Our ref; 74895/VF/KJ

Part One

The Chief Planning Officer
Staffordshire Moorlands District Council
Moorlands House
Stockwell Street
Leek
Staffordshire
ST13 6HQ

MONO CONSULTANTS LIMITED
VICTORIA BUILDINGS
1-7 PRINCESS STREET
MANCHESTER M2 4DF
t. 44 (0)161 839 8839 f. 44 (0)161 839 8840
www.monoconsultants.com

FAO Mr Williams

BY RECORDED DELIVERY

18/12/2008

08/02079/ [illegible] S M D

Dear Mr Williams,

RE: PROPOSED VODAFONE INSTALLATION AT GRASS VERGE OF QUEENS DRIVE, HAREGATE, LEEK, STAFFORDSHIRE, ST13 6QS

This application is submitted under Part 24 of Schedule 2 to the Town And Country Planning (General Permitted Development) Order 1995, as amended by the Town And Country Planning (General Permitted Development) (Amendment) (England) Order 2001 and in accordance with the electronic communications code under the Telecommunications Act 1984 Schedule 2 as amended by the Communications Act 2003.

This is an application for a determination as to whether the prior approval of the Authority will be required to the siting and appearance of the development. This application comprises:

- Written description of the proposed development - 12m high (to underside of antenna) slim line streetworks monopole supporting 3no antennas, associated equipment cabinet;
- Located at grass verge on Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS (E399564 N357512);
- A planning application fee in the sum of £335.00 made payable to Staffordshire Moorlands District Council;
- Copy of Developer's Notice, and proof of delivery;

For your further assistance, we enclose additional information:-

- Supplementary drawings - Ref. No's: 74895/A/001, 74895/A/002A, 74895/A/003A & 74895/A/004A
- Site Specific Supplementary Information (including copies of pre-consultation and coverage plots as appropriate);
- General Background Information for Telecommunications Development;
- ICNIRP declaration and clarification statement.

As you will be aware, the telecommunications industry has pledged in the Code of Best Practice for Mobile Phone Network Development (November 2002) to improved consultation with Local Planning Authorities and the public in relation to network development and the siting of radio base stations. This application has been prepared in accordance with those commitments.

On an annual basis Vodafone circulates its network plans of our existing and proposed sites to all Local Planning Authorities (marked for the attention of the Chief Planning Officer) in order that you can maintain your mast register and ensure that the public has access to this information. We also offer to arrange a presentation or meeting with your officer's and members to discuss the issues if appropriate.

Following that early consultation, we have reviewed our network development proposals in this area and have evaluated suitable site shares, existing structures and buildings as well as your development plan. The above site that is the subject of this application is identified as the most suitable option that balances operational need with local planning policies and national planning policy guidance.

Furthermore Vodafone would like to assist the Local Planning Authority and would like to offer to arrange a presentation or meeting with your officer's and members to discuss the issues if appropriate.

We are committed to improving our relationship with all Local Planning Authorities and we would be happy to provide any additional information in relation to this application or in general.

We look forward to receiving your acknowledgement and decision in due course.

Yours faithfully

Keith Johnson
Planner

Direct Dial: 0161 214 1720
Mobile: 07885101141
Email: keith.johnson@monoconsultants.com

(for and on behalf of Vodafone Ltd)

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Highways Department
Staffordshire County Council
Riverway
Stafford
ST16 3JT

18/12/2008

KJ/VF/74895

Dear Sir

VODAFONE LTD – CELL NO: 74895
PLANNING APPLICATION FOR VODAFONE BASE STATION INSTALLATION

We write on behalf of our clients Vodafone Ltd who are in the process of seeking a suitable site in the Haregate area for a radio base station.

We have today submitted an application for prior approval for the following site: -

Pavement at grass verge of Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS

Enclosed are copies of the statutory ownership notifications supplied by the planning authority, which I have supplied for your attention as owners of the land. I would draw your attention to the information contained there.

I trust these are in order, however should you have any queries please do not please contact me

Thank you for your co-operation

Yours sincerely

Keith Johnson
Planner

Direct Dial: 0161 214 1720
Mobile: 07885101141
Email: keith.johnson@monoconsultants.com

(for and on behalf of Vodafone Ltd)

REGISTERED IN SCOTLAND NO SC175320
REGISTERED OFFICE 48 ST VINCENT STREET GLASGOW G2 5TS

Developer's Notice as required under the Town and Country Planning (General Permitted Development) Amendment (England) Order 2001

Proposed Development at: Grass verge at Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS

National Grid Reference: 399564 357512 Cell no: 74895

I give notice that Mono Consultants Ltd, 1-7 Princess Street, Manchester, M2 4DF on behalf of Vodafone Ltd, will be applying to Staffordshire Moorlands District Council, Moorlands House, Stockwell Street, Leek, Staffordshire, ST13 6HQ under paragraph (4) (b) of Part 24 of Schedule 2 of the Town and Country Planning (General Permitted Development) Amendment (England) Order 2001 for its determination as to whether the prior approval of the authority will be required to the siting and appearance of:

The installation of a radio base station consisting of 3no antenna mounted to a 12 metre high (to underside of antenna) slim line streetworks monopole. There will also be a ground based equipment cabinet adjacent to the pole.

The application and accompanying plans may be available for public inspection at the offices of the above Authority at Staffordshire Moorlands District Council, Moorlands House, Stockwell Street, Leek, Staffordshire, ST13 6HQ during usual office hours.

Any individual and organisation wishing to make representation about the siting and appearance of the proposed development may do so in writing to the Local Planning Authority at the address above (please quote site address given above). Any representations must be received by the Local Planning Authority no later than 9.01.2009

Name: Keith Johnson

Signed: 

On Behalf of: Vodafone Ltd

Date: 18/12/08

SITE SPECIFIC SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Queens Drive	Site Address:	Grass verge of Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS
NGR:	E399564 N357512		
Site Ref Number:	74895	Site Type:[1]	Macro

2. Pre Application Check List

Site Selection

Was an LPA mast register used to check for suitable sites by the operator or the LPA?	Yes	
Was the industry site database checked for suitable sites by the operator:	Yes	

Annual roll out consultation with LPA

Date of last annual rollout information/submission:	23/10/2008
Name of Contact:	Steve Williams
Summary of outcome/Main issues raised:	No response

Pre-application consultation with LPA

Date of written offer of pre-application consultation:	14th April & 16th September 2008
Was there pre-application contact:	Yes
Date of pre-application contact:	1st October & 7th November 2008
Name of contact:	Steve Williams

[1] Macro or Micro

Summary of outcome/Main issues raised:

Telephone discussions were held with Mr Williams who highlighted that the search area was predominantly residential in character and that a radio base station in this location was likely to attract opposition, even though it's siting means that it is overlooked by a minimal number of residential properties. Mr Williams suggested we investigate further the possibility of utilising a number of alternative sites including a police station and the grass verge of Buxton Road. However, none of the alternatives suggested were suitable to Vodafone's requirements, as they are all located too far away from the target coverage area of Haregate.

