
Notice of Ofcom's proposal to make regulations for the award of the 700 MHz and 3.6-3.8 GHz spectrum bands

Proposals to make the auction regulations

CONSULTATION:

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1. Overview

In December 2018, we set out our proposals for awarding spectrum in the 700 MHz and 3.6-3.8 GHz bands. This document sets out our proposals for the Auction Regulations that would implement those proposals.

What we are proposing – in brief

This document provides notice of, and invites stakeholders' views on, Ofcom's proposals to make regulations for the award by auction of radio spectrum licences in the 700 MHz and 3.6-3.8 GHz bands. These regulations would give effect to the policy proposals set out in our consultation document published on 18 December 2018.

We invite comments on these proposals by 12 March 2019.

This overview is a simplified high-level summary only. The proposed regulations we are consulting on are described in the full document below, which should be read in conjunction with the consultation document published on 18 December 2018.

2. Notice

Summary

- 2.1 We are planning to award wireless telegraphy licences for equipment operating within the following spectrum bands: 80 MHz of spectrum within the 694-790 MHz frequency range (the "700 MHz band") and 120 MHz of spectrum within the 3680-3800 MHz frequency range (the "3.6-3.8 GHz band").
- 2.2 On 18 December 2018, we published a consultation document setting out our policy proposals for the award of these licences by auction (the "December 2018 consultation").¹ This document provides formal notice to stakeholders of our intention to give effect to such proposals by making The Wireless Telegraphy (Licence Award) Regulations 2019 (the "Auction Regulations").
- 2.3 The proposed Auction Regulations set out the procedure and rules that will apply for the award of wireless telegraphy licences to operate within the bands. In particular, they set out and implement our proposals for the auction design, which are explained in more detail in section 7 and annex 16 of the December 2018 consultation.
- 2.4 A draft of the proposed Auction Regulations is set out at annex 5, and the general effect of the proposed Auction Regulations is explained in section 3 of this document.
- 2.5 We have also published, alongside this consultation, a supporting document setting out bidding examples to illustrate the bidding mechanics of the principal stage.²

Next steps

- 2.6 In accordance with the requirements of section 122(4) and (5) of the WT Act, this document gives notice of our intention to make the proposed regulations. We invite stakeholders to provide comments on the proposed regulations by **5pm on 12 March 2019**.
- 2.7 Subject to this consultation, we intend to make the final Auction Regulations later this year, in advance of the auction.
- 2.8 The proposed order and regulations are set out in the annexes to this document, which are available on Ofcom's website (www.ofcom.org.uk). A paper copy may be obtained from John Glover, Ofcom, Riverside House, 2a Southwark Bridge Road, London SE1 9HA.

¹ <https://www.ofcom.org.uk/consultations-and-statements/category-1/award-700mhz-3.6-3.8ghz-spectrum>

² https://www.ofcom.org.uk/_data/assets/pdf_file/0011/135110/bidding-example.pdf

3. General effect of the proposed Wireless Telegraphy (Licence Award) Regulations 2019

The legislative framework

- 3.1 Under section 14(1), (2), (3), (4), (6) and (7) of the Wireless Telegraphy Act 2006 (the "**WT Act**"), we may make regulations to allow wireless telegraphy licences to be awarded by means of an auction.³
- 3.2 We are giving notice of our proposal to make auction regulations in relation to the award of frequencies in the 700 MHz and 3.6-3.8 GHz bands (the "**Auction Regulations**").
- 3.3 A draft of the proposed Auction Regulations is set out at annex 5.

The proposed regulations

- 3.4 The proposed Auction Regulations set out the procedure and rules that would apply for the award of wireless telegraphy licences to operate within specified frequencies.
- 3.5 The proposed award process involves several stages. These are:
 - a) the **application stage**, in which applicants can apply to Ofcom to take part in the award process (Part 2 of the proposed Auction Regulations);
 - b) the **qualification stage**, in which Ofcom decides which applicants are qualified to participate in the award process, records their existing spectrum holdings and calculates the overall bid constraint that applies to each bidder (Part 3 of the proposed Auction Regulations);
 - c) the **principal stage**, in which bidding takes place and in which it is determined which bidders have won rights to use frequencies and for how many 'lots' (but not the specific frequencies to be assigned to each bidder), and whether any bidders have won a coverage obligation (Part 5 of the proposed Auction Regulations);
 - d) the **assignment stage**, in which bidders can bid for specific frequencies, and specific frequencies are assigned to winning bidders, which correspond to the quantity of lots which they won in the principal stage (Part 6 of the proposed Auction Regulations); and
 - e) the **grant stage**, where the licence fee payable by a winning bidder is determined by Ofcom in accordance with the regulations and in which that fee is paid and licences granted (Part 7 of the proposed Auction Regulations).

³ When doing so, section 122(7) of the WT Act enables us to make different provision for different cases and to make incidental provision.

