# **Environmental EME Report**

Location

Catshed Workshop, Friday Drive Thredbo Village, THREDBO NSW 2625

Date

10/12/2021

**RFNSA No.** 2625005

### How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at Catshed Workshop, Friday Drive Thredbo Village, THREDBO NSW 2625. These levels have been calculated by Lend Lease using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

A document describing how to interpret this report is available at ARPANSA's website: <u>A Guide to the Environmental Report</u>.

## A snapshot of calculated EME levels at this site

| The maximum EME level calculated for the <b>existing</b><br>systems at this site is | The maximum EME level calculated for the <b>proposed</b><br>changes at this site is |  |  |
|---|---|--|--|
| 1.89%   | 2.35%   |  |  |
| out of 100% of the public exposure limit, 149 m from the location.                  | out of 100% of the public exposure limit, 167 m from the location.                  |  |  |
|   | EME levels with the proposed changes  |  |  |
|   | Distance from<br>the site   | Percentage of the public exposure<br>limit |  |
|   | 0-50 m  | 0.78%                                      |  |
|   | 50-100 m  | 0.49%                                      |  |
|   | 100-200 m   | 2.35%                                      |  |
|   | 200-300 m   | 1.93%                                      |  |
|   | 300-400 m   | 0.87%                                      |  |
|   | 400-500 m   | 0.48%                                      |  |

For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at <u>http://www.rfnsa.com.au/2625005</u>.

#### Radio systems at the site

This base station currently has equipment for transmitting the services listed under the existing configuration. The proposal would modify the base station to include all the services listed under the proposed configuration.

|         | Existing      |   | Proposed      |   |  |
|---------|---------------|---|---------------|---|--|
| Carrier | Systems       | Configuration Systems   |               | Configuration   |  |
| Optus   | 3G, 4G,<br>5G | LTE1800, NR/LTE2100, LTE2600,<br>LTE700, WCDMA2100,<br>WCDMA900, LTE900 | 3G, 4G,<br>5G | NR/LTE2100, LTE1800,<br>NR/LTE2100 (proposed),<br>LTE2600, WCDMA2100, NR3500<br>(proposed), LTE700, LTE900,<br>WCDMA900 |  |

### An in-depth look at calculated EME levels at this site

This table provides calculations of RF EME at different distances from the base station for emissions from existing equipment alone and for emissions from existing equipment and proposed equipment combined. All EME levels are relative to 1.5 m above ground and all distances from the site are in 360° circular bands.

|                           | Existing configuration  |                             | Proposed configuration                           |                         |                             |  |
|---------------------------|-------------------------|-----------------------------|--|-------------------------|-----------------------------|--|
| Distance from<br>the site | Electric field<br>(V/m) | Power<br>density<br>(mW/m²) | Percentage of<br>the public<br>exposure<br>limit | Electric field<br>(V/m) | Power<br>density<br>(mW/m²) | Percentage of<br>the public<br>exposure<br>limit |
| 0-50m                     | 4.53                    | 54.47                       | 0.72%  | 4.93                    | 64.58                       | 0.78%  |
| 50-100m                   | 3.59                    | 34.12                       | 0.68%  | 3.24                    | 27.93                       | 0.49%  |
| 100-200m                  | 6.62                    | 116.08                      | 1.89%  | 7.84                    | 163.15                      | 2.35%  |
| 200-300m                  | 6.04                    | 96.77                       | 1.51%  | 7.16                    | 136.09                      | 1.93%  |
| 300-400m                  | 4.13                    | 45.16                       | 0.70%  | 4.84                    | 62.14                       | 0.87%  |
| 400-500m                  | 3.13                    | 25.94                       | 0.40%  | 3.59                    | 34.10                       | 0.48%  |

#### Calculated EME levels at other areas of interest

This table contains calculations of the maximum EME levels at selected areas of interest, identified through consultation requirements of the <u>Communications Alliance Ltd Deployment Code C564:2020</u> or other means. Calculations are performed over the indicated height range and include all existing and any proposed radio systems for this site.

#### Maximum cumulative EME level for the proposed configuration

| Location                                  | Height range | Electric field<br>(V/m) | Power<br>density<br>(mW/m²) | Percentage of<br>the public<br>exposure<br>limit |
|---|--------------|-------------------------|-----------------------------|--|
| Thredbo Village Leisure Centre Child Care | 0-5 m        | 1.07                    | 3.02                        | 0.05%  |