

Mobile Coverage Programme Discussion Paper

Submission Cover Sheet

Submission Information

This cover sheet should be attached to submissions made to the Department of Communications in relation to the Mobile Coverage Programme Discussion Paper.

Contact Details

| | |
|---------------------------------|--------------------------------------------------------------------|
| Name of respondent: | David McKean |
| Name of organisation: | Crown Castle Australia Pty Ltd |
| Phone: | [REDACTED] |
| Email: | [REDACTED] |
| Website (if applicable): | www.crowncastle.com.au |
| Date: | 28 February 2014 |

Confidentiality and privacy

All submissions and comments, or parts thereof, will be treated as non-confidential information unless specifically requested, and acceptable reasons should accompany each request. Email disclaimers will not be considered sufficient confidentiality requests.

Respondents lodging a submission should be aware that submissions (excluding any information agreed to be treated as confidential information) will be made publicly available, including on the Department of Communications' website. Submissions and comments will be subject to freedom of information provisions. Despite a submission being identified as confidential or sensitive, submissions may be disclosed where authorised or required by law, or for the purpose of parliamentary processes.

Do you want all or parts of the submission to be treated as confidential? Yes No

If yes, identify below which parts of the submission are to be treated as confidential (and provide a reason):

If the submission contains personal information of any third party individual, indicate on this Submission Cover Sheet if that third party individual has not consented to the publication of his or her personal information:

Submission Instructions

Submissions are to be made by **5:00pm (AEST) Friday 28 February 2014**.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text-based formats via the email address mobilecoverage@communications.gov.au

Alternatively, submissions can be sent to the postal address below (to arrive by the due date):

The Manager
Mobile Coverage Programme
Department of Communications
GPO Box 2154
CANBERRA ACT 2615

All submissions lodged will be acknowledged by the Department of Communications by email (or by letter if no email is provided). Respondents lodging a submission who do not receive acknowledgement of their submission should contact the Department. Submissions which are not acknowledged by the Department as being received may not be considered. Respondents should be aware that emails greater than 10Mb may not be successfully delivered.



Crown Castle
 Level 1, 754 Pacific Highway
 PO Box 202
 Chatswood NSW 2067
 Australia

Tel +61 2 9495 9000
 Fax +61 2 9495 9100
 www.crowncastle.com

28 February 2014

The Manager

Mobile Coverage Programme
 Department of Communications ('Department')
 GPO Box 2154
 CANBERRA ACT 2615

Dear Sir/Madam,

Crown Castle Australia Pty Ltd ('Crown Castle') Submission for the Mobile Coverage Programme ('MCP')

We refer to the Department's Discussion Paper regarding the MCP dated 16 December 2013 ('MCP Discussion Paper').

Crown Castle appreciates the opportunity to make this submission in relation to the MCP Discussion Paper and the MCP more generally.

Crown Castle is Australia's largest independent owner and operator of shared telecommunications infrastructure. We own, operate, build and lease towers and rooftops across the country. Our portfolio consists of over 1850 sites across Australia. We also own KAW Consulting, a site acquisition company and Structel, Australia's only specialist tower engineering company. This gives Crown Castle an end to end tower infrastructure capability unmatched in Australia.

We have analysed the MCP Discussion Paper with a view to delivering (a) the most efficient build delivery model for stakeholders; (b) competitive outcomes that benefit consumers; and (c) broader productivity benefits for the Australian economy. The bulk of the capital cost associated with the MCP will involve the tower construction cost and tower operating costs going forward (rather than installed base station equipment) and so we believe we are well placed to provide commentary for the Department's consideration.

A. Overview – Government suggested options

The Government has suggested a number of viable options in the MCP Discussion Paper to deliver improved mobile coverage and competition to regional Australia. The options can be roughly described as follows:

| OPTION 1 | OPTION 2 | OPTION 3 |
|---------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------|
| Single MNO solution | Site by site or Cluster by cluster bid process by MNOs | Network infrastructure provider (NIP) co-ordinate implementation: |
| | | 3(a) - NIP build and operate mobile infrastructure |
| | | 3(b) - NIP develop wholesale mobile network capability for MNOs to roam commercially |