As Vodafone still have a requirement within this area the current application site has been progressed, as it lies opposite a commercial land use and although viewed from surrounding houses is not directly outside any residential properties.

Ten Commitments Consultation

Rating of Site under Traffic Light Model:	Red

Outline Consultation carried out:

A community consultation exercise was undertaken with the ward councillors (Cllr Povey, Robinson and Cllr Lovatt) on 16/09/08. Consultation letters were also sent on 16/09/08 to the occupiers of;
45, 47, 61, 63, 65, Queens Drive, Leek, ST13 6QF
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 Ramshaw View, Leek, ST13 6QF
1, 2, 3, 4, 5, 6 Horsecroft Grove, Leek, ST13 6QS.

Summary of outcome/Main issues raised:

Councillor Lovatt responded to the informative consultation letter objecting raising concerns about the residential character of the proposed site location.

Responses were also received from the residents of 5 Ramshaw View as well as 45 and 47 Queens Drive opposing the proposed development.

Charlotte Atkins MP contacted us on 26th September 2008 seeking confirmation on whether a number of alternative sites in the area had been considered. A response was sent to Charlotte Atkins MP on 13th October 2008 outlining the reasons why these alternative sites were unsuitable to Vodafone and why the current application site had been selected. It was highlighted that there are no other existing mast within the search area and therefore no was available to accommodate a second operator.

School/College

Location of site in relation to school/college:

In accordance with the Code of Best Practise no school or college was considered to have either a direct or functional relationship with the proposed development.

Outline of consultation carried out with school/college: N/A

Summary of outcome/Main issues raised: N/A

Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator consultation (only required for an application for prior approval)

Will the structure be within 3km of an aerodrome or airfield?		No
Has the Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator been notified?		No
Details of response: N/A		

Developer's Notice

Copy of Developer's Notice enclosed?		Yes	
Date served:	18/12/08		

3. Proposed Development

The proposed site:

The proposed site is located at Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS. More specifically the site will be located on the grass verge on the west side of Queens Drive, which runs through the area in a north to south direction. The site is located opposite The Hare and Gate Public House and will be set against a backdrop of established trees that lie to the south of the site. The nearest houses are located 30 metres away from the proposed site.

It is acknowledged that residential properties can be found within the vicinity of the proposed site, however given their orientation within the street scene, the separation that exists between these properties and the site and the positioning of apertures it is considered that the proposal would not significantly affect the outlook from these properties. The proposed site is set along side tall and mature trees which will break up the appearance of the monopole resulting in a minimal impact upon the surrounding amenity. Street lights that reah a height of 10 metres also line this section of Queens Drive and provide a suitable context for the proposed slim line pole.

The proposed installation will consist of a slim line monopole which will soon be seen as a utilitarian feature not uncommon in such a street scene and it will in time be accepted as part of the urban fabric of the area.

Enclose map showing the cell centre and adjoining cells:

See enclosed coverage plots.

Type of Structure:	
Description:	
The installation of a radio base station consisting of a 12 metre high (to base of antenna) streetworks monopole that will accommodate 3no antenna within a cylindrical shroud. There will also be a ground based equipment cabinet adjacent to the pole.	
Overall Height:	
Height:	14.3 Metres
Equipment Housing:	
Length:	1.58 Metres
Width:	0.38 Metres
Height:	1.35 Metres
Materials:	
Tower/mast etc – type of material and external colour:	Galvanised steel, colour coated grey, unless otherwise requested by LPA
Equipment housing – type of material and external colour:	Steel, colour coated green, unless otherwise requested by LPA
Reasons for choice of design:	

In address of the appearance of the proposal, it is believed that the scheme takes a form which is sympathetic within the context of its immediate street scene which includes existing telegraph poles and lighting columns. The monopole is considered less visually intrusive then a larger ground based lattice mast which would be bulkier in appearance than the proposed slim line streetworks monopole.

Aware that standard mast design can appear incongruous, it is of note that the monopole benefits from a shrouded antennae rather than a traditional 'head frame' design, which will further mitigate the impact of the proposals. The monopole will colour coated grey to match existing street lighting columns, making it merge more effectively within its surroundings. This is all considered to ensure that the proposed installation has the minimum effect upon the surrounding area.

4. Technical Information

ICNIRP Declaration attached ICNIRP public compliance is determined by mathematical calculation and implemented by careful location of antennas, access restrictions and/or barriers and signage as necessary. Members of the public cannot unknowingly enter areas close to the antennas where exposure may exceed the relevant guidelines. When determining compliance the emissions from all mobile phone network operators on the site are taken into account.	Yes	

Frequency:	2.1 GHz
Modulation characteristics[2]	QPSK
Power output (expressed in EIRP in dBW per carrier) In order to minimise interference within its own network and with other radio networks, Vodafone Ltd operates its network in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision As part of Vodafone Ltd's network, the radio base station that is the subject of this application will be configured to operate in this way	
Height of antenna (m above ground level)	12 metres

5. Technical Justification

Enclose predictive coverage plots.

Reason(s) why site required e.g. coverage, upgrade, capacity (map attached if required):

A site is required in this location in order to improve radio coverage and capacity in the surrounding area. A site in this location could also help in the prevention of call dropping. Call dropping occurs due to the inability of adjoining cells to pass on active calls to each other; this will result in the termination of live calls.

The minimum level of coverage required is urban coverage.

The site is required to increase network capacity and provide 3G coverage to the Haregate area of Leek. This location currently suffers from low levels of 3G coverage and therefore, a mast is required to bring 3G coverage in the area up to the standards set by Vodafone and requirements of central government.

It should be noted that in densely developed urban environments, or in environments containing robust commercial buildings, the buildings will attenuate signals to a greater extent than in a more open suburban or rural environments. As such there is a need to provide a higher quality of signal in urban environments.

GIS modelling plots illustrating the predicted levels of coverage are included with this application.

Plot 1 – Proposed 3G Coverage from Surrounding Sites
Plot 1 shows the level of 3G coverage expected by the surrounding sites without the proposed installation. The plot shows that the area around the proposed installation does not benefit from good coverage levels. The non coloured areas on the plot show this. There is currently a large area of lower 3G coverage in the search area in particular areas around Haregate. Due to this poor quality coverage, there are large areas to the north, south, east and west of the Haregate which are without the required 'Urban' telecoms coverage.

