

PLANNING SERVICES APPLICATION

CONSULTATION SHEET

MNW

APPLICANT:

Mr. S. Home, SpectraSite Transco Communications,
Claremont House,
Hatters Lane,
Croxley Business Park, Watford,
WD18 8TR

APPLICATION NO: PP/00/02806

APPLICATION DATED: 04/12/2000

DATE ACKNOWLEDGED: 7 December 2000

APPLICATION COMPLETE: 06/12/2000

DATE TO BE DECIDED BY: 31/01/2001

SITE: Transco Gas Holder Station, Kensal Green House, Canal Way, London, W10 5AJ
PROPOSAL: The installation of a 20m high lattice tower and 6 No. sector antennae with the necessary equipment cabin and ancillary equipment.

ADDRESSES TO BE CONSULTED

- 1. Gas Works, Canal Way
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.

J g 11/12

CONSULT STATUTORILY

- HBMC Listed Buildings
- HBMC Setting of Buildings Grade I or II
- HBMC Demolition in Conservation Area
- Demolition Bodies
- DoT Trunk Road - Increased traffic
- DoT Westway etc.,
- Neighbouring Local Authority
- Strategic view authorities
- Kensington Palace
- Civil Aviation Authority (over 300')
- Theatres Trust
- The Environment Agency
- Thames Water
- Crossrail
- LRT/Chelsea-Hackney Line

ADVERTISE

- Effect on CA
- Setting of Listed Building
- Works to Listed Building
- Departure from UDP
- Demolition in CA
- "Major Development"
- Environmental Assessment
- No Site Notice Required
- Notice Required other reason
- Police
- L.P.A.C
- British Waterways
- Environmental Health
- GLA
- Govt Office for London

DEVELOPMENT CONTROL

TECHNICAL INFORMATION

THE ROYAL BOROUGH OF



KENSINGTON AND CHELSEA

ADDRESS _____
 TRANSKO GAS HOLDER STATION
 KENSAL GREEN HOUSE
 CANAL WAY W10 5AJ.
POLLING DISTRICT A

- | | | | |
|-----|--|--------|--|
| HB | Buildings of Architectural Interest | LSC | Local Shopping Centre |
| AMI | Areas of Metropolitan Importance | AI | Sites of Archeological Importance |
| MDO | Major Sites with Development Opportunities | SV | Designated View of St Paul's from Richmond |
| MOL | Metropolitan Open Land | SNCI | Sites of Nature Conservation Importance |
| SBA | Small Business Area | REG 7 | Restricted size and use of Estate Agent Boards |
| PSC | Principal Shopping Centre (Core or Non-core) | ART IV | Restrictions of Permitted Development Rights |

| Conservation Area | HB | CPO | TPO | AMI | MDO | MOL | SBA | Unsuitable for Diplomatic use | PSC | | LSC | AI | SV | SNCI | REG 7 | ART IV | |
|-------------------|----|-----|-----|-----|-----|-----|-----|-------------------------------|-----|---|-----|----|----|------|-------|--------|--|
| | | | | | | | | | C | N | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| | |
|-------------------------------------|---|
| | Within the line of Safeguarding of the proposed Chelsea/Hackney underground line |
| <input checked="" type="checkbox"/> | Within the line of Safeguarding of the proposed Eastwest/Crossrail underground line |

| | |
|--------------------------|--|
| Density | |
| Site Area | |
| Habitable rooms proposed | |
| Proposed Density | |

| | |
|---------------------|--|
| Plot Ratio | |
| Site Area | |
| Zoned Ratio | |
| Floor Area proposed | |
| Proposed Plot Ratio | |

| | | |
|--------------------|-----------|--|
| Daylighting | Complies | |
| | Infringes | |

| | | |
|--------------------|-----------------|--|
| Car Parking | Spaces required | |
| | Spaces proposed | |

Notes:

PLANNING AND CONSERVATION

THE TOWN HALL HORNTON STREET LONDON W8 7NX

Executive Director M J FRENCH FRICS Dip TP MRTPI Cert TS

THE ROYAL
BOROUGH OF



KENSINGTON
AND CHELSEA

File
File
File
File

Switchboard: 020-7937-5464

Ext: 2079/2080

Direct Line: 020-7361- 2079/2080

Facsimile: 020-7361- 3643

Date: 11 December 2000

My reference:

Your reference:

Please ask for:

My Ref: DPS/DCN/PP/00/02806/SW

Planning Information Office

Dear Sir/Madam,

TOWN AND COUNTRY PLANNING ACT 1990

Proposed development at: Transco Gas Holder Station, Kensal Green House, Canal Way, London, W10 5AJ

Brief details of the proposed development are set out below. Members of the public may inspect copies of the application, the plans and any other documents submitted with it. The Council's Planning Services Committee, in considering the proposal, welcomes comments either for or against the scheme. Anyone who wishes to make representations about the application should write to the Council at the above address **within 21 days** of the date of this letter. Unfortunately, the Council does not have the resources to advise objectors of the Committee date, and you should telephone for further information.

Proposal for which permission is sought

The installation of a 20m high lattice tower and 6 No. sector antennae with the necessary equipment cabin and ancillary equipment.

Applicant BT Cellnet Ltd., 260 Bath Road, Slough, Berkshire SL1 4DX

Yours faithfully,

M. J. FRENCH

Executive Director, Planning and Conservation

WHAT MATTERS CAN BE TAKEN INTO ACCOUNT

When dealing with a planning application the Council has to consider the policies of the Borough Plan, known as the Unitary Development Plan, and any other material considerations. The most common of these include (not necessarily in order of importance):

- The scale and appearance of the proposal and impact upon the surrounding area or adjoining neighbours;
- Effect upon the character or appearance of a Conservation Area;
- Effect upon the special historic interest of a Listed Building, or its setting;
- Effect upon traffic, access, and parking;
- Amenity issues such as loss of Sunlight or daylight, Overlooking and loss of privacy, Noise and disturbance resulting from a use, Hours of operation.

WHAT MATTERS CANNOT BE TAKEN INTO ACCOUNT

Often people may wish to object on grounds that, unfortunately, cannot be taken into account because they are not controlled by Planning Legislation. These include (again not in any order of importance):

- Loss of property value;
- Private issues between neighbours such as land covenants, party walls, land and boundary disputes, damage to property;
- Problems associated with construction such as noise, dust, or vehicles (If you experience these problems Environmental Services have some control and you should contact them direct);
- Smells (Also covered by Environmental Services);
- Competition between firms;
- Structural and fire precaution concerns; (These are Building Control matters).

WHAT HAPPENS TO YOUR LETTER

Planning applications where objections have been received are presented to the Planning Services Committee which is made up of elected Ward Councillors. Planning Officers write a report to the Committee with a recommendation as to whether the application should be granted or refused. Letters received are summarised in the report, and copies can be seen by Councillors and members of the public including the applicant. The Councillors make the decisions and are not bound by the Planning Officer's recommendation. All meetings of the Committee are open to the public.

If you would like further information, about the application itself or when it is likely to be decided, please contact the Planning Department on the telephone number overleaf.

WHERE TO SEE THE PLANS

Details of the application can be seen at the Planning Information Office, 3rd floor, Town Hall, Hornton Street W.8. It is open from 9am to 4.45pm Mondays to Thursdays (4pm Fridays). A Planning Officer will always be there to assist you.

In addition, copies of applications in the Chelsea Area (SW1, SW3, SW10) can be seen at The Reference Library, Chelsea Old Town Hall, Kings Road SW3 (020 7361 4158), for the Central Area (W8, W14, SW5, SW7) can be viewed in the Central Library, Town Hall, Hornton Street, W.8. and applications for districts W10, W11 and W2 in the North of the Borough can be seen at The Information Centre, North Kensington Library, 108 Ladbroke Grove, London W11 (under the Westway near Ladbroke Grove Station 020 7727-6583). Please telephone to check the opening times of these offices.

If you are a registered disabled person, it may be possible for an Officer to come to your home with the plans. Please contact the Planning Department and ask to speak to the Case Officer for the application.

PLEASE QUOTE THE APPLICATION REFERENCE NUMBER ON YOUR REPLY

THE ROYAL
BOROUGH OF

NOTICE OF A PLANNING APPLICATION

TOWN AND COUNTRY PLANNING ACT 1990
PLANNING (LISTED BUILDINGS AND CONSERVATION AREAS) ACT 1990



KENSINGTON
AND CHELSEA

MEMORANDUM

TO: FOR FILE USE ONLY

**From: EXECUTIVE DIRECTOR
PLANNING & CONSERVATION**

**My Ref: PP/00/02806/SW
Room No:**

CODE SL

Date: 11 December 2000

DEVELOPMENT AT:

Transco Gas Holder Station, Kensal Green House, Canal Way, London, W10 5AJ

DEVELOPMENT:

The installation of a 20m high lattice tower and 6 No. sector antennae with the necessary equipment cabin and ancillary equipment.

The above development is to be advertised under:-

NO REQUIREMENT FOR SITE NOTICE/ADVERTISEMENT IN THIS CASE

M.J. French

Executive Director, Planning & Conservation
SITE NOTICE CRITERIA NOT MATCHED
CHECK CORRECT CODE IS ENTERED

PLANNING AND CONSERVATION

THE TOWN HALL HORNTON STREET LONDON W8 7NX

Executive Director M J FRENCH FRICS Dip TP MRTPI Cert TS

Ruper Howe, Consultation Manager,
CrossRail Project Team,
30 The South Colonnade,
Canary Wharf,
London,
E14 5EU

Switchboard: 020-7937-5464
Direct Line: 020-7361-2082
Extension: 2082
Facsimilie: 020-7361-3463

**THE ROYAL
BOROUGH OF**



**KENSINGTON
AND CHELSEA**

Date: 11 December 2000

My Ref: DPS/DCN/PP/00/02806 Your ref: TQ0967 Please ask for: Mrs.S. Wilden

Dear Sir / Madam

TOWN AND COUNTRY PLANNING ACT 1990

Proposed development at: Transco Gas Holder Station, Kensal Green House, Canal Way, London, W10 5AJ

I enclose a copy of an application, with relevant drawings and/or supporting information, and should be pleased to receive your observations on these proposals as soon as possible.

It is hoped to present this application to the Planning Services Committee prior to 31/01/2001. I look forward to hearing from you in the near future, in order that your comments may be reported to this Committee.

Should you require any further details in respect of this case, please do not hesitate to contact the Case Officer on the above extension.

Yours faithfully,

M.J. FRENCH

Executive Director, Planning and Conservation

• No evidence of health risk (at present from
what is known).

INFORMATION REQUEST FORM

Planning Services to Environmental Health

To: Paul Morse - Director of Environmental Health
 Attn: Rebecca Jane
Planning Reference No.: PP 00 02806
Planning Case Officer: SARAH WILDEN

Address/Issue
 Transco Gas Holder Station
 Kensal Green House, Canal Way, W10

Summary of Proposal:
Policy Issue/Subject of Advice
 (key Features)(Uses,Scale etc.)(Main Issues/Problems).

