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**Countrytell**

**Response to Future use of the 3.6 GHz band August 2017**

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# Executive Summary

1. Countytell appreciates the opportunity to the Options paper on Future use of the 3.6 GHz band.
2. We do not agree with the ACMA preferred option.
3. The ACMA is options paper continues to wrongly assume and promulgate that the band is allocated only for Mobile Broadband use which results in inbuilt bias resulting in a highest value assessment which is inaccurate and predetermined.
4. The assumption of population based density models being the basis for current and future deployments in the band in regional areas is wrong in fact - which results in the assessment being incorrect as a whole.
5. We consider that the movement to a clearance of incumbents is not substantiated by evidence nor is it fair or competitive.
6. The best value use of this band in regional and rural areas remains for Fixed Wireless Broadband, for high speed broadband to underserved areas, and also for ITS and IIoT applications for mining and SMART Cities. The regions are a crucible for innovative business models and applications, and slash and burn removal of these spectrum licences, notwithstanding an extended period of time is short sighted and yet another body blow to regional sustainability.
7. We consider that the embargos should be lifted and a simple market allowed enabling existing WISP incumbents to develop and grow – or sell licences – or relocate bands - without artificial regulatory intervention and constraints, deadlines or embargoes which have the effect of discriminating and destroying currently healthy regional businesses in favour of the large Telcos.
8. The global regulatory approach is increasingly adopting sharing methodologies for spectrum acknowledging that it is a finite resource. Australia must embrace this approach.
9. Suggestions that the regulatory regime already allows for this are not reflected by reality – small operators have minuscule if any leverage to negotiate once licences have been sold off to big Carriers. There needs to be actual and philosophical transformational change. We consider that a tipping point has been reached and it is time to initiate a spectrum sharing method that will benefit both providers and consumers in the future, particularly in the regional areas.

# Highest value use and market mechanisms.

***ACMA View:*** *This analysis indicates that the highest value use of the band has (or will soon) move to wide-area broadband deployments (notably fixed/mobile broadband) in metro and regional areas. As always, this analysis and its conclusions depend on a number of assumptions. Broadly speaking, the conclusion holds if the value placed on the band by new users is above the minimum valuation in the ACMA’s valuation range, and incumbents can continue to deliver their services via other means, such as alternative spectrum options (different bands or geographic locations) or different platforms (for example, fibre).*

