

# Supporting Technical Information for

## CTiL

Sites 80982 and 80983 are required to replace coverage and capacity in and around Russell Square and Great Ormond St Hospital due to the loss of site 9046. The area is extremely busy due to Russell Square station and the numerous busy Hotels in the area. 80983 will provide wider coverage to the area, whilst 80982 will mainly help alleviate capacity issues in and around Queen Square where many of the Hospital buildings are located.

**Date Prepared:** 23/7/2017

# KEY TO COVERAGE PLOTS

## Key for GSM (2G) Plots

The enclosed radio propagation plots are based on Ordnance Survey geographical information.

The level of coverage provided by a particular site is dependant on a number of variables. The main factors which determine the extent of coverage are: the frequency of the signal emitted, the height of the antenna above ground level, the characteristics of the surrounding topography and the type and occurrence of ground clutter such as buildings and trees which can cause 'shadows' or reflections and can absorb the signal.

The Radio Planners have produced accurate visual representations of the level of coverage available in this particular area by using advanced computer modelling software based on a Geographical Information System. The programme takes the numerous variables as above into account and can then calculate and plot the strength of the signal.

Existing and proposed sites are indicated by a blue or red circle and dot with the site number. The orientation of the antennas is shown by the arrows.



Site arrows show orientation of antennas

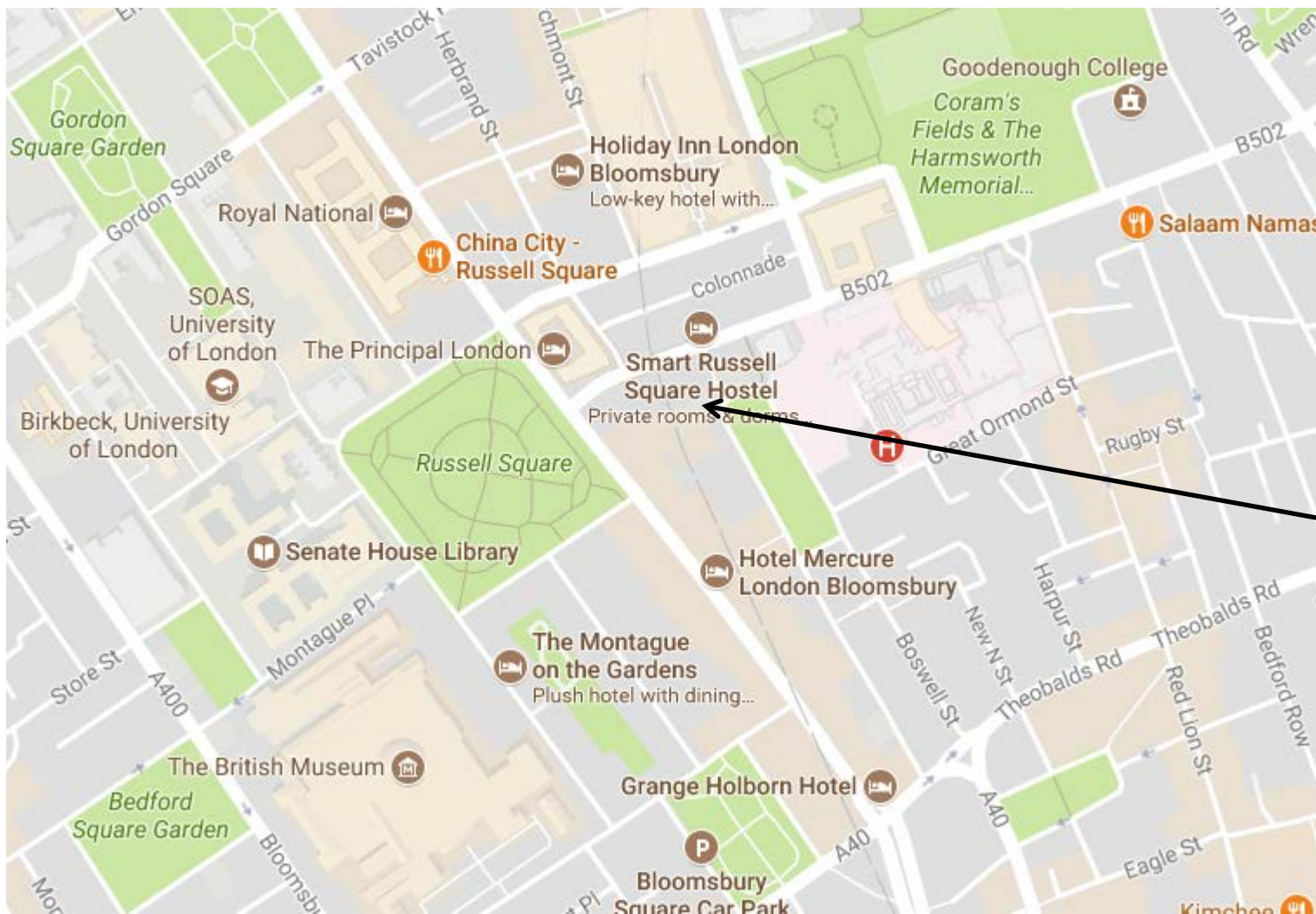
Note on large rooftop sites the antenna can be distributed in different locations from the site location. This is represented by a line extending outwards from the site to the antenna.