Installation of 20m. high lattice tower and 6 sector antennae, equipment cabin and ancillary equipment

| Schedule of Attachments: | Schedule of Key Dates: |
|--|--|
| Specifications <input type="checkbox"/> | 1. Case initiated/Application received: <input type="checkbox"/> |
| Drawings <input checked="" type="checkbox"/> | 4. Information required by: <input type="checkbox"/> |
| Supporting Info. <input checked="" type="checkbox"/> | 2. Sent by Planning Services: <input type="checkbox"/> |
| Draft Text etc. <input type="checkbox"/> | 5. Returned by Environmental Health: <input type="checkbox"/> |
| | 3. Entered on EHIS <input type="checkbox"/> |

Purpose/Status of Request:

| | | |
|--|--|---|
| <input checked="" type="checkbox"/> Planning Application | <input type="checkbox"/> Planning Appeal | <input type="checkbox"/> Planning Brief |
| <input type="checkbox"/> Planning Issues paper | <input type="checkbox"/> Planning Guidance | <input type="checkbox"/> UDP Consultation |
| <input type="checkbox"/> Impact Assessment | <input type="checkbox"/> General Advice | <input type="checkbox"/> Other |

Nature of Request in brief: Please advise on compliance with relevant standards etc re radiation.

Previous Planning History:

Need for telephone discussion of background

Essentials of relevant UDP or other Policy:

Need for telephone discussion of background

Specific Issues for Environmental Health Comment

| | | | |
|---|---|--------------------------------------|---|
| <input type="checkbox"/> Food | <input type="checkbox"/> Health and Safety | <input type="checkbox"/> HMO's | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Noise and Nuisance | <input checked="" type="checkbox"/> Contaminated Land ? | <input type="checkbox"/> Air Quality | |

E.H. Response: (Continue on reverse if necessary) **EHIS Reference No.:**

E.H. Case officer(s) and telephone number(s):

Department Safeguarding Team

Ext/Direct: 020 7308 4400
Fax: 020 7308 4680
Our ref: Ps.020/00/HVR/hvr/08012
Your ref: DPS/DCN/PP/00/02806
Date: 15th December 2000

PP/00/2806

① Ah - No obj
② SW



Handwritten signature/initials

London Underground Limited
30 The South Colonnade
Canary Wharf
London E14 5EU
Telephone 020 7222 5600

The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

Dear Sirs,

RE: TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON W10 5AJ

Thank you for your letter dated 11th December 2000 which requests the comments of the CrossRail Project office on the above mentioned application.

The application submitted for consultation has been considered and the CrossRail project office does not wish to make any comments.

Yours faithfully,

H.V. Robinson

pp David J Taylor
MANAGER, STATIONS & SAFEGUARDING

| RECEIVED BY PLANNING SERVICES | | | | | | | | |
|-------------------------------|-----|---|---|-------------|-----|-----|---------|---------|
| EX DIR | HDC | N | C | SW | SE | ENF | AO ACK | |
| | | | | 21 DEC 2000 | | | | |
| | | | | IO | REC | ARB | FWD PLN | CON DES |

B

PLANNING AND CONSERVATION

THE TOWN HALL HORNTON STREET LONDON W8 7NX

**THE ROYAL
BOROUGH OF**

Executive Director M J FRENCH FRICS Dip TP MRTPI Cert TS



**KENSINGTON
AND CHELSEA**

Mrs. S. Horne,
Spectra Site Transco,
Claremont House, Hatters Lane,
Croxley Business Park,
Watford,
Hertfordshire WD18 8TR

Switchboard: 020 7937 5464
Extension: 2082
Direct Line: 020 7937 2082
Facsimile: 020 7937 3463
Web: www.rbkc.gov.uk

08 January 2001

My reference: DPS/DCN/SW/
PP/00/02806

Your reference:

Please ask for: Mrs. S. Wilden

Dear Sir,

Town and Country Planning Act 1990
Transco Gas Holder Station, Kensal Green House, Canal Way, London W10 5AJ

I refer to your application in respect of the above premises.

In order to assess the proposal would you kindly supply the following information:

- (a) the exact specification of the equipment to be installed including:
 - the frequencies that the apparatus will operate at;
 - details about the paths of the microwave beams;
 - the power density that will be emitted from the installation, for comparison with national and international guidelines.
- (b) a detailed risk assessment incorporating:
 - identification of potential receptors and the possible hazards that this may represent;
 - methods that will be undertaken to minimise the risks, including those risks to which personnel maintaining the site and other contractors/visitors may be exposed.

While I note that your state that B.T. Cellnet have advised that emissions fall within relevant guidelines, this needs to be demonstrated in writing as explained above. Would you kindly supply the information requested as soon as possible within seven days of the date of this letter.

Yours faithfully,

D. Taylor,
Area Planning Officer
for the Executive Director,
Planning and Conservation.

F

01923 831010



① PC ② SW



SpectraSite
Transco

Our ref: BTCELLNET/TQ0967/SH/1

E-mail : steve.horne@sstuk.com

Mob : 07968 859497

Mrs. S. Wilsden
The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

✓ CT
26/1/2001

SUBJECT TO CONTRACT

Dear Mrs. Wilsden

24th January 2001

BT CELLNET PROPOSED TELECOMMUNICATION AT TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON.

With reference to your letter dated the 08th January regarding the above project and the recently submitted full planning application, please accept this Health & Safety pamphlet from BT Cellnet Limited, the contents of which, I hope, are of some interest to you.

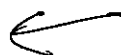
Should you have any queries then please do not hesitate to contact me at the above address and number.

Yours sincerely

**Steve Horne B.Sc. (Hons)
Acquisition Surveyor**

| | | | | | | | |
|-------------------------------|-----|-----|-----|-------------|---------|------|--------|
| RECEIVED BY PLANNING SERVICES | | | | | | | |
| EX DIR | HDC | M | C | SW | SE | ENF | AO ACK |
| (42) | | | | 26 JAN 2001 | | | |
| FEES | C | REL | ARB | FWD PLN | CON DES | FEES | |

Mr H will
withdraw app,
talk to R.J.
+ resubmit when wife
available



copy madequate
cc to
Rebecca Jane
30/1



SpectraSite
Transco

with compliments

SpectraSite Transco Communications Limited

www.spectrasite-transco.co.uk

Claremont House, Hatters Lane, Croxley Business Park, Watford, Hertfordshire. WD18 8TR ♦ Telephone: +44 (0) 1923 831000 ♦ Fax: +44 (0) 1923 831010

Registered in England No. 3922958 ♦ Registered office: Claremont House, Hatters Lane, Croxley Business Park, Watford, Hertfordshire. WD18 8TR

Our ref: BTCELLNET/TQ0967/SH/1

E-mail : steve.horne@sstuk.com
Mob : 07968 859497

Mrs. S. Wilden
The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

SUBJECT TO CONTRACT

Dear Mrs. Wilden

24th January 2001

BT CELLNET PROPOSED TELECOMMUNICATION AT TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON.

I refer to your letter dated the 08th January regarding the above project and the recently submitted Full Planning Application.

I am, at present, awaiting instruction from BT Cellnet with regard to providing the details requested. I will revert to you with BT Cellnet's response in the very near future

Should you have any queries then please do not hesitate to contact me at the above address and number.

Yours sincerely



**Steve Horne B.Sc. (Hons)
Acquisition Surveyor**



| RECEIVED BY PLANNING SERVICES | | | | | | | |
|-------------------------------|-----|-----|-----|---------|---------|------|--------|
| EX DIR | HDC | N | DE | SW | SE | ENF | AO ACK |
| 25 JAN 2001 | | | | | | | 34 |
| APPEALS | IO | REC | ARB | FWD PLN | CON DES | FEES | |

*Tel con with Mr H 26/1.
He sent some info 25/1.
If its not enough he is
willing to withdraw case &
re-submit when ready.*

①PC ②SW



SpectraSite
Transco

| | | | | | | | |
|-------------------------------|-----|-----|-----|------------|------------|------|-----------|
| RECEIVED BY PLANNING SERVICES | | | | | | | |
| EX DIR | HDC | N | C | SW | SE | ENF | AO ACK |
| 2.8 FEB 2001 | | | | | | 56 | |
| APPEALS | IO | REC | ARB | FWD PLN | CON DES | FEES | |

Our ref: BTCELLNET/TQ0967/SH/3

Mrs. S. Wilsden
The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

SUBJECT TO CONTRACT

Dear Mrs. Wilsden

CF
28/2/2001

26th February 2001

BT CELLNET PROPOSED TELECOMMUNICATION AT TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON.

With reference to your letter dated the 08th January regarding the above project and the recently submitted full planning application, please find enclosed with relevance, information from BT Cellnet Limited the contents of which, I hope, are of some interest to you.

Although the enclosed report refers to one specific site, the majority of the paper is of a general nature and is relevant to the proposed telecommunication installation at Kensal House.

I hope that the delay in the providing of this information is in no way detrimental to our application and should you have any queries then please do not hesitate to contact me at the above address and number.

Yours sincerely

Steve Horne B.Sc. (Hons)
Acquisition Surveyor

E-mail : steve.horne@sstuk.com
Mob : 07968 859497

Copy to Rebecca Jane
Will this info do or is site specific info needed?

RF powers near BTCellnet Base Station at Tedworth Square London

Summary

This paper outlines a method for calculating radio Power Flux Density near BTCellnet base stations. In the particular case of Tedworth Square it is shown that maximum RF exposure is less than 2% of the international RF safety recommendation.

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1. Scope

This paper has been written to give Acquisition Managers and Landlords some background information about typical Radio Frequency (RF) exposures in the areas near to BTCellnet base stations. The paper considers, BTCellnet Health and Safety policy, methods of estimating RF exposure and typical exposure in the case of Tedworth Square. The paper does not consider the calculation and implementation of "safety zones" or "exclusion areas".

2. Frequency bands

BT Cellnet is authorised by the United Kingdom Radio Communications agency to operate base site radio transmitters in the following bands:

| | Frequency From base to mobile (MHz) |
|---------|--|
| GSM900 | 929.5 - 932.9 |
| GSM900 | 934.1 - 934.9 |
| GSM900 | 939.9 - 947.1 |
| GSM900 | 955.1 - 959.9 |
| GSM1800 | 1805.1 - 1810.6 |
| 3G FDD | 2124.9 - 2134.9 |
| 3G TDD | 1909.9 - 1914.9 |

A typical transmit site will consist of 3 antennas in a group, mounted on a mast or support structure, each antenna gives coverage over a 120 degree sector. At some sites such as the antennas are mounted at the corners of a roof.

The GSM radio channels, which are 200kHz wide, will be distributed throughout the bands detailed above. Typically a sector may be radiating up to 6 GSM900 channels and 2 GSM1800 channels - although occasionally more.

Third generation (3G) channels are 5MHz wide. All 3G sectors will be equipped with 1 or 2 channels

3. RF Health and Safety Policy

BT Cellnet supports the international precautionary approach for limiting radio frequency (RF) exposure of the general public, as recommended by the report of the Independent Expert Group on Mobile Phones (ref. i) and accepted by Government.