[2] The modulation method employed in GSM is GMSK (Gaussian Minimum Shift Keying) which is a form of Phase modulation
The modulation method employed in UMTS is QPSK (Quad Phase Shift Keying) which is another form of Phase Modulation

Plot 2 – 3G Coverage from Surrounding Sites in Conjunction with Proposed Site
Plot 2 shows that the proposed installation will address a large part of the coverage deficiency identified in Plot 1. Plot 2 shows that the proposed mast will provide high quality 'Urban' coverage to an area of housing and major through roads. This plot shows how effective the mast is in conveying its signal over the area, thus bringing coverage in the area up to Vodafone's own high standards and requirements set out by central government.

Further detail regarding the general operation of the Vodafone network can be found in the accompanying document entitled 'General Background Information for Telecommunications Development'. This information is provided to assist the local planning authority in understanding any technical constraints on the location of the proposed development.

6. Site Selection Process – alternative sites considered and not chosen (Enclose map highlighting all alternatives that have been considered by the operator)

Site[3]	Site Name and address	NGR	Reason for not choosing[4]
GF	**Industrial Estate on Haregate Road, Leek, Staffordshire**	**E399090 N357270**	**SP - An agreement on mutually acceptable terms could not be reached with the site owners. Therefore, this site has to be discounted as Vodafone does not have the owner's permission to use their land.**
GF	**Land at Hare & Gate Public House, Queens Drive, Leek, Staffordshire**	**E399640 N357525**	**P - An installation in this location would be visually less acceptable than the one proposed, as this site is situated closer to residential properties than the application site. Therefore this site has to be discounted as Vodafone is unlikely to be granted planning permission.**
RT	**Hare & Gate Public House, Queens Drive, Leek, Staffordshire**	**E399640 N357525**	**T - An installation of this nature could not be accommodated as it would exceed the structural limitations of the building. Therefore this site has to be discounted as Vodafone cannot implement such a proposal.**
GF	**Moss Rose Inn Public House, Buxton Road, Leek, Staffordshire**	**E399847 N357282**	**SP - An agreement on mutually acceptable terms could not be reached with the site owners. Therefore, this site has to be discounted as Vodafone does not have the owner's permission to use their land.**
GF	**Leek Edge Farm, Thorncliffe Road, Leek, Staffordshire**	**E399995 N357360**	**T - The surrounding dense tree coverage in this area would prevent the effective propagation of radio signals. Therefore, this site has to be discounted as it doesn't meet Vodafone's technical requirements.**
GF	**Edge End Farm, Buxton Road, Leek, Staffordshire**	**E400178 N357872**	**T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located at the edge of the search area. Therefore this site has to be discounted as it doesn't meet Vodafone's technical requirements.**
ETS	**BBC Mast**		**T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located outside of the search area. Therefore this site has to be discounted as it**

[3] ETS – Existing Telecomm site, ES – Existing Structure, RT – Roof Top, GF – Greenfield
[4] SP – Site Provider, RD – Redevelopment Not Possible, T – Technical Difficulties, P – Planning, O - Other

			doesn't meet Vodafone's technical requirements.
RT	Police Station		T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located outside of the search area. Therefore this site has to be discounted as it doesn't meet Vodafone's technical requirements.
GF	Leek Recycling Centre, Fowlchurch Road		T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located outside of the search area. Therefore this site has to be discounted as it doesn't meet Vodafone's technical requirements.
GF	Grass verge of Buxton Road		T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located outside of the search area. Therefore this site has to be discounted as it doesn't meet Vodafone's technical requirements.
GF	Buxton Road Cemetery		T - It was deemed that this location would not provide adequate coverage to the desired target area as it is located outside of the search area. Therefore this site has to be discounted as it doesn't meet Vodafone's technical requirements.

Additional relevant information:

Siting:

The proposed installation is location on the grass verge at Queens Drive, Haregate, Leek, Staffordshire, ST13 6QS. It is recognised from the outset that the general cell area is predominantly residential in character; hence the applicant's decision to locate the proposal along a highway that contains existing street lighting columns and in front of an area of open space with tall and mature trees opposite a public house. The site is situated 1 metres from the highway and 30 metres away from the nearest residential property.

Visual appearance:

The proposed development at this location relates to the installation of a 12 metre high (to underside of antenna) slim line streetworks monopole incorporating three no. 3G antennas found within the upper section of the mast. An equipment cabinet will be sited alongside the proposed installation.

A slim line streetworks monopole is designed to allow minimal intrusion whilst meeting Vodafone's coverage requirements in the area. The installation is proposed to be sited near to an existing street lighting column. The point of access will be obtained from Queens Drive.

The proposed siting on the west side of Queens Drive means that the proposed installation is overlooked by a minimal number of residential properties, meaning that it will not detract from the visual amenity of residential view points. Those houses that do have views of the application site will view the proposals over a reasonable distance. The proposed installation has been sited so that it will not impinge the forward visibility of the splay of Queens Drive, making it an unobtrusive feature upon the highway.

Through using a slim line streetworks and by colour coating it grey it is considered that it will aid the merging of the installation and therefore minimise the visual impact of the installation upon the surrounding amenity. The ground based equipment cabinet will also be colour coated green and benefit form a backdrop of vegetation. The surrounding street lighting columns provide context for the site whilst the vegetation is considered to have a softening effect upon the proposed installation upon the surrounding area. Due to the height of the trees there is a need for the radio signal to clear these obstacles. This means that an installation of the proposed height is necessary in order to address the identified hole in coverage.

There are no other telecom installations nearby to the proposed installation that are capable of accommodating a second operator without requiring considerable redevelopment, making it more visually obtrusive then the one proposed. The other option would be a ground based lattice mast; however, in order to provide the correct level of coverage to meet Vodafone's technical requirements a much larger installation would have been necessary. It is considered that a bulkier mast in this location would be visually less acceptable than the proposed development at Queens Drive.

Policies:

National policy advice on the siting of telecommunications base stations is found within Planning Policy Guidance Note "Telecommunications" (PPG8), August 2001.

The Appendix-Supporting Guidance to PPG8 identifies as an essential and beneficial element of life of the community and in the national economy. It acknowledges that fast, cost effective and reliable communications can attract businesses to an area, encouraging competitiveness and economic growth. In addition, the continuing improvements in all forms of telecommunications systems will encourage more sustainable methods of working such as home working, reduced journeys and therefore reductions in pollutants from vehicle emissions.

Paragraph 5 states "The Government's policy is to facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum." The proposed installation is designed to achieve Vodafone's technical requirements whilst utilising the least intrusive equipment array possible, thereby keeping environmental impact to a minimum.