## Countrytell Comment:

1. The 3.6 GHz band is currently allocated to and being used for wide area broadband and communications services delivery to communities and regional areas either underserved or not served by the NBN. Some Wireless Internet Service Providers (WISPs) are also contemplating moving to 3GPP 5G technology to achieve this although planning and investment decisions have now been forestalled by the uncertainty caused by the inappropriate (in our opinion) embargo and the current ACMA re-farming process.
2. COUNTRYTELL acknowledges there is opportunity and certainly demand for more extensive use of the band by the large Telcos, now it has been identified as an ISM 5G global band.
3. However, we assert that the proposal to clear the band to make way for them is precipitous and unfair and is responding to pressure by the major Telcos - despite the lengthy timeline before the 5G standard is promulgated. The preferred proposal is not strategic. It can be construed as market manipulation.
4. We note that even Telstra suggest a 10 year clearance timeline for regional incumbents and a reliance on normal market mechanisms should the larger carriers require acquisition prior to the final clearance deadline. The ACMA suggests only 7 years. We contend there is no requirement for a ‘drop dead’ date for WISPs - the market is capable of resolving the issue whilst preserving valuable businesses, jobs, and services in regional Australia.
5. We emphasise that historically all previous spectrum licences have been renewed ‘in the public interest’ - including an unused block of spectrum to support railway communications. Attempts to suggest that apparatus licences are inherently ‘temporary’ are disingenuous and at odds with the claims made by ACMA when the 3.6 GHz band was released for Wireless Broadband services some ten years ago.
6. At that time this company expended hundreds of thousands of dollars for 3.6 GHz apparatus licenses on an annual renewal basis with legitimate expectation that these license types would be regularly renewed if compliance conditions were met.
7. Incumbent purchasers at that time clearly acquired implied rights to ongoing use and enjoyment of these 3.6 GHz BWA apparatus licenses. Drawing on this historical implied application of inherent rights, regardless of licence type, we consider that implementation of perpetual licences are now most appropriate for the current WISP incumbents.
8. Market mechanisms can be implemented to ensure a clean transition when that spectrum is required in a particular area for another use. Indeed, the new Communications legislation envisages a single license type in the future - WISPs could be forgiven for a healthy cynicism about the timing that seeks to institute this clearance prior to the promulgation of the new legislation – legislation which will better entrench their tenure security.
9. **In summary:** The current concept of wide area spectrum licences, under which Australian spectrum management has laboured for nearly 30 years is old and arguably lazy thinking and is ripe for change. A tipping point has been reached. As a finite resource the need for a flexible and dynamic sharing system is inevitable – this band proposal, coupled with the long lead time for 5G promulgation presents as an ideal opportunity to seize and implement transformational change.
10. The irony is that where communications are sparse such as in the regional areas, spectrum is underutilised but ‘locked up’ in national tranches. The current model does not reflect the increasing need to share spectrum to enable regionally focused providers and does not utilise the modern tools and techniques available to enable this.
11. The national licence model also adopts a non-strategic ‘single user’ view of highest value use. We assert that a multi user model delivering services to all areas in a region, including those where 5G mobile will not be economically viable, is in fact a higher value use. It should not be just about the demands of the large Telcos or auction windfalls to government.
12. We consider that new licences should be allowed to coordinate with current and future spectrum licensees where possible. A simple market must be allowed to enable the close down or relocation of existing incumbents without artificial regulatory constraints, deadlines or embargoes which have the effect of killing currently healthy regional businesses.
13. The global regulatory approach is increasingly addressing and adopting sharing methodologies and it is vital Australia similarly embrace this approach. Suggestions that the regulatory regime already allows for this are not reflected by reality – small operators have minuscule if any leverage to negotiate once licences have been sold off to big Carriers. There needs to be actual and philosophical transformational change.

# Comments on the ACMA Preferred Option.

***The ACMA’s preferred option*** *is to establish arrangements optimised for wide-area broadband deployments (be they mobile or fixed) over the entire 125 MHz of the 3.6 GHz band available in metro and regional areas. The expected licensing regime under this approach would be spectrum licences allocated via auction.*

1. COUNTRYTELL does not have objections to auctions per se. However, their use as a general principle under a rather dated auction model reflecting economics and technologies of 30 years ago needs to be revisited.
2. The current model assumes ‘single user’ spectrum spaces which global administration models have moved on from and which is specifically ill suited to the lop sided density of the Australian continent which has an aggregation of population in a small number of metropolitan centres.
3. Aside from being outdated, albeit administratively ‘easy’ or ‘simple’, the auction process is an inefficient use of a finite public resource. It artificially and anti-competitively discriminates against small businesses in favour of large carriers and prohibits start-ups entering the market.
4. Economically it denies regional customers and businesses end user access to the niche high grade services we provide – predominantly in areas where 5G mobile services under the traditional carrier population density model will not be viable.
5. It is an outdated paradigm which results in poor spectrum management, artificial resource scarcity and loss of service and employment in regional areas. It is our strong position that a tipping point for change has arrived and a true rethink of how spectrum is made accessible in regional areas is required.
6. Where dissimilar services are collocated modern coordination tools can make best use of the spectrum space. The availability of these tools, especially to well-resourced large carriers, means that in many cases the services could continue to exist and operate side by side for many years to come.
7. Where the tools are unable to achieve coordination some technical changes could be negotiated to ensure continuing compatibility.
8. Where no coordination is possible then a simply market untainted by artificial regulatory intervention will be able to solve the problem.
9. However as WISPs move to new technologies, including potential convergence to 5G services, as many were contemplating prior to the ACMA 3.6Ghz re-farming process, these similar – and very smart - systems can be readily coordinated through the use of

suites of codes that have sufficient discrimination to allow both services to operate in a co-located environment.

1. To encourage and enable these innovative solutions, particularly in the regions, the ACMA must not involve itself in the market by setting artificial limits on the tenure of WISPs. We contend that ACMA involvement at this level is detrimental to the industry, to competition, the economy and to modern spectrum management.