Orange	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in urban areas.	Indoor Urban
Blue	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in suburban areas	Indoor Suburban
Green	Sufficient signal strength to provide adequate service for use of a hand portable mobile in a car	In Car
Yellow	Sufficient signal strength to provide adequate service for outdoor use of a hand portable mobile.	Outdoor
No Colour	Insufficient signal strength to provide reliable service.	No Coverage

## Key for UMTS (3G) Plots

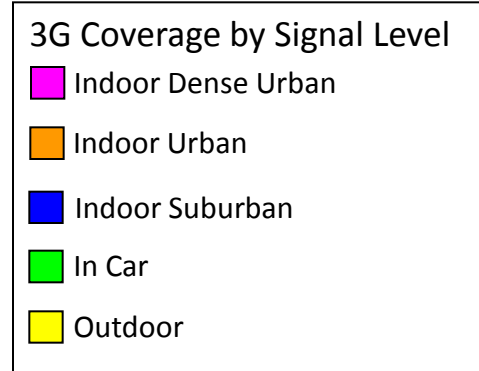
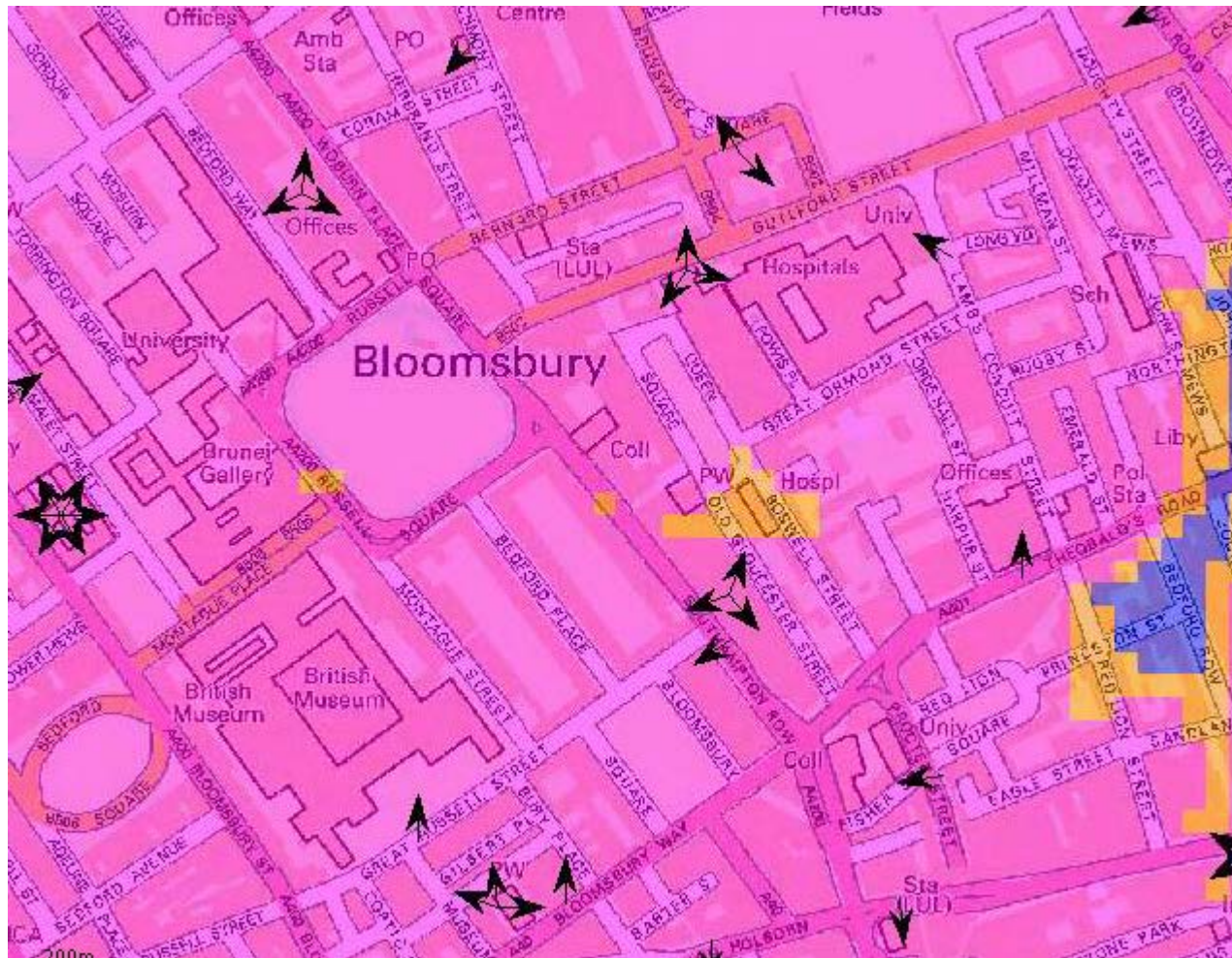
Pink	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in urban areas.	Indoor Dense Urban
Orange	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in suburban areas	Indoor Urban
Blue	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in suburban areas	Indoor Suburban
Green	Sufficient signal strength to provide adequate service for use of a hand portable mobile in a car	In Car
Yellow	Sufficient signal strength to provide adequate service for outdoor use of a hand portable mobile.	Outdoor
No Colour	Insufficient signal strength to provide reliable service.	No Coverage

