plan for the reasons set out above:
  - i) the 1 percentage point obligation set out in condition (4)(b) of the Licence will be reduced by the coverage estimated to be provided by the sites which could not be constructed in the Initial Radio Plan and could not be replaced by alternatives;
  - ii) the 90% Geographic Coverage Obligation set out in condition (3)(a) of the Licence will accordingly be reduced by the same amount as in sub-paragraph (a)(i) above; and
  - iii) the same mechanism as set out in (a)(i) and (a)(ii) above will be used to reduce the relevant Subsequent Nations Requirements set out in conditions (3)(b) to (e) of the Licence; and/or
- b) if the coverage provided by alternative sites is lower than those in the Initial Radio Plan:
  - i) the 1 percentage point obligation set out in condition (4)(b) of the Licence will be reduced by the difference in coverage between the coverage estimated to be provided by the sites which could not be constructed in the Initial Radio Plan and the coverage provided by the alternative sites;
  - ii) the 90% Geographic Coverage Obligation set out in condition (3)(a) of the Licence will accordingly be reduced by the same amount as in sub-paragraph (b)(i) above; and
  - iii) the same mechanism set out in (b)(i) and (ii) above will be used to reduce the relevant Subsequent Nations Requirements set out in conditions 3(b) to (e) of the Licence.

4.35 In the event that the Licensee has failed to meet the 90% Geographic Coverage Obligation set out in condition (3)(a) of the Licence, but provides evidence that any of the EAS Sites assumed in its Initial Radio Plan have not been made Available (by reference to the Preferred Specifications), and resulted in less coverage than initially estimated, the 90% threshold and the Subsequent Nations Requirements will also be varied by a proportionate amount.

#### **Partially successful challenge against the subsidy**

4.36 The obligations set out in conditions (3) and (4) will be subject to appropriate adjustments (for example, a proportionate reduction) if a "Mandatory Suspension Event", as defined in the Grant Agreement, (i) prevents payment or requires repayment of part of the Grant Sum, or (ii) involves material changes that limit the Licensee's ability to meet these conditions.

- 4.37 Any such appropriate adjustment shall have the objective of ensuring that the Licensee is not disadvantaged, financially or otherwise, as a result of any such event.

## 5. Databases for verifying compliance

5.1 The datasets to be used for verifying compliance with the 2020 Coverage Obligations shall be those made available to the MNOs under certain conditions on 11 February 2020.

### UK landmass and locations

5.2 The extent of the UK landmass shall be defined based on vector lines that define the extent of the UK. The vector lines should be taken from the following source datasets:

- a) Office for National Statistics Countries (December 2018) Boundaries GB Boundaries Full resolution, Clipped to coastline (BFC) [here](#),<sup>10</sup> and
- b) Ordnance Survey Northern Ireland Large Scale 1:50,000 vector boundary area [here](#).<sup>11</sup>

5.3 For the avoidance of doubt, locations on islands that are part of the UK and are inhabited are included, but islands that are part of the UK and are uninhabited are excluded.

### Premises dataset

5.4 For the purposes of compliance, Ordnance Survey AddressBase® Premium product [Epoch 70](#)<sup>12</sup> released in Sept 2019 shall be used. AddressBase® includes information about addresses, properties and land areas by combining the following datasets:

- a) Local Government National Land and Property Gazetteer (NLPG);
- b) Ordnance Survey MasterMap address layer; and
- c) Royal Mail Postal Address File (PAF).