*Mitigation opportunities for incumbents under the preferred ACMA option include:*

* *An extended re-allocation period (transition period) of seven (7) years for all incumbents. While spectrum licences would commence well before the end of this period, existing apparatus-licensed users could, at their discretion, continue to operate (and be protected) throughout this period, though no new assignments would be issued. Spectrum licensees would be required to afford protection to incumbent apparatus licences during the re-allocation period. At the end of the re‑allocation period, all apparatus licences would be cancelled. Apparatus licensees would also be free to negotiate with any spectrum licensees in the area to continue operating their services after the end of the re-allocation period. This could be facilitated under third-party access arrangements and requires no intervention by the ACMA.*

1. As previously argued COUNTRYTELL holds that there should be no artificial constraint on licence tenure and licences should be renewed until transferred or cancelled by the incumbent WISP. This is a true market at work.

* *Establishment of site-based, coordinated apparatus licensing arrangements for point-to-multipoint services in the 5610–5650 MHz band initially in regional and remote areas, with future consideration for release in metropolitan areas. Existing 3.6 GHz licensees would initially be invited to apply for and obtain ‘like-for-like’ licences in the band. An ACMA policy commitment would be made stating its intention not to vary these arrangements to the detriment of licensees prior to the end of 2028.*

1. COUNTRYTELL supports such arrangements with the caveat that the RALI process is not ideally suited or really able to take into account the ability of modern technologies to share or to acknowledge the new and effective tools available to operators to conduct site-by-site collaborative coordination.

* *Establishment of long-term planning arrangements supporting the relocation of satellite earth stations from metropolitan areas. Specifically, this would see the establishment of a specified area (or areas) on the east coast of Australia to complement existing arrangements on the west coast at Mingenew, Western Australia. Depending on the location of the area(s) selected, it may need to be excised from a spectrum licence allocation in regional Australia to facilitate the creation of the east coast earth station protection zone(s).*

1. COUNTRYTELL supports this. Because of the low number of satellite licences coupled with the very large coordination distances they state they require, they are unlikely to be a viable service in the modern fixed and mobile broadband world. However, we contend that the coordination distances claimed are likely to be overstated and in reality, and using modern techniques and modelling, many services will not need to move prior to their natural expiry. The ACMA should consider making satellite services secondary to fixed and mobile broadband outside of the areas mentioned above.

* *Excluding the area immediately surrounding the earth station facility at Uralla, New South Wales (represented by the HCIS identifier NU7K4) from being re-allocated for the issue of spectrum licences. This would enable the facility to continue operating under existing apparatus licence arrangements. Suitable coordination criteria would also be developed*
* *so spectrum licensees can manage interference into the earth station receivers operated at the site. However, it is important to note that the long-term viability of this site for earth station use cannot be guaranteed. This is due to the increasing interest in using the broader 3400–3800 MHz band for the delivery of mobile broadband services and the earth station facility being located reasonably close to significant population centres (Armidale and Tamworth). As such, this facility may be required to relocate to another location, such as one of the identified earth station protection zones, in the future.*

1. COUNTRYTELL supports the ongoing protection of high value civil and defence assets provided the coordination distances are realistic and do not represent over conservative protection demands.

# Countrytell comments on ACMA’s view on sharing.

*In identifying this preferred option, the ACMA has given thought to the possibility of using some form of ongoing spectrum-sharing in the band (including the use of dynamic spectrum access approaches). Some incumbents have suggested various sharing arrangements as a potential way to allow wide-area fixed and mobile broadband deployments in the 3.6 GHz band by new users, while simultaneously allowing incumbent site-based point-to-multipoint users to continue to operate. A key concept advocated by proponents is that of allowing point-to-multipoint users to continue to operate (and expand services) in areas until the ‘main’ spectrum user wishes to deploy in that area.*

*The ACMA has carefully considered whether practical sharing models could be implemented within the existing legislative framework, which would meet the requirements of both aspirant wide-area broadband network users and incumbent (and aspirant) point-to-multipoint users alike. Its view is that in areas where demand for 3.6 GHz spectrum is likely to exceed supply, practical sharing models will not provide the required certainty of long-term access to wide-area broadband users while simultaneously offering the desired certainty to current and new point-to-multipoint users that they state is required. This is because in practice the sharing models contemplated are based on hierarchical access rights—with lower tiers of users having to ‘give way’ to higher tier users (which could be incumbent or new licensees). The approach currently proposed of providing an extended re-allocation period (during which incumbents retain ‘primary’ rights), along with identifying alternative spectrum for future deployments, is likely to be the better approach.*

