
TELSTRA CORPORATION LIMITED

Submission to the Department of Communications and the Arts on the Exposure Draft Radiocommunications (Spectrum Licence Allocation—Residual 700 MHz Band One) Direction 2016

[Public version]

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EXECUTIVE SUMMARY

We appreciate the opportunity to comment on the Draft Direction to the ACMA for the proposed sale of a 2x10 MHz block of the unsold 700 MHz spectrum to Vodafone Hutchinson Australia (VHA). We recently made inquiries (in April 2016) to the ACMA and Government about the likely timing of its allocation. We received no indication that it was likely to be allocated in the near future. So we were very surprised and concerned when we saw this proposal to sell some of the unsold spectrum directly to VHA without testing the market. [Commercial-in-Confidence].

Concerns about the proposed sale

We believe the proposed sale is detrimental to the integrity of Australia's spectrum management framework and potentially undermines confidence in future auction processes. Not only is it inconsistent with previous spectrum allocations, it is also inconsistent with key policy principles such as openness, transparency, equity and ensuring that spectrum can be put to its highest value use. The proposed sale has the following significant shortcomings:

- The lack of an open and competitive market mechanism to test the current demand and price.
- Lack of evidence to justify the assumptions that there is no other competing interest in the spectrum, the unilateral sale to VHA is in the public interest, and therefore the allocation limits should be set to zero for all parties other than VHA.
- Bidders in the 2013 auction are not treated fairly due to VHA being offered more favourable terms such as flexibility to make payment instalments after the start of the spectrum licence, a discounted price, and additional option value in the form of future access to the residual 2x5 MHz block.
- The residual 2x5 MHz block of unsold spectrum is likely to be of limited value to any party other than VHA, and is therefore at risk of being undervalued and underutilised.
- Directing the ACMA to allocate a spectrum licence to a particular party (VHA) appears to be inconsistent with procedures prescribed by the Radiocommunications Act 1992.

These shortcomings are likely to result in a sub-optimal allocation of the unsold 700 MHz spectrum which would reduce its contribution towards delivering better and more innovative services for customers and wider economic benefits. Such an allocation would also set an undesirable precedent for the future management of Australia's spectrum resource.

A more appropriate sale process

We believe the only way to satisfactorily resolve these shortcomings and maintain the integrity of the spectrum allocation framework is to adopt an alternative process which is transparent, competitive and open to all market participants. We strongly urge the Government to:

1. Not proceed with the Draft Direction.
2. Conduct an expressions of interest (EOI) process to identify any competing demand for the unsold 700 MHz spectrum. Interested parties should be given 6 months in which to respond, so they have time to properly assess the value of the spectrum and complete internal governance processes.
3. If the EOI identify competing demand, consult with industry and design an auction. There may be merit in considering a multiple-band auction which simultaneously auctions the unsold 700 MHz spectrum with spectrum in the 900 MHz and Extended 850 MHz bands. If allocation (competition) limits are to be applied we believe a more efficient outcome would result from applying a multi-band limit across the spectrum to be allocated in these three sub 1 GHz bands rather than using separate in-band limits.
4. If the EOI identify no competing demand, offer the spectrum directly to the interested party (or parties), but the terms must not be more favourable than those offered in the 2013 auction.

01 INTRODUCTION

1.1. Introductory comments

We welcome the opportunity to comment on the *Exposure Draft Radiocommunications (Spectrum Licence Allocation—Residual 700 MHz Band One) Direction 2016* (the Draft Direction).

Spectrum in the 700 MHz frequency band is a highly valuable resource for the delivery of mobile broadband services in Australia. The excellent propagation characteristics of this band enhance coverage and building penetration and the wider bandwidths available in the band also mean that it can deliver increased broadband speeds and network capacity. The band is important for delivering new and innovative mobile services to customers across Australia along with significant productivity benefits that are estimated to be worth many billions of dollars to the broader economy.¹

It is vital that the spectrum in this band is allocated in a way that maximise the benefits to the community. It is generally understood that the best way to achieve this is to allocate the spectrum through open and transparent market processes. The existing legislation for allocating spectrum licences in Australia is designed to facilitate this and the proposals currently being considered in the Government's review of Australia's spectrum policy and management framework are seeking to further strengthen it. A key principle guiding the review is *"promoting efficient allocation and use of spectrum – by making use of market principles and mechanisms"*.² Our understanding is that all previous allocations of new spectrum licences have used an open and competitive market process such as an auction.³

Consequently, we were very surprised to see the proposal from the Department of Communications and the Arts (the Department) to directly allocate a 2x10 MHz block of unsold 700 MHz spectrum to VHA without using an open and competitive market mechanism. The proposal was also surprising because we had recently made written inquiries (in April 2016) to both the ACMA and the Department about the likely timing of the allocation of the unsold 700 MHz spectrum and received no indication that Government was considering selling some of this spectrum in the near future.

Our expectation, based on the previous Ministerial Direction to the ACMA on 26 July 2013, was that the ACMA would report to the Minister by 1 September 2014 on the appropriate procedures for the allocation of the unsold 700 MHz spectrum ("the 2014 ACMA Report"), and this report would eventually result in the Minister making a decision about these procedures, possibly in conjunction with further consultation. We anticipated this decision would be made public so that the agreed procedures would be transparent to all parties interested in gaining access to the spectrum. There has been no public visibility of the Minister's consideration of the 2014 ACMA Report and it is unclear how the current proposal relates to the Minister's consideration of that report. [Commercial-in-Confidence]

We are very concerned that the proposed sale of a 2x10 MHz portion of the unsold 700 MHz spectrum to VHA has a number of serious shortcomings which are likely to undermine the integrity of Australia's

¹ A [2008 report prepared by Spectrum Value Partners and Venture Consulting Australia](#) for the Australian Mobile Telecommunications Association indicated that the use of the 700 MHz spectrum would deliver economic benefits of up to \$10 billion over a 20 year period.