BT Cellnet will operate Mobile Phone Base Stations in accordance with the International Commission on Non-Ionising Radiation Protection (ICNIRP) RF exposure guidelines (ref. ii) as expressed in the European Union Council Recommendation of 12 July 1999 (ref. iii) on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).

This means that BT Cellnet base sites will comply with ICNIRP general public exposure guidelines in areas where the public spend a significant amount of time (referred to as public access) and United Kingdom National Radiological Protection Board (NRPB) (ref. iv) all-people exposure guidelines in other areas (referred to as short term access).

In general, all areas where the public has unrestricted access without any time constraints will be classified as public access. Areas that are restricted to short term access (usually, but not exclusively, for work related reasons) are classified as short-term access.

4. Safe working

Exclusion zones are defined near BTCellnet antennas to determine the boundaries of the area where the relevant safety recommendations may be exceeded. The extent of the exclusion zone depends upon the maximum radio power envisaged for the site configuration and the type of site access, as derived from the EU recommendation. The exclusion zones for *public access* are greater than the exclusion zones for *short-term access*

Access restrictions are applied if there is an opportunity for any person to approach and enter the exclusion zone. The restrictions applied will depend on the nature of the access route but normally include warning signs and physical barriers.

When access is required within the exclusion zone, BT Cellnet will always employ a safe system of work, switching off the transmitters if required, so that no one is at risk.

5. RF exposure standards

Radio power is often expressed as the intensity of radio power that would flow through a 1 metre square perpendicular to the direction of energy flow, expressed in units of Watts per sq metre. The formal term for the radio power flowing across a surface is Power Flux Density (PFD).

The ICNRP and NRPB have recommended limits for human exposure to radio waves such that exposure to RF at levels below the limit value is not detrimental to human health. The recommended limit values of PFD derived from the ICNRP and NRPB recommendations are given below.

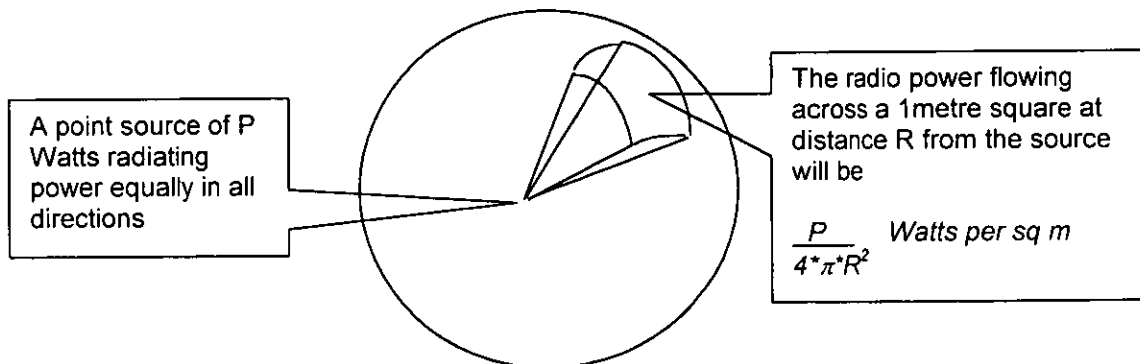
| Frequency band | Recommended limit value for PFD at lowest BT Cellnet Operational Frequency | |
|----------------|--|---|
| | Watts per sq m | |
| | <i>Public access areas</i> | <i>Short term access areas</i> |
| | ICNRP Public ref ii (Table 7) | NRPB Public Ref iv (Table 6) (including children) |
| 900 MHz | 4.63 | 35.08 |
| 1800 MHz | 9.02 | 100 |
| UMTS | 10 | 100 |

6. Estimating the Power Flux Density

The PFD at a given position or "reference point" may be calculated by the inverse square law formula. This is one of several mathematical techniques that are available for calculating RF exposure levels. A full description of the methods that may be used for demonstrating compliance to RF safety recommendation is given in ref (v). The inverse square method has the advantage that it is relatively easy to use; it tends to overestimate the PFD thus erring on the side of caution.

The inverse square law may be described as follows. If a radio source has an power of P Watts and the power spreads equally in all directions (referred to as isotropic) then at some distance R away we can envisage a sphere of radius R wrapped around the source, the power flow across a unit square drawn on the surface of the sphere would be given by:

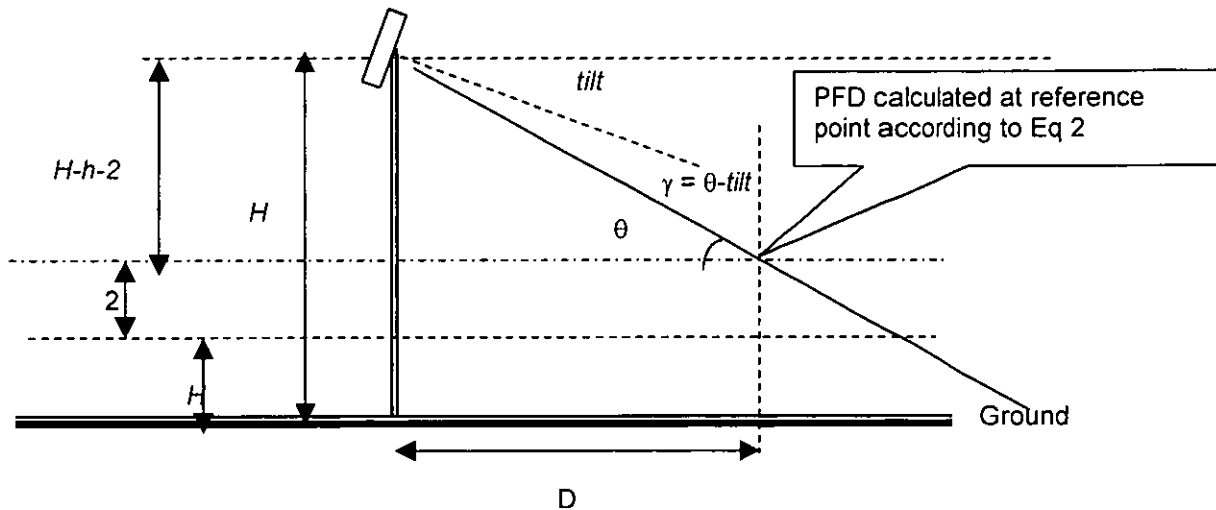
$$PFD = \frac{P}{\text{Area of sphere of radius } R}$$
$$= \frac{P}{4 * \pi * R^2} \dots \dots \dots (1)$$



This formula is a good estimation PFD in the range 10 to 300m. At shorter distances it is not valid to model the transmitter as a single point source, so more sophisticated formula may be used, and at distances greater than 300m the local infrastructure is beginning to absorb and reflect some of the radio power.

The formula may be developed to give the PFD at a reference point, a horizontal distance D from the mast and height h above local ground. 2m is added to the height at the reference point to so that the PFD is calculated at head height.

Antenna geometry to accompany Eq. 2



The complete formula becomes:

$$PFD = \frac{N * EIRP * L * G(\tan^{-1}(\frac{H-h-2}{D}) - \text{tilt}) * A}{4 * \pi * (D^2 + (H-h-2)^2)} \dots\dots\dots 2$$

The calculated PFD may also be compared with the recommended limit value $PFDL$ to give the RF exposure as a percentage of the limit value.

RF exposure

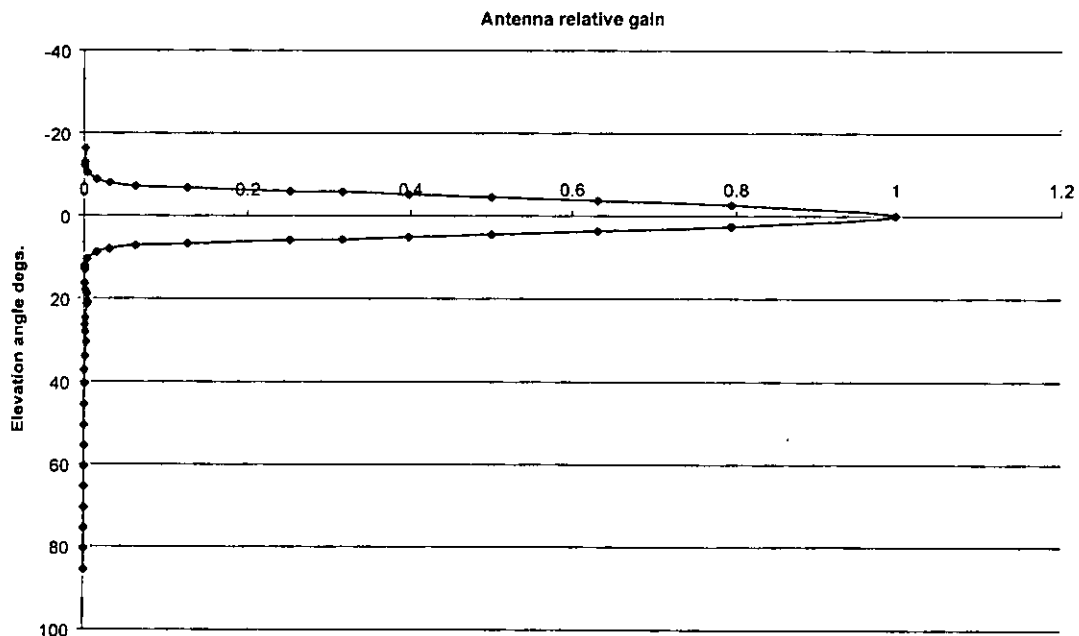
$$= \frac{\text{Actual PFD}}{\text{Limit value of PFD}} * 100\%$$

$$= \frac{N * EIRP * L * G(\tan^{-1}(\frac{H-h-2}{D}) - \text{tilt}) * A}{4 * \pi * (D^2 + (H-h-2)^2)} * \frac{1}{PFDL} * 100\% \dots\dots\dots 3$$

Where:

- N is the number of active channels in a particular sector
- $EIRP$ is the isotropic radiated power for a single channel (see footnote 1)
- L is an allowance for building loss (see footnote 2)
- $G(\gamma)$ is antenna elevation characteristic (gain relative to maximum) (see footnote 3).
- $tilt$ is the antenna tilt
- A is the antenna azimuth characteristic (gain relative to maximum)
- D is the horizontal distance from the mast to the reference point
- H is antenna height above local ground
- h is the height of the reference point above local ground
- $PFDL$ is the RF exposure limit

$G(\gamma)$ is the antenna elevation characteristic. The relative gain of the antenna varies with the elevation angle γ , at small values of γ the antenna gain will approach unity whereas as at large values of γ approaching 90 degs, the antenna exhibits a loss. A plot of $G(\gamma)$ is given below.



Plot of antenna elevation gain relative to maximum

1 RF powers are normally quoted as Effective Isotropic Radiated power (EIRP). EIRP is defined as the product of the antenna input power and the antenna gain measured relative to an isotropic radiator.