1. COUNTRYTELL strongly disagrees with this view. Our model ‘pipes’ a large quotient of data into a small area such as the towns in the Snowy Mountains. This is then reticulated within the communities using 3.6 GHz. Provided a large carrier does not wish to deliver services there in 3.6 GHz (noting the multiple other bands available for sparse area delivery) and given the terrain, we submit sharing is indeed viable in many if not most areas.
2. The ACMA not having flexible models currently in its toolkit is not a good argument. As mentioned previously we believe the paucity of accessible spectrum in regional areas represents a tipping point for change. The proposed models we have previously suggested for consideration are simple, allow the market to dictate either a coordination/sharing approach or modify strategy - with ‘buy out’ as the last option. That way the economic incentive exists on the new entrant to coordinate around incumbents or when this is not possible buying their access thus delivering the highest value use of the band.
3. Unfortunately the argument above implies the ACMA is either unable or unwilling to contemplate modern flexible spectrum management and spectrum market techniques. It is not appropriate for the concept of sharing a finite resource to be consigned so readily to a ‘too hard basket’. The WISP Association of Australia will be suggesting a methodology for a dynamic spectrum sharing approach which we support. We can also secure spectrum engineering expertise wholly independent of connections with either the WISPs or ACMA, to assist.

# COUNTRYTELL’s response to ACMA Questions for comment.

Q1. *Should the 3.6 GHz band be progressed from the preliminary replanning stage to the re-farming stage in the ACMA’s process for considering additional spectrum for MBB services? Why/Why not?*

No – for the following reasons:

* The current estimation of highest value use is biased by;
* a preference to use the existing dated spectrum licensing system
* a preference for large single user lots
* an assumption that the overall economic value of WISP services in regions is low compared to 5G services which are unlikely to be seen in the regions for a decade or more
* The current engineering assumptions are also flawed and are not evidence based.

We hold the view that many, if not most WISP services will be able to be coordinated with 5G services and where this cannot be achieved, there are options to make technical changes, use 5G for WISP services, or for a true market to function where the carrier determines buying out the WISP’s access is the economically effective solution. This economically and technically efficient process can only happen if all the settings are right. Currently because of regulatory, system and large carrier bias the ACMA’s proposed settings are not right and consequently re-farming this band should not proceed at this time. Smarter thinking must prevail.

*Q2. Do the areas identified in this analysis cover the likely areas of high demand for access to the 3.6 GHz band? Would smaller or larger areas be more appropriate? Why?*

The areas identified are not relevant to the WISPs. The areas are designed to suit the large carrier’s preconceptions of market density population based models, not relevant to WISPs who operate more sophisticated and regionally relevant business models based on capacity, quality and service levels.

Countrytell operates as a social enterprise valuing regional economic and social development. We reinvest earnings into expanding our regional network, enhancing the product set, and maintaining affordability. These nascent and innovative business models should be encouraged to ensure continued regional economic and social development. What is relevant is an assumption the WISPs must clear out – how is this assumption evidence based?

Noting Option 4 we maintain that WISP licences should be perpetual with defined protections. If coordination is not possible, then the operator who purchased or purchases that geographic area, and only that operator, should be free to purchase that assignment and roll it into their holdings.

*Q3. If any part of the 3.6 GHz band is re-allocated for the issue of spectrum licences is seven years a suitable re-allocation period? If not, what period of time would be appropriate?*

No. A reallocation period is neither required nor appropriate. We contend that WISP services can coordinate using a number of methods or if they cannot, then a market unencumbered by regulatory intervention will result in the best outcome. Given the carriers have many MHz of spectrum between 694 MHz and 2500 MHz (including 1.5 GHz which is also a potential 5G band) to select from it is unlikely a WISP can ‘hold out’ for an inappropriate premium, if that is a concern. This is a market that can work - but only if the ACMA leaves it alone and the incumbent licences are perpetual. Allowing an open market to work will also allow WISPs to negotiate access to spectrum after the auctions – if they are to proceed.