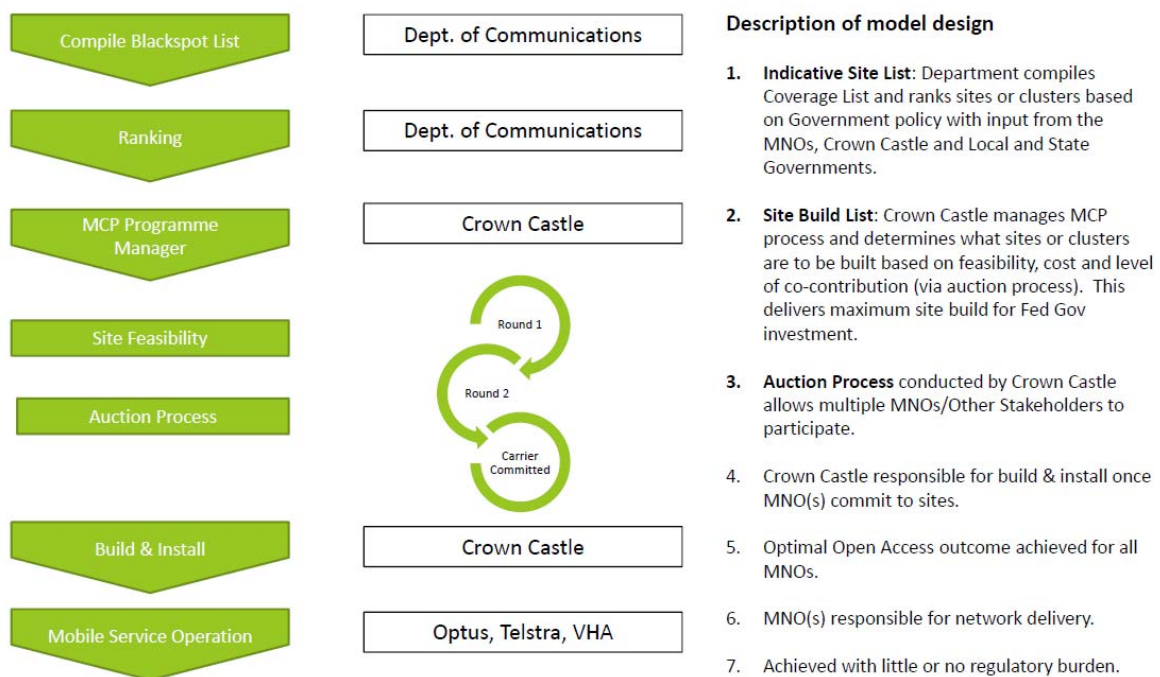
Crown Castle has considered a number of different models to deliver the MCP and suggests that the Department give consideration to the models we have suggested in B and C below.

- The first design (**Open Access Auction Model**) involves Crown Castle as programme manager, which delivers an overarching competitively neutral framework.
- The second design (**MNO led with NIP tower owner and operator**) can be used for a single MNO solution or a site by site competitive bidding process.

These designs should at the very least be cost neutral for Government when compared to a MNO solution and also deliver competitive outcomes – both in theory and practice. This can also be achieved with less regulatory burden for the industry – thereby delivering future productivity benefits for the Australian economy.

B. Open Access Auction Model

Our proposed Open Access Auction Model is a hybrid incorporating Option 2 and 3(a). This design suits Australia’s industry structure and population density and takes account of a similar programme already underway in the UK.



This model offers the following benefits:

- Competitive framework not just a competitive bidding process:**
 - Self-regulated embedded open access rights to all towers, even on sites with a single MNO.
 - future open access is assured through the structural separation of the tower infrastructure from the MNO.

2. **Lowest cost to implement:** a single MCP Programme Manager liaises informally with the various stakeholders to gauge genuine interest rather than multiple parallel negotiations being required by each bidder.
3. **Faster rollout:** The process should maximise the number of sites built for the funds made available by the Government and expedite the rollout.

C. MNO Tenders with NIP Tower Own and Operate Contract (under Options 1 and 2)

This model would enable a competitive outcome on a whole of programme basis (Option 1) or otherwise on a site by site/cluster by cluster basis (Option 2).

As part of the tender process, each MNO would be required to involve a NIP to own and operate the towers. In this case, it doesn't matter whether the MNO or the NIP builds the tower - the NIP owns and operate the towers going forward and is self-regulated to provide open access.

The Department could consider calling for bids from NIPs to participate in the MCP as a preferred tower owner and operator. The Government could then prescribe some transparent guidelines for the arrangements between the MNO and the NIP to ensure that the Government achieves the best return on its investment in the programme.

Ultimately, this means taxpayer funds are invested in competitively neutral outcomes that facilitate consumer choice. This should be at worst neutral from a total cost of build perspective and is likely to reduce the per site cost and hence allow more sites to be built for the taxpayer funds invested in the programme.