3.6 The proposed Auction Regulations also contain a section setting out the rules that will apply to applicants and bidders regarding the forfeit of deposit and exclusion from the award process (Part 8 of the proposed Auction Regulations).

3.7 The proposed Auction Regulations have been drafted in a way that reflects the chronology of the award process in these different stages.

Extent of application of the regulations

3.8 The proposed Auction Regulations would apply in the United Kingdom but would not extend to the Channel Islands or to the Isle of Man.

Entry into force of the regulations

3.9 The proposed Auction Regulations would come into force on a particular day which will be specified in the regulations when they are made. This date has yet to be determined and will depend on a number of factors, including responses to this Notice.

The radio frequencies which are available for award

3.10 The frequencies which are available in the award process are set out in Schedule 1 to the proposed regulations. This Schedule is entitled "Lots".

3.11 Bids made during the award process will be for a wireless telegraphy licence (granted under section 8 of the 2006 Act) which authorises the use of 700 MHz frequency lots, or for a wireless telegraphy licence which authorises the use of 3.6-3.8 GHz frequency lots.

3.12 The different types of lots which are available in the award process are:

- a) 700 MHz paired (FDD) frequency lot;
- b) 700 MHz individual (SDL) frequency lot; and
- c) 3.6 GHz frequency lot.⁴

3.13 We are also proposing to offer two 'standalone' coverage obligations which will not be pre-attached to any spectrum lot. These would require that, within four years of the award, the winning bidder:

- a) delivers good quality mobile coverage outdoors to at least 90% of the UK landmass (as well as meeting specific thresholds for good quality outdoor coverage in each of the UK nations);
- b) deploys a minimum of 500 new wide area macro sites; and
- c) provides new coverage in areas where at least 140,000 premises to which it currently does not provide good coverage are located.⁵

⁴ We refer to 3.6-3.8 GHz frequency lots as "3.6 GHz lots" throughout this document and the draft regulations.

⁵ Please see section 4 of the December Consultation for more detail on the proposed coverage obligations.

- 3.14 In terms of bidding, the coverage obligations would operate in the same way as spectrum frequency lots, but would provide a discount on the prices for spectrum lots when included in a package bid selection. This is equivalent to the coverage obligations having a 'negative' round price that is equal to the amount of the discount.
- 3.15 As set out in Schedule 1 of the proposed Auction Regulations, we will be awarding 80 MHz of spectrum in the 700 MHz Band within the 694-790 MHz frequency range. We will award two 30 MHz blocks of paired spectrum (703-733 MHz and 758-788 MHz), and a 'centre gap' of 20 MHz at 738-758 MHz. Alongside the centre gap spectrum that we are awarding there is a 5 MHz guard band at 733-738 MHz.
- 3.16 We will be awarding 120 MHz of spectrum in the 3.6-3.8 GHz band between 3680 and 3800 MHz. In the principal stage bidders will be able to bid for 5 MHz lots for the 3.6-3.8 GHz band and 700 MHz SDL lots, and 2x5 MHz 700 MHz FDD lots.

Application stage

- 3.17 The application stage is described in detail at Part 2 of the proposed Auction Regulations.
- 3.18 The application requirements include the submission of:
- a) an application form which is set out in Schedule 2 to the Regulations, and which includes warranties on the part of the applicant. It must be signed by two authorised persons;
 - b) a document for each person who is not an associate of the applicant, but whom the applicant wishes to join its applicant group, signed by that person and two authorised persons on behalf of the applicant;
 - c) a document setting out details of the existing spectrum holdings of the applicant and various related parties; and
 - d) an initial deposit of £100,000.
- 3.19 The document mentioned at paragraph 3.18.b is intended to cover advisers and other persons to whom the applicant will reveal confidential information in connection with the award process. Revealing confidential information would breach the regulations if it were to a person who was not included within the same bidder group, and could lead to exclusion from the award process and forfeiture of deposits (Part 8 of the proposed Auction Regulations).
- 3.20 The concepts of 'applicant group' and 'bidder group' in the proposed Auction Regulations are to ensure that the persons within company groups, and their advisers, keep information confidential. Bidder groups should not have overlapping members, and there is to be a separation of bidders during the award process, to ensure the integrity of the award process.
- 3.21 Applicant groups include associates, and 'associate' is defined as a person with a material interest in the applicant. Material interest is also defined with reference to particular sections in the Companies Act 2006 in Part 1 of the proposed Auction Regulations.

Members of an applicant's group also include persons that are not associates of the applicant (and in relation to which the applicant has submitted the document mentioned at paragraph 3.18.b).

- 3.22 In exceptional circumstances, Ofcom may change the day, time or place for delivery of application forms or the payment of the initial deposit. Ofcom will take reasonable steps to inform interested parties of a change.

