



F4.1 Precautionary Approach to Site Selection Checklist

Issue Date	5/12/2023	Carrier	Optus and Vodafone	Site No. Address	3501519 Carlisle 134 Oats Street, Carlisle WA 6101	RFNSA No.	6101006
Description of Infrastructure	Upgrades to existing facility (replace existing lattice tower with a new steel monopole and associated equipment)						

4.1 Application of Precautionary Approach to Site Selection		
Section No.	Industry Code C564:2020 Requirement For each site the Carrier must have regard to:	Prompt/Question/response
4.1.2	For new sites, once the preferred candidate has been selected, the Carrier must make available to the public on request the summary of the sites considered and the reasons for the selection of the preferred option.	<p><i>The proposal involves upgrades to an existing mobile telecommunications facility. A new site selection process was not required.</i></p> <p><i>The proposed works at this site are to provide improved 4G and 5G services to the Carlisle area.</i></p>
4.1.4 (a)	The reasonable service objectives of the carrier including: (i) the area the planned service must cover (ii) power levels needed to provide quality of service (iii) the amount of usage the planned service must handle	<p><i>i) The proposed upgrade works will provide the surrounding area with access to enhanced mobile communications.</i></p> <p><i>ii) The transmit power settings at this facility will be set to accomplish the desired coverage, capacity and call quality within the areas listed above. The specifications provide for the ability for the facility to reduce the transmitting power to each user based on the radio environment.</i></p> <p><i>iii) This upgrade will provide improved peak traffic/in-building/hand held on street coverage</i></p>

4.1.4 (b)	Minimisation of EME exposure to public	<p><i>This facility will be designed and will be installed in accordance with relevant regulations relating to exposure to EME.</i></p> <p><i>The environmental EME level is minimised through radio network design. Adaptive power control is the network feature that automatically adjusts the power and hence minimises EME from both the base station and the handset. Another feature, called discontinuous transmission, reduces EME emissions by automatically switching the transmitter off when no speech or data is sent.</i></p> <p><i>The site has been designed to restrict public access to any areas that exceed the general public exposure limits. EME exposure to the public will be minimised by:</i></p> <ul style="list-style-type: none"> <i>• On site signage</i> <i>• Restricted access</i>
4.1.4 (c)	The likelihood of an area being a community sensitive location.	<p><i>A review of community sensitive locations both at and surrounding the site has been undertaken as part of the site selection process. The assessment takes into account any environmental and community issues that have been identified, and an evaluation is made as to whether the proposal is to proceed in its current form.</i></p> <p><i>No prior record of sensitivity. Site is in a commercial area and is not expected to be sensitive.</i></p>
4.1.4 (d)	The objective of avoiding community sensitive locations	<p><i>Wherever possible Carriers seek to avoid community sensitive locations when siting new telecommunications facilities.</i></p> <p><i>In some circumstances, mobile telecommunications facilities need to be located close to community sensitive locations, due to the area that the carrier is servicing. Quality mobile network services can only be maintained where base stations are located in close proximity to area being serviced.</i></p> <p><i>This proposal involves upgrades to an existing telecommunications facility. No record of sensitivity. Site is in a commercial area and is not expected sensitive.</i></p>