In view of this policy, authorities are advised in PPG8 to respond positively to proposals for telecommunications developments and to understand the associated special problems and technical needs.

The Staffordshire Moorlands Local Plan was adopted in 1998. The relevant telecommunications policy states.

Policy F7 - Telecommunications

"Large masts and antennae will be permitted where the facility has a minimal visual impact and does not have a significant adverse impact on the amenity of surrounding land uses. This is of particular importance in relation to conservation areas and in open countryside, or where there is clear evidence that radio interference will result. Exceptionally, such facilities may be permitted in less suitable locations where an applicant can demonstrate that there are no technically feasible alternatives."

A thorough investigation of the surrounding area has been carried out and no suitable existing structures presented a viable option for the siting of a telecommunications base station. It is therefore considered that Policy F7 has been adhered to as far as possible.

It is considered that the proposed installation is sited in such a way so as to make use of the existing features such as the established tall trees, street lighting columns and road signs will aid the structure to blend into its setting and assimilated into the environment. The structure will have to protrude over the trees in order to provide a signal that will meet Vodafone's technical requirements and that also allows for tree growth. The proposed installation is sited opposite a commercial property in order to minimise the views available from residential properties and as such the development of this site would have a minimal impact on the visual amenity from surrounding view points. It is therefore considered that the proposed installation is in compliance with Policy F7.

Health:

Planning Policy Guidance 8 (PPG8) advises, on the issue of health, that:

"Paragraph 98...it is the Government's firm view that the planning system is not the place for determining health safeguards. It remains central Governments responsibility to decide what measure are necessary to protect public health. In the Government's view, if any proposed mobile phone base station meets the ICNIRP guidelines for public exposure it should not be

necessary for a local planning authority, in processing an application for planning permission or prior approval, to consider further the health aspects and concerns about them".

The core principle of this principle has recently been challenged in both the High Court and the Court of Appeal (T-Mobile UK Ltd, Hutchinson 3G Ltd, Orange Personal Communications Services Ltd -V- First Secretary of State & Harrogate Borough Council 2004). On both occasions the case was dismissed, thereby confirming that if a proposed mobile phone base station meets the ICNIRP guidelines for public exposure it should not be necessary for a local planning authority to consider further the health aspects and concerns about them.

A declaration of compliance with the ICNIRP guideline for public exposure has been enclosed with this application. RF emissions from the proposed installation will be may times lower than the ICNIRP reference standard in all publicly accessible areas around the installation. In the light of the above information, it is clear that the weight to be given to such concerns should not be so great as to warrant a refusal of the application on health grounds.

Contact Details

Name: (Agent)	Keith Johnson	Telephone:	0161 214 1720
Operator:	Vodafone Ltd	Fax no:	
Address:	Vodafone House The Connection Newbury RG14 2FN	Email Address:	Keith.johnson@monoconsultants.com
Signed:		Date:	18.12.2008
Position:	Planner	Company: (Agent) (on behalf of Vodafone Ltd)	Mono Consultants Ltd Victoria Buildings 1 – 7 Princess Street Manchester M2 4DF

vodafone

Our Ref: 74895/VF/KJ

30/09/08

The Chief Planning Officer
Staffordshire Moorlands District Council
Moorlands House
Stockwell Street
Leek
Staffordshire
ST13 6HQ

Dear Sir/Madam

CLARIFICATION OF THE DECLARATION OF ICNIRP COMPLIANCE ISSUED AS PART OF THE PLANNING APPLICATION ATTACHED FOR SITE CS 74985 GRASS VERGE QUEENS DRIVE, HAREGATE, LEEK, STAFFORDSHIRE, ST13 6QS

I refer to the Declaration of Conformity with ICNIRP Public Exposure Guidelines ("ICNIRP Declaration"). sent with this application in relation to the proposed telecommunications installation as detailed above.

The "ICNIRP Declaration" certifies that the site is designed to be in full compliance with the requirements of the radio frequency (RF) guidelines of the International Commission on Non-Ionizing Radiation (ICNIRP) for public exposure as expressed in the EU Council recommendation of July 1999.

The ICNIRP declaration produced by Vodafone Ltd takes into account the cumulative effect of the emissions from the proposed Vodafone installation and <u>all</u> radio base stations present at, or near, the proposed location.

The radio emission compliance calculation is based upon the maximum possible cumulative values.

If you have any further enquiries concerning the "ICNIRP Declaration" certificate or the certification process please contact Vodafone's EMF Advisory Unit on 08454 450 450

Yours sincerely

PROJECT MANAGER

Vodafone Limited
Vodafone House, The Connection, Newbury, Berkshire RG14 2FN, England
Telephone: +44 (0)1635 33251, Facsimile: +44 (0)1635 234858

vodafone

Our ref 74895/VF/DN

Declaration of Conformity with ICNIRP Public Exposure Guidelines
("ICNIRP Declaration")

Vodafone Ltd
Vodafone House
The Connection
Newbury
Berks
RG14 2FN

Declares that the proposed equipment and installation as detailed in the attached planning application at;

Grass verge on Queens Drive
Haregate
Leek
Staffordshire
ST13 6QS

(E399564 N357512)

is designed to be in full compliance with the requirements of the radio frequency (RF) public exposure guidelines of the International Commission on Non-Ionizing Radiation (ICNIRP), as expressed in the EU Council recommendation of 12 July 1999 * "on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)".

* Reference: 1999/519/E

Date:	30/09/08
Signed:	
Name:	Chris Baker
Position:	Project Manager for (Team)

vodafone

General Background Information on Radio Network Development for Planning Applications

This document is designed to provide general background information on the development of the Vodafone network. It has been prepared for inclusion with our planning applications and supports our network development proposal with generic information regarding:-

1. Introduction
2. Digital networks
3. Site selection process
4. Planning policy guidance PPG8
5. Site or mast sharing
6. Councils
7. Consultation with schools
8. Legal cases
9. Further information

Note - All references in this document refers to England only, appropriate amendments need to be made for Wales, Scotland and Northern Ireland.

1.0 INTRODUCTION

Nearly 25 years ago under the Telecommunications Act 1984, a licence was granted to Vodafone to provide a wireless (or mobile) phone service utilising unused radio frequencies adjacent to those transmitted for over 50 years by the television industry. Initially because this wireless technology was new and the number of potential customers unknown, a number of tall masts were used to provide basic radio coverage to the main populated areas. The design strategy used was similar to that used by local radio/television i.e. tall masts to cover large distances over all types of topography.