² Page 13 of the May 2015 *Spectrum Review Report* published by the Department of Communications at <https://www.communications.gov.au/publications/spectrum-review-report>

³ We also note that offers to re-issue spectrum licences to existing licensees (based on a pre-determined price) were made available to all eligible licensees on an equal basis and only after extensive consultation with the licensees and other interested parties.

spectrum allocation framework and result in the unsold 700 MHz spectrum not being put to its highest value use. Our concerns are explained in detail in section 2 of this submission.

To resolve this situation, we strongly urge the Government to not proceed with the sale contemplated in the Draft Direction and instead implement a more appropriate transparent and competitive market process for the sale of the spectrum. We propose that this alternative process should commence with a call for expressions of interest (EOI) and then move to an auction if excess demand is identified. More detail about our views on this alternative approach to selling the spectrum is provided in section 3 of this submission.

[Commercial-in-Confidence]

02 CONCERNS ABOUT THE PROPOSED SALE

2.1. Overview

The object of the *Radiocommunications Act 1992 (Cth)* (the Act) seeks to maximise the overall public benefit through ‘the efficient allocation and use of the spectrum’ (sub-section 3(a)), and ‘an efficient, equitable and transparent system of charging for the use of spectrum’ (sub-section 3(e)). We are concerned that the proposed sale contains a number of serious shortcomings which are not aligned with either of these outcomes and are likely to have the effect of undermining the integrity of the 2013 digital dividend auction and the wider spectrum management framework in Australia. These shortcomings include:

- The lack of an open and competitive market mechanism to properly test the current demand and price.
- The lack of evidence to justify the Government’s assumptions that there is no other competing interest in the spectrum, that a unilateral sale to VHA is in the public interest, and therefore the allocation limits⁴ should be set to zero for all parties other than VHA.
- The lack of equity due to VHA being offered more favourable terms than the bidders in the 2013 auction of 700 MHz spectrum (and in other previous spectrum allocation processes). These favourable terms include the flexibility of being able to make payment instalments after the start of the spectrum licence, a discounted price, and additional option value in the form of potential future access to the residual 2x5 MHz block of unsold spectrum.
- The residual 2x5 MHz block of unsold spectrum is at risk of being both undervalued and under-utilised because it is likely to be of limited value to any party. The proposal could potentially have the effect of granting VHA a free option on this lot. Consequently, the sale is unlikely to deliver efficient allocation or use of the unsold 700 MHz spectrum as a whole.
- The Draft Direction appears to be inconsistent with the procedures under sections 60 and 62 of the Act which do not contemplate the Minister directing the ACMA to allocate a spectrum licence to a particular person (such as VHA).

2.2. No competitive mechanism to test demand and price

Spectrum is a valuable and scarce public resource. We firmly believe the allocation of the spectrum resource is best achieved through an open and competitive market process as this is most likely to result in it being allocated to its highest value use and thereby maximising the public benefit. This is consistent with the practice to date in Australia’s existing spectrum management regime and the approach being advocated in the Government’s proposals for new legislation in the current spectrum review process.

Allowing a party to acquire unsold spectrum through a closed process, especially after they decided not to participate in an earlier auction process, undermines the integrity of spectrum auctions and the spectrum allocation framework more generally. It also sends an unhelpful message that future spectrum

⁴ We use the term ‘allocation limits’ to refer to limits determined under sub-sections 60(1) and 60(5) of the Radiocommunications Act, however we note the term ‘competition limits’ is also commonly used to describe the same concept. See, for example, the use of the latter term by the Productivity Commission, *Radiocommunications - Inquiry Report No.22* (1 July 2002) p106 et seq.

allocations can be in the form of bi-lateral negotiations with Government rather than through open and transparent market processes.

A direct sale to a party at a pre-determined price, such as the one currently proposed, should only be considered after testing the current level of demand in an open and competitive market process. We do not believe the 2013 auction and 2014 ACMA Report can be relied on to assess the current level of demand.

Uncertainty about demand and price

The lack of a competitive process in the current proposal means there is uncertainty about the level of demand and the price for the unsold 700 MHz spectrum.

We do not believe the ACMA's 2014 consultation on the future treatment of the unsold 700 MHz spectrum can be relied on as an accurate predictor of current demand. That consultation was conducted two years ago and much has changed in the mobile industry since that time. Further, we understood the 2014 consultation undertaken by the ACMA was a closed one with comments only being sought from Telstra, Optus, VHA, TPG and the Australian Mobile Telecommunications Association (AMTA). Therefore, it is unlikely that the process would have captured any interest from other parties.

There are a number of changes in the mobile broadband market which indicate that demand for the unsold 700 MHz spectrum may have changed over the past two years:

- the LTE market has matured;
- technical plans for the use of the 700 MHz band in other regions were settled at the 2015 ITU World Radio Conference;
- growth in the demand for mobile video content has been stronger than anticipated; and
- new demand is emerging in the form of Internet of Things services.

