



Technical Justification & Plots




CSR 43356 39 Whitfield st
3G, NGR [529485-181785]

Brief. The increased use of mobiles phones and other devices means that O2 is continually looking to improve its network as well as to fulfil its license agreements. Within O2's network, There is currently a shortfall of coverage/Call blocking issues in the area of Tottenham court rd & Goodge st,
A proposed cell site installation has been designed to keep and retain a high level of coverage to O2 customers, so that they can make and retain good quality calls. The cell site is required to improve the existing 3G service to customers.

This is a technical justification for the proposed telecommunications (site) installation in the O2 3G Network. It is accompanied by radio coverage plots which illustrate the need for the proposed site. The radio coverage plots are produced using computer modelling software and are intended to give as accurate a representation as possible of existing and proposed coverage. The model does not take into account specific local features such as individual building heights and trees.

This site will offload traffic from surrounding sites that are suffering from Channel Element blocking which is causing a poor customer experience during call setup and in some cases no throughput in the voice busy hour. These sites are currently at maximum configuration and require a new site in the area to reduce the traffic carried by the cell experiencing blocking.

The coverage plots show levels of coverage @ -75dBm which is good for Urban Coverage.

	-75	Urban
	-83	Suburban
	-91	In Car
	-96	Outdoor

O₂

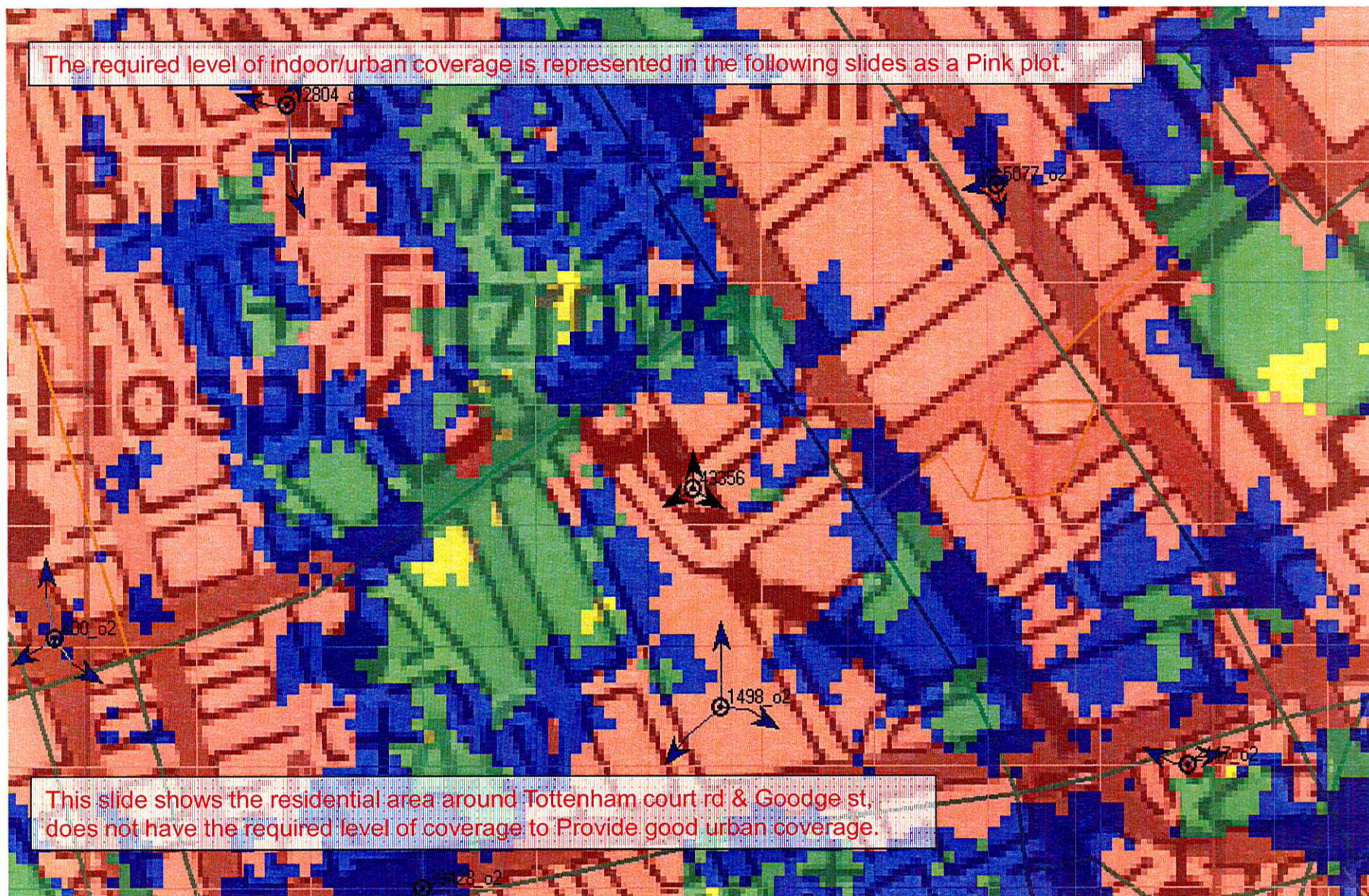
Cell Search Area

The search area depicts an area which would provide a suitable location to ameliorate the O2 network coverage issues. Existing O2 sites surrounding the search area were discounted as not suitable candidates due to their distance from the target area.