It is important to note that in recent years form has followed function and digital technology has resulted in the development of smaller equipment. In addition, smaller radio coverage areas have resulted in antenna/mast heights being generally reduced. The industry has also been able to develop low impact designs for use in sensitive planning areas such as in Conservation Areas, Listed Buildings, and National Parks etc. The wireless telegraph pole solution is just one example of a design which has minimised impact on visual amenity of the local neighbourhood.

2.0 DIGITAL NETWORKS – "2G/3G" OR SECOND/THIRD GENERATION

The Vodafone 2G digital network was developed in the early 1990s. This digital technology is often referred to as GSM (Global System for Mobile Communications) which is the common European operating standard enabling phones to inter-connect to other networks throughout Europe and Internationally.

In April 2000, Vodafone was successful in its bid for one of five licences available to provide a 'Third Generation' mobile telecommunications service known as '3G' or UMTS.

In addition to voice services, this technology enables Vodafone to offer high resolution video and multi-media applications. Among other things this enables office services, virtual banking, e-retailing, video conferencing and high quality broadband internet access to be provided to users on the move. This is all made possible by higher rates of data transfer allowing wireless broadband access to the Internet for mobile phones and laptop computer data card users.

The 3G radio base station is designed to provide a service via cells in a similar way as the GSM (2G) system but with a few differences. Due to the increased data transfer, the location of 3G base station sites is even more critical. Base stations must be located where the local demand exists in order to provide the required levels of service, otherwise the network will not function.

Whenever possible, Vodafone will ensure it complies with planning policy guidance (PPG8) by ensuring apparatus be installed on existing buildings and structures, including masts wherever possible. However, in spite of these efforts, there is likely to be a need to install additional base stations to provide contiguous service. This is largely due to the characteristics of radio propagation at this frequency, demands on the service and the high data transfer rates.

It is very important to note that mobiles can only work with a network of base stations in place where people want to use their phones (or other wireless devices) Without base stations, the mobile phones we rely on simply won't work.

2.1 How the cellular radio network works

The building blocks of the mobile telecommunications network are called radio base stations which transmit and receive calls to and from mobile phones using radio waves, similar to those used in domestic television and radio equipment. Radio base stations are often associated with free-standing masts, however they can be located on, or even inside, existing buildings and other structures. Approximately 66 per cent of Vodafone sites are located on existing structures or buildings. Vodafone uses "radio frequencies" to transmit and receive calls at 900 MHz or 1800 MHz for 2G whilst 3G uses slightly higher frequencies within the 2100 MHz range.

2.2 How radio signals are transmitted

The radio signals are transmitted from antennas which are part of the radio base station and cover an area known as a "cell", hence the term "cellular phone". The size of the cell is dependent on a number of factors including: the height at which the radio base station is positioned; the topography of the surrounding landscape; anticipated demand; and the population density in the area.

Radio signal transmission from a radio base station can be likened to water being distributed from a garden sprinkler. The area immediately adjacent to the sprinkler remains almost "dry". However the grass gets progressively wetter moving further away from the sprinkler, until a wettest point is reached. Then the further away from the centre, the ground becomes progressively drier. Radio base stations provide network services in a similar manner. The area immediately beneath the antennas receives limited or, occasionally, no signal. Moving further away, the signal steadily improves until it reaches an optimum level and then gets progressively weaker.

In order to use mobile phones whenever and wherever we are, a network of radio base stations is required to maintain a continuous signal or 'network service' across a geographical area. The network is designed so that the cells from each radio base station slightly overlap. Travelling even a short distance may take us through a number of cell areas. Mobile phones are designed to monitor the strength of signal from surrounding radio base stations and automatically select the clearest signal, which often comes from the nearest site. As you approach the edge of the cell area, the phone will automatically select the adjoining radio base station, to provide a continuous service. This process is known as 'call handover'.

2.3 Factors affecting network services

The siting of a radio base station is largely dependent on the characteristics of the radio signals which they transmit. The signals are similar to noise or heat in that physical features such as buildings or landscape can obstruct them. In open rural areas one base station can typically cover several kilometres in radius. However in urban areas where surrounding buildings will obstruct the signal, this range can be reduced to as little as a few hundred metres.

2.4 Network Capacity

Radio base station sites can only receive and transmit a limited number of simultaneous calls to and from mobile phones. In areas where the use of phones is particularly high, such as major towns or cities, many sites will reach the maximum number of calls they can process. When a customer attempts to make a call in an area where the network has reached its full capacity, the 'network busy' message is displayed on their mobile phone. In order to continue to meet customer demand and improve the quality of services in these areas, there is a need to increase the capacity of the network to allow more calls to be made.

2.5 Technical Requirements

Vodafone's radio engineers identify the need for a new radio base station where the existing signal strength is insufficient to support network requirements, or where demand on the system is such that we need to increase capacity. The location of each radio base station is determined by the following factors:-

- The proximity of adjacent radio base stations and the signal coverage from them.
- The terrain height of the area and surrounding topography.
- The height and density of the buildings and structures within the area.
- The potential customer demand within the area.
- The service type that is required.

3.0 SITE SELECTION PROCESS

The following site selection procedures apply to each installation to identify and sequentially discount alternative site options:-

1. Following a technical review which identifies need, Vodafone's radio engineers undertake a desktop analysis to identify the best way of meeting the site requirement. This is completed by using Vodafone's computerised radio propagation modelling tool. This tool shows every site on our existing network and identifies those areas where insufficient signal level exists or where there is a need to increase capacity.

2. The desktop search also identifies other operators' existing telecommunications installations. This interrogation of databases ensures any mast-sharing opportunities are maximised. Where available the LPA's mast register is also reviewed.

3. The radio engineers define a search area, which is then issued to an acquisition agent who undertakes a detailed ground search with the radio engineer to identify suitable options.

4. The acquisition agent will obtain site-specific details to identify those sites that are viable options. The possible options are short-listed according to those that combine the following: location within or close to the search area, a willing landlord, adherence to planning and environmental policy, and sensitivity. These options are then returned to our radio engineers for a computer modelling assessment, taking into account the ground height, potential available antenna height and surrounding obstructions.

5. Discussions are offered to the local planning authority to consider local policies and any protected areas and to agree additional public consultation if required. These discussions are used to identify a 'preferred' option.

6. A plan for local consultation is drawn up, and where appropriate, a consultation exercise is undertaken with the local community. The issues associated with the proposal are discussed to obtain their views on the options under consideration. After this review the final preferred option is selected.

7. Finally a site survey provides a full structural analysis of site including identifying power routes and how the site will be linked into the network. Terms with the landlord are then finalised, detailed plans prepared and the application submitted.

Details of Vodafone's site selection procedures are as set out in our Facts about the Network Handbook which is used by all personnel involved in the acquisition process. Vodafone are committed to ensuring the number and visual impact of any additional sites is minimised. The company will continue to develop and utilise sympathetic and innovative design solutions.