Noting Option 4 we submit that WISP licences should be perpetual with defined protections. If coordination is not possible the operator who purchased that geographic area, and only that operator, should be free to purchase that assignment and roll it into their holdings.

*Q4. Should different re-allocation periods be considered for different areas? For example, should a longer period be considered for services outside Area 1?*

While we consider the licences should be perpetual we do not believe that differentiation is appropriate as having faster clearance near metro areas discriminates against business serving the metropolitan fringe. Again, if the market deems these licences are valuable then we have described many market mechanisms that will facilitate early clearance.

Noting Option 4 we submit that WISP licences should be perpetual with defined protections. If coordination is not possible the operator who purchased that geographic area, and only that operator, should be free to purchase that assignment and roll it into their holdings.

*Q5. Are these guidelines appropriate? Why?*

*> To the extent possible, define geographical borders in areas of low demand.*

No these guidelines are not correct. The guidelines assume a big carrier population based model and is accordingly inherently biased. This is not an issue that affects the WISPs who use more innovative models and approaches. Implementing a more flexible spectrum licensing model other than the ‘vintage’ system proposed would allow the auction lot winners to negotiate boundary changes in the same way they would with incumbent WISPs.

We are not in a position to define population densities that would be viable for 5G deployments; the ACMA could possibly look to the 2500 MHz spectrum to get a good indication. In areas where 2500 MHz is not rolled out now it is unlikely that 5G would be viable for at least 15 years.

*> To the extent possible, define geographical areas that are large enough to minimise potential co-channel interference issues when deploying services in areas of high demand.*

This is not an issue that affects WISPs.

*> Consider allocating spectrum licences simultaneously across the entire area in which spectrum licensing is considered the most appropriate longer term outcome, even if the rollout of services is likely to commence in some areas first.*

This would not affect WISPs provided their licences were perpetual and the winning Telco/carrier either coordinated or used market mechanisms to relocate the WISP service.

*Q6. Are there any other issues that affect the usability of an area-wide licence that should be taken into account when defining the licence area?*

Incumbent perpetual WISP licences should be identified as the cost of coordination or buy out and should be taken into account.

*Q7. If point-to-point licences are affected by replanning activities in the 3.6 GHz band, are the options identified for point-to-point licences suitable? Are there any alternative options that should be considered?*

Point to Point systems in 3.6 GHz do not generally service business end users or support significant employment in the regions so the options are appropriate.

*Q8. Is the 5.6 GHz band a viable option for wireless broadband systems?*

This is yet to be seen. We have significant doubts although we recognise ACMAs efforts in attempting to find a ‘home’ albeit a less than optimal one, for dislocated 3.6 Point to Multi-Point operators. Given an operating radius of 256 km, what protection levels will be afforded to BoM radars? Even for 12dB protection during advection ducting events this suggests a coordination distance exceeding 1000km.

What filters are fitted to BoM radars? Could they live with a closely located WISP base station in a near adjacent band?

Is the proposed 5.6 allocation actually unused? Anecdotally we are aware that it has increasingly been used as an overflow and that international equipment has not been engineered to automatically negate operation in the band nominated. The allocation is also limited in bandwidth and likely to accommodate only one operator in any given area. Propagation characteristics are also poorer than the 3.6 GHz band.

These questions need to be answered before this process progresses.

A band from 4000 – 4200 MHz would be more appropriate.

*Q9. Under what circumstances should apparatus and class-licensed arrangements be considered for the 5.6 GHz band?*

Class licensing or an Australia wide dual user apparatus licence would be appropriate. If a class licence, then other systems (apart from BoM and WISP) would need to be excluded.

*Q10. If apparatus licensing arrangements are developed for wireless broadband systems in the 5.6 GHz band, are the notional arrangements proposed in Appendix 3 suitable?*

We say “No” for a range of reasons. It is difficult to arrive at a conclusion in the absence of technical data and testing with the BoM systems. It is probable that WISPs could co-exist with Wi-Fi provided the Wi-Fi systems are not outdoor high powered use (e.g. Point to Point links). There is also insufficient bandwidth on offer for more than one operator in an area, and the propagation characteristics are poorer than the 3.6 GHz band.