2 This paper has not used the radio engineers' units dB, all expressions of gain and loss are given in linear units.

3 The gain is quoted relative to the peak value when $\gamma = 0$ so $G(\gamma)=1$.

A is the antenna azimuth characteristic, in most situations we are calculating PFD in the area in front of the antenna so it is reasonable to set A=1, but on a roof top the surrounding antennas are pointing outwards and we are estimating PFD behind the antenna. Power is not greatly radiated from the rear of the antenna so A is conservatively set to 0.01 (20 dB),

It is worth observing how Eq. 2 behaves with distance from the mast D . At small values of D the elevation angle will be close to 90degrees, $G(\gamma)$ will be small and the antenna will exhibit a power loss, consequently the PFD will be small. Similarly at large values of D , D^2 will be large, the denominator in equation 2 will be large and the PFD will be small. At some value of D usually around 150m these effects will balance and the PFD will reach a maximum. This is synonymous with the point where the main beam or "beam of greatest intensity" reaches the ground. A simpler explanation is to think of a lighthouse, the large reflector behind the bulb directs the light beam towards the horizon, under the tower there is very little light, at great distances the beam is dim, maximum brightness is observed in complete safety a few miles out from the tower.

6.6 Maximum configuration

For all calculations of RF exposure we assume that the site is operating at maximum capacity, with all channels powered and at the maximum power allowed by the particular build configuration.

7. Tedworth Square

7.1 Antenna heights at Tedworth square

The antennas at 18-20 Tedworth Square will be mounted on the roof and the heights are 16 metres above local ground for the antenna facing 160 degrees and 18 metres above, local ground for the antennas facing 40 and 280degrees. Taking account of the antenna centres the radiation heights are 17.08 and 19.25m respectively. The RF exposure of 1.327 thousandths of Watts per sq m was based on an assumed antenna height of 20m and these calculations are reproduced below.

7.2 RF exposure near 18-20 Tedworth Square

In the case of Tedworth Square we calculate Eq 3 for the following basic data:

N = 4 channels, the number of active channels in a particular sector
 $EIRP$ = 120 watts, the isotropic power for a single channel
 L = 1 (i.e. no building loss)

$$\theta = \tan^{-1} \left(\frac{H - h - 2}{D} \right) = 7.67 \text{ degs}$$

Tilt = 4 degrees
So γ = 7.67-4
And G = $G(7.67-4)$ degs
= 0.631 - looked up from antenna elevation characteristic
 A = 1 except for roof top when $A = 0.01$
 H = 20m (original assumption)

h = 0 (ie reference point at ground level)
 D = 133m (this value is found by trial to give a maximum value for PFD)
 $PFDL$ = 4.63 Watts per sq m from ICNRP general public RF exposure limit

$$(D^2 + (H - h - 2)^2) = 20^2 + (20 - 0 - 2)^2 = 18168$$

So from Eq. 2:

$$PFD = \frac{4 * 120 * 1 * 0.631 * 1}{4 * \pi * 18168} * 1000$$

$$= 1.327 \text{ thousandths of watts per sq m}$$

This is equivalent to 0.028% of the ICNRP public RF exposure recommendation at a distance of 133m from the tower.

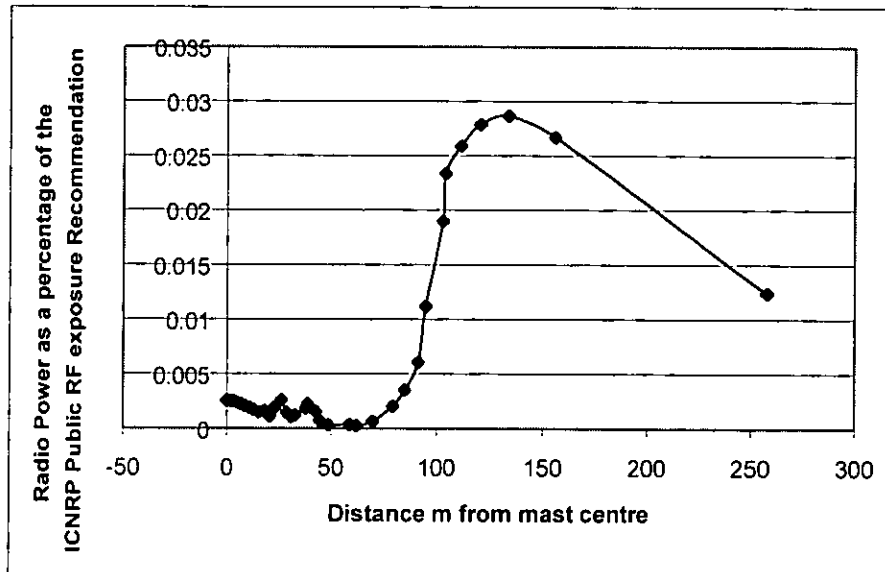
The PFD plot for Tedworth Square is shown below.

BT CELLNET ANTENNA FIELD STRENGTH PREDICTION

SITE: Tedworth Sq.



| | |
|--------------------|--|
| range from | 0 m |
| range to | 500 m |
| number of channels | 4 |
| EIRP | 120 Watts |
| Mechanical tilt | 0 degrees |
| Antenna Height | 20 m - measured local ground to antenna centre |
| measurement height | 0 m - above local ground |
| Building losses | 0 dB |



maximum = 1.33 Thousandths of Watts per sq m
0.00379 % of NRPB safety levels
0.02865 % of ICNRP safety level
0.7 Volts per metre

Others situations can be considered in a similar fashion

7.3 Within no 18-20 Tedworth square

We can consider the RF the exposure in the rooms directly below the antenna.

The drawings suggest that the top floor of No 18-20 Tedworth Gardens is at a height of 12m above local ground. The loss factor is set to 0.2 (7dB) to allow for power absorbed by the roof and ceiling. In this situation the maximum estimated maximum PFD is 5.382 thousandths of Watts per sq m, equivalent to 0.12% of the ICNRP public RF exposure recommendation

7.4 Roof top exposure

A, the azimuth antenna characteristic, is set to 0.01 (20dB) to allow for the RF signals radiating from the back of the antenna. At 5m from the rear of the antenna the estimated PFD is 15.3 thousandths of watts per sq m, equivalent to 0.33% of the ICNRP public RF exposure recommendation and 0.044% of the UK NRPB RF exposure. It is reasonable to compare RF exposure with the NRPB recommendation in this situation because we are not anticipating unrestricted, continuous, access.

There may be a zone near the antenna where the RF exposure recommendations may be exceeded, this zone will be clearly labelled and physical barriers may also be provided, so that no person can be exposed to RF in excess of the recommended safety level.

7.5 Adjacent buildings

We note from the drawings that no 43 Tedworth Gardens is approximately 20m from 18-20 Tedworth Sq and is the same height as 18-20 Tedworth Square.

The PFD on the external wall of No 43 we estimate to be 95.5 thousandths of watts per sq m, equivalent to 2.06% of the ICNRP public RF exposure recommendation and 0.27% of the UK NRPB public RF exposure recommendation.

7.6 Summary of exposure values

The RF exposures considered may be summarised below:

| | |
|--|---|
| % of ICNRP general public RF exposure recommendation | |
| 2.06 | External wall of no 43 Tedworth Gardens |
| 0.33 | Roof of 18-20 Tedworth Square |
| 0.028 | Ground level 133m from mast |
| 0.012 | Rooms below mast |

It has been demonstrated by calculation that the RF exposures near the proposed Tedworth Square site are significantly below the ICNRP general public RF exposure recommendation. This can be verified by measurement after the site has been build and is operational

BTCellnet
Radio Design Department
260 Bath Road
Slough, SL1 4DX

8. References:

-
- i Independent Expert Group on Mobile Phones Report – Mobile Phones and Health
May 2000.
 - ii Guidelines for limiting exposure to time varying electric magnetic and electro
magnetic fields (up to 300GHz)
International Commission on Non Ionizing Radiation Protection
Health Physics April 1998 Vol. 74 No 4.
 - iii European Parliament Council Recommendation on the limitation of exposure of the
general public to electromagnetic fields 0Hz - 300GHz 12 July 1999, 1999/519/EC.
 - iv Restrictions on exposure to static and time varying electromagnetic fields- 1995.
National Radiological Protection Board Chilton, Didcot, Oxford OX11 0RQ.
 - v Basic standard for the calculation and measurement of electromagnetic field strength
and SAR related to human exposure from radio transmitters.
European Committee for Electrotechnical Standardisation, TC 211 WGMBS
Version 11 - Oct. 2000
Draft proposal to be sent to national committees for comments

---- End of Document ----

SUBJECT-SITE *Transco Gas Holder Station,*
Kensal Green Ho, Canal Way
R.B.K. & C. Planning Service.

FILE REFERENCE: *PP/00/*
2806

NOTES OF MEETING *Tel*
can

DATE: *02.03.01*

NAMES OF PERSONS
ATTENDING:

Steve Horne

OFFICERS:

SW

MATTERS
DISCUSSED:

I will pass info received 28/2/01 onto Rebecca Jane in Env't Services for advice as to whether this gives info needed. I reminded him that he was going to withdraw + reinstate when agreed that all necessary info was ready. I had asked for all info, by letter, by 15th Jan + the case is now well past target date. If I'd known he wasn't going to withdraw, would have refused the case. He will write to confirm withdrawal.

LITERATURE:
POLICY, PAPERS, ETC.

SIGNATURES:

pc adv + bkim → FILE
PP 00 / 2806



Our ref: BTCELLNET/TQ0967/SH/4

Mrs. S. Wilsden
The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

✓
CT
19/3/2001

SUBJECT TO CONTRACT

Dear Mrs. Wilsden

15th March 2001

BT CELLNET PROPOSED TELECOMMUNICATION AT TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON.

Thank you for your letter of the 08th March 2001 in respect of the above project.

With reference to the site at Kensal green House, I must now inform you that it is our express intention to withdraw the application forthwith as requested. Following this withdrawal, SSTUK therefore shall not be resubmitting the application to the aforementioned site due to the approval of a previous application within your jurisdiction.

I once again thank you and your staff for your efforts on this project and should you have any queries then please do not hesitate to contact me at the above address and number.

Yours sincerely

Steve Horne B.Sc. (Hons)
Acquisition Surveyor

E-mail : steve.horne@sstuk.com
Mob : 07968 859497

| | | | | | | | | | |
|-------------------------------|-----|-----|-----|---------|---------|------|--------|--|--|
| RECEIVED BY PLANNING SERVICES | | | | | | | | | |
| EX DIR | HDC | N | C | SW | SE | ENF | AO ACK | | |
| 19 MAR 2001 | | | | | | | 26 | | |
| APPEALS | IO | HEC | HRH | FWD PLN | CON DES | FEES | | | |

To: Rebecca Jane

Date: 30.1.01

The attached document(s) is/are forwarded:

- as discussed
- for action by you
- for your information
- for your consideration and comments
- for noting and returning
- please ring to discuss.

With the Compliments of

Sarah Widen

X2082.

The Executive Director of Planning & Conservation

The Town Hall, Hornton Street, London, W8 7NX

Telephone: 0171 - 937 5464 FAX: 0171 - 361 3463

Notes: Re Transco Gas
Holder Station,
Kensal Green House,
Canal Way W10.