Demand in the recent 1800 MHz regional spectrum auction was greater than anticipated as reflected in the extended duration of the auction (29 working days) and the generally higher than expected prices. Of particular note was the high prices paid for lots in the Canberra region where VHA was prepared to pay \$1.48/MHz/pop for three lots with an 11 year licence term. This is substantially higher than the \$1.36/MHz/pop price in the 700 MHz auction for nationwide spectrum with a 15 year licence term. These observations lead us to suggest that current demand for the 700 MHz spectrum may also be greater than expected.

The high demand in the 1800 MHz regional spectrum auction was at least partly driven by strong bidding from TPG which ended up acquiring a greater quantity of spectrum than VHA. The possibility of newer players like TPG being interested in the unsold 700 MHz spectrum should not be discounted.

[Commercial-in-Confidence]

For these reasons, we do not think it is reasonable to assume that current market demand for the unsold 700 MHz spectrum is the same as it was in 2014. If there is demand in addition to that expressed by VHA, then the current market price may be higher than the equivalent of the \$1.36/MHz/pop reserve price that was paid in the 2013 auction. We believe the only way to properly discover the current level of demand and price is through an open and competitive market process.

Nonetheless, in the absence of any other information regarding competing demand, we concur that the \$1.36/MHz/pop reserve price from the 2013 auction is an appropriate starting point for the minimum price in any sale of the unsold 700 MHz spectrum. A lesser value would undermine the integrity of the 2013 auction and the investment in this spectrum by the successful bidders.



2.3. Lack of evidence to justify key assumptions

We are concerned that the consultation documentation fails to provide transparency and clarity about some key matters. In particular, little evidence has been provided to support the view that:

- there is no other demand for the unsold 700 MHz spectrum;
- the unilateral sale to VHA is in the public interest, and;
- therefore, the allocation (competition) limits for this spectrum should be set to zero for all other parties.

Lack of evidence to support the view that there is no other demand

As explained in section 2.2, we do not believe relevant evidence has been provided to support the Department's view that there is no other demand for the unsold spectrum that needs to be taken into account. The reliance on the 2014 ACMA Report is inappropriate as the consultation that informed the report was conducted two years ago. We have not been given access to the 2014 ACMA Report, however we consider it unlikely that the ACMA would have forecast demand for years into the future without recommending that the forecast be reappraised at regular intervals.

At the very least, we think the Government should have tested the level of current demand by seeking expressions of interest from other parties before proceeding with plans to offer the spectrum to VHA.

Lack of evidence to justify that the sale is in the public interest

No justification has been provided for why a unilateral sale to VHA would be in the public interest, other than an unsubstantiated comment that the sale would assist VHA to be a stronger competitor as the "newest entrant" in the mobile broadband market.⁵ We question the basis for this comment as Vodafone and Hutchinson are both substantial global players, and Vodafone has been in the Australian mobile market since the early 1990s⁶ and even longer in the international market. We also fail to see why VHA, which has financial backing from substantial off-shore parent companies, should be given assistance to gain access to spectrum after it failed to participate in the 2013 auction.⁷

We are not aware of any basis to suggest that VHA commenced supply of "mobile broadband" (however that may be defined) later than other mobile network operators ("MNOs") in Australia. The Hutchison Australia website maintains, to the contrary, that, "Hutchison, through the 3 brand, introduced Australia's **first** third generation (3G) mobile telecommunications network."⁸

⁵ Department of Communications and the Arts, "Consultation Note: Exposure Draft Radiocommunications (Spectrum Licence Allocation – Residual 700 MHz Band One) Direction 2016", 6 May 2016, p3.

⁶ The Productivity Commission's 2002 report records that Vodafone obtained its carrier licence in 1992. See *Radiocommunications - Inquiry Report No.22* (1 July 2002) p199.

⁷ The 18 December 2012 ZDNet report at <http://www.zdnet.com/article/vodafone-pulled-out-of-4g-spectrum-auction-months-ago-govt/> quotes advice from Minister Conroy's office which indicates that VHA pulled out of the 2013 auction prior to the reserve price being set. [Commercial-in-Confidence]

⁸ Our emphasis. See www.hutchison.com.au/about-hutchison/ (last visited 2 June 2016).

If the Consultation Note is purporting to claim that by virtue of the merger of Vodafone and Hutchison in 2009 a “new” entrant was somehow created, this overlooks the fact that the merger combined two substantial existing businesses, each with its own network and subscribers.⁹

Further, the Consultation Note issued by the Department suggests that reliance has been placed on market share data from the 2012-13 financial year, which is now three years old.¹⁰ Reliable current market share data is available from numerous sources, as is trend data which would be equally relevant to an assessment of whether *ex ante* allocation limits might be justified. No explanation is provided by the Department as to why such dated information has been used, the source of that information, or why the data apparently being relied upon does not take into account recent trends in subscriber acquisition in the relevant market.

These factual inaccuracies in the Consultation Note question the basis of the proposed policy decision by the Minister to provide a preferential benefit to VHA through not exposing it to the ordinary competitive process for spectrum acquisition. Assessment of the public interest must be based on evidence. Reliance on incorrect, selective and dated data is likely to lead to an inaccurate understanding of the relevant market.

No evidence to justify the setting of the allocation limits

No justification has been provided for the imposition of zero allocation limits on the 2x10 MHz block of spectrum for all parties other than VHA. This decision would effectively prevent the ACMA from considering competing interest in the spectrum from any other party. It would seem to be an extreme decision and, as far as we are aware, unprecedented in Australia or any other developed country. However, despite this, no analysis or evidence has been supplied to support the decision.

