

# Supporting Technical Information for

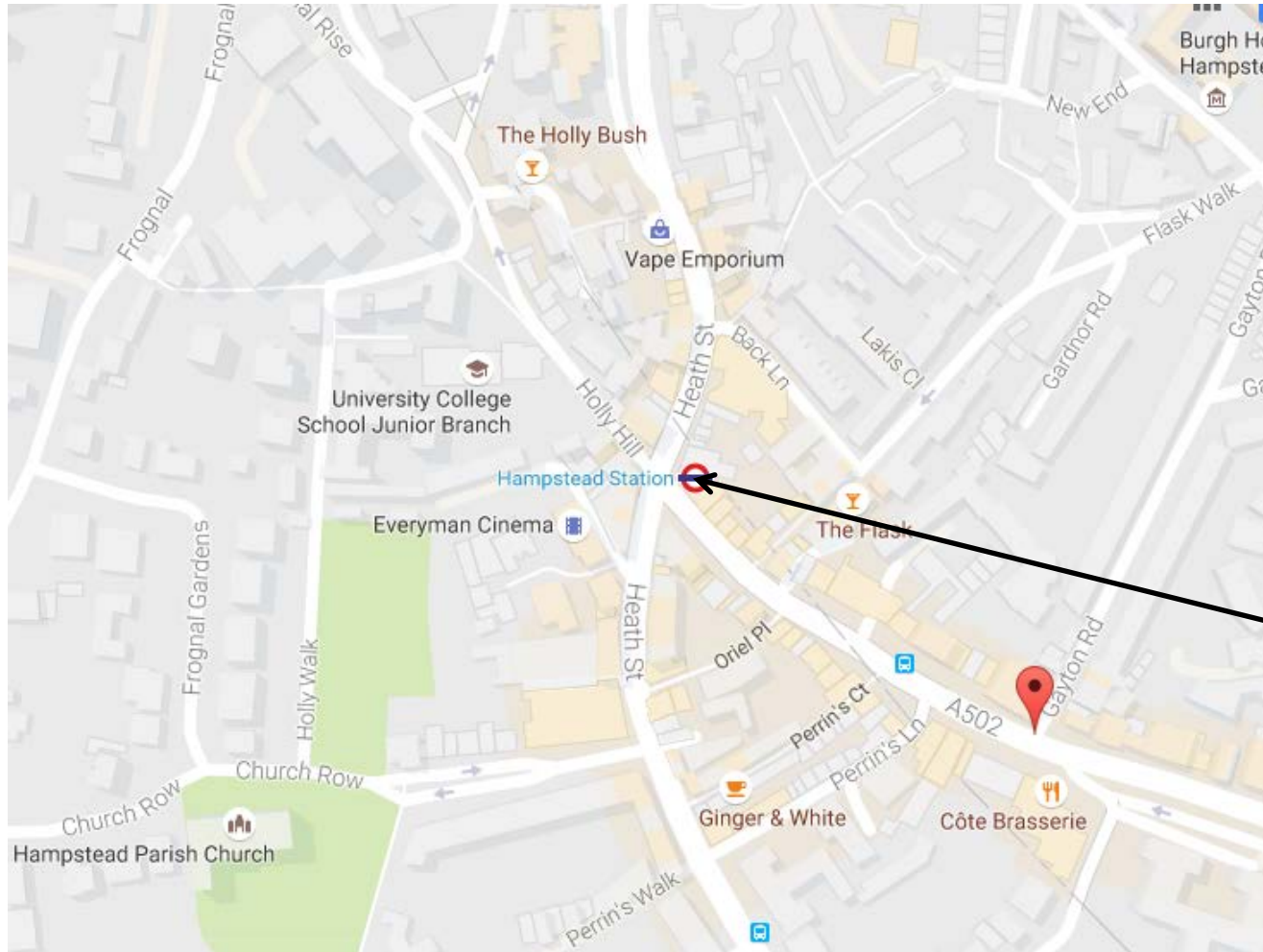
## CTiL

## 44426

44426 is required to provide the necessary level of coverage and capacity in and around Hampstead. It has been several years whereby the network has been unable to acquire a site in Hampstead with many failed options due to unsuitable build or planning. Hampstead station is ideal as it benefits from being central in location and targeting the main traffic source of commuters- this enables the design to be non intrusive whilst being a very effective site. Currently, the surrounding sites in the area are at breaking point with trying to cope with the demands of Hampstead and in the very near future will be unable to provide the required service with customers seeing very low data rates and dropped calls with the increasing demand.