# CTiL – Map of required Coverage Area



Centre of  
Search Area

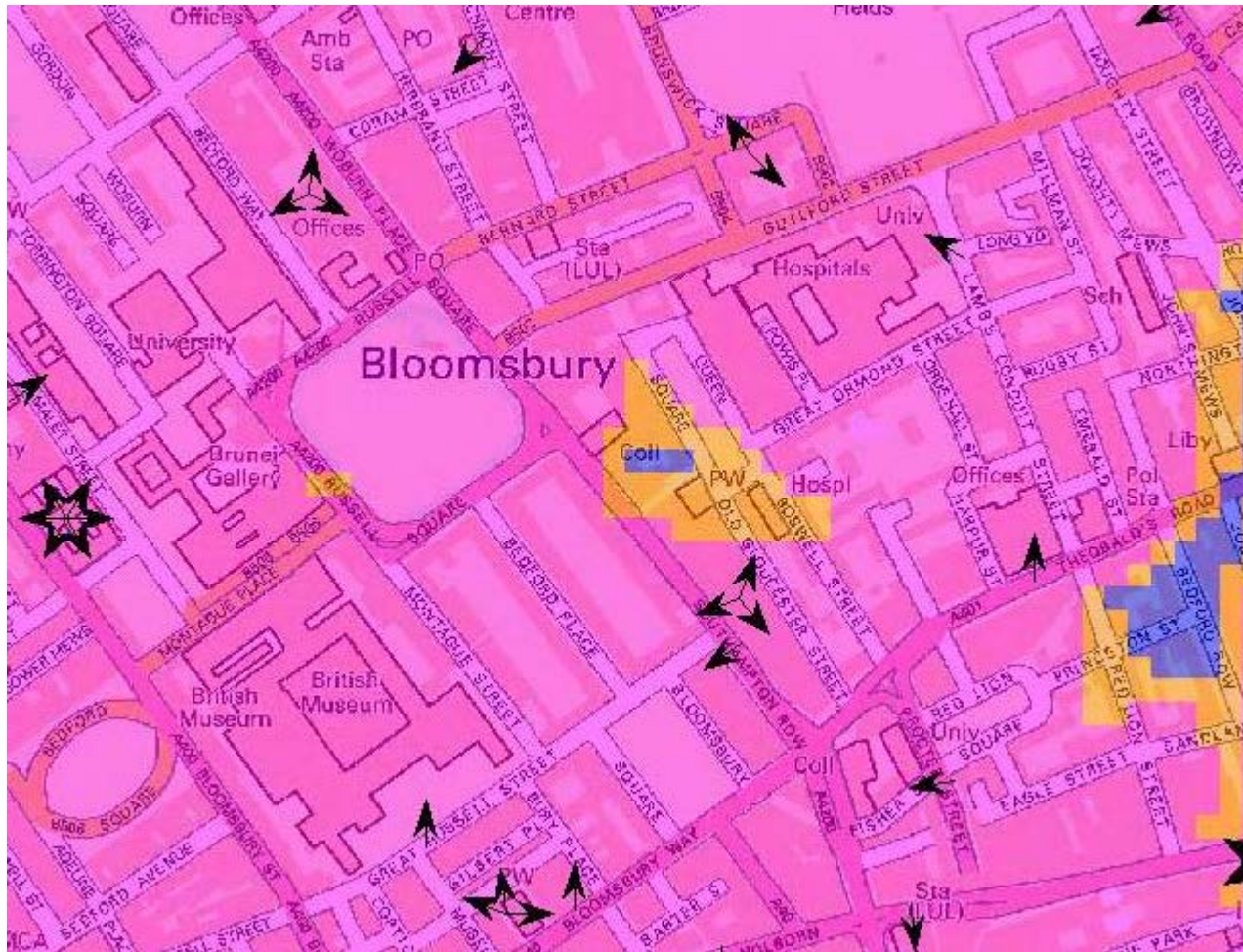
# CTiL – Existing UMTS Telefonica (3G) Coverage