Qualification stage

- 3.23 The qualification stage is described in detail at Part 3 of the proposed Auction Regulations.
- 3.24 Following the date for receipt of applications, Ofcom will notify each applicant of the names and associates of each other applicant.
- 3.25 This notification will also set a deadline by when applicants must notify Ofcom whether or not any members of their applicant group are also associates of another applicant. In such cases, applicants must also notify the other applicant(s) concerned.
- 3.26 In parallel with this exercise, Ofcom will also consider whether any members of one applicant group are also members of another applicant group.
- 3.27 Where Ofcom has determined that a common membership exists, Ofcom will notify the applicants concerned and specify a deadline by when all the common memberships must be resolved (for example, the time by when a common associate must have disposed of or otherwise removed its 'material interest' in one or both of the applicants concerned, or by when one of the applicants concerned must have withdrawn from the award process).
- 3.28 Ofcom will then record the details of the members of each applicant group. Where there has been a change in the composition of an applicant group, the applicant must provide new versions of the documents already submitted, following that change. Each applicant group so recorded constitutes a 'bidder group' for the subsequent stages of the award process.
- 3.29 Ofcom then considers whether each applicant is qualified to participate in the award process.
- 3.30 Each applicant considered fit to hold a licence (in accordance with the provisions of regulation 11) and not having an overlap in its bidder group with another applicant, will qualify to participate in the award process.
- a) During the qualification stage, Ofcom may request an applicant to provide additional information or documentation by a specified deadline. In making its determination of whether an applicant is fit to hold a licence, Ofcom will take into account any failure by the applicant to provide the additional information by the relevant deadline.
 - b) In addition, in making its determination of whether an applicant is fit to hold a licence, Ofcom will take into account a number of factors including, for example, any action that is likely to distort the outcome of the award process.

- 3.31 Ofcom will notify each applicant whether it has qualified to bid in the award process, including the reasons an applicant has not qualified.
- 3.32 Following qualification there will be a period within which applicants may withdraw from the award process if they wish to do so. If an applicant does withdraw, it will be excluded from the award process and, unless the initial deposit has been forfeited in accordance with the Auction Regulations, its initial deposit will be refunded.
- 3.33 Ofcom will return initial deposits to applicants who do not qualify to bid in the award process or who withdraw from the award process at the end of the qualification stage, unless the initial deposit has been forfeited in accordance with the Auction. No interest, if any, will be returned to applicants.
- 3.34 After the last day for withdrawal, Ofcom will determine and publish the number and names of bidders.

Eligibility and deposit before the first primary bid round of the principal stage

- 3.35 Before the principal stage commences, bidders can pay an additional deposit (regulation 15) which will be taken into account by Ofcom in accordance with regulation 16 for calculating the bidder's eligibility limit for the first primary bid round of the principal stage.
- 3.36 The concept of an 'eligibility limit' is used in the proposed Auction Regulations to determine how many lots a bidder may bid for (as described in Part 5). This is a separate concept from the overall bid constraint which is discussed below. During the principal stage, the eligibility points used by a bidder must not exceed the bidder's eligibility limit, unless it is a valid relaxed bid (explained below). The concept of 'eligibility points' is explained in more detail in paragraphs 3.52 - 3.55 of this document.
- 3.37 In order to determine eligibility limits for each bidder for the first principal stage round, Ofcom calculates the maximum number of lots each bidder could bid for in the first principal stage round, given the round price for each 700 MHz paired frequency lot, 700 MHz individual frequency lot, and 3.6 GHz lot in the first primary bid round (regulation 16).
- 3.38 If the number which results is less than one, that bidder is excluded from the award process, and any sums provided to Ofcom as a deposit will be forfeited (together with any interest on that deposit).

Determination of the overall bid constraint

- 3.39 The proposed Auction Regulations provide for a limit on the total amount of spectrum that any bidder may win in the award, known as the 'overall bid constraint', which is determined in accordance with regulation 18. The purpose of this is to implement the proposal, set out in Section 5 of the December 2018 Consultation, to impose a cap of 416 MHz on the overall amount of spectrum any bidder is authorised to use in order to ensure that the award does not give rise to any competition concerns.

- 3.40 In order to determine the overall bid constraint, Ofcom will record the existing spectrum holdings of each bidder after the deadline for additional deposits has passed (regulation 17 and Schedule 8). Ofcom will then determine, on the basis of the recorded spectrum holdings, the overall bid constraint that will apply for each bidder,
- 3.41 We note that the existing spectrum holdings of a number of persons associated with a bidder are relevant when recording that bidder's spectrum holdings (regulation 4(3)(a)(iii)). These persons may be different to those persons that are in a bidder's group.
- 3.42 As with previous spectrum awards, a bidder's overall bid constraint will remain the same throughout the principal stage. This means that, once a bidder's existing spectrum holdings have been recorded, any divestment of spectrum by that bidder (or associated parties) will not lead to any amendment of that bidder's recorded spectrum holdings, nor to its overall bid constraint. Conversely, where a bidder's existing spectrum holdings are increased after the recording of spectrum holdings, that bidder risks exclusion from the award process and forfeiture of its deposit by Ofcom (regulations 118 and 120).