4.0 PLANNING POLICY GUIDANCE ON TELECOMMUNICATIONS (PPG 8)

PPG 8 seeks to facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum. It encourages local planning authorities to respond positively to telecommunications development proposals, whilst taking into account other planning policy.

PPG 8 states that fast, reliable and cost-effective communications can attract business to an area. PPG 8 states that good communications can enrich life at home and offer new choices in education, entertainment, shopping and banking.

4.1 Need for development

PPG 8 advises that operators are required to provide a high quality service, which includes the need to meet customer demand. It states that systems are demand-led, therefore operators are continually expanding their networks to accommodate customer requirements of service and quality.

PPG 8 advises that local planning authorities should have regard to any technical constraints on the location and proposed development. Material considerations include the significance of the proposed development as part of a national network.

4.2 Siting and design

PPG8 identifies that "protection from visual intrusion and the implications for subsequent network development will be important considerations in determining applications. Masts and antennas often require a particular operating height, which allows signals to clear trees and urban clutter. Telecommunications development may therefore need particular locations in order to work effectively." (Paragraph 64 – Appendix).

PPG 8 states "Siting and design concerns may centre particularly on the type of mast and its impact... Its height, ancillary development and the scope for landscaping and screening will also be important considerations. But many of the antennas have special siting needs because they have a limited range or require line-of-sight. Authorities should take account of these needs." (Paragraph 74, Appendix)

In seeking to arrive at the best solution for an individual site, local planning authorities and operators should consider the use of sympathetic design to minimise the impact of development on the environment. It advises that depending upon their location, an appropriately designed single operator mast may have a smaller environmental impact than a shared one.

5.0 SITE / MAST SHARING

Vodafone actively encourages and supports site sharing for both commercial and environmental reasons. All operators are required to explore site-sharing opportunities under the terms of their licence. Vodafone has implemented a number of measures to identify site-sharing opportunities.

Where a new ground based radio base station site is required, every effort will be made to ensure that sufficient land is acquired to accommodate a second operator's equipment. Approximately two thirds of all Vodafone radio base stations are now located on existing structures, such as buildings, pylons or existing masts.

Site sharing with other operators on an existing mast may not always result in the most visually acceptable structure. Typically, only lattice masts can accommodate other operators' antennas. With each additional set of antennas, the height of the mast will increase by between four and six metres. This is because antennas of different operators have to be vertically separated by at least one metre in order to avoid potential interference.

The following key factors are considered when assessing sharing an existing mast structure:

- Is the structural capacity of the mast sufficient to accommodate the weight of additional antennas?
- Is there space at the right height on the mast for the additional operators to provide network coverage to their chosen area?
- Will the landlord allow further land to be released to accommodate the additional operator's equipment cabins.

6.0 COUNCILS

6.1 Moratoria

Government guidance on mobile telecom installations advises that local authorities should make suitable council owned property available to network operators for base station development. If suitable council sites are not made available, operators may have to look for alternative sites which the local community might find less acceptable.

Moratoria may also increase the number of new sites needed as council owned buildings are often better suited for base stations e.g. tall buildings. The operators believe it is preferable to deal with proposed developments on council property on a case by case basis.

6.2 Mast register

Guidance in the English Government's Code of Best Practice on Mobile Phone Network Development recommends that local authorities develop a register of local base stations based on a map. This is mirrored in the devolved administrations.

The code goes on to say, *"Ideally, all the information should be available to be viewed electronically and in hard copy. Local authorities should ensure that the mast register is kept up to date and may make a reasonable charge if anybody wishes to obtain a copy of any of the information."*

The MOA welcomes the provision of registers of base stations by local authorities in addition to Ofcom's public database of UK base stations. http://www.ofcom.org.uk/sitefinder/

Market research by Ipsos MORI indicates that approximately two thirds of UK local authorities have mast registers.

7.0 CONSULTATION WITH SCHOOLS

The operators fully comply with Government Guidance on pre application consultation with schools and colleges. They provide evidence to the local planning authority that they have consulted the relevant body of the school or college.

The English Government's Code of Best Practice on Mobile Phone Network Development gives guidance on the factors operators should consider when determining whether consultation is required, as each development is different. These factors are equally applicable for Local Planning Authorities who carry out their own consultation once the application has been submitted. A recent report stated there is no scientific basis for siting base stations away from schools (NRPB report, January 2005)

8.0 LEGAL CASES

The following legal cases may be helpful;-

8.1 Harrogate case November 2004

The Court of Appeal gave a judgment that Government Planning Guidance in PPG8 is perfectly clear in relation to compliance with the health and safety standards for mobile phone base stations. The Court of Appeal and the High Court both upheld Government policy in response to a planning inspector's decision that departed from that policy and failed to give adequate reasons for doing so.

8.2 Winchester case November 2004

The Court of Appeal decision upheld an earlier decision by Mr Justice Sullivan that a mobile phone network operator should not use its compulsory acquisition powers as part of its day to day radio base station siting processes.

The Court of Appeal agreed with Mr Justice Sullivan that these far-reaching statutory powers were never intended for use in day to day planning situations and should be used by an operator only as a last resort when there is no other siting alternative.The House of Lords on 16 March 2005 refused leave to appeal the Court of Appeal ruling.

8.3 Bardsey case January 2005

The Court of Appeal confirmed that the permitted development regime for mobile phone base stations is compliant with the Human Rights Act.

This was a case in which a local planning authority failed to comply with its obligations to act within the 56 day period provided under the permitted development regulations.

9.0 FURTHER INFORMATION

We trust the above answers your main queries regarding our planned installation.

The enclosed site-specific details will identify the alternative discounted options and reasons why they were rejected and how the proposed site complies with national and local planning policies.

The Local Government Ombudsman's Special Report on Telecommunication Masts gives some positive recommendations and advice to Local Planning Authorities in determining Prior Approval applications. A copy of the report is available at http://www.lgo.org.uk/pdf/phone-masts-sr.pdf

Vodafone Supporting Technical Information for: -

C.S 74895A Queens Drive, Leek

3G Coverage & Capacity to Leek

Date Prepared: 01 Oct 2008



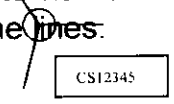
KEY TO COVERAGE PLOTS

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.

Vodafone's Radio Engineers 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 circle with site number. The orientation of the antennas is shown by the lines.