**Date Prepared:** 26/9/2016

# CTiL – Map of required Coverage Area



Centre of  
Search Area

# KEY TO COVERAGE 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.

## Key for GSM (2G) Plots

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

## Key for UMTS (3G) Plots

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

# CTiL – Existing UMTS Telefonica (3G) Coverage



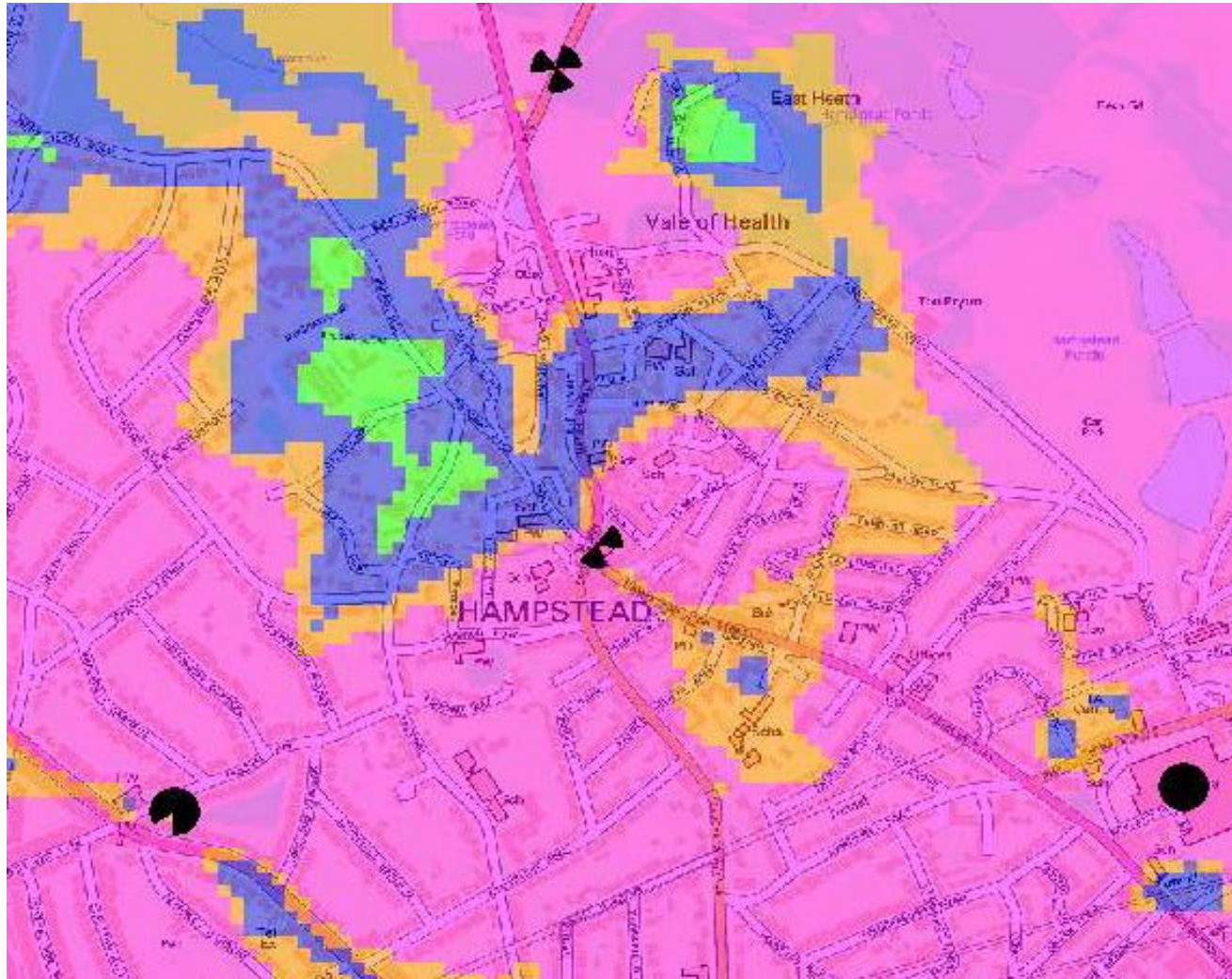
## 3G Coverage by Signal Level

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

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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 - Proposed UMTS Telefonica (3G)



## 3G Coverage by Signal Level

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

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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.