We would normally expect allocation limits to be set after the Minister considered advice from the ACCC on the competition considerations associated with an allocation. In previous spectrum allocations it has been standard practice for the Minister to seek and receive advice from the ACCC before proceeding to set allocation limits. Further, the ACCC has also normally consulted with stakeholders in a transparent public process before offering its advice to the Minister. It is not clear to us that any such advice has been sought by the Government or received from the ACCC in relation to the current proposal.

Given that access to the relevant spectrum would only commence on 1 April 2018 under the proposed sale arrangements, there does not appear to be any pressing time constraint justifying the abandonment of good regulatory practice. The ACCC could conduct its standard public consultation process and render its advice within 3 months, as was the case for the recent regional 1800 MHz spectrum auction, without causing delay of commercial consequence for any party wishing to acquire the unsold 700 MHz spectrum

2.4. Parties are not treated equally

We are concerned the terms of the proposed sale to VHA are more favourable than the terms that were offered to successful bidders in the 2013 auction. We believe equitable treatment of all parties is essential for maintaining the integrity of the 2013 auction process and to avoid undermining the investment made by the successful bidders at that auction. Equitable treatment is also important for

⁹ See ACCC, “Public Competition Assessment: Vodafone Group plc and Hutchison 3G Australia Pty Limited - proposed merger of Australian mobile operations”, 24 June 2009.

¹⁰ Department, “Consultation Note”, fn 5 above, p2.

avoiding the creation of a precedent which would have the undesirable effect of encouraging parties to not bid in future auctions and instead seek to negotiate access to unsold spectrum on more favourable terms directly from the Government at a later date.

As explained below, we believe there are several aspects of the current sales proposal which fail to deliver an equitable outcome:

- the instalment payments after the commencement of the spectrum licence represent additional flexibility for VHA that was not made available to bidders in the 2013 auction (or any other previous spectrum sale);
- the calculated adjustment of the price for the shorter term and instalment payments, [Commercial-in-Confidence]; and
- the residual 2x5 MHz block of unsold spectrum is likely to be of limited value to anyone other than VHA and this creates additional option value for VHA.

The calculated adjustment of the price is not neutral

When determining the price to be paid by VHA, the objective should be to make it neutral compared to the payment terms for the winners of the Digital Dividend Auction in 2013. Those terms were \$1.36/MHz/pop (or \$622.1 million for 2x10MHz) payable in full 107 days prior to the start of the licence (payment was due by 16 September 2014 and the new licences commenced on 1 January 2015).

To achieve this two adjustments are required: firstly for a shorter licence duration, and secondly for delayed payment by instalment.

Adjustment for a shorter licence duration

We agree with a tilted annuity approach to calculating the adjustment but we have concerns regarding the Department's implementation, particularly with regard to its treatment of tax. [Commercial-in-Confidence]

Further, we would like to see more information about the assumptions underlying the choice of the 2.5% cash flow tilt. The Department states that 2.5% *"is based on expected long-term population growth; expected mobile penetration; expected growth in the average revenue per user (ARPU); and expected growth in mobile data applications"*.¹¹ When the ACMA was calculating annual tax charges for the possible use of apparatus licences in the 1800 MHz regional spectrum and early access to the 700 MHz spectrum, it applied a tilt of 3.73% to account for expected inflation of 2.5% per annum and long-term population growth of 1.2% per annum. It is not clear to us why the proposed tilt for the sale to VHA is markedly different to the figure that was recently used by the ACMA.

Adjustment for payment by instalments

We believe that this adjustment is substantially understated. [Commercial-in-Confidence]

The proposed sale assumes payment in three annual instalments commencing from 31 January 2018 which is 60 days prior to the start of the licence. This is in contrast to the payments for the licences sold in the 2013 auction, which were due in full 107 days prior to the start of the licence. The delayed

¹¹ Department of Communications and the Arts, "Additional Information – 700 MHz spectrum", 26 May 2016, p3.

payments provide VHA with a clear financial advantage, and therefore the Department is correct to adjust the payments upwards. However, we believe that the adjustment is understated for two reasons:

- the discount rate used in the calculation of 5%, suggested by VHA, is too low; and
- the 47 day delay until the first payment is not reflected in the adjustment.

When making adjustments for delayed payments, it is important to use a discount rate that reflects the licensee's WACC. By doing so the licensee should be neutral to the timing of the payments. The use of a lower discount rate would mean that the licensee gains an advantage from the delayed payment. With this in mind and given that VHA provided the discount rate of 5%, we would expect the Department to undertake sufficient due diligence to ensure the rate is correct and consistent with discount rates used in other similar exercises.

The Department's calculation for a shorter licence duration uses a discount rate of 8.4%, which was chosen by the ACMA as a reflection of the post-tax WACC of Australian mobile operators. Notably, one of the two approaches provided – Approach B¹² – implicitly assumes a delay in the payment date (of 3.25 years) and so provides a precedent for a discount rate when adjusting for payment delays.

Therefore, there are two problems with the Department's choice of 5%:

- it is too low to reflect the WACC of VHA (or indeed another Australian mobile operator); and
- there is a clear inconsistency with the adjustment for shorter licence duration.

We also note that, if the Department has conducted the above calculation on pre-tax cash flows, an even higher pre-tax WACC should be used. In its 2012 documentation regarding its calculation of the 1800 MHz apparatus licence taxes¹³, the ACMA states that a pre-tax equivalent of an 8.4% post-tax WACC would be 12%.