Existing Site

Existing Site and orientation of antennas

- Motorways are illustrated by ***Dark Blue*** lines;
- A Class roads are illustrated as *Cyan* lines;
- B Roads are illustrated as *Grey* lines;
- Railway lines are illustrated as lines; and

Key for 3G plots

Pink	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in dense urban areas, such as major cities and large industrial areas.	Dense Urban
Orange	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in urban areas, for example dense residential and industrial areas.	Urban
Yellow	Sufficient signal strength to provide adequate service for indoor use of a hand portable mobile in suburban areas or on a train.	Suburban
Green	Sufficient signal strength to provide adequate service for use of a hand portable mobile in a car	In Car
Blue	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

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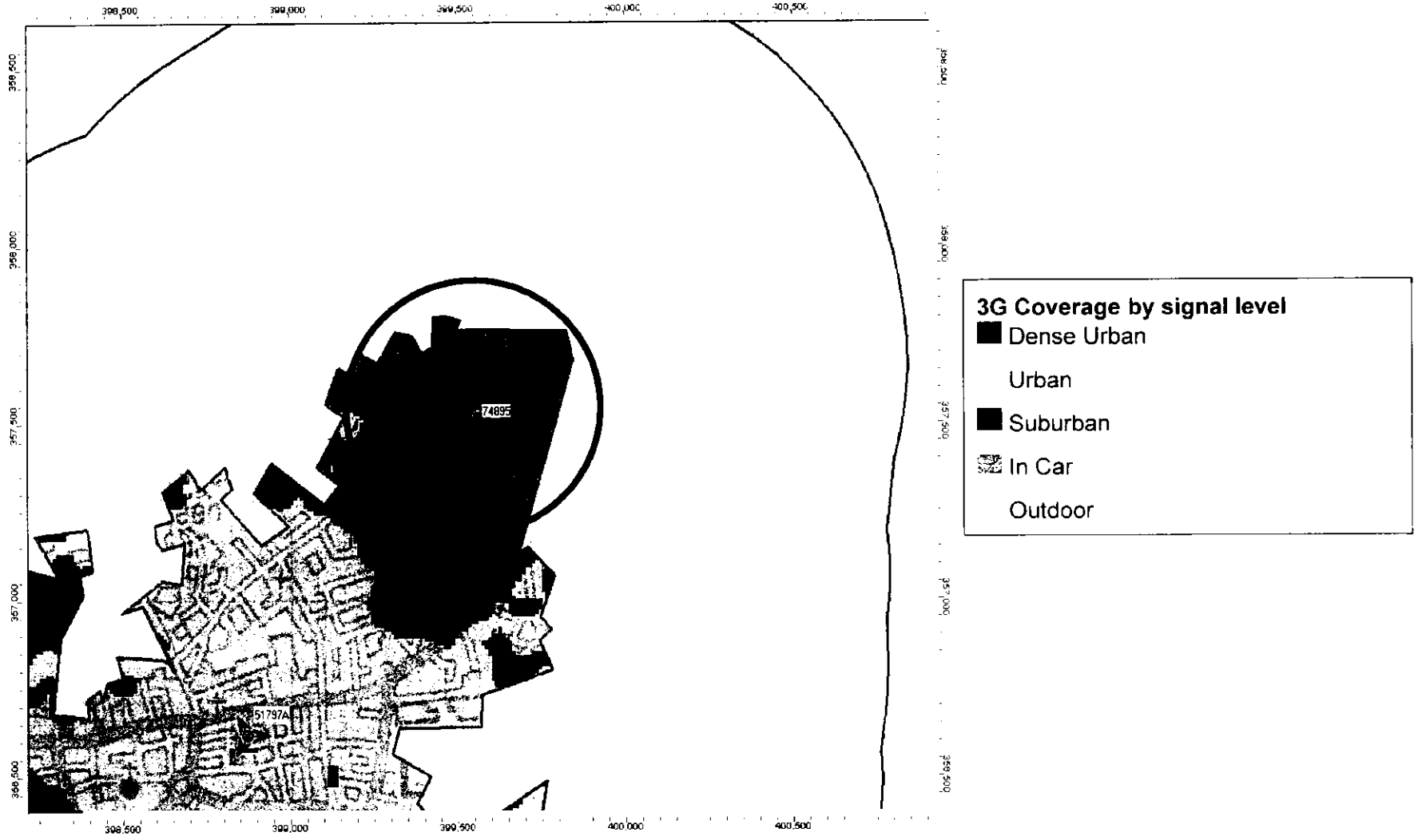
C.S 74895A Queens Drive – Geographical Area



Plot 1 : OS map extract for area of Leek.
UMTS (3G) Coverage Identified, target area circled in blue
Date Prepared: 01 Oct 2008

This coverage plan must be read in conjunction with the key and site specific supplementary information.
Each colour block represents 100 metres square.

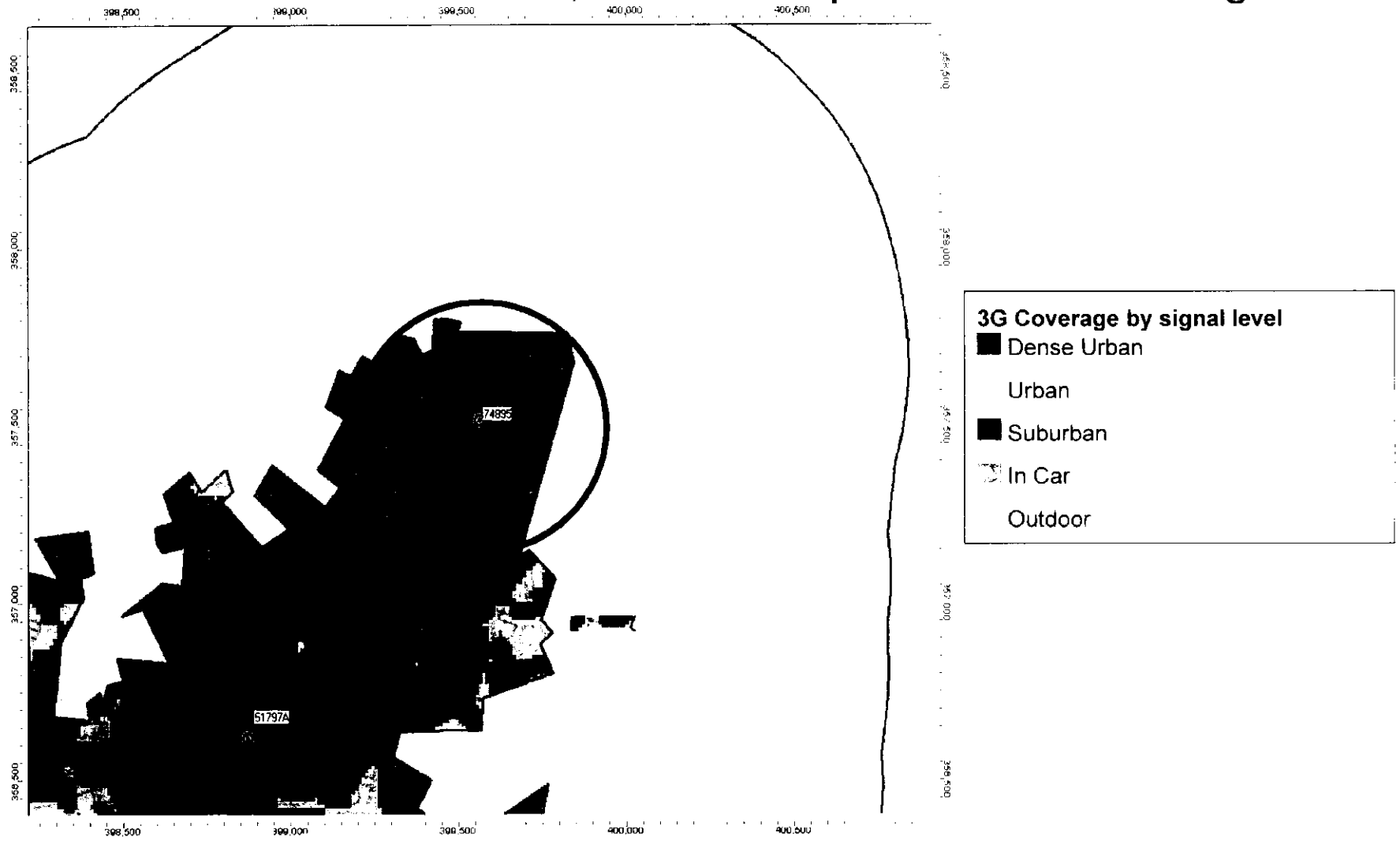
C.S 74895A Queens Drive, Leek - Proposed 3G Coverage