From quick glance, looks
like general info that
doesn't answer questions
asked in letter 8-1-01.

**THE ROYAL
BOROUGH OF**



**KENSINGTON
AND CHELSEA**

B

PLANNING AND CONSERVATION

THE TOWN HALL HORNTON STREET LONDON W8 7NX

**THE ROYAL
BOROUGH OF**

Executive Director M J FRENCH FRICS Dip TP MRTPI Cert TS



**KENSINGTON
AND CHELSEA**

Mr. S. Horne,
Spectra Site Transco,
Claremont House, Hatters Lane,
Croxley Business Park,
Watford,
Hertfordshire WD18 8TR

Switchboard: 020 7937 5464
Extension: 2082
Direct Line: 020 7937 2082
Facsimile: 020 7937 3463
Web: www.rbkc.gov.uk

08 January 2001

My reference: DPS/DCN/SW/
PP/00/02806

Your reference:

Please ask for: Mrs. S. Wilden

Dear Sir,

Town and Country Planning Act 1990
Transco Gas Holder Station, Kensal Green House, Canal Way, London W10 5AJ

I refer to your application in respect of the above premises.

In order to assess the proposal would you kindly supply the following information:

- (a) the exact specification of the equipment to be installed including:
 - the frequencies that the apparatus will operate at;
 - details about the paths of the microwave beams;
 - the power density that will be emitted from the installation, for comparison with national and international guidelines.
- (b) a detailed risk assessment incorporating:
 - identification of potential receptors and the possible hazards that this may represent;
 - methods that will be undertaken to minimise the risks, including those risks to which personnel maintaining the site and other contractors/visitors may be exposed.

While I note that your state that B.T. Cellnet have advised that emissions fall within relevant guidelines, this needs to be demonstrated in writing as explained above. Would you kindly supply the information requested as soon as possible within seven days of the date of this letter.

Yours faithfully,

D. Taylor,
Area Planning Officer
for the Executive Director,
Planning and Conservation.

F

① P.C ② SW



Our ref: BTCELLNET/TQ0967/SH/1

E-mail : steve.horne@sstuk.com
Mob : 07968 859497

Mrs. S. Wilsden
The Royal Borough of Kensington & Chelsea
Planning and Conservation
The Town Hall
Hornton Street
London
W8 7NX

✓ CT
26/1/2001

SUBJECT TO CONTRACT

Dear Mrs. Wilsden

24th January 2001

BT CELLNET PROPOSED TELECOMMUNICATION AT TRANSCO GAS HOLDER STATION, KENSAL GREEN HOUSE, CANAL WAY, LONDON.

With reference to your letter dated the 08th January regarding the above project and the recently submitted full planning application, please accept this Health & Safety pamphlet from BT Cellnet Limited, the contents of which, I hope, are of some interest to you.

Should you have any queries then please do not hesitate to contact me at the above address and number.

Yours sincerely

**Steve Horne B.Sc. (Hons)
Acquisition Surveyor**

| | | | | | | | |
|-------------------------------|-----|-----|-----|---------|---------|------|--------|
| RECEIVED BY PLANNING SERVICES | | | | | | | |
| EX DIR | HDC | | C | SW | SE | ENF | AO ACK |
| (W) 26 JAN 2001 | | | | | | | |
| PPS | C | PER | ARB | FWD PLN | CON DES | FEES | |

Planning consents.

The acquisition team is also responsible for gaining the necessary planning consent for each site. This can take the form of a full planning consent or, as is more often the case, a permitted development consent under the Town and Country Planning (General Permitted Development) Order 1995 as amended by the Town and Country Planning (General Permitted Development) (Amendment) Order 1999.

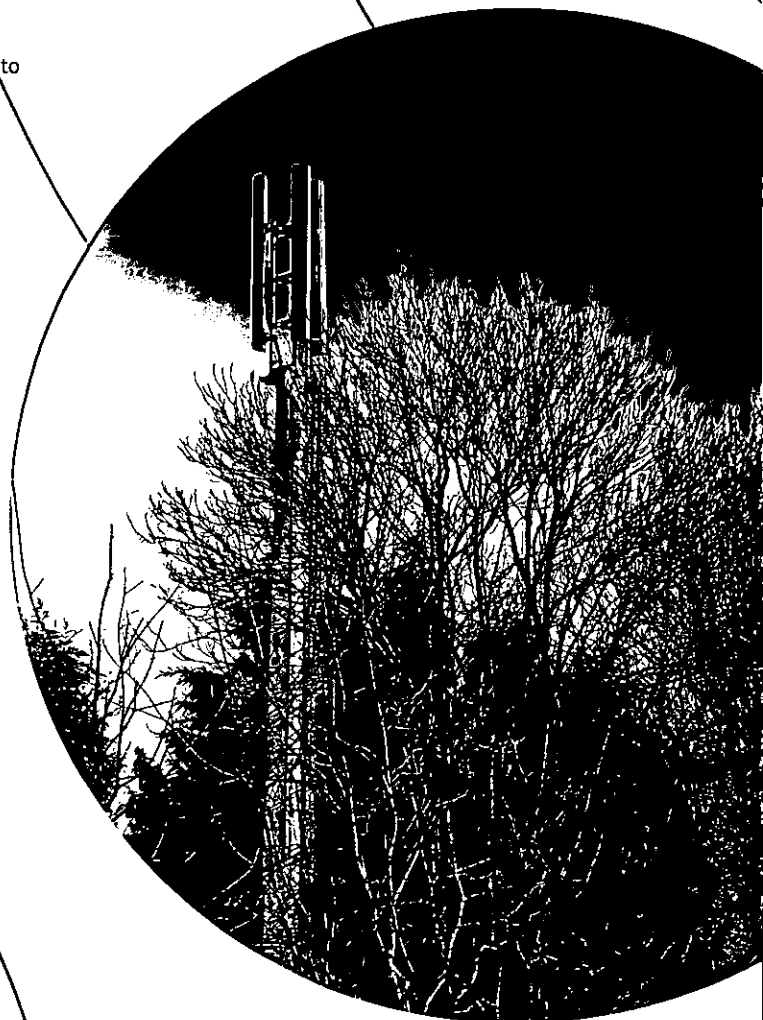
Permitted development rights were given to licensed telecommunication operators in order to facilitate the development of their networks.

Although these speed up the process, BT Cellnet still require the approval of the appropriate Planning Authority for a development to proceed.

Whether the consent required is 'full planning' or 'permitted development' the acquisition team will enter into dialogue with the local Planning Authority at an early stage. The aim, wherever possible, is to agree the form of development with the Planning Authority prior to any application being made.

Once landlord negotiations have been concluded and the necessary planning consent has been granted, construction can begin, and the cellsite subsequently integrated into our national network.

A modern monopole mast.



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Registered in England: No.1743099
Registered Office as above


BTcellnet

Acquiring new sites for radio transmitters.

Before BT Cellnet can add a base site to its network, it has to go through the acquisition process comprising three stages: site surveys, landlord negotiations and a planning application.

Site survey.

In order to enhance network coverage, our radio planners identify a search area within which a base site is required. This area will vary in size depending on the capacity requirements of the network in that area.

The search area will be surveyed and a report compiled detailing all possible sites. The acquisition team will be looking specifically for existing radio towers or other structures upon which the necessary antenna can be located. If no existing structures are suitable, a green-field site offering a good degree of natural screening will be sought.

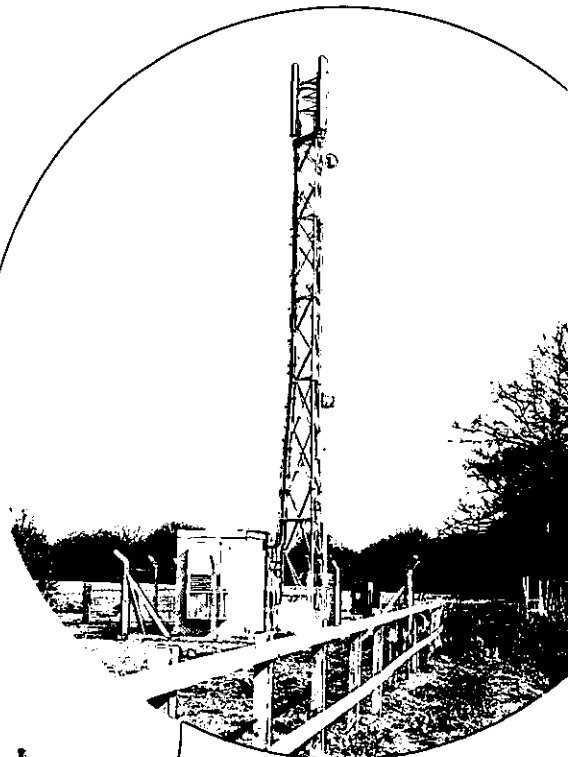
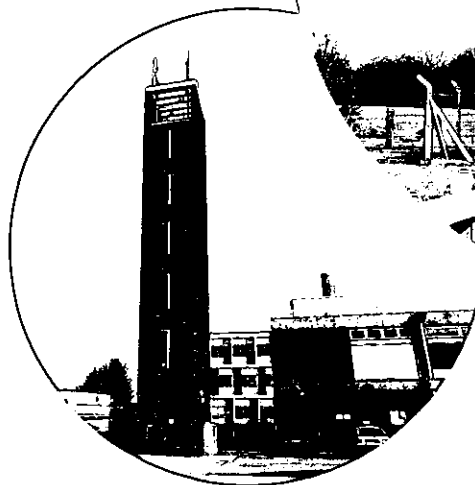
The main aim of the acquisition team is to identify the site that will offer the best possible coverage while minimising the environmental impact of any structures that may be required.

Landlord negotiations.

BT Cellnet have standard agreements with a large number of site providers. These include CTI, NTL, the public utilities and the other mobile phone companies: Vodafone, Orange and one2one.

If a site belonging to any of these organisations can be identified then the acquisition process is made much easier.

If the site identified belongs to a private landlord then negotiations will be opened, hopefully providing a satisfactory outcome for all parties. The end result is usually a Lease or Licence Agreement with BT Cellnet paying an annual rent for the required site.



Wherever possible, an existing structure, such as this Fire Service tower, is used to support antennas. Where no existing structure is available, a simple lattice tower is one of the options available.