D. General Comments on Tender Principles

Some principles to be considered as part of the tender process would be:

1. Embedded open access rights to the towers. We believe that only a NIP can truly deliver this in practice.
2. Sufficient structural capacity embedded in tower design to accommodate at least another competitive MNO.
3. To ensure the programme facilitates competition, the operator must demonstrate the ability to:
 - a. design towers and site layout that enable co-location;
 - b. utilise techniques to reduce the future cost of upgrading towers;
 - c. provide sufficient land to enable co-location without additional lease costs; and
 - d. secure long, certain tenure for long term operation of the facilities.
4. Relevant local or state governments or land agencies should specify what land access regime they are offering to facilitate the site build.

E. Why Crown Castle?

With over 40,000 towers in the US and a growing portfolio in Australia, Crown Castle is a global leader in tower ownership and management and a partner you can rely on. We believe we are well placed to assist the

Government in meeting the policy objectives and achieve value for money by maximising the number of sites built. Crown Castle can do this whilst offering a competitively neutral outcome and the best result for end users of mobile and fixed wireless services in the targeted areas. Ultimately, we enable consumer choice.

Crown Castle is willing to provide both open access management solutions for build programmes and also contribute a portion of the required site construction capital where appropriate.

We also have existing relationships and contracts with the MNOs and NBN Co. In an already highly regulated telecommunications industry, our existing relationships will help reduce red-tape and contractual burdens whilst creating greater efficiencies and better competition for those parts of Australia not receiving adequate mobile coverage.

| MCP Objectives | | Why Crown Castle |
|----------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Improve mobile voice and wireless broadband coverage in regional Australia | <ul style="list-style-type: none"> Existing tower network covers 20 million Australians – supporting all MNOs and emergency service providers. Crown Castle can deliver to more Australians by supporting <u>all</u> MNOs. Proven build capability for new sites. |
| 2 | Improve competition in regional Australia | <ul style="list-style-type: none"> Crown Castle is open access and competitively neutral . Facilitates consumer choice. Less regulation required = productive efficiency and lowers cost of competitive outcome. |
| 3 | Network delivery | <ul style="list-style-type: none"> Demonstrated ability to build towers in difficult locations . Our expertise is not only towers – it is leasing, site design; planning and structural upgrade. These skills are required for real outcomes. Crown Castle can provide an end to end infrastructure solution (with KAW and Structel part of that value proposition). |
| 4 | Most efficient use of taxpayer funds – max number of new sites | <ul style="list-style-type: none"> Work with Government to find solutions that deliver best value for taxpayer investment. We will look for most efficient solution including reuse of existing infrastructure including single truck roll for construction + installation. All other thing being equal, more sites can be built. |
| 5 | Find synergies with NBN's fixed wireless rollout | <ul style="list-style-type: none"> Number 1 site supplier to NBN Co . Proven co-operative relationship with NBN Co. |
| 6 | Start building without undue delay | <ul style="list-style-type: none"> Relationships with most land owners and local government authorities. Existing access agreements with all the carriers. |

Our responses to the questions raised in the MCP Discussion Paper are annexed to this letter as Annexure A. We would be delighted to meet with the Department to expand on any of the comments we have made in this submission.

Yours sincerely



David McKean
 Director, Corporate Development
 Crown Castle Australia

ANNEXURE A – ANSWERS TO QUESTIONS RAISED IN THE MCP DISCUSSION PAPER

\$80 million Mobile Network Expansion Project

Delivery Option 1 – Single MNO contracted to deliver the programme

1. **Would an appropriate minimum quality standard be that base stations must provide high-speed 4G LTE mobile broadband data communication services and also high quality 3G mobile voice and broadband data services? If this is not an appropriate minimum quality standard, what is?**

This is a matter properly addressed by the MNOs. As a general proposition, blackspots require minimum voice, SMS and data capability. Anything beyond that should be a commercial matter for the MNO. The higher the minimum requirements, the more sites that will be required and, accordingly, less blackspots will be addressed through the programme.

2. **What are the most appropriate indicators that could be used to specify the minimum quality standards that should apply to the mobile services being provided through the programme? For instance, should it be a minimum received service signal indication (RSSI) in decibel-milliwatts (dBm)? A similar approach was adopted recently in the UK where a comparable programme specified a minimum RSSI for 3G voice and basic data service of -85dBm on roads and -75dBm in community areas (outside premises).**

This is a matter properly addressed by the MNOs.