4.1.4 (e)	Relevant state and local government telecommunications planning policies	<p><i>Optus and Vodafone have considered all relevant local, state and federal government telecommunications planning policies, regulations and legislation prior to proceeding with this site.</i></p> <p><i>The proposal requires development consent from the Town of Victoria Park. The proposal is consistent with the applicable regulatory requirements.</i></p>
4.1.4 (f)	The outcomes of consultation processes with Councils and Interested and Affected parties (eg S7 & S6.4)	<i>Consultation will be conducted in accordance with Council's Community Consultation on Planning Proposals policy.</i>
4.1.4 (g)	The heritage significance (built, cultural and natural)	<p><i>A review of the heritage significance at and around the site has been undertaken as part of the site assessment.</i></p> <p><i>Based on a review of national, state and local registers, the subject site has not been identified as retaining built, cultural or natural heritage significance.</i></p>
4.1.4 (h)	The physical characteristics of the locality including elevation and terrain	<p><i>The physical characteristics of the area were considered in the initial deployment of the existing facility.</i></p> <p><i>This proposal involves upgrades to an existing facility. Upgrades to the facility are feasible considering the local elevation and terrain.</i></p>
4.1.4 (i)	The availability of land and public utilities	<i>Availability of land and public utilities were considered during the original deployment of the subject site. The proposed site will utilise existing power supply, with upgrades being undertaken where necessary.</i>
4.1.4 (j)	the availability of transmission to connect the Mobile Phone Radiocommunications Infrastructure with the rest of the network	<i>The proposed installation will utilise the existing transmission infrastructure to connect to the rest of the network.</i>
4.1.4 (k)	The radiofrequency interference the planned service may cause to other services	<p><i>Radio propagation analysis has been used to select appropriate antenna tilts to meet the requirements for coverage from the facility, while minimising interference to the existing network.</i></p> <p><i>Due consideration has been given to control interference to other services, for example:</i></p>

		<ul style="list-style-type: none"> - Transmitters are designed to comply with ACMA regulations which minimise spurious interference to other services. - Sufficient antenna separation is maintained at co-located sites. - Detailed RF modelling has been performed to ensure that interference into other services (such as domestic electrical equipment, medical equipment and fuel/explosive stores etc) is within acceptable limits.
4.1.4 (l)	The radiofrequency interference the planned service could experience at that location from other services or sources of radio emissions	Radio propagation analysis has been used to select appropriate antenna tilts to meet the requirements for coverage from the facility. Interference from other services has been considered in the process.
4.1.4 (m)	Any obligations and opportunities to co-locate facilities	The proposal involves co-location.
4.1.4 (n)	Cost factors	Preliminary costing of the proposed upgrade has been undertaken. The costs are considered to be reasonable.



F4.2 Precautionary Approach to Infrastructure Design Checklist

4.2 Application of Precautionary Approach to Infrastructure Design		
Section No.	Industry Code C564:2020 Requirement For each site the Carrier must have regard to:	Comments on how the Carrier has had regard to each item
4.2.3 (a)	the reason for the installation of the infrastructure considering – coverage, capacity and quality	<i>This upgrade is intended to provide enhanced mobile phone services, improved capacity and call quality in the area surrounding the site.</i>
4.2.3 (b)	the positioning of antennas to minimise obstruction of radio signals	<i>The antennas have been located at the most appropriate location to minimise the obstruction of radio signals and to also meet the objectives outlined in Section No 4.2.3 (a).</i>
4.2.3 (c)	the objective of restricting access to areas where RF exposure may exceed limits of the EMR standard	<i>This facility is designed and will be installed in accordance with carrier guidelines to restrict public access to any areas that exceed the general public EME exposure limits.</i>
4.2.3 (d)	the type and features of the infrastructure that are required to meet service needs including: (i) the need for macro or small scale infrastructure; and (ii) the need for directional or non-directional antennas	<i>This facility consists of macro cells utilising directional antennas to meet the objectives outlined in Section No 4.2.3 (a).</i>
4.2.3 (e)	the objective of minimising power whilst meeting service objectives	<i>The transmit power settings at this facility will be set to accomplish the desired coverage, capacity and call quality within the areas listed in 4.2.3 (a). The Over the Air specifications provide for the ability for the facility to reduce the transmitting power to each user based on the radio environment.</i>
4.2.3 (f)	whether the costs of achieving this objective are reasonable	<i>Optus and Vodafone have undertaken preliminary costing of this upgrade and are of the opinion these costs are reasonable.</i>
4.2.4	The Carrier must make site EME assessments for Mobile Phone Radiocommunication Infrastructure in accordance with the ARPANSA prediction methodology and report format (as referenced in Appendix B).	<i>EMR assessments in accordance with ARPANSA have been completed and have been uploaded onto the RFNSA (www.rfnsa.com.au).</i>