On the issue of insufficient Wi-Fi spectrum, perhaps the ACMA could review parts of the band that are apparently currently empty or underutilised solely to protect two or three mobile satellite gateways. This band would appear to have a much higher value use delivering Wi-Fi or WISP services under the current ACMA HVU methodology.

*Q11. If point-to-multipoint licences are affected by replanning activities in the 3.6 GHz band, are the alternative options identified suitable? Are there any alternative options that should be considered?*

It is difficult to determine what the ACMA means by Point to Multi Point. Is 5G not a form of P-MP? Do NBN not use 4G as a P-MP solution? If by P-MP the ACMA is referring to the current point to multi point wireless broadband services delivered by WISPs, then no, we do not consider enough work has been done to establish if 5.6 GHz is a viable or suitable option.

Nor do we believe that the requirement for a mandated clearance has been established. It is unnecessarily punitive n the incumbents and anti-competitive in its outcome for the regional communities. If the market is allowed to work without artificial intervention and interference, clearance is not necessary.

This goes to the heart of our indignation about the imposition of the embargo – embargos should only be initiated for change of use – we hold that the 5G opportunity is not a change of use and that incumbents have suffered unnecessary and deleterious impacts on their growth as a result of arbitrary action by the regulator. Compensatory action is warranted.

*Q12. The ACMA seeks comment on the suitability of the current west coast earth station protection zone located near Mingenew, WA, for long-term satellite service use. Are the current regulatory arrangements effective?*

COUNTRYTELL has no comment – this is not within our area of expertise.

*Q13. In the event FSS earth stations are affected by replanning activities in the 3.6 GHz band, the ACMA seeks comment on:*

*a. Any issues surrounding the development and establishment of an east coast earth station protection zone; particularly on what factors would be necessary to make it an attractive option for earth station operations.*

COUNTRYTELL supports this proposal as it makes sense given the small number of FSS systems and their large spectrum impact.

*b. Whether there are any views on potential candidate locations to consider.*

COUNTRYTELL has no comment – this is not within our area of expertise.

*c. Whether there should there be more than one earth station protection zone on the east and west coasts of Australia.*

It would seem that one is sufficient once it is served by backhaul. Opening the door to more will only create coordination issues given the high level of protection demanded by FSS proponents.

*d. If the identification of a central Australia earth station zone should be considered.*

No comment other than to make a general statement that future satellite earth stations are better situated away from populated areas.

*Q14. Are the approaches for amateurs, radiolocation services, class licensed devices and TVRO systems suitable?*

These services should not be protected or receive consideration during planning or coordination.

*Q15. Are there any other options for incumbent services, not identified in this paper, which should be considered?*

No comment.

*Q16. Should any of the sharing arrangements discussed in this section be considered for implementation in the 3.6 GHz band? Why or why not?*

COUNTRYTELL supports sharing but not specifically a tiered approach. Incumbent WISPs should have the same status as incoming services and coordination and market principles, or a combination of the two, should be allowed to work. We support the proposal of the WISP Association to explore a dynamic sharing arrangement.

COUNTRYTELL suggests the ACMA, carriers and WISPs collaboratively meet (physically) and discuss face to face and with goodwill the possible options and not necessarily seek to copy or replicate US or European models which represent very different geography and demographics. 5G is some way off – we have the time, imagination and goodwill of incumbent stakeholders to implement truly transformational change.

*Q17. Are there any other sharing arrangements that should be considered?*

COUNTRYTELL suggests a technical committee comprising WISPs, large Telco Carriers and ACMA be formed to discuss sharing parameters. Countrytell can facilitate access to spectrum co-ordination expertise with no connection to WISPS or ACMA, to assist with an objective and independent approach.

*Q18. Are there any other replanning options that should be considered?*

A band should be set aside for WISPs in all areas within the current 3.6 GHz spectrum.

The band 4000 – 4200 MHz should be considered for replanning for future WISP services.

The 1.5 GHz band should be planned before the 3.6 GHz band to allow more time for 3.6 GHz options to develop together with a more suitable spectrum licensing system.