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This coverage plan must be read in conjunction with the key and site specific supplementary information. Each colour block represents 50 metres square.

# CTiL - UMTS Telefonica (3G) Coverage without 9046



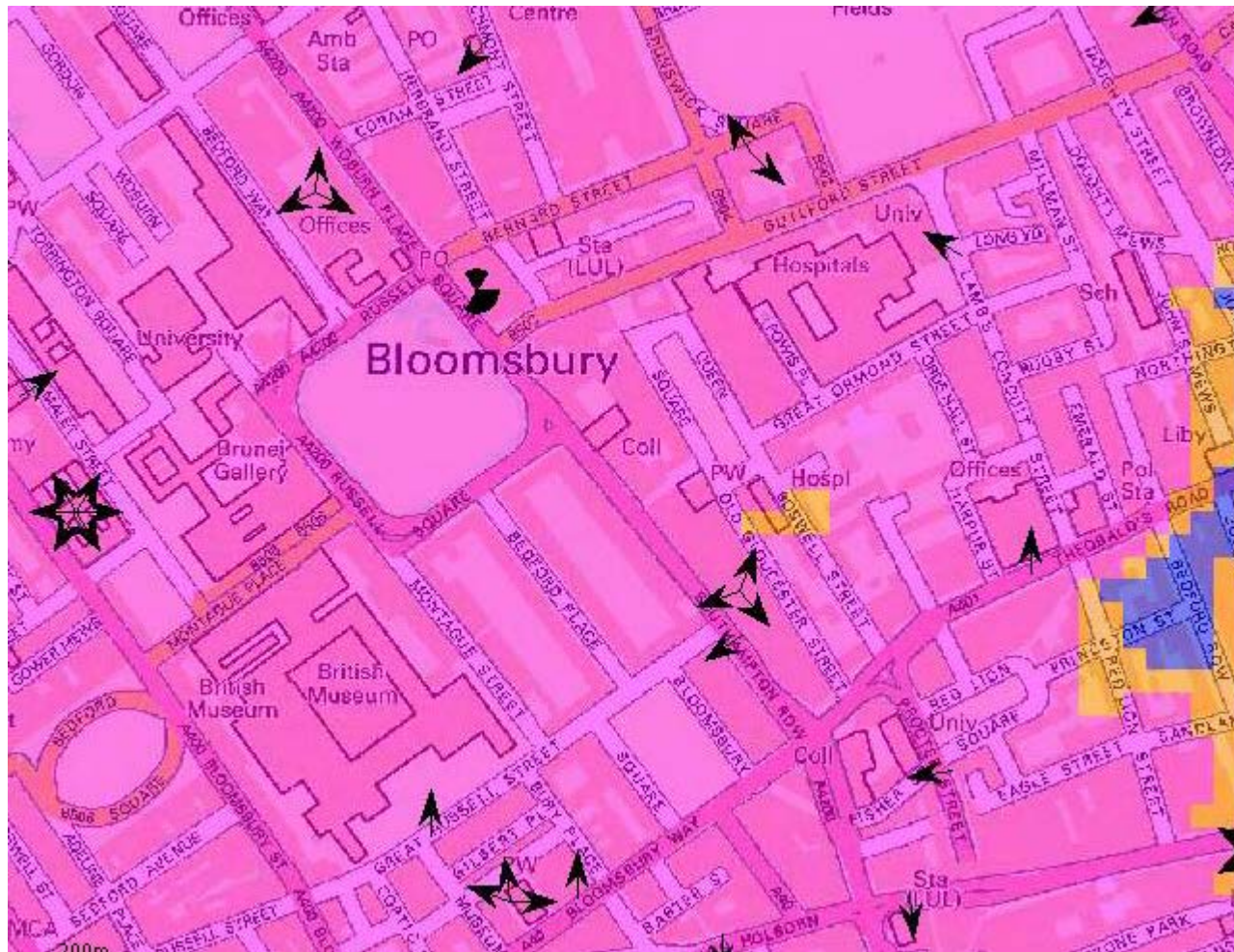
## 3G Coverage by Signal Level

- Indoor Dense Urban
- Indoor Urban
- Indoor Suburban
- In Car
- Outdoor

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# CTiL – Proposed UMTS Telefonica (3G) Coverage 80983



