

in the phone being passed to GSM mode (3G coverage, 3G quality and 3G capacity being the main reasons).

### **2.3 Alternative sites considered and the precautionary principle**

When looking at alternative sites there is a limit as to how far the 3G mobile base station can be located from the targeted coverage area (in this case the township of Uki). Even though 3G coverage from a mobile station may reach many kilometres out from the actual base station the greater the distance from the base station the greater degradation the 3G signal suffers. Signal degradation leads to commonly experienced problems such as dropping out, poor connectivity etc.

#### **Alternative sites considered – (please refer to Map 1)**

##### **Candidate 1 – Lot 1 DP 574910 No 1529 Kyogle Road Uki – Hardings Construction Yard**

A telecommunications facility at this location would have been prominent from the main street of Uki.

##### **Candidate 2 – Lot 2 DP 581366 No 22-30 Aulfs Road Uki**

Difficulties were encountered in sourcing power to this site. Additionally it was also anticipated that there would be difficulty in getting heavy machinery to the site (for construction) due to the steep gradient of the terrain.

##### **Candidate 3 – Lot 53 DP 755754, Langes Road, Uki**

Inability to obtain tenure approval from the property owner.

##### **Candidate 4 – Water Treatment Works, end of Old Convent Road, Uki**

As per candidate 1.

##### **Candidate 5 – Water Reservoir at end of Grants Road, Uki**

Existing layout of area around water reservoir is problematic. There was difficulty in locating an appropriate area for the facility to be erected.

##### **Candidate 6 – Lot 4 DP 43844 1359 Kyogle Road, Byangum NSW**

Insufficient space left on property to appropriately accommodate the proposed facility. Furthermore the existing house is already located in the prime area for any proposed telecommunications facility.

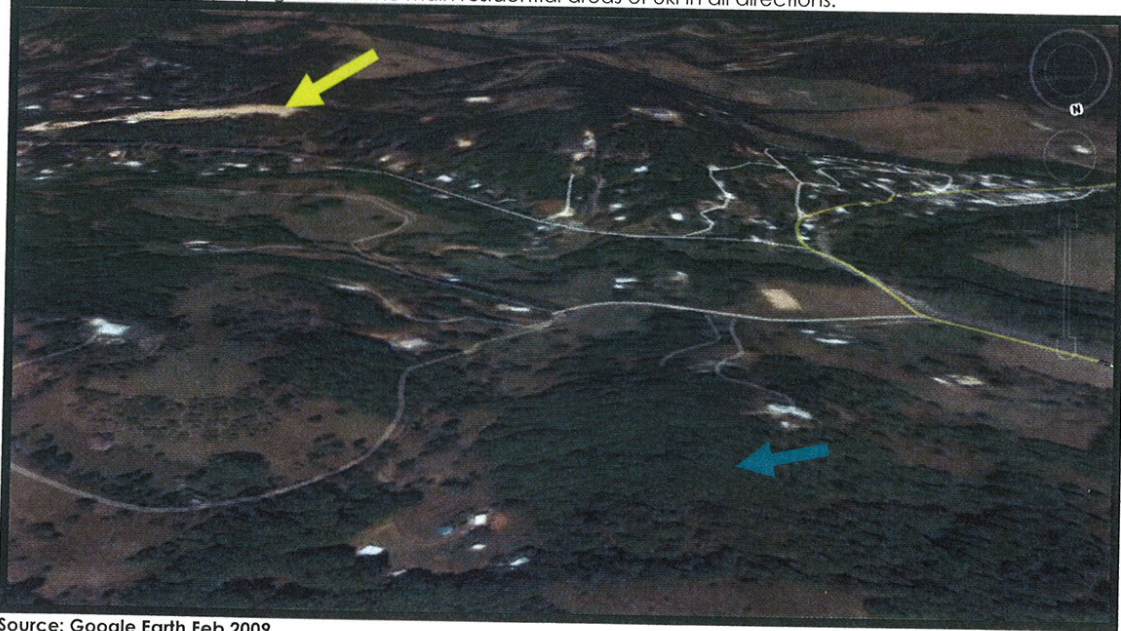
##### **Candidate 7 – Property at end of Sunrise Place, Uki**

As per candidate 3.

##### **Candidate 8 – Working Quarry site off Smiths Creek Road, East of Uki**

Site was discounted from a radiofrequency perspective because the 3G signal to Uki was blocked by terrain of a greater elevation to the west of the quarry. Basically, the main intended target of the 3G coverage, Uki Village, would have received no coverage from this location. Please see Figure 1 for a 3D illustration. Additionally the quarry is also a working quarry which also makes it difficult to secure an area that will not impede quarry activities now and in the future.