Plot 2 - Proposed 3G Coverage from site located in Leek
UMTS (3G) Coverage Identified
Date Prepared: 01 Oct 2008

This coverage plan must be read in conjunction with the key and site specific supplementary information.
Each colour block represents 100 metres square.

C.S 74895A Queens Drive, Leek - Proposed 3G Coverage all Sites

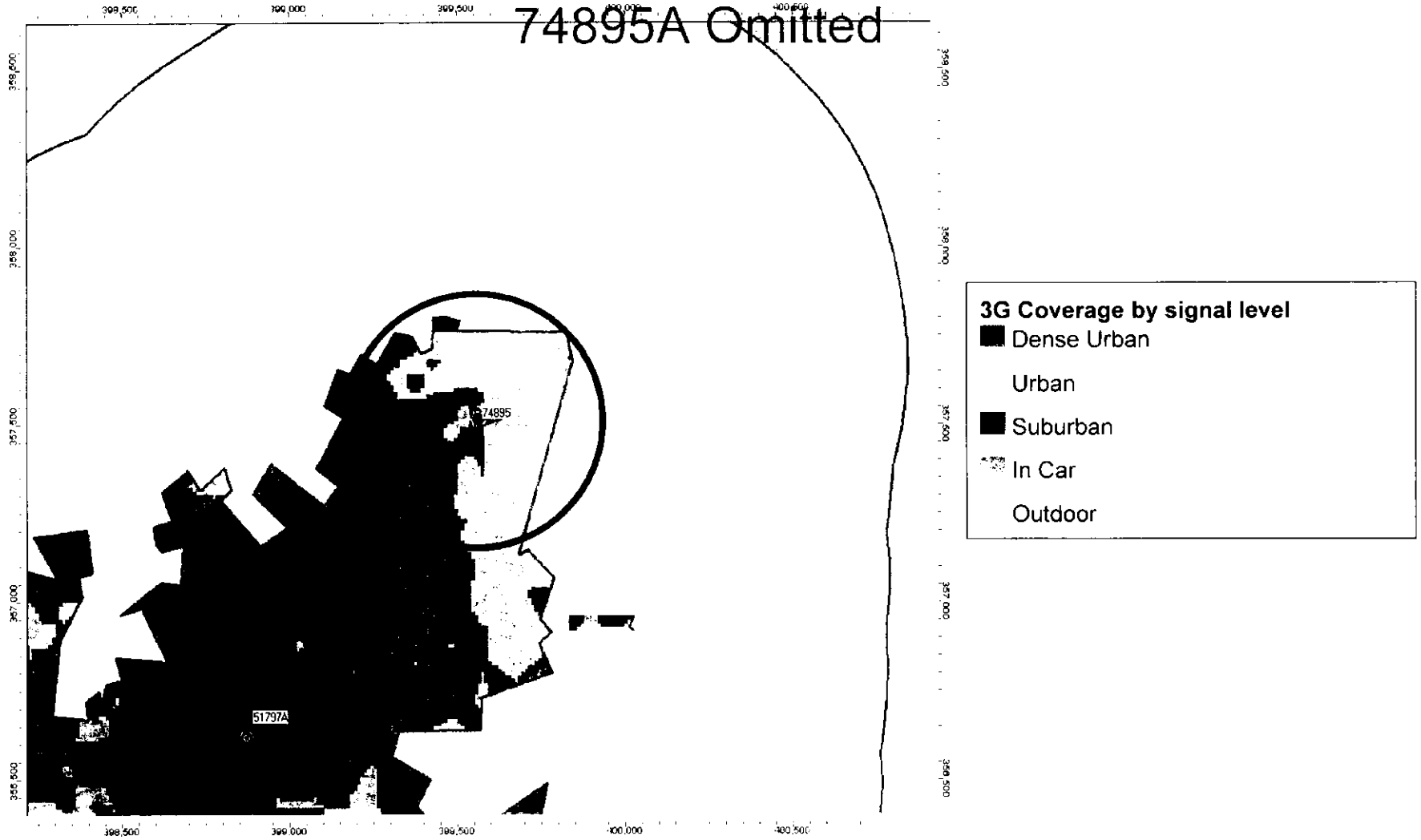


Plot 3 - Proposed 3G Coverage from site located in Leek
UMTS (3G) Coverage Identified
Date Prepared: 01 Oct 2008

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This coverage plan must be read in conjunction with the key and site specific supplementary information.
Each colour block represents 100 metres square.

C.S 74895A Queens Drive, Leek - Proposed 3G Coverage with C.S 74895A Omitted



Plot 4 - Proposed 3G Coverage from site located in Leek
UMTS (3G) Coverage Identified
Date Prepared: 01 Oct 2008

This coverage plan must be read in conjunction with the key and site specific supplementary information.
Each colour block represents 100 metres square.