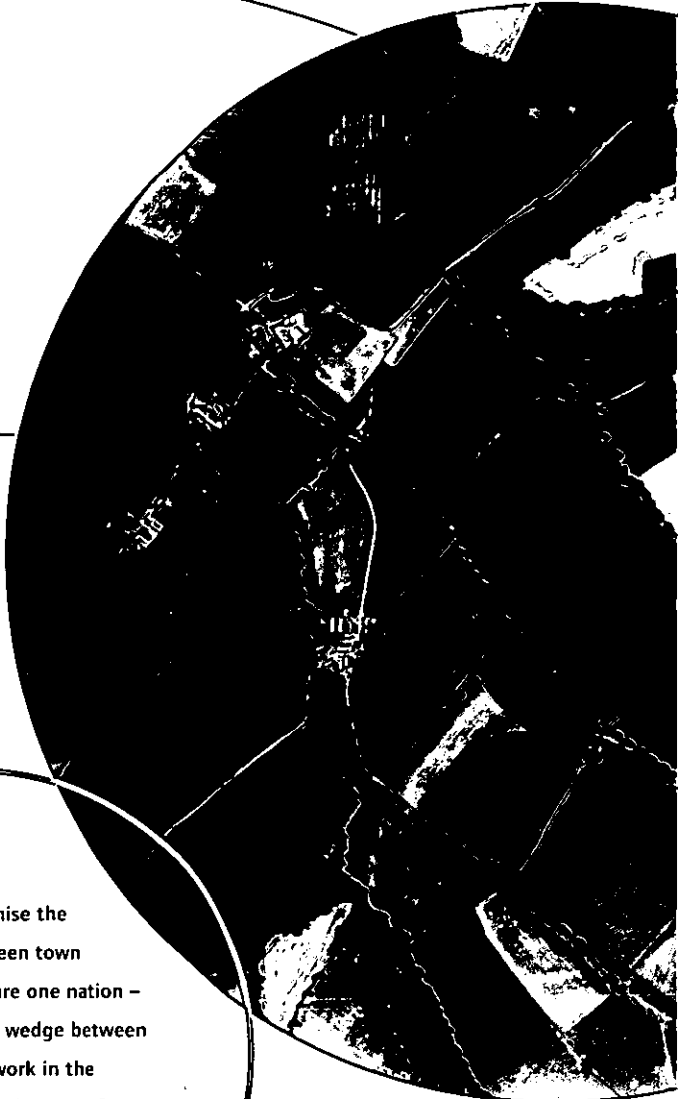
Sharing the benefits with rural and urban communities.

Although demand is obviously greater where there are higher population densities, we believe that the benefits of mobile communications should be available to customers throughout the UK, and that people living and working in rural areas have a right to the same high quality service as town-dwellers.

The scale of our commitment to this ideal (and a measure of the number of cell sites we will need to acquire) can be judged from the investment we are making in our network infrastructure. We have invested £2 billion to date and continue to spend £2 million every working day to provide our customers with truly national coverage and a full range of voice and data services.

Working responsibly with Local Authorities, nationwide.

Wherever we can, we aim to go well beyond the statutory requirement to comply with planning regulations. In regions where we need to erect cell sites in order to achieve our operational objectives, we approach Local Authorities in advance, working with them to find locations that offer the best mobile phone coverage while minimising the visual impact on the surrounding area.



'We need to recognise the relationships between town and country – we are one nation – rather than drive a wedge between those who live or work in the country and those who come from urban areas to visit it.'

Countryside Commission

www.btcellnet.net

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Registered in England: No.1743099
Registered Office as above



Using analogue technology, the original mobile communications networks (Cellnet and Vodafone) were able to handle the limited number of mobile phone users who connected during the 1980s. Service was provided by radio base stations, usually with high masts or rooftop sites, predominantly to customers with powerful 'car phones'. These radio base stations could be sited at some distance from the customers they served.

Customer demand for smaller, lighter phones, clearer call quality and advanced features has led to the development of compact digital handsets. Digital signals, however, do not travel as far as analogue, and the new hand-portable digital phones have far less 'transmit' power than the original analogue 'car phones'.

This, together with the need for greater network capacity to meet the ever increasing demand for mobile services, has resulted in the need for a greater number of base stations, for each of the operators offering the new digital technology.

No other mobile network offers greater UK coverage.

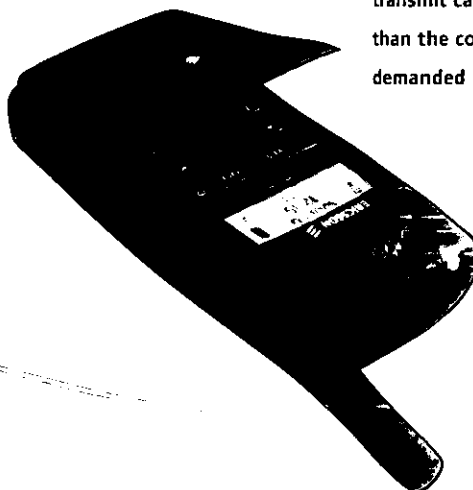
BT Cellnet already offers coverage to 99% of the UK population, so why do we need to expand our network further?

Adding capacity. Enhancing call quality.

The rapidly increasing demand for mobile communications by business and personal users, and the public sector, especially in busy commercial areas, can only be supported by adding additional capacity to our network. To ensure consistent call quality and a continuous service throughout a call, we need to provide coverage in depth, filling in areas where coverage is weak or calls are prone to 'break-up'.



Powered by a car battery, the original analogue 'car phones' were able to transmit calls over greater distances than the compact digital handsets demanded by customers today.



Helping the public sector to be more responsive.

Fast and easy access to information and to senior staff, enables public sector employees working in the community to resolve problems straight away.

Enabling them to call for assistance from other agencies, to discuss cases with their colleagues, to access records from a central database, and file a complete account of the day's events – mobile voice and data communications not only help them to deliver a more effective service and increase personal productivity, but help to reduce response times and to control and contain costs.

Helping the Emergency Services in critical situations.

Increasingly, the Emergency Services, too, are recognising the advantages of the secure communications offered by today's national digital networks.

Vital information can be accessed on the move, from central and external databases – enabling informed decisions to be taken and reducing risk. Reports can be compiled at the scene of incidents and then transmitted back to the command centre – saving time and cutting paper work dramatically.

Empowering 'people on the spot' – the mobile phone gives them the confidence and support they need to take effective action, wherever and whenever it is needed.

In addition, every year millions of calls are made from mobile phones to the Emergency Authorities and roadside recovery services by road users, helping to save lives and rescue stranded motorists.



Mobile communications –
empowering 'people on the spot'.



The mobile phone now plays a key role in the communications strategies of most business and public sector organisations – and is increasingly the preferred choice (over conventional landline phones) for personal users.

The mobile phone is here to stay. And it's set to be adopted as the universal communications tool.

That's why it is so important that the mobile communications networks that support mobile phone services are able to provide the highest standards of coverage and call quality.

The development of first class mobile networks is a priority of national strategic importance – but achieving this goal will require many more sites for the radio transmitters that are central to cellular communications systems.

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Registered Office as above


BTcellnet

An indispensable tool for
more and more people.

The mobile phone is no longer an expensive accessory for the privileged few. Today, a rapidly increasing number of people rely on their 'mobiles' to help them manage their lives more effectively.

What's more, mobile phones are no longer simply a means of 'keeping in touch'.

Already, they can be used to access business systems, the Internet, and a wide range of information services.

Soon, with the introduction of even more sophisticated new services like video conferencing, mobile phones will be helping to make life easier, safer, and more productive in many more exciting ways.

Helping people with busy social lives.

Unprecedented mobility and the freedom to follow our own individual interests creates an even greater demand to 'keep in touch'.

Whether it's simply to organise a get together... to alert someone that we'll be arriving late and reassure them that there's no need to worry... or to call for help when the car breaks down... the mobile phone can help us all to enjoy life more fully, and cope more effectively with its ups and downs.

Helping business people to be more efficient and productive.

For the vast majority of people whose work takes them away from the office, the mobile phone really is essential equipment.

In addition to enabling users to keep in touch with customers and colleagues, and be contactable wherever business takes them, today's mobile phones support a wide range of sophisticated data communications services.

With a laptop computer connected to a mobile phone, people working away from their offices can be linked to their company business systems, enabling them to go about their business just as easily and efficiently as if they were at their desks.

This avoids the need to return regularly to the office – reducing the need to travel and helping to ease congestion on the roads.

Mobile communications – helping people to manage their business and social lives more effectively.



Factors affecting the location of base stations.

The fundamental factor governing the location of base stations is the characteristics of radio waves themselves. Like light waves, radio waves travel in straight lines, and can be obstructed and deflected by objects in their way.

The higher the radio antenna, the greater the area of coverage it provides. However, the closer you are to the antenna, the stronger the signal will be. Conversely, the further away you are, the weaker the signal will be, so it is important that adjacent cellsites are located close enough to provide significant coverage overlap.

Shadowing.

In this example, high ground prevents radio waves entering the valley, forming a shadow and making it impossible to send and receive calls.

The same effect occurs when a radio base station is located on the roof of a building. Around the base of the building, a shadow will be formed which will prevent radio reception.

This effect can be reduced by raising the antenna, or mounting it on the edge of a roof or side of a building to provide enhanced coverage in a specific direction.

Reflection and attenuation.

Signal loss inside a building can sometimes be caused by the use of cladding materials such as reflective glass and metal panels.

Radio signals can also be absorbed by the fabric of a building or by trees, for example, preventing them from reaching their destination.

These problems can usually be overcome by careful positioning. And the solution does not necessarily have to be a tall mast. In urban areas, for example, the use of mini-cellsites – some no larger than a street sign (and capable of doubling up as one) – can provide increased capacity where local demand for mobile service is high.

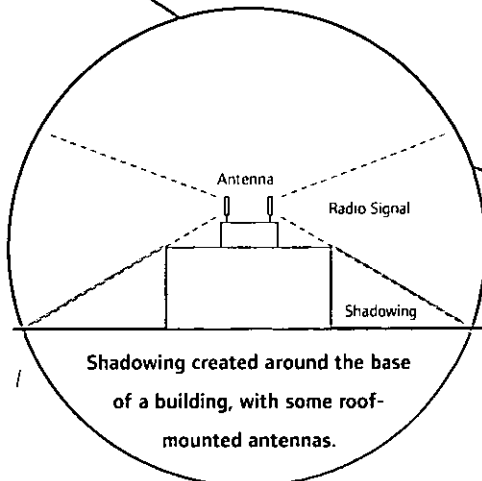
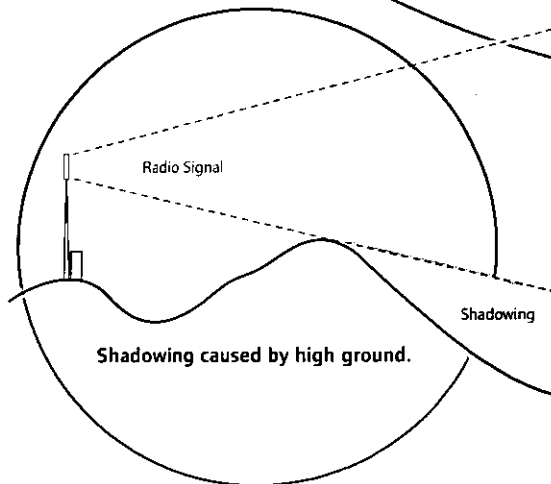
BT Cellnet is very aware of its obligation to give due consideration to environmental issues; wherever possible we aim to create the minimum visual impact.

From Analogue to Digital

With the introduction of the digital handset, mobile phone ownership has soared.