5.5 The approach to the determination of premises is provided in the [methodology report](#) for Connected Nations 2019.<sup>13</sup>

### Roads dataset

5.6 Roads includes all motorway, A-road, B-road, minor (non-numbered) roads and local (non-classified) roads. It excludes restricted access roads and the data set does not include private roads or cul-de-sacs. The following source datasets are used:

- a) Ordnance Survey Great Britain Open Roads data set version 03/2019 available [here](#),<sup>14</sup> and
- b) The Northern Ireland 1:50,000 road network data set available [here](#).<sup>15</sup>

---

<sup>10</sup> [https://geoportal.statistics.gov.uk/datasets/5e6059b209df4e399cf924b673591cc2\\_0](https://geoportal.statistics.gov.uk/datasets/5e6059b209df4e399cf924b673591cc2_0)

<sup>11</sup> [http://osni-spatial-ni.opendata.arcgis.com/datasets/d9dfdaf77847401e81efc9471dcd09e1\\_0](http://osni-spatial-ni.opendata.arcgis.com/datasets/d9dfdaf77847401e81efc9471dcd09e1_0)

<sup>12</sup> <https://www.ordnancesurvey.co.uk/documents/product-support/release-notes/addressbase-release-note-sept-19.pdf>

<sup>13</sup> [https://www.ofcom.org.uk/data/assets/pdf\\_file/0021/186411/connected-nations-2019-methodology.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0021/186411/connected-nations-2019-methodology.pdf)

<sup>14</sup> <https://www.ordnancesurvey.co.uk/business-government/products/open-map-roads>

<sup>15</sup> [https://www.nidirect.gov.uk/1\\_50\\_000-road-network-vector](https://www.nidirect.gov.uk/1_50_000-road-network-vector)

## A1. Definitions

A1.1 For the purpose of interpreting this Notice, the following definitions have effect, except in so far as the context otherwise requires. For the avoidance of doubt, in the case of any difference between texts, the text set out in the 2020 Coverage Obligations contained in the relevant licences shall take precedence over these definitions.

*Definitions:*

- a) **“2020 Coverage Obligations”** means the obligations to provide mobile coverage set out in paragraph 2.1 of this Notice and included in the licences held by the MNOs which cover frequencies in the 900 MHz and 1800 MHz bands;
- b) **“88% Geographic Coverage Obligation”** means the obligation set out in condition (2)(a) of the Licence (see section 3 of this Notice);
- c) **“90% Geographic Coverage Obligation”** means the obligations set out in condition (3)(a) of the Licence (see section 4 of this Notice);
- d) **“EAS Coverage Obligation”** means the requirement set out in condition (4)(a) of the Licence (see section 4 of this Notice);
- e) **“Grant Agreement”** means the *“Shared Rural Network – Total Not Spot and Extended Area Services Grant Agreement”* pursuant to which the Government shall provide the Grant Sum in accordance with its terms and entered into between the SRN Entity and the Government on or around the date on which the Licensees agreed to the variation of the Licences;
- f) **“Grant Sum”** means the funding of £354.6m which Government has committed to make available to the SRN Programme;
- g) **“Initial Nations Requirement(s)”** means the obligations set out in conditions (2)(b) to (e) of the Licence (see section 3 of this Notice);
- h) **“Initial Radio Plan”** means the radio plan to be produced by the Licensee by 31 July 2020 detailing how the Licensee intends to comply with the obligations set out in conditions (2) to (4) of the Licence;
- i) **“Licence”** means the licence(s) held by the MNOs which cover frequencies in the 900 MHz and 1800 MHz bands;
- j) **“Preferred Specification”** means the gold configuration set out in Appendix B to Schedule 2 of the Grant Agreement;
- k) **“Premises Requirement”** means the obligation set out in condition (3)(f) of the Licence (see section 4 of this Notice);
- l) **“Publicly Funded (non-EAS) sites”** means the c.450 new sites that the MNOs are intending to build through the SRN Entity on the basis that they would be eligible for public funding;

- m) **“Roads Requirement”** means the requirements set out in condition (3)(g) of the Licence (see section 4 of this Notice);
- n) **“SRN Oversight Committee”** means the governance body established by agreement between DCMS and the MNOs under the terms of the SRN agreement;
- o) **“Subsequent Nations Requirement(s)”** means the obligations set out in conditions (3)(b) to (e) of the Licence (see section 4 of this Notice);
- p) **“Total Not Spots Requirement”** means the obligation set out in condition (4)(b) of the Licence (see section 4 of this Notice).