Additionally, we believe the Department has failed to account for the additional 47 day delay until the first payment to make the payment equivalent to that for the licences auctioned in 2013. Although it isn't made explicit, Approach B to the adjustment for 3.25 year shorter licence duration also adjusts the timing of payment by 3.25 years – from 16 September 2014 to 16 December 2017. Therefore VHA's payment should be further adjusted for the 47 day delay from 16 December 2017 to the date of its first payment on 31 January 2018.

Finally, we note that in recent auction processes (including the 2013 auction) the ACMA has insisted on the provision of financial security in the form of bank guarantees to ensure that there is no default in meeting payment commitments by a bidder should they succeed in the auction. This has caused significant additional cost for licensees, over and above the amounts of their winning bids at the auction and the cost of their auction participation. The proposed sale arrangements with VHA do not contemplate any similar form of security for payment and in that respect are inequitable with the

¹² The Department provides two approaches to the calculation for a shorter licence duration: Approach A and Approach B. Approach A is clearly wrong as it adjusts the 2013 auction price to an 11.75 year licence period at the start of the original licence period and assumes no change in the original payment date. Approach B on the other hand adjusts the 2013 auction price to an 11.75 year licence period at the end of the original licence period. It also assumes an equivalent delay in the fee payment – that is, a 3.25 year delay to 16 December 2017 (although this assumption is not made explicit). We believe that it is the correct approach, subject to our explanation above regarding the need for further adjustment for the 47 day delay to the date of first payment on 31 January 2018.

¹³ ACMA, *Regional and remote apparatus licences in the 1800 MHz band, Issues paper 1*, December 2012.

treatment of purchasers under the ACMA's recent approach to spectrum licence allocation. We believe VHA should also be required to lodge a bank guarantee as security until after the acquisition is settled.

Instalment payments are additional flexibility not offered to bidders in the 2013 auction

Even though the instalment payment prices may be adjusted to make them neutral from a pricing perspective, they still represent additional flexibility that is being offered to VHA but was not made available to bidders in the 2013 auction or any previous spectrum sale processes. To maintain equivalence with the 2013 auction terms we believe payment must be in the form of a single upfront lump sum.

The residual 2x5 MHz block creates additional option value for VHA

As explained in section 2.5 below, the proposed sale would create an orphaned 2x5 MHz block of unsold 700 MHz spectrum which is likely to be of limited value to anyone other than VHA. The block is adjacent to the 2x10 MHz block in the current sale proposal so VHA could potentially combine the two blocks in the future to make a larger and more valuable 2x15 MHz block. In the meantime the block is likely to remain unsold and unused. This effectively creates additional option value for VHA that is not available to other parties and does not appear to have been factored into the proposed sale price.

2.5. The residual 2x5 MHz block is likely to be undervalued and underutilised

We are concerned that the proposed sale overlooks the treatment of the residual 2x5 MHz block. The size and location of this block within the band means that it is likely to be of limited interest to anyone other than VHA in the future. Therefore, its potential maximum value may not be realised and there is a risk it will also remain underutilised for some time.

This outcome is inconsistent with sub-section (a) of the Object of the Act which is to “maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum”.¹⁴ The proposed sale intentionally creates an orphaned and underutilised block and this cannot be regarded as being in the interest of ensuring the efficient allocation and use of spectrum.

To address this problem, we believe the sale process for the unsold 700 MHz spectrum needs to encompass all of the unsold 700 MHz spectrum and be designed to minimise the risk of this spectrum remaining fragmented or unsold.

It is not economic to invest in an orphaned 2x5 MHz block

Larger contiguous blocks of spectrum allow LTE systems to use the spectrum resource most efficiently and deliver the best speeds and customer experience. Current LTE technology is deployed in increments of 2x5 MHz (for frequency division duplex spectrum) up to a maximum of 2x20 MHz in a single transceiver. It is generally not economic for commercial LTE operators to invest in a single 2x5 MHz block of spectrum as the reduced network capacity and speed associated with the smaller bandwidth does not normally justify the investment.

The LTE carrier aggregation feature can be used to combine smaller blocks of spectrum, either within the same band or across bands, but there is a loss of efficiency due to overheads in the aggregation

¹⁴ Radiocommunications Act, section 3.

process. Further, only certain combinations of blocks of spectrum can be aggregated and the number of combinations is limited – because of technology and cost constraints in the user device hardware.

For these reasons, it is highly desirable that allocations of spectrum suitable for commercial LTE use are designed to give operators the opportunity to acquire larger contiguous blocks of spectrum such as 2x10 MHz, 2x15 MHz or 2x20 MHz.

The residual 2x5 MHz block is unlikely to be of significant value to anyone other than VHA

As explained above, the residual 2x5 MHz block would be of limited value to a commercial operator unless it can be combined with other existing holdings to make a larger contiguous block of spectrum.

VHA is the operator that would benefit the most from acquiring the residual 2x5 MHz block, as this block is immediately adjacent to the 2x10 MHz block that it is seeking to acquire in the current sale process. VHA could combine the two blocks in the future, without the cost of having to install additional radio frequency infrastructure, to make a larger and more valuable 2x15 MHz block.