*Q19. Which replanning option should be implemented in the band? Why?*

Countrytell considers that Options 1, 2 and 4 merit further considerations and discussion. Option 3, based on a 30 year concept, should be discarded at least until a more flexible and appropriate spectrum management model can be developed.

Current indications (in the absence of even an agreed standard) are that 5G services will initially and effectively be small area infill systems; - could not the rights to a band/area be auctioned and then systems installed where they can be coordinated or the incumbent bought out? This is an alternative to the commonly understood parlance of an encumbered sale, being an auction with encumbrances plus limited right.

*Q20. In the event an area-wide licensing option is implemented, in which of the defined areas (that is, Area 1, 2, 3 and Australia-wide as defined in Appendix 6) should these arrangements be implemented? Are the current area definitions appropriate? If not, what area should be defined?*

Given 5G services will effectively be small area infill systems servicing areas of high population why can’t the rights to a band/area be auctioned and then systems installed where they can be coordinated or the incumbent bought out while still allowing WISP services to continue to grow?

*Q21. If Option 4a is implemented, what frequencies and areas should be re-allocated for the issue of spectrum licences? How much spectrum should remain subject to site-based apparatus licensing arrangements? Should different amounts be considered in different areas?*

In order to enable sustainability for one WISP in any area, 40 MHz of spectrum should be excised from any spectrum licence including metropolitan areas. In most areas there are two or more WISPs operating suggesting up to 120 MHz should be set aside or alternate arrangements that encourage sharing be developed.

*Q22. If Option 4b is implemented, what frequencies and areas (that is, incumbent apparatus licence services) should remain subject to site-based apparatus licensing arrangements?*

Countrytell considers that the ‘Swiss Cheese’ model would suit incumbent WISPs but it is acknowledged as inefficient. Our preferred approach of perpetual licences and coordination or market mechanisms will lead to the highest value being derived from the band and not result in massive regional job losses - provided suitable options are provided.

We note that the proposed new Act allows for perpetual licences as a general principle and trust the ACMA is not accelerating this process, intentionally or otherwise to forestall that outcome.

Perpetual licences and a market free of artificial regulatory interference will create a secondary benefit and will lead to greater spectrum and economic efficiency in the band. Where a new user is faced with negotiating with an incumbent and where technical coordination is not possible the new user could offer up spectrum access in other areas as a part of a package to secure encumbered areas where it is viable to deploy 5G.

This will allow major carriers to serve high population density areas while WISPs continue to serve areas where the market for sophisticated broadband products exists. In fact a shared approach and access to other users is vital for the spectrum to deliver the highest value to the community and also vital in areas where 5G will not be deployed in this band.

In clearing incumbents the ACMA risks damaging the market as it is likely many WISPs will be unwilling or unable to enter this secondary spectrum market. As a consequence the ACMA through its actions will damage both the economy and regional employment.

*Q23. Comment is sought on the ACMA’s preferred option (Option 3c) for the 3.6 GHz band.*

This option is based on a 30 year old licensing model, favours a single operator and will damage the economies of regional Australian towns. This model is not appropriate to modern Australia, is inefficient and will only deliver value from a single use which we note has not been ‘devalued’ by the cost in the ACMA estimates. It is effectively selling market share and inherently anti-competitive.

It is essential that the ACMA be prepared to enable incumbents to remain in the band, by co-ordinating and negotiating and sharing with the putative new Carrier entrants or the proposed model will harm the regions.

The current and arguably antiquated concept of spectrum licensing and auctions is well past its use by date and should be discontinued. A tipping point has been reached. The ACMA should work with industry to develop a new model that does not need to resort to the ‘slash and burn’ clearance of incumbent services.

This would help develop a healthy spectrum market, something we note the ACMA professes to support in its literature and utterances. Now is an opportunity to activate the principles into real action. It is of no surprise that there is a severely limited spectrum market and swathes of unused but inaccessible spectrum particularly in the regions. The current outdated approach permits a very small number of large users to express a wish to acquire a certain band and then simply wait until the ACMA clears it for them. History confirms this.

Nowhere else in a developed market economy does such an arbitrary and draconian measure apply and COUNTRYTELL believes it is no longer appropriate to employ these techniques while the holdings of a few get larger at the expense of small businesses.