**Figure 1.** Elevation of quarry site in comparison to the higher elevated terrain located to the west. Location of quarry is indicated by yellow arrow. In comparison the proposed site, indicated by the blue arrow, has unobstructed signal propagation to the main residential areas of Uki in all directions.



Source: Google Earth Feb 2009

**Candidate 9 - Site located around Mt Wollumbin**

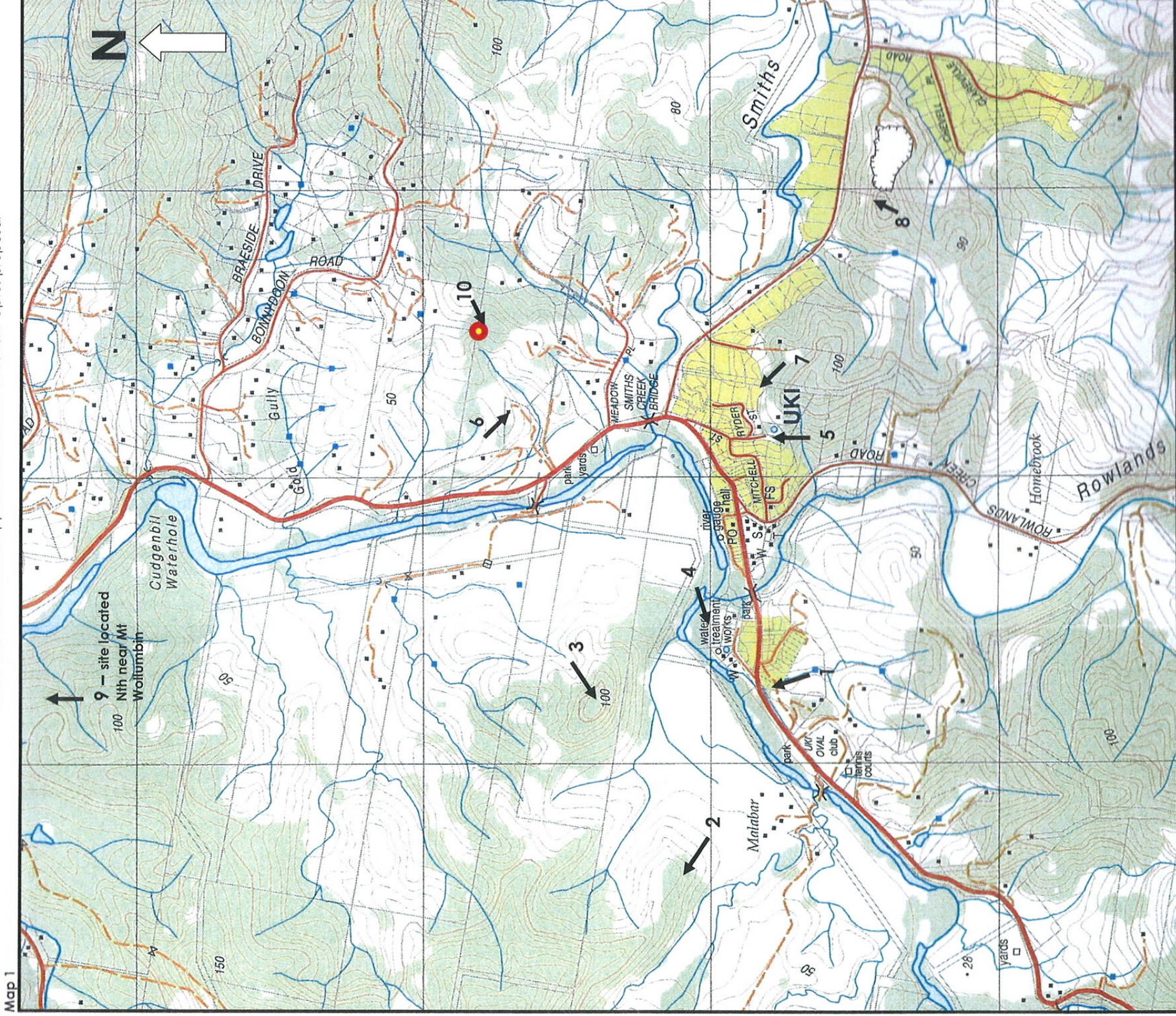
This site was very difficult to access by heavy machinery due to the steep terrain. It is also probable that the creation of a significant power easement (20m wide) requiring tree removal, would have been needed if this site had been progressed.

**Candidate 10 – Lot 17 DP 778719, 19 Meadow Place, Uki**

Candidate 10 is situated on elevated terrain outside the main Uki village area. This candidate has many attractive features for telecommunications facility siting including access, power and good vegetation cover.

Alternative Sites map

Yellow & red dot indicate approximate location of current Optus proposal



Map 1  
Source: LPI Map