APPENDIX 4: COVERAGE PLOTS

Cornerstone : Supporting Technical Information for O_2 & Vodafone : -

Forest Hills Replacement

O_2 Site - 49091

Vodafone Site - 81899

Date Prepared: 16 August 2011

CS_18619 VF_81899 O2_49091 - VF 3G site requirement. O2 3G requirement

CORN/09/014 v1.3

KEY TO PLOTS

Key for GSM (2G) plots

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

Key for UMTS (3G) Plots

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

The enclosed 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. **Blue** represents O2 and **red** represents **Vodafone**. 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.

O2 and Vodafone - Map of Search Area

CS_LBR1_TV_0888_20_A004_1 - TV 3G site replacement. O2 3G replacement

O2 - Existing UMTS (3G) Coverage

O2 3G redimensioning

CS_1808_TV_1808_O2_4008 - TV 3G site independent.

This coverage plan must be read in conjunction with additional statements, assumptions and key set out in the supporting 02 master document.

Each colour block represents 20 metres.

O2 - proposed UMTS (3G) Coverage

Brutpage
Brutpage
Brutpage

Vodafone - Existing UMTS (3G) Coverage

3G Coverage by Signal Level
Dense Urban
Urban
Suburban
In Car
Outdoor
Burpage
Burpage Hill
Burpage Hall
Burpage Hayes
Burpage Cottages
Burpage Farm
Burpage Grange
Burpage Lodge
Burpage Mill
Burpage Park
Burpage Rise
Burpage Wood
Burpage Woods
Burpage Works
Burpage Yard
Burpage Cross
Burpage Court
Burpage Gate
Burpage Hall
Burpage Hayes
Burpage Hill

Vodafone - proposed UMTS (3G) Coverage

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Each colour block represents 20 metres.

This coverage is based on current information and assumptions. Variations in topography, clutter and buildings will affect the coverage.

CS_1801 TV_8180 OS_4004 - TV 3G site locations

OS 3G refinement