The principal stage

- 3.43 The principal stage is described in detail in Part 5 of the proposed Auction Regulations.
- 3.44 The principal stage includes the two phases: (i) the primary bid rounds and (ii) the supplementary bids round.

The primary bid rounds

- 3.45 The primary bids rounds are described in detail in chapters 1-3 of Part 5 of the proposed Auction Regulations.⁶ In each primary round a bidder must, in addition to bidding for frequency lots, indicate whether or not it wishes for the coverage obligation to be included in a licence for those frequency lots.
- 3.46 Ofcom will inform bidders of the round prices and coverage discount for the first round before the auction starts, as set out in regulations 31 and 33. These are the reserve prices for the respective frequency lot categories and the maximum discount for the coverage obligation. Round prices will be announced in units of one thousand pounds.
- 3.47 The round price for a frequency lot category and the discount for the coverage obligation will change according to the sum of bidder demands and available frequency lots and coverage obligations (see regulations 32 and 34). When the sum of bidders' demand exceeds available supply for a frequency lot category, Ofcom will increase the round price of the respective frequency lot category in the next round. Ofcom will cease increasing the round price of any frequency lot category whenever bidder demands are no greater than the available supply of a frequency lot category.

⁶ The primary bid rounds are often referred to as the "clock rounds" within auction theory and in our December Consultation.

- 3.48 The round price for the coverage obligations will function as a 'discount' which bidders can apply to the price of the frequency lots included in their bid selection (regulation 23). This is equivalent to the coverage obligations having a 'negative' round price that is equal to the amount of the discount. There are two coverage obligations in total. If more than two bidders bid for a coverage obligation in a primary round, Ofcom will reduce the discount for the coverage obligation in the next primary round. The discount applying to the coverage obligation is such that it cannot be less than zero. Each bidder can only bid for at most one coverage obligation.
- 3.49 Once Ofcom has announced the round prices for the frequency lots and the discount for the coverage obligation at the beginning of a round, bidders may submit a single bid selection in the round. The price of a bid selection is the sum of the number of frequency lots in each category multiplied by the frequency lot category round price, minus the discount associated with the coverage obligation if it is included in the bid selection. In some instances, including the coverage obligation in a bid selection may result in a negative price. In the event that a bid selection has a negative price, the bid amount for the bid selection would be set at £1,000. Therefore, where the price of a bid selection is negative, a 'positive price constraint' would apply and the amount bid for the bid selection would be converted to £1,000 (see regulation [23(5)] of the proposed Auction Regulations).
- 3.50 The final primary bid round is when there is no positive excess demand for any of the frequency lot categories or for the coverage obligations (regulation 29). After the final primary bid round, all valid bids submitted during the primary round phase are entered into the supplementary bids round.

Bid activity constraints in the primary bid rounds

- 3.51 A bid selection made by a bidder in a primary bid round is subject to a number of constraints on bid activity set out in regulations 24(2) and 37-43. The activity constraints are designed in part to encourage bidders to submit bids in a timely and consistent fashion.

Eligibility points

- 3.52 Each bidder would have a specified number of eligibility points at the start of each round and can use these points to bid on frequency lots.⁷ Each frequency lot has a certain number of eligibility points associated with it as set out in Schedule 9, and bidders cannot bid on a package of frequency lots greater than their current eligibility (unless they make a relaxed bid, see paragraphs 3.56 to 3.61 below).
- 3.53 The number of eligibility points a bidder starts with in any primary round will be the number of eligibility points associated with its bid in the previous round (except when the bidder made a relaxed bid), set out in regulation 36. A bidder's eligibility points in the first primary round would be based on its total financial deposit payment before the start of the

⁷ It is proposed that the coverage obligation has zero eligibility points.

principal stage (see regulation 16). Ofcom has proposed 2x5 MHz paired 700 MHz is worth four points, 5 MHz of SDL 700 MHz is worth one point and 5 MHz of 3.6 GHz is worth one point, as set out in Schedule 9.

- 3.54 A bidder will be able to bid for a selection in each round if its activity points do not exceed the bidder's initial eligibility. A bid selection comprises a number of frequency lots and may also include the coverage obligation.
- 3.55 If a bidder does not submit a bid in the first primary round with at least one point of activity, the bidder shall be excluded from further participation in the award and forfeit its deposit (regulation 27). If a bidder chooses a zero-points activity bid selection in a primary round other than the first primary bid round, the bidder shall not be allowed to submit bids in any subsequent primary bid rounds but is permitted to submit bids in the supplementary round, regulation 28.