Light and compact, digital phones are not only truly portable, but offer enhanced call quality, access to a wide range of new services – and they can be used while travelling abroad. However, digital handsets have less range than the analogue handsets they have replaced.

The coverage area provided by a digital base station is also significantly less than that offered by earlier analogue cellsites. These factors have resulted in the need for a greater number of digital cellsites.



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Registered Office as above


BTcellnet

How mobile networks work.

The BT Cellnet network is a mobile cellular radio telecommunications system operating under a licence issued by the Department of Trade and Industry.

How cells support continuous mobile calls.

In order to provide a national service, the UK is divided into thousands of individual overlapping cells at the centre of which is a radio base station (otherwise known as a cellsite).

The size of each cell is governed by the area of coverage needed and the number of calls it is expected to carry.

When a mobile phone user travels across an area, calls are 'handed over' from one cell site to the next, thereby maintaining a continuous call. The phone's signal strength is monitored continuously by the network which automatically routes the call to the base station which is receiving the best signal and has available capacity.

In order to achieve continuous call transfer individual cells must overlap, and this is one of the key factors in determining the location of our cellsites. If they are positioned too far away from each other, calls cannot be transferred from one cell to another and will be interrupted or 'dropped'.

Increasing network capacity.

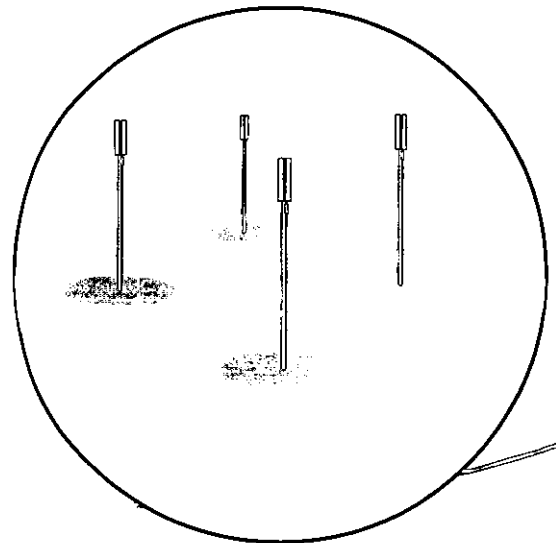
As the number of network users increases, additional capacity must be found. This is done by 'cell-splitting'.

A single cell with a coverage radius of 5km, for example, supporting 60 channels could be split into 7 smaller cells, each providing say 15 voice channels, but potentially more. This would initially increase capacity from 60 to 105 channels.

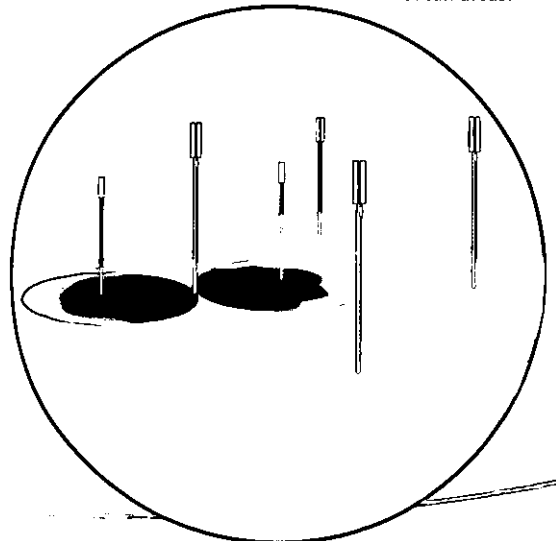
Each new cell is given a discreet part of the available radio spectrum, the same part of the spectrum is then used again in a non-adjacent cell to provide additional channels, while avoiding interference between phones using the same frequencies.

In urban areas, the technique of cell-splitting is used to cope with increased demand for mobile services and to counter the effects of signal loss because of high building densities.

In rural areas, with less users and less signal interference, fewer radio base stations are required and cell areas can usually be larger than those required in urban environments.



Overlapping cells showing area of 'hand over'.

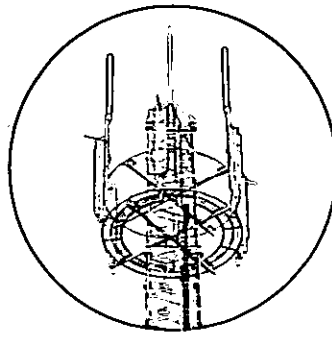


Cell-splitting to provide increased call capacity in urban areas.

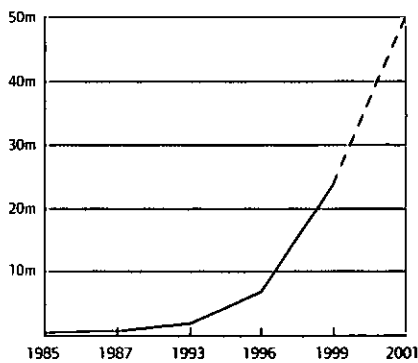
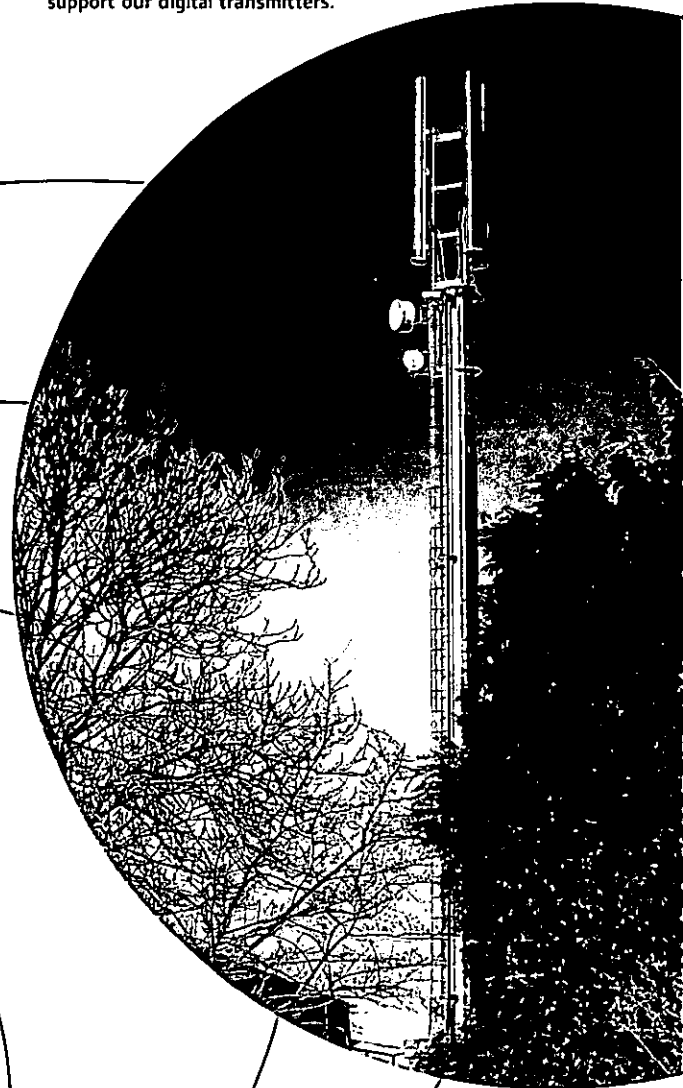
Supporting the need for mobile communications.

Today, the mobile phone has captured everybody's imagination. The ability to keep in touch and be contactable wherever we are, is now regarded as one of life's essentials.

BT Cellnet's role, and that of the other mobile network operators, is to enable everyone who wants to share in the benefits of mobile communications, for business, social or personal reasons, to do so – wherever they are in the UK and around the world.



An early lattice mast, developed for BT Cellnet's original analogue service, contrasted with one of the latest monopole masts used increasingly to support our digital transmitters.



Demand for mobile communications has grown rapidly, year on year, since the first mobile networks were launched in 1985. Within the next 2 years over 50 million people in the UK will own a mobile phone.

www.btccllnet.net

Telecom Securicor Cellular Radio Ltd,
260 Bath Road, Slough SL1 4DX

Registered in England: No.1743099
Registered Office as above

BTcellnet

Meeting the increasing demand for mobile communications.

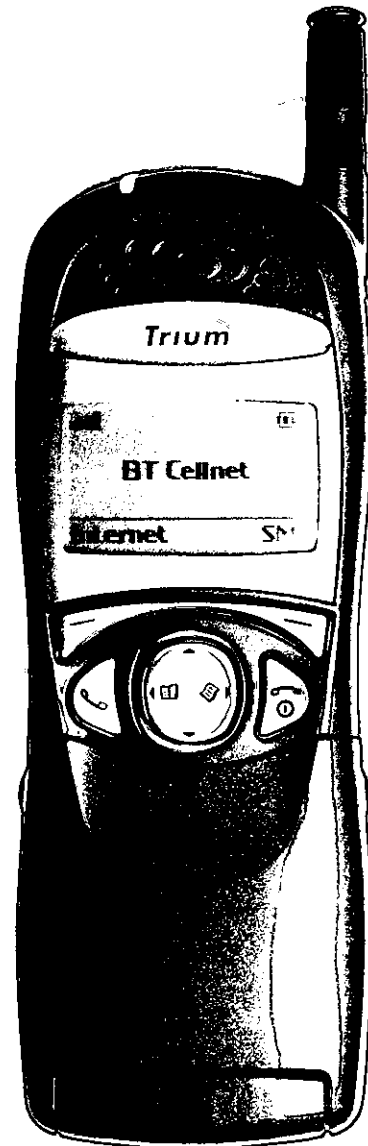
Formed by BT and Securicor Group plc, BT Cellnet was granted a mobile communications network operator's licence in 1983.

Our network service was launched in January 1985, and although handsets were both unwieldy and expensive by today's standards, the service was to prove so popular that in just two years 100,000 customers connected to BT Cellnet.

The demand just keeps on growing.

As mobile phones have become more compact and affordable, more and more people have wanted to share in the benefits of mobile communications.

At the beginning of the new millennium, over 30% of the UK population are mobile phone users, of which well over 7 million are connected to BT Cellnet. Within the next 2 years over 50 million people in the UK will own a mobile phone.



The Mitsubishi Trium, one of a new class of Mobile Internet phones, enables users to access the Internet, business systems, and a wide range of advanced communications and information services, via BT Cellnet's pioneering Mobile Internet service.

Reducing environmental impact.

In order to provide a high quality national mobile communications network, BT Cellnet needs to install radio base stations (cellsites) throughout the UK, in both urban and rural areas. Mindful of the impact radio masts can have on the landscape, we take every care to locate our cellsites with due consideration for the environment.

Our commitment to behaving responsibly in all matters relating to the environment is demonstrated by the care with which we have designed our networks. This has enabled us to provide unbeaten national coverage, with fewer cellsites than any rival operator.

However, we do work cooperatively with other network operators – and share more cellsites than any of our competitors. Also helping to prevent the unnecessary proliferation of radio masts, around 70% of our cellsites are housed on existing buildings or structures. And as new digital technology makes earlier systems obsolete, we aim to decommission redundant cellsites rapidly, so that none are left standing unnecessarily.