Delivery Option 2 – order of merit from base stations proposed by multiple MNOs

3. **Does delivery option 2 for the \$80 million Mobile Network Expansion component raise any additional issues that need to be considered?**

See our cover letter.

Delivery Option 3 – Network infrastructure provider to co-ordinate implementation

- (a) **Network infrastructure provider builds and operates mobile infrastructure (including backhaul) on which MNOs can install own network equipment on a commercial basis;**

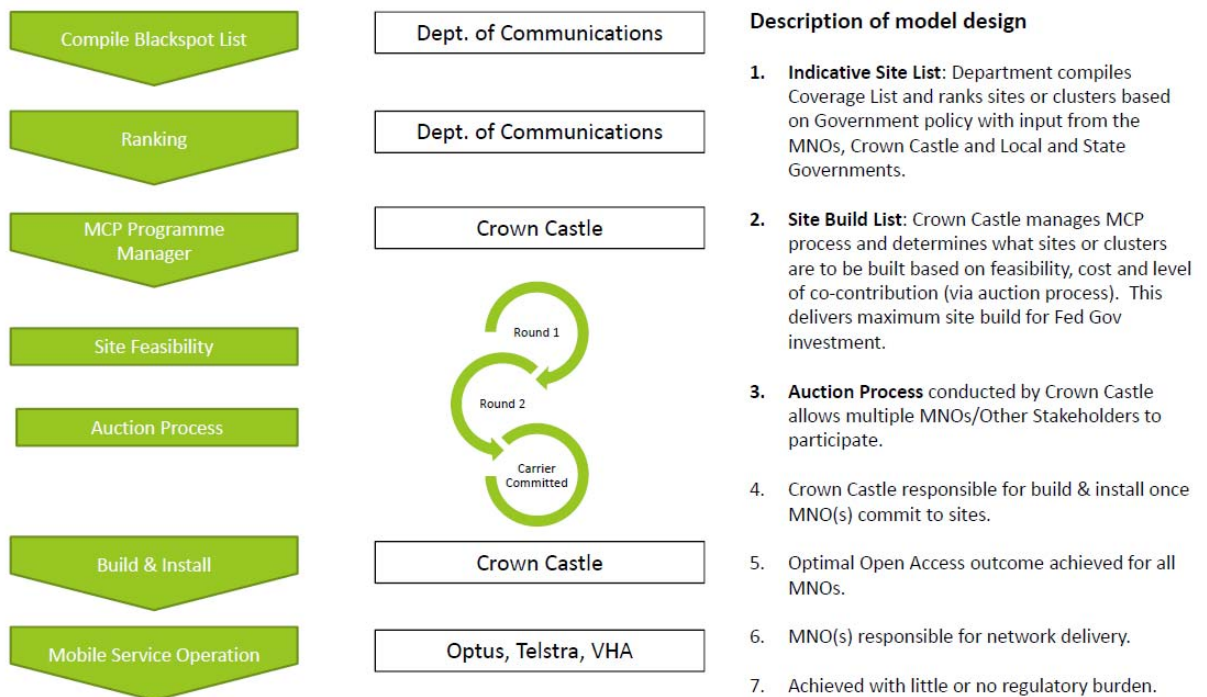
See our cover letter.

- (b) **Development of a wholesale mobile network capability onto which MNOs could roam locally on a commercial basis.**

See answer to question 8 (below).

4. Could options 3(a) or 3(b) for the \$80 million Mobile Network Expansion Project be delivered in conjunction with options 1 or 2 to enable network infrastructure providers to compete with MNOs?

Yes – in our view, a hybrid of Option 2 and Option 3(a) would deliver the most effective solution for the MCP.



5. Should bidders be able to propose to incorporate the use of base stations owned by NBN Co as part of their bid?

Yes, although NBN Co towers will need to be constructed and designed to support co-location.

Crown Castle would be able to assist in upgrading existing NBN sites to enable inclusion in the MCP with the agreement of a MNO to deploy on the site.

6. Should a joint bid (between a specialist network infrastructure provider and a MNO) be permitted? Should it be encouraged?

Yes. In Crown Castle’s view the lowest cost and most effective programme delivery will be achieved through a process of co-operation involving the infrastructure provider, MNOs and other stakeholders. Indeed, a NIP cannot bid without a MNO as it does not operate a mobile network.

Multiple bidder combinations may well result in the best outcome for all stakeholders.

Open access to all MNOs is the key reason Crown Castle recommends an Open Access Auction Model.