Relaxed bids

- 3.56 The relaxed activity rule would allow bidders to submit bids during the primary rounds for packages that exceed their eligibility limit in a particular round, provided that doing so is consistent with certain relative preferences that a bidder has expressed up to that point in the primary rounds. Such a bid selection is referred to as a 'relaxed primary bid', as it relaxes the activity rule set out in 24(2)(a). To ensure consistency, the submission of bids above the bidder's eligibility limit may, in some instances, require raising earlier bid amounts made by the bidder on other packages in prior primary rounds. These are referred to as 'chain bids' and are described in more detail in paragraphs 3.62-3.67.
- 3.57 Relaxed primary bids are described in chapter 2, Part 5 of the regulations. If a bidder wants to bid for a selection in a round that requires more eligibility points than it has at the start of the round (but not higher than its initial eligibility), the bidder may submit a relaxed primary bid, provided certain conditions are met.
- 3.58 Ofcom proposes to allow relaxed primary bids that are consistent with the preferences a bidder has expressed in particular (prior) primary bid rounds known as 'eligibility reducing rounds' (regulation 37(4)(a)). Eligibility reducing rounds are specific to individual bidders and occur whenever a bidder chooses a bid selection in a round that has activity below the bidder's eligibility limit in the round.
- 3.59 A relaxed bid selection in a primary round may or may not require one or more accompanying chain bids as set out in regulations 37 and 38.
- 3.60 A relaxed bid in a primary round without chain bids means that the price of the bid selection is consistent with the choice made by the bidder in a connected eligibility reducing round, regulation 37(4)(d). A connected eligibility reducing round is the most recent round in which the bidder could have presented the current bid selection without exceeding the eligibility limit and is uniquely determined.
- 3.61 In the event a relaxed bid appears inconsistent with the bidder's choice in the bidder's connected eligibility reducing round, Ofcom would determine whether appropriate

changes to bid amounts would result in consistency. Appropriate changes would be undertaken in this instance through what are termed chain bids.

Chain bids

- 3.62 A relaxed bid could require a bidder to submit one or more accompanying 'chain bids', as set out in regulations 38-43. A chain bid is an increase in a bidder's bid amount for a bid selection made by the bidder in an eligibility reducing round occurring previously.⁸ Alternatively, chain bids reflect the amounts the bidder would be willing to pay for such bid selections to ensure consistency with the bidder's preferred bid selection in the current round.
- 3.63 If a chain bid is required to accompany a relaxed bid, this is determined with reference to the bidder's connected eligibility reducing round (regulation 41).
- 3.64 Between a bidder's connected eligibility reducing round and the current round in which the bidder is submitting the relaxed bid, a bidder may have submitted bid selections that resulted in other eligibility reducing rounds. In the scenario where a chain bid is required in regard to the connected eligibility reducing round, Ofcom will also check that the relaxed bid selection is consistent with choices made in any further eligibility reducing rounds that may have occurred after the connected eligibility reducing round and before the current round. This check for consistency may require further chain bids depending on the number of eligibility reducing rounds (regulations 42 and 43). The approach Ofcom applies to these chain bids is the same as for the chain bid outlined in 3.63.
- 3.65 A relaxed bid selection accompanied by one or more chain bids is a valid bid in the primary bid rounds (regulations 25 and 26).
- 3.66 It is possible for a bidder to make relaxed primary bids that necessitate chain bids for *past* chain bids, and the procedure for assessing such bids is identical to that outlined above.
- 3.67 Whenever a bidder makes a relaxed primary bid selection, the eligibility limit in the next round is equal to that in the last round in which the bidder presented a standard primary bid (regulation 35(4)(b)).

Information made available during the primary bid rounds

- 3.68 After each primary bid round, Ofcom will announce to a bidder the bid selection made by the bidder, but not the bid selections of other bidders. After each primary bid round, except the final primary bid round (see below), Ofcom will announce to all bidders information about excess demand as in regulation 62. After the final primary bid round Ofcom will not provide any information about excess demand.
- 3.69 For the last round of each day of the primary bid rounds, excluding the day of the final primary bid round, Ofcom will publish on its website the level of excess demand for each

⁸ The bid amount expressed previously for any bid selection is constrained to be no less than £1,000, though the bid price may be negative.

frequency lot category as in regulation 63. On the day of the final primary bid round, Ofcom will publish on its website that the primary bid rounds have ended.

Extensions during the primary bid rounds

- 3.70 Regulation 60 describes extensions during the primary bid rounds. During the primary bid rounds only, bidders would be entitled to two round extensions of thirty minutes. A round extension will be automatically triggered when the scheduled end of a round is reached and a bidder with one or more extensions remaining has not submitted its bid.
- 3.71 Ofcom may grant a further extension to a bidder where it is satisfied that the use of an extension has been due to circumstances beyond the bidder's control

Deposit payments during the primary bid rounds

- 3.72 When the amount that a bidder has specified it is willing to pay for a bid selection in the primary round is greater than double the total amount the bidder has on deposit, Ofcom may require the bidder to increase its deposit and specify a deadline for payment of the further sum (see regulation 68). The further sum that the bidder may be required to pay shall be at most the difference between its deposit amount and the amount of the bidder's highest valid primary bid. Ofcom expects to provide further guidance on deposit payments for the primary bid rounds closer to the start of the auction.