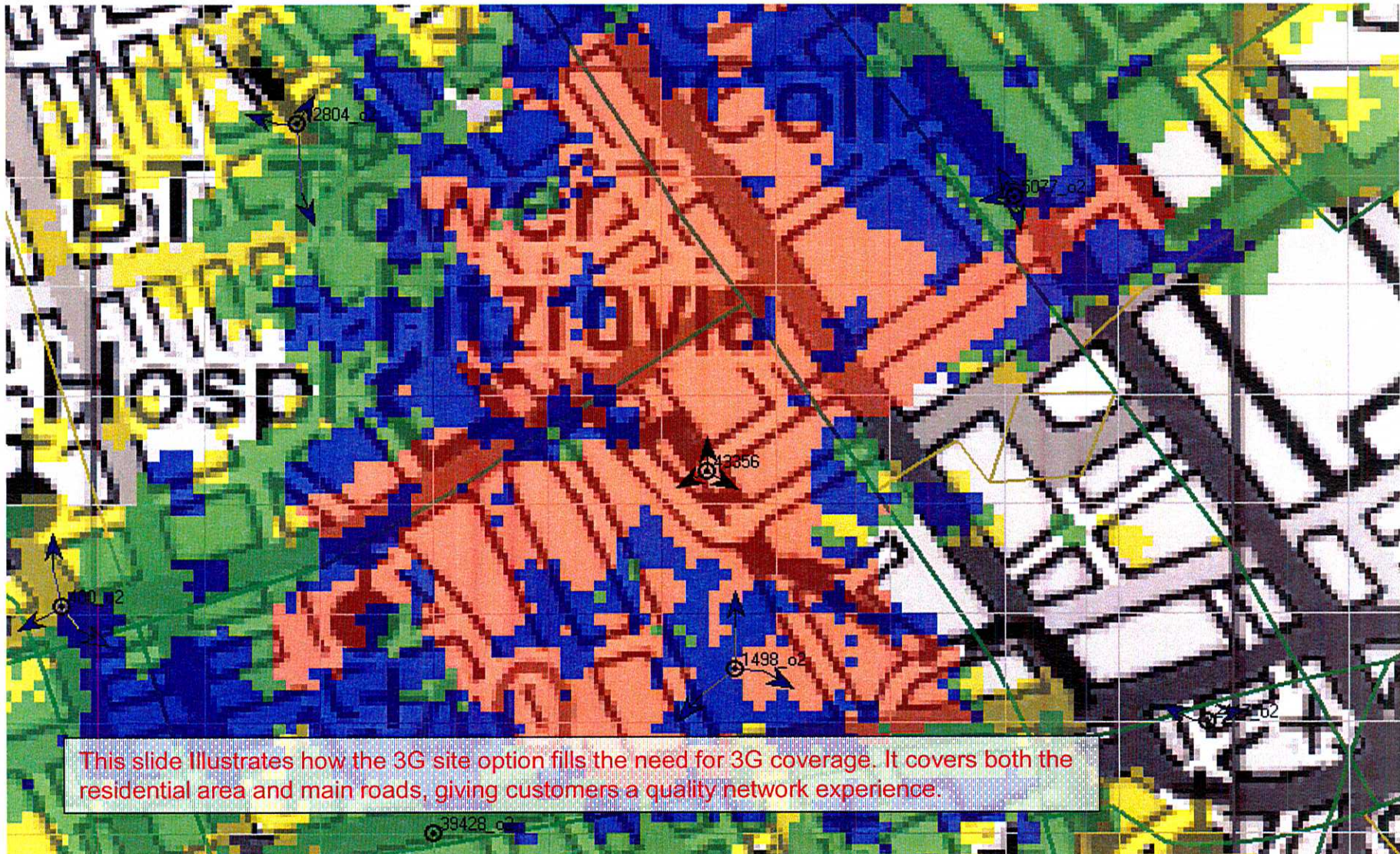
O₂

Plot A
CSR 43356 39 Whitfield st
Coverage without 43356



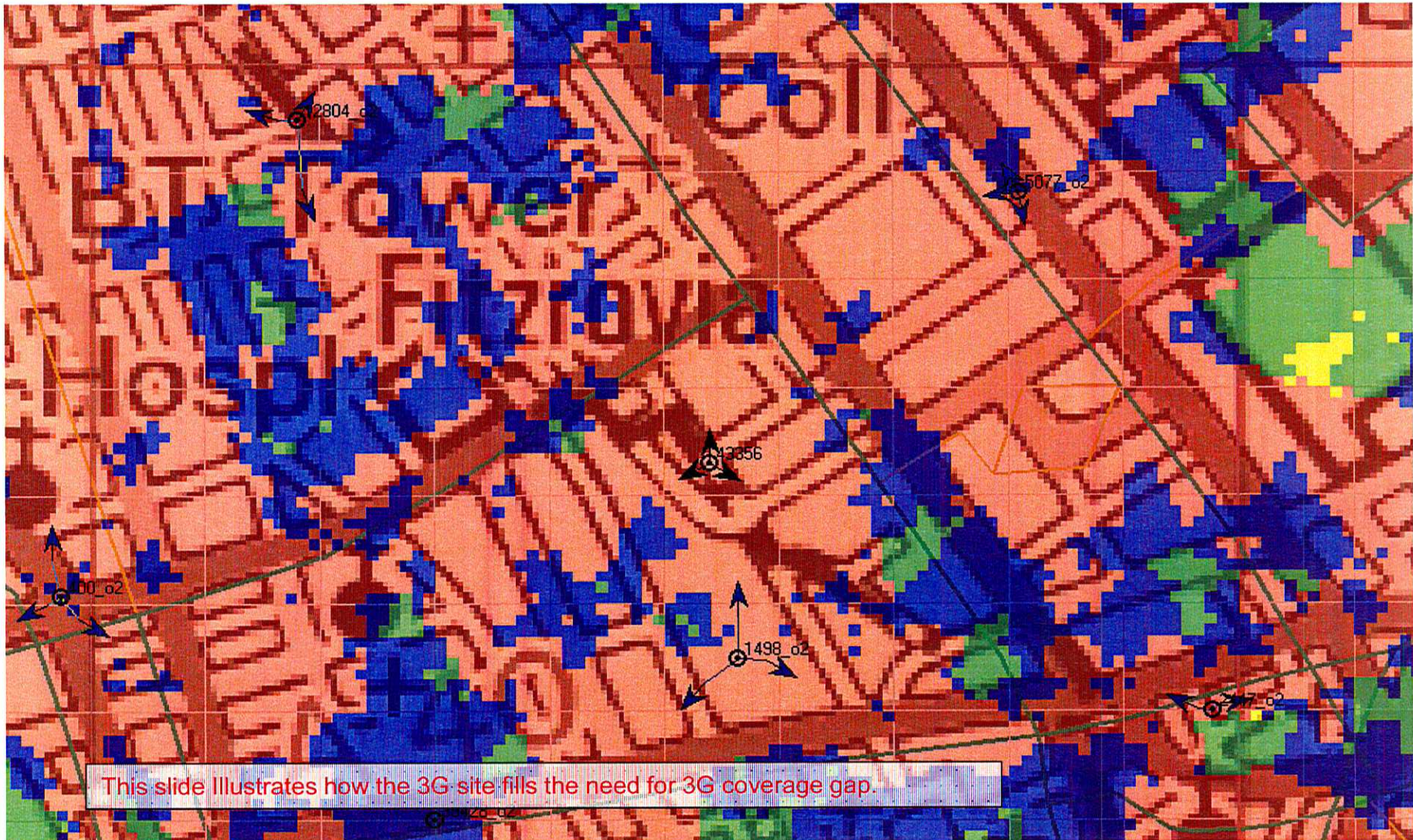
O₂

Plot B
CSR 43356 39 Whitfield st
Standalone prediction



O₂

Plot C
CSR 43356 39 Whitfield st
Existing coverage and with CSR 43356





CSR 43356 39 Whitfield st Conclusion

The composite plot “C” showing coverage with the proposed site CSR 43356 confirms the suitability of the location to fill the coverage gap and help with the Channel Element blocking within O2 network around this area.

- The new site CSR 043356 will be a satisfactory site, as established communication links will have a low drop rate also call establishment failure rate will also remain low and will be within acceptable limits.
- The plots show good coverage from the site with antenna modelled at 38m.
- The plots indicate that: the proposed O2 Site will improve the coverage/data use footprint in the Area, in particular the areas surrounding Tottenham court rd & Goodge st and surrounding residential/business areas. The proposed site will remedy the poor coverage/poor Data issues and provide customers with an improved level of service, allowing them to make and retain calls, whether this is from home, from work, or whilst on the move.
- The advantage of integrating a site at this location into the O2 network will allow for optimisation of local operational sites improving coverage/data use in other areas (removing the need for some additional sites in the area)

N.B.

The radio coverage plots are produced using computer modelling software and are intended to give as accurate a representation as possible of existing and proposed coverage. The model does not take into account specific local features such as individual building heights and trees.

The coverage plots show levels of coverage @ -75dBm which is required for good in-building/urban coverage.