[Commercial-in-Confidence]

Further, the residual 2x5 MHz block uses the upper duplexer¹⁵ in the 700 MHz band plan and our current 2x20 MHz holding uses the lower duplexer. Not all 700 MHz user devices are able to support aggregation across the two duplexers. [Commercial-in-Confidence]

We think the residual 2x5 MHz block is unlikely to be attractive to other commercial parties (except for VHA) as they would also need to justify the investment in new radio frequency infrastructure to utilise it.

We note the residual 2x5 MHz block would be likely to be of greater interest to other parties if it could be acquired in combination with spectrum in the 2x10 MHz block that is being offered to VHA.

It is possible that public safety agencies may advocate for the residual 2x5 MHz block of spectrum to be assigned to them for the development of a public safety mobile broadband capability. We think the residual 2x5 MHz block is of limited value for this purpose as this frequency range is not one that has been harmonised in the Asia-Pacific region for Public Protection and Disaster Relief (PPDR) use. Regional harmonisation is important for achieving economies of scale in devices and infrastructure, and to also promote compatibility of devices and networks in the region. Band 27 (807-824 MHz and 852-869 MHz) has been identified as the preferred band for Public Protection and Disaster Relief (PPDR) in Australia by the ACMA, and in the Asia Pacific region by the ITU and APT.

Further, the Productivity Commission, in its recent research report on Public Safety Mobile Broadband¹⁶, found that a commercial solution involving public mobile network infrastructure would be the most cost-effective approach to delivering a public safety mobile broadband capability. It is difficult to see how a competitive commercial solution would be achieved using the residual 2x5 MHz block, noting the high marginal cost of deploying infrastructure in this block for any commercial operators other than VHA.

[Commercial-in-Confidence]

2.6. Procedural concerns

The arrangements in the Draft Direction appear to be at odds with sections 60 and 62 of the Act.

¹⁵ The duplexer is a radiofrequency device that shares the same antenna between a transmitter and receiver.

¹⁶ Productivity Commission *Research Report - Public Safety Mobile Broadband*, p27, <http://www.pc.gov.au/inquiries/completed/public-safety-mobile-broadband/report/public-safety-mobile-broadband.pdf>

Section 60 provides for the establishment of an open and transparent procedure for the allocation of spectrum licences between multiple prospective licensees, consistent with the object and purpose of the Act. It does not permit the Minister to require that the ACMA allocate a spectrum licence to a particular person, which is the effect of the Draft Direction.

The tension between the Draft Direction and sections 60 and 62 of the Act arises in a number of ways:

- The Act distinguishes between the determination of procedures to be applied in allocating licences (section 60) and the allocation of licences in accordance with those procedures (section 62). The Draft Direction collapses this distinction between the procedural and allocative stages of the licencing process — a ‘procedure’ serves no useful purpose if a direction requires that a licence be issued to a particular person.
- Sub-sections 60(5), (6) and (6A) do not permit the setting of allocation limits so as to exclude ‘all other persons’ from the procedure to be applied in allocating spectrum. ‘All other persons’ are not ‘a specified group of persons’ within the meaning of sub-section 60(6A). Further, the purpose of sub-section 60(6A) —to ‘*facilitate the entry of new players in the telecommunication industry*’¹⁷ — is frustrated if all other potential spectrum licensees are excluded from an allocation procedure to the benefit of a large and well-established market participant like VHA. As noted in section 2.3 above, VHA through its Vodafone entity has been a participant in the Australian mobile services market since being initially licensed in 1992¹⁸, and no credible evidence or argument exists that would support a description of VHA being a “new player”.
- The Draft Direction is at odds with the object and purpose of the Act. The object of the Act includes providing for ‘*an efficient, equitable and transparent system of charging for the use of spectrum*’ (sub-section 3(e)) and maximising overall public benefit through ‘*the efficient allocation and use of the spectrum*’ (sub-section 3(a)). The Explanatory Memorandum to the *Radiocommunications Bill 1992* (Cth) also confirms that the Act was intended to establish a ‘*market system of spectrum management*’. In addition to offending the terms of the Act, the form of allocation contemplated by the Draft Direction is at odds with the object and purpose of the Act.

We believe that, consistent with previous directions made under sub-section 60(10), along with the terms of sections 60 and 62 and the overarching object and purpose of the Act, any procedure directed by the Minister should facilitate the participation of multiple prospective licensees subject only to validly imposed allocation limits determined in accordance with the Act.

While the Draft Direction relies upon the Minister’s powers under sub-section 14(1) of the *Australian Communications and Media Authority Act 2005* (Cth) (“the ACMA Act”) to direct the ACMA to issue a single spectrum licence,¹⁹ the Minister’s directive powers in respect of the allocation process must still be exercised in a manner consistent with section 60 of the Act and its object and purpose. Similar considerations arose in 2014 when the previous Minister exercised his directive powers under section 14 of the ACMA Act to enable apparatus licensed spectrum to be made available in a configuration optimal for use by NBN Co.²⁰ While the apparatus licensing framework in the Act is distinct from that applicable to spectrum licence allocation, it is noteworthy that the former Minister in the 2014 case did not direct the

¹⁷ Explanatory Memorandum, *Radiocommunications Legislation Amendment Bill 1999* (Cth) pp 2, 4, 6.

¹⁸ The Productivity Commission’s 2002 report records that Vodafone obtained its carrier licence in 1992. See *Radiocommunications - Inquiry Report No.22* (1 July 2002) p199.

¹⁹ Draft Direction sub-section 8(1), (2).

²⁰ *Australian Communications and Media Authority (3.5 GHz frequency band) Direction 2014*.