The supplementary bids round

- 3.73 The supplementary bids round is described in chapters 4-6 of Part 5 of the proposed Auction Regulations. This is a single round in which each bidder can present one or more mutually exclusive bids for any bid selection no higher than the bidder's initial eligibility, subject to a number of other constraints as described in chapters 4-6 of Part 5 of the Auction Regulations. For each supplementary bid submitted by a bidder, excluding any chain bids that might accompany such a bid, there shall at most be one bid amount for each possible bid selection. Ofcom proposes a bidder may submit up to a maximum of three thousand bids in the supplementary bids round, excluding any chain bids (regulation 45(4))
- 3.74 The amount a bidder submits for a bid selection X in the supplementary bids round would depend on whether a bidder made a bid for bid selection X in the primary bid rounds phase and whether bid selection X was the subject of a chain bid accompanying a bidder's selection in the final primary round.
- 3.75 With the exception of a bidder's bid in the final primary bid round (and any associated chain bids), any bids in the supplementary bids round must be:
- a) at least as high as the bidder's highest bid amount in the primary bid round (whether standard or chain bid); and
 - b) no higher than a supplementary cap (as outlined below).

- 3.76 The bidder's bid in the final primary bid round (and any associated chain bids) are not subject to the supplementary cap. A supplementary round bid for the bidder's bid selection in the final primary bid round can be made at any amount at least as high as the amount in the final primary round (regulation 49).
- 3.77 In the event bid selection X was the subject of a chain bid associated with a bidder's relaxed bid selection in the final primary round, bid selection X would also be subject to eligibility reducing round consistency checks if the bidder subsequently submits a supplementary relaxed bid for its final primary round package. Relaxed supplementary bids are described in more detail below.
- 3.78 A supplementary round bid for a bid selection that the bidder did not choose in the primary bid rounds is subject to a price floor which is the greater of £1,000 or the reserve prices and a supplementary cap rule.

Supplementary cap

- 3.79 The supplementary cap rule (also referred to as the 'final price cap') is set out in regulation 50. The supplementary cap constrains each supplementary bid that a bidder may place on each package, except for the package chosen by the bidder in the final primary bid round. If the choice in the final primary bid round was a relaxed primary bid with accompanying chain bids, a bidder submitting a supplementary bid for such packages would necessarily need to adhere to consistency checks made with reference to eligibility reducing rounds.
- 3.80 The supplementary cap is designed to ensure bid consistency across bid selections. By way of illustration, a bidder choosing package A in the final primary bid round reveals that at the final round prices the bidder prefers package A over all packages that the bidder could have selected in the final primary round (including any packages with higher eligibility that would have necessitated a relaxed bid and possible associated chain bids). Therefore, if a bidder chooses not to submit a higher bid for package A in the supplementary bids round, it would be consistent to require that a supplementary bid for any other package should not be at an amount above the price of the package in the final primary round.
- 3.81 By contrast, if a bidder increases the bid amount for package A in the supplementary bids round, it would be consistent to allow the bidder discretion to submit a supplementary bid for any other package within or at initial eligibility (e.g. package B) that is not above the price of package B at the final primary bid round prices *plus* the increase in the amount bid for package A (i.e. the difference between the bidder's bid amount for package A bid in the supplementary round and the bid price for package A in the final primary round).

Relaxed supplementary bids

- 3.82 Every supplementary bid selection, except one that may be for the bidder's bid selection in the final primary bid round, is subject to the supplementary cap rule. A subset of these bids, known as relaxed supplementary bids, are additionally subject to consistency checks as set out in regulations 51-57. The consistency checks are analogous to those applied to relaxed primary round bids.

- 3.83 We propose that all bid selections in the supplementary round which have activity above the eligibility limit that would have applied had a primary round occurred immediately after the final primary round, are subject to consistency checks. These checks are determined with reference to bids made in eligibility reducing rounds in the primary bid rounds phase.
- 3.84 The consistency checks would comprise a set of one or more relative caps applying to all bids in the supplementary round with activity above the supplementary round eligibility limit. Such bids are relaxed supplementary bids which may necessitate one or more chain bids (regulations 55-57). Where multiple relaxed supplementary round bids result in multiple chain bids for the same package bid in an eligibility reducing round in the primary bid rounds, the highest bid amount submitted would be the bid considered in the winner determination (see below, regulation 76).

Extensions during the supplementary bids round

- 3.85 As set out in the regulation 72, if a bidder is unable to submit its supplementary bids within the time specified for the round, it may be entitled to an extension of a further 60 minutes. In order for this to apply, Ofcom must be satisfied that there are circumstances beyond the bidder's control which meant that the bidder could not submit its supplementary bids before the end of the round.