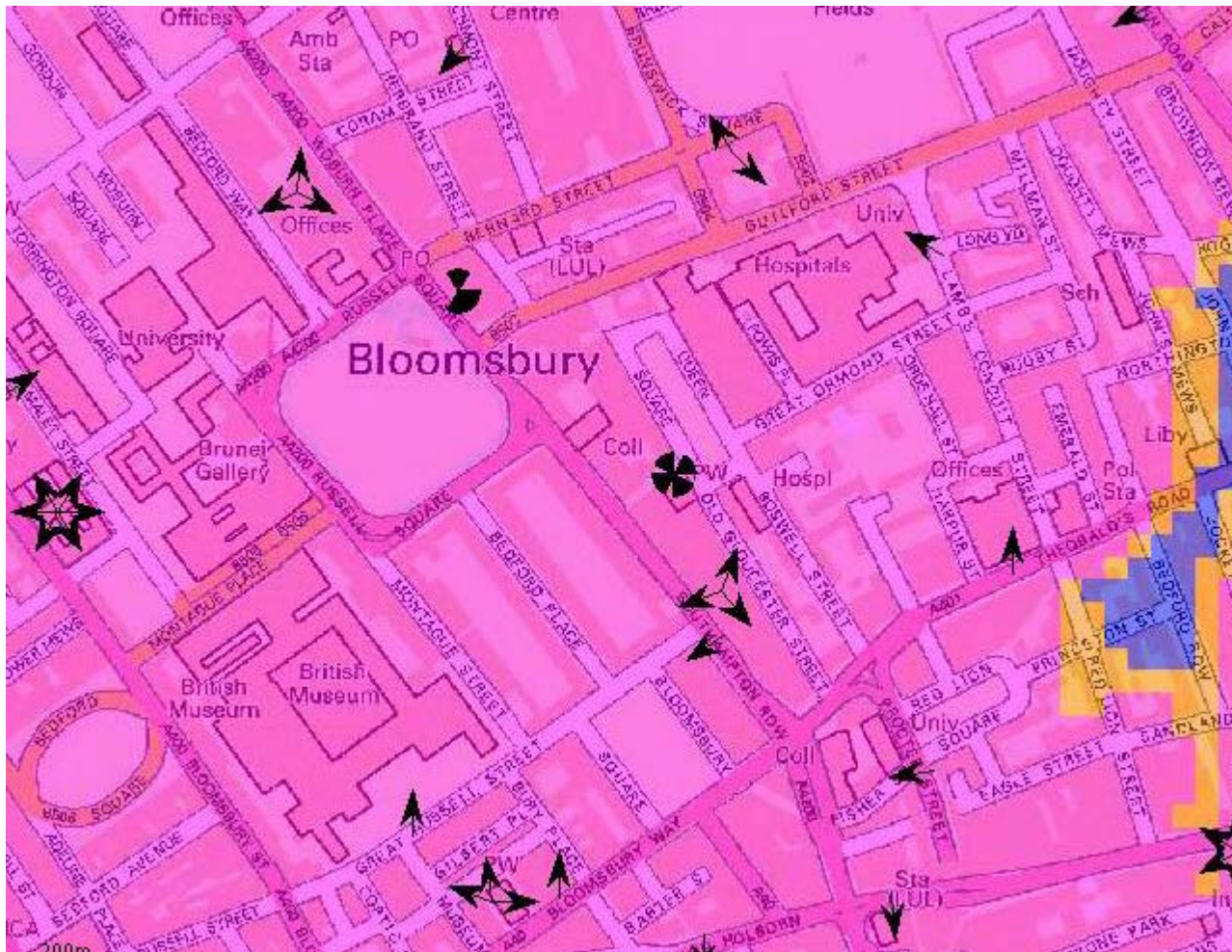
## 3G Coverage by Signal Level

- Indoor Dense Urban
- Indoor Urban
- Indoor Suburban
- In Car
- Outdoor

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# CTiL – Proposed UMTS Telefonica (3G) Coverage 80982



## 3G Coverage by Signal Level

- Indoor Dense Urban
- Indoor Urban
- Indoor Suburban
- In Car
- Outdoor

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