7. Is it realistic to expect specialist network infrastructure providers to provide backhaul (recognising that they would presumably need to contract with a third party to provide this)?

Whilst a specialist infrastructure provider like Crown Castle will select site locations with backhaul as part of the design, it is more efficient for each MNO to provide its own backhaul or otherwise make use of NBN Co “fibre to the tower (FTTT)” – if that forms part of the programme design.

8. Is option 3(b) suitable for Australia’s regional mobile market?

The sites to be built will not be contiguous and will service areas with existing market failure. It’s unlikely that a NIP could establish a business case to build and operate a wholesale network.

\$20 Million Mobile Black Spots Project

9. What are the appropriate specifications for a base station to be able to accommodate at least two other MNOs?

See our comments on the Tender Principles set out in our cover letter.

10. Will the proposed open access provisions be sufficient to encourage other MNOs to use the base stations to provide mobile services?

The mobile industry is highly competitive. In Crown Castle’s experience MNOs will seek to service as many customers as they can, as best they can, where it is practical and economic to do so. Providing open access is not a core business driver for a MNO. Ensuring operational assistance is difficult to regulate.

The Open Access Auction Model proposed by Crown Castle would provide:

- An Auction Process driven by MNOs who are economically incentivised to participate in those sites, maximising private contributions.
- A material subsidy to the successful MNO and also a subsidy to future users of the site. The subsidy for future users can be regulated but it is also a function of the open access tower operator having designed the site for colocation.
- Delivery by an independent infrastructure owner, naturally incentivised to maximise MNO’s participation, and build sites with co-location potential for multiple MNOs.

11. Should MNOs be required to pre-commit to/co-invest in the base stations for which they wish to share infrastructure?

Yes, for the first MNO.

12. What is the estimated additional cost of requiring all new base stations to meet the open access requirements?

There will be a small incremental cost if the towers are designed for colocation at first instance. If not, there will be a substantial cost for future users of the towers.

- 13. Should the proposed open access provisions be applicable to base stations funded under the \$20 million component, or should there be scope to exclude some base stations from these requirements?**

This will depend on the particular site locations.

- 14. What are the most appropriate models/benchmarks for establishing access and backhaul pricing, and for reflecting in that pricing the value of the public funding received by the owner of the facilities (such that access seekers receive an appropriate discount from the market price for access to the facility)?**

We will need to discuss this further with the Department.

Proposed Assessment Criteria

- 15. Do the proposed assessment criteria achieve the right balance to deliver the best value for money outcomes?**

Yes. The proposed assessment criteria looks appropriate.

- 16. Should the proposed assessment criteria be weighted, and if so, how?**

No. Crown Castle believes the weighting of the assessment criteria may add an unnecessary layer of complexity. Any “set” weighting will also be subject to change and may also encourage parties to challenge the decision of the Department to allocate funds properly based on an independent assessment of the criteria taken as a whole.

- 17. Is there a more effective means of assessing seasonal demand than proposed in criterion 3(c)?**

We will leave this to the MNOs to comment.

Utilising the NBN fixed wireless network

- 18. To what extent would the use of the NBN fixed wireless network result in improved mobile coverage outcomes in regional Australia?**

This involves looking at both towers and backhaul.

There are likely to be some synergies with the NBN’s tower build although NBN’s sites will need to be designed to support MNOs. The next question is whether NBN Co deploys fibre to the towers as they go about delivering broadband to premises across Australia.

- 19. How best can a greater role for NBN Co improve competition and choice for consumers in regional Australia?**

NBN Co can deploy FTTT as part of its broader network design. This needs to be considered in a broader regulatory context.

- 20. In addition to base station location, design and backhaul access, what other considerations would NBN Co need to take into account if it were to also support mobile coverage and competition benefits as part of its mandate?**

See the comments we have made in relation to the Tender Principles. These points equally apply to NBN Co in building out tower infrastructure.

21. How can early engagement between NBN Co and MNOs be facilitated in the design of each base station? Is there a role here for the Australian Mobile Telecommunications Association (AMTA)?

We would be happy to participate in this process. A single truck roll for the site acquisition, deployment and installation of towers and associated base stations that support NBN Co and MNOs would result in a very substantial cost saving for the Government and industry.

22. How can the Mobile Coverage Programme best complement any role that the NBN fixed wireless service plays in improving mobile coverage and competition?

Any build overlap (being tower and backhaul) between the MCP and NBN Co's fixed wireless network could reduce the total build cost for government and enable competitively neutral tower infrastructure to be constructed that facilitates consumer choice in the market. See also answer to 21.