Further deposit for supplementary bids round

- 3.86 Ofcom will notify a deadline for bidders to pay the further deposit for the supplementary bids round (regulation 75). For bidders that have satisfied all deposit requirements during the primary bid rounds, the further sum to be paid will be such that the total amount a bidder has on deposit is at most one half of the greater of the bidder's highest valid primary bid or highest valid supplementary bid. For bidders that have not met all deposit requirements, the further sum will be up to the full amount of the greater of the bidder's highest valid primary bid or highest valid supplementary bid. Ofcom expects to provide further guidance on deposit payments for the supplementary bids round closer to the start of the auction.

Determination of winning principal stage bids

- 3.87 After the supplementary bids round, Ofcom applies a procedure to determine the winning bidders and the base prices, which is called the 'winner determination' and is set out in regulations 76 and 77 and Schedule 4.
- 3.88 The winning combination of principal stage bids shall be the valid combination of principal stage bids for which the total value is the highest. The total value of the combination of principal stage bids is calculated in accordance with regulation 76, and is the sum of the total bid amounts included in the combination, plus the reserve price for any frequency lots not included in the combination minus the maximum discount for any coverage obligation not included in the combination.

- 3.89 Following the selection of the winning combination of principal stage bidders, Ofcom proposes to apply a method based upon opportunity cost for determining base prices for their winning bid selections as set out in Schedule 4.
- 3.90 The base prices for winning bidders must satisfy the following conditions:
- the base price for each winning bid must be at least the sum of the starting prices of all the frequency lots included in the package of the winning bid minus the discount for the coverage obligation if included in the winning bid;
 - the base price must be at least £1,000;
 - the base price for each winning bid cannot exceed the bid amount of the winning bid;
 - the sum of base prices for each subset of winners (including subsets containing a single winner and the subset containing all winners) must be at least the joint opportunity cost for that subset of winners; and
 - the sum of base prices must be minimised across all possible sets of prices that meet the conditions above.

Final principal stage deposit

- 3.91 Winning bidders from the principal stage must pay a final principal stage deposit by a deadline specified by Ofcom, such that the amount that the bidder has on deposit is at least the amount of the base price of that bidder's winning bid (regulations 79). If the amount a bidder has on deposit is less than this following the passing of the deadline, that bidder shall be excluded from the award process, will not be granted any licences, and shall forfeit its deposit.

Publication of the principal stage results

- 3.92 In accordance with regulation 80, after the deadline for the final principal stage deposit, Ofcom will publish on its website the names of the winning bidders and, for each winning bidder, the number of frequency lots won in each frequency category, whether a coverage obligation applies, and base prices. Ofcom will also publish the names, number of lots won, and base prices for any bidder that did not pay the final principal stage deposit by the deadline specified under regulation 79 and was therefore excluded from the award process.

The assignment stage

- 3.93 After the principal stage of the auction, we propose to hold a single round, sealed bid assignment stage to determine the exact frequencies won by each bidder. Part 6 of the proposed Auction Regulations sets out how we propose to implement the assignment stage.

- 3.94 If there is only one permissible assignment plan for a frequency lot category, then bidders would be assigned the frequencies corresponding to the spectrum they won in the respective band in accordance with this assignment.
- 3.95 If, as is more likely, there are multiple assignments that meet these requirements, then bidders who would be assigned alternative frequencies in different assignments would be invited to submit bids for these alternative options. Ofcom would then select the highest value combination of bids that can be accommodated. Assignment stage bids are considered separately for each of the three spectrum bands.
- 3.96 Bidders are not required to submit assignment bids to be assigned frequencies that correspond to the amount of spectrum won in the principal stage. Therefore, participation in the bidding process of the assignment stage is optional.
- 3.97 Ofcom will only consider combinations of assignment stage options where each bidder is assigned a contiguous frequency block of spectrum that corresponds to the bandwidth acquired in the principal stage, and where any frequency lots in a category not assigned to any bidder also form a contiguous frequency block.

Required assignment stage deposit

- 3.98 Bids placed in the assignment stage by a bidder will only be considered valid if the bidder provides Ofcom with the required assignment stage deposit (regulation 109). The required assignment stage deposit should be such that the amount the bidder has on deposit covers its required final principal stage deposit, plus
- a) the bidder's highest assignment stage bid for a 700 MHz paired assignment stage option;
 - b) the bidder's highest assignment stage bid for a 700 MHz individual assignment stage option; and
 - c) the bidder's highest assignment stage bid for a 3.6-3.8 GHz assignment stage option.
- 3.99 Where the bidder fails to do so, it shall be deemed to have made a valid assignment stage bid of zero pounds for all assignment stage options, in accordance with regulations 92(4), 97(4) and 102(4).

Determination of winning assignment stage bids and additional prices

- 3.100 Of all combinations of assignment stage options that are compatible with valid assignment stage band plans, the one that yields the greatest value will be selected as the winning combination of assignment stage options.
- 3.101 Bidders will pay an additional price reflecting the opportunity cost of bids, as set out in Schedules 5, 6 and 7 to the regulations.