Working responsibly with Local Authorities and communities at large.

While enjoying 'permitted rights' under current Government regulations, which avoid the need to seek full planning permission when we wish to erect a cellsite, we believe that local Planning Authorities and the communities they serve are entitled to be fully informed of any proposed developments.

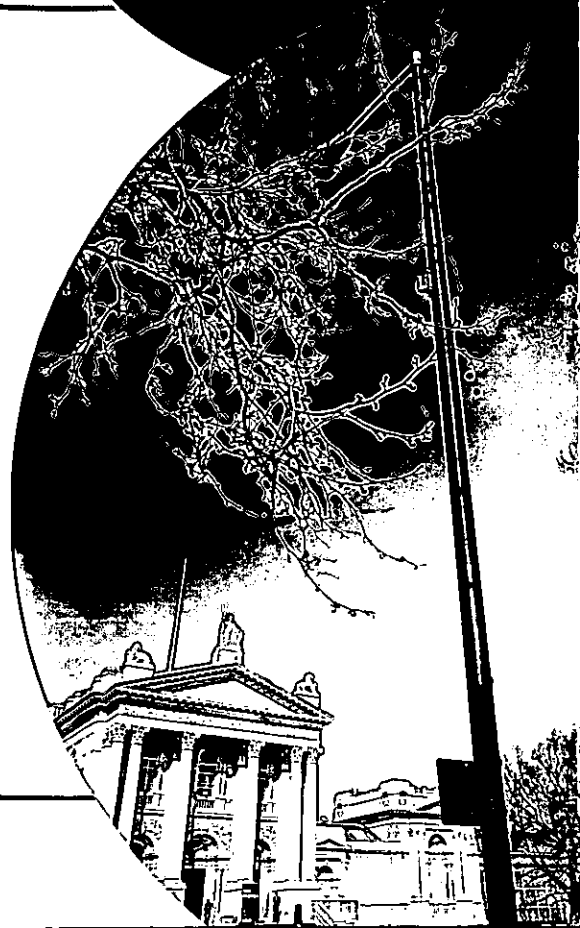
We prefer, therefore, to work with Local Authorities from the earliest stages of any network development plan, and in locating our cellsites aim to be sensitive to both local concerns and the wider environmental issues.

Treating special sites with sensitivity.

BT Cellnet's concern for environmental issues can be seen in both individual instances where the use of tall structures such as church and water towers with carefully disguised radio antennas provide a more attractive alternative to conventional masts; and in large scale developments such as the highly successful scheme to provide mobile communications across the Highlands and Islands of Scotland, jointly planned and built with Vodafone.

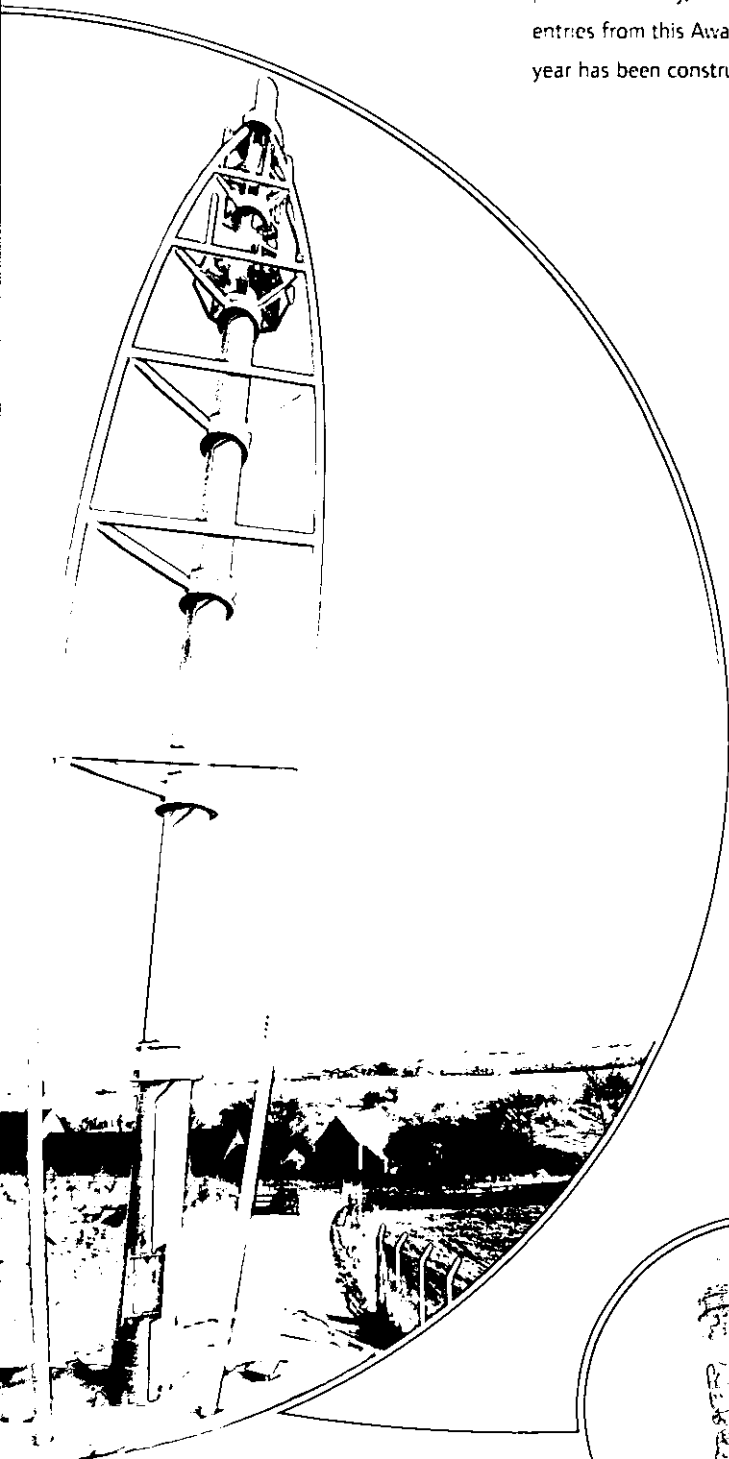


To enable local coverage capacity to be increased in busy commercial centres without the need for conventional masts, BT Cellnet has developed discreet 'microcell' units. Similar in size to an intruder alarm, these are small enough to be mounted on lighting pillars or incorporated into street or business signage.



Reflecting the company's commitment to reducing the impact of cell site works on the environment in 1997

BT Cellnet created a new category – 'Communication and Landscape' – in the Royal Society of Arts (RSA) annual Student Design Awards. Now in its second year, the award aims to explore innovative thinking on cellsite design and encourage environmental best practice. Already, one of the winning entries from this Award's inaugural year has been constructed.



A bold new award-winning design, contrasted with a traditional solution featuring antennas disguised as flagpoles supported by an existing tower.



BT CELLNET'S ENVIRONMENTAL POLICY.

BT Cellnet is passionately committed to the positive protection of the environment meeting the needs of the present without compromising those of the future.

BT Cellnet is committed to the prevention of pollution and minimising the impact of its operations on the environment. This will be achieved through a programme of continual improvement. In particular, BT Cellnet will:

- Ⓞ meet all relevant legislation and set our own standard where no regulations exist.
- Ⓞ improve consumption of materials in all operations, reduce rather than dispose of whenever possible and promote recycling and the use of recycled materials.
- Ⓞ promote energy efficiency in the specification for new and refurbished buildings sites and equipment.
- Ⓞ consider environmental issues throughout the life cycle of our network products, equipment and services.
- Ⓞ work in partnership with our suppliers to minimise the impact of their operations on the environment through a quality purchasing policy.
- Ⓞ endeavour to site our buildings, structures and operational plant in order to minimise the visual, noise and other impacts on the local environment and where operationally feasible, make use of existing structures and the continued best use of technological advances.
- Ⓞ liaise with the local community and the cellular industry on environmental awareness and issues.
- Ⓞ promote individual awareness of good environmental practices within BT Cellnet.
- Ⓞ monitor progress and produce an annual report on our environmental performance.

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BTcellnet

INFORMATION REQUEST FORM

Planning Services to Environmental Health

TO ENVIRONMENTAL HEALTH TO PLANNING SERVICES TO ENVIRONMENTAL HEALTH TO PLANNING SERVICES TO...

To: Paul Morse - Director of Environmental Health
Attn: Rebecca Jane
Planning Reference No.: 0200 02806
Planning Case Officer: SARAH WILDEN

Address/Issue
*Transco Gas Holder Station
 Kensal Green House, Canal
 Way, W11*

Summary of Proposal:
Policy Issue/Subject of Advice
 (key Features)(Uses,Scale etc.)(Main Issues/Problems).

Installation of 20m. high lattice tower and 6 sector antennae, equipment cabin and ancillary equipment.

| Schedule of Attachments: | Schedule of Key Dates: |
|--|--|
| Specifications <input type="text"/> | 1. Case initiated/Application received: <input type="text"/> |
| Drawings <input checked="" type="checkbox"/> | 4. Information required by: <u>1 0 0 1 0 1</u> |
| Supporting Info. <input checked="" type="checkbox"/> | 2. Sent by Planning Services: <u>2 0 1 2 0 0</u> |
| Draft Text etc. <input type="text"/> | 5. Returned by Environmental Health: <input type="text"/> |
| | 3. Entered on EHIS: <input type="text"/> |

Purpose/Status of Request:

| | | |
|--|--|---|
| <input checked="" type="checkbox"/> Planning Application | <input type="checkbox"/> Planning Appeal | <input type="checkbox"/> Planning Brief |
| <input type="checkbox"/> Planning Issues paper | <input type="checkbox"/> Planning Guidance | <input type="checkbox"/> UDP Consultation |
| <input type="checkbox"/> Impact Assessment | <input type="checkbox"/> General Advice | <input type="checkbox"/> Other |

Nature of Request in brief: *Please advise on compliance with relevant standards etc re radiation.*

Previous Planning History:

Need for telephone discussion of background

Essentials of relevant UDP or other Policy:

Need for telephone discussion of background

Specific Issues for Environmental Health Comment

| | | | |
|---|---|--------------------------------------|---|
| <input type="checkbox"/> Food | <input type="checkbox"/> Health and Safety | <input type="checkbox"/> HMO's | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Noise and Nuisance | <input checked="" type="checkbox"/> Contaminated Land ? | <input type="checkbox"/> Air Quality | |

E.H. Response: (Continue on reverse if necessary) **EHIS Reference No.:**

E.H. Case officer(s) and telephone number(s):

ENVIRONMENTAL SERVICES
INTERNAL MEMORANDUM

TO: Sarah Wilden ROOM NO: Town Hall
CC:
FROM: Rebecca Jane ROOM NO: Pembroke Road
TELEPHONE: 020 7341 5716 CONNECT:
DATE: 07 February 2001 REF:
SUBJECT: Kensal Green House, Canal Way

Sarah,

Please find enclosed the original documents that you sent to me in December.

I spoke to someone connected with this application yesterday and explained that the information that we needed had to be site specific.

Becky