ACMA to issue the relevant licences to a particular named party and not to any other party, as the Draft Direction effectively purports to do.

Finally, we doubt the need for the express revocation by the Draft Direction of the *Radiocommunications (Spectrum Licence Limits) Direction No. 1 of 2012*²¹ – this was the instrument which determined the allocation limits for the 2013 auction. The direction contained in this instrument, made by the then Minister under section 60(10) of the Act, was duly carried out by the ACMA when it determined the allocation procedure for the 2013 auction under section 60(1) of the Act. It has been noted on many occasions in commentary on the Act that allocation limits apply to the relevant allocation procedure but thereafter are of no further effect, for example in respect of secondary market trades (even if those trades take place immediately after the auction concludes and would have been in excess of the allocation limits had the relevant spectrum been acquired at the auction).²² Unfortunately the Draft Direction was not accompanied by a Draft Explanatory Memorandum and so the rationale as to why this express revocation is needed, is not explained.²³

²¹ Draft Direction sub-section 5(a).

²² See, for example, Productivity Commission, *Radiocommunications - Inquiry Report No.22* (1 July 2002) pp 111 and 164.

²³ We note that in the case of the consultation by the Department in respect of the 3.5 GHz frequency band Direction in 2014, referenced in fn 20 above, the draft EM was made available as part of the consultation process. See: <https://www.communications.gov.au/have-your-say/consultation-draft-direction-use-35-ghz-band-spectrum-nbn-spectrum-gap>

03 A MORE APPROPRIATE SALE PROCESS

3.1. Overview

In order to avoid the serious shortcomings of the current process we strongly urge the Government to not proceed with the Draft Direction and instead offer all of the unsold 700 MHz spectrum through a competitive market based process that is open to all market participants. This will allow the spectrum to be allocated in a transparent, open and even-handed manner that is consistent with the object and procedures of the Act, and does not risk undermining the integrity of the 2013 auction or the broader spectrum allocation framework. We believe the best approach is for the Government to direct the ACMA to:

- Conduct an expressions of interest (EOI) process. Interested parties should be provided with sufficient time so they can properly assess the value of the spectrum (including the value relative to other spectrum that is due to be awarded in the coming years) and complete internal governance procedures.
- If excess demand is expressed in the EOI then resolve this through a transparent and competitive market mechanism, such as an auction.
- If excess demand is not identified in the EOI then offer the spectrum directly to the interested party (or parties), but the terms must be no more favourable than those offered to bidders in the 2013 auction.

Further detail about our views on the design of this approach is provided below.

3.2. Conduct an expressions of interest process

The Minister should direct the ACMA to conduct an Expressions of Interest (EOI) process. The EOI notice would seek indicative statements of interest in all or parts of the 2x15 MHz block of unsold 700 MHz spectrum. Respondents would be required to indicate which specific frequencies are of interest so that contention for position within the 2x15 MHz block can be identified.

The EOI notice should state the steps to be followed after evaluating the expressions of interest. We believe the ACMA should publish the outcome of the EOI process and then conduct a public consultation on the proposed next steps in response to that outcome.

We note that VHA has had the benefit of considerably more time (presumably in the order of months) than other parties to consider the sale of the unsold spectrum. In the interests of treating parties equally, we believe all parties must be given sufficient time to develop their response to the EOI notice. This includes preparing valuations, noting that parties may also wish to give consideration to the impact of other pending spectrum allocations (the Extended 850 MHz band²⁴, 900 MHz band²⁵, 1500 MHz L Band²⁶ and the 3575-3700 MHz band), and completing internal governance procedures. We estimate that a period of 6 months would be appropriate for completing these activities.

3.3. Excess demand – conduct an auction

²⁴ 809-824 MHz paired with 854-869 MHz

²⁵ 890-915 MHz paired with 935-960 MHz

²⁶ 1427-1518 MHz

If the outcome of the EOI process indicates that either there is aggregate demand for more than the 2x15 MHz of unsold 700 MHz spectrum, or the demand for parts of the spectrum overlaps, we believe the Minister should direct the ACMA to allocate this spectrum via an open and competitive auction process. Various options for the design of an auction process exist, including the possibility of a multi-band auction which simultaneously auctions the unsold 700 MHz spectrum with the spectrum that is planned for allocation in the 900 MHz and Extended 850 MHz bands. We would expect the ACMA to consult with key stakeholders in relation to these options before committing to a specific option.

One issue which is likely to arise in the design of an auction is the need or otherwise for allocation limits. We have long been of the view that allocation limits should not be applied to new allocations of spectrum given the adequacy of the competition safeguards which exist under Section 50 of the *Competition and Consumer Act 2010 (Cth)*. Nonetheless, we do note that allocation limits have been a feature of Australian auctions since 1997 and based on advice provided by the ACCC.²⁷

The current situation is somewhat unusual because it concerns a small quantum of spectrum and participation in the associated 2013 auction was limited. Given these considerations, and the fact there is other substitutable spectrum coming up for allocation in the near future, we believe any use of an auction framework to allocate the unsold spectrum presents an opportunity to revisit the approach to using allocation limits, should these be deemed necessary. In particular, we believe there is a strong case for considering a multi-band limit, rather than in-band limits. Such a limit should be based on all of the spectrum to be allocated in these three bands, but excluding existing spectrum which has already been allocated. A multi-band limit would assist mobile operators to coordinate their needs for larger contiguous holdings and reduce the risk of fragmented blocks, which in turn would promote both technical and allocative efficiency. Information to support our views on this matter is provided in Attachment A.

