

Planning Policy Guidance 8: Telecommunications

On 5th May 2006 the responsibilities of the Office of the Deputy Prime Minister (ODPM) transferred