The grant stage

Licences available in the auction

- 3.102 Part 7 of the Auction Regulations deals with the grant stage.
- 3.103 Regulation 113 sets out the two licences which Ofcom proposes to make available under the auction. These are:
- a) 700 MHz licences, which will be available to bidders which made winning bids for 700 MHz paired frequency lots and/or 700 MHz individual frequency lots; and
 - b) 3.6-3.8 GHz licences, which will be available to bidders which made winning bids for 3.6 GHz lots;
- 3.104 If a bidder wins a coverage obligation in the principal stage of the auction, the coverage obligation will be written into each of the spectrum licences that the bidder wins in the auction.
- 3.105 Following the end of the assignment stage, Ofcom will determine the particular licence fee and the precise frequencies to be included in the licence (regulation 112).

Granting of licences

- 3.106 Where the winning bidder's deposit is less than its licence fee after the assignment stage, the bidder must pay the difference between the amount of its deposit and its licence fee by the deadline specified under regulation 115. If a winning bidder's deposit is greater than or equal to its licence fee, Ofcom will grant licences to that bidder for the relevant frequencies assigned and refund to the bidder the difference (if any) between the amount of that deposit (less any sum forfeited) and the licence fee (regulation 116).
- 3.107 Interest on deposits, if any, will not be paid to applicants or bidders.
- 3.108 As explained above, if a bidder does not meet the payment requirement, it will not be entitled to the grant of any licences and will not receive a refund of its deposit, which will (where not already forfeited) be forfeited.

Completion of the award process

- 3.109 After the grant of licences, and the payment of refunds to winning bidders, Ofcom will complete the award process by publishing on the Ofcom website the names of all the licensees, the details of the frequency ranges and any coverage obligations included in the licences awarded, the licence fees, details of the bids, and, where a bidder did not meet the requirements relating to the amount payable, details of the licences which would have been awarded, and fees which would have been paid.

Consultation questions

Question 1: Do you have any comments on our proposals to make Wireless Telegraphy (Licence Award) Regulations 2019, which are set out in draft form in annex 5?

Question 2: Do you have any comments on the implementation of the bid activity constraints in the primary rounds in the draft regulations, in particular relaxed bids, relative caps, and chain bids?

Question 3: Do you have any comments on the implementation of the supplementary cap (i.e. final price cap), relaxed supplementary bids and relative caps in the supplementary bids round

A1. Responding to this consultation

Delete these annexes if your document is not a consultation

How to respond

- A1.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 12 March 2019
- A1.2 You can download a response form from <https://www.ofcom.org.uk/consultations-and-statements/category-2/proposal-auction-regulations-700mhz-3.6-3.8-ghz>. You can return this by email or post 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 radiospectrum.award@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet (<https://www.ofcom.org.uk/consultations-and-statements/consultation-response-coversheet>).
- A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- 700 MHz and 3.6-3.8 GHz award
Ofcom
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 a direct answer to the questions asked in the consultation document, and set out at annex 4 below. 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 John Glover on 020 7981 3000, or by email to radiospectrum.award@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 our website, www.ofcom.org.uk, 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 at <https://www.ofcom.org.uk/about-ofcom/website/terms-of-use>.

Next steps

- A1.15 Following this consultation period, Ofcom plans to publish a statement.
- A1.16 If you wish, you can register to receive mail updates alerting you to new Ofcom publications; for more details please see <https://www.ofcom.org.uk/about-ofcom/latest/email-updates>

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 x.
- 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 Jacqui Gregory, Ofcom's consultation champion:

Jacqui Gregory
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA
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: organisation realise

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

Question 1: Do you have any comments on our proposals to make Wireless Telegraphy (Licence Award) Regulations 2019, which are set out in draft form in annex 5?

Question 2: Do you have any comments on the implementation of the bid activity constraints in the primary bid rounds in the draft regulations, in particular relaxed bids, relative caps, and chain bids?

Question 3: Do you have any comments on the implementation of the supplementary cap (i.e. final price cap), relaxed supplementary bids and relative caps in the supplementary bids round

A5. Draft of the Wireless Telegraphy (Licence Award) Regulations 2019

This annex is published as a separate document.

A6. Glossary

2012 Register Regulations means The Wireless Telegraphy (Register) Regulations 2012;

Authorisation Directive means the Directive of the European Parliament and the Council of 7 March 2002 on the authorisation of electronic communications networks and services 2002/20/EC;

Award Regulations means The Wireless Telegraphy (Licence Award) Regulations 2019 that we are proposing to make;

General Trading Regulations means The Wireless Telegraphy (Spectrum Trading) Regulations 2012;

Mobile Trading Regulations means The Wireless Telegraphy (Mobile Spectrum Trading) Regulations 2011;

WT Act means The Wireless Telegraphy Act 2006;