In the event a multi-band limit is adopted, it should be dimensioned in a way which maximises the opportunity for all bidders to efficiently serve their customer base. Catering for likely bidder preferences is a key consideration for the 'auction design' process. In Telstra's view the greatest scope for enabling bidder preferences (and therefore allocative efficiency) for sub 1 GHz spectrum to be realised is associated with a simultaneous multi-band auction (with a multi-band allocation limit) because this would allow sequencing difficulties (and therefore potential uncertainty) to be avoided.

3.4. No excess demand – sell the spectrum directly to interested parties

If the outcome of the EOI process indicates that there is no competing demand for the spectrum, we believe it would be appropriate for the Minister to direct the ACMA to offer the relevant spectrum direct to the interested party (or parties). However, to maintain the integrity of the 2013 auction and the broader spectrum allocation framework, it is essential that the terms of the offer be no more favourable than those offered to bidders in the 2013 auction.

As explained in section 2.4, we believe the terms being offered to VHA in the current proposal are more favourable than those that were offered to bidders in the 2013 auction. In particular, VHA is being offered the flexibility of instalment payments after it gains access to the spectrum, and the calculated price is less than the equivalent of the reserve price in the 2013 auction. These biases must be removed from any future offers that are to be made directly to parties as part of the above process.

²⁷ See Productivity Commission *Radiocommunications - Inquiry Report No.22* (1 July 2002) p107.

3.5. Adequate consultation is key to a successful outcome

To ensure the final arrangements are transparent and have integrity, it is important that there is adequate public consultation at all stages of the alternate process outlined above, and especially in relation to the design of any auction mechanism and the final terms for any spectrum that is to be sold directly to parties.

One of our concerns about the current sale process was the absence of consultation until after the final instrument for the sale mechanism (the Draft Direction) had been drafted. We believe the difficulties created by the current process could have been avoided if there had been consultation earlier in the policy development phase when options were still being considered.

ATTACHMENT A: THE CASE FOR A SUB 1 GHZ MULTI-BAND ALLOCATION LIMIT

In recent times the ACCC has advised the use of in-band allocation limits — in the context of spectrum auctions — to prevent monopolisation and promote competition. We believe in-band limits are a narrow approach for managing access to a scarce resource, and they are particularly poorly suited for the current situation.

If in-band allocation limits were employed in an auction of the unsold spectrum it is likely they would significantly diminish competitive tension and impede the realisation of technical and allocative efficiency. The diminishment of competitive tension would occur if any parties already holding 700 MHz spectrum were limited in their ability to participate in the auction, and this in turn would impact technical efficiency. Because there is only a small quantity of spectrum available for allocation in the 700 MHz band, splitting it across multiple providers is likely to be technically inefficient as this would preclude the realisation of operational efficiencies. If parties who may value the spectrum the most cannot fully participate in the auction, then allocative efficiency is likely to be negatively impacted.

The application of in-band allocation limits to an auction of the unsold 700 MHz spectrum (if there is evidence of demand) would also create the impression that competitive processes for spectrum — and the tension these create — can be bypassed without ramification, as the spectrum in question may be attainable at a later date in a less competitive setting.

If allocation limits are to be applied to any future auction of the unsold 700 MHz lots, there are good reasons for these to be broader than a single 'in-band' measure, as discussed below.

A smarter approach – apply a multi-band limit to sub-1 GHz spectrum

While spectrum is a scarce resource, there can be high levels of substitutability between bands that have similar properties to one another, such as proximity in frequency terms. In practice we believe that the unsold 700 MHz spectrum is likely to be highly substitutable with spectrum in the 850 MHz, Extended 850 MHz and 900 MHz bands, noting each these bands are relatively small in size. Based on these observations, Telstra suggests that if allocation limits are to be considered, they should be framed as a 'multi-band' limit applicable across the spectrum that is to be allocated in all three of these sub 1 GHz spectrum bands.

A multi-band limit could be used in various auction settings including a simultaneous multi-band auction. If there is support for the use of multi-band allocation limits, options for the design of a corresponding auction structure should be explored through a future consultation process.

The use of a 'multi-band' limit would have a number of clear benefits. These include:

- **The avoidance of future coordination challenges.** The quantity of spectrum which is available in each of the sub 1 GHz bands ranges between 2x15 MHz and 2x45 MHz. As explained in section 2.5, efficient LTE deployments require contiguous holdings that are 2x10 MHz, 2x15 MHz or 2x20 MHz in size, with 2x20 MHz being the most desirable. Any use of in-band caps would impede the ability of individual MNOs to coordinate their needs for larger contiguous holdings and result in MNOs having relatively fragmented holdings across each sub 1 GHz band. Such an outcome would not be efficient. A smarter approach would enable interested MNOs to resolve these coordination challenges themselves through a combination of multi-band limits and one or more auction events.
- **The promotion of technical efficiency.** Because a multi-band limit would maximise the opportunity for MNOs to acquire larger blocks of spectrum for more efficient LTE deployment, they would also promote technical efficiency. This in turn would reduce the scope for fragmented blocks — which are devalued and underutilised (and can end up unsold in some situations) — to arise.

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- **The promotion of allocative efficiency.** Because a multi-band limit would enable interested parties to bid on spectrum according to the value they place on it, with minimal artificial constraints, this should support the allocation of various tranches of spectrum to the parties which value it the most equating in turn to the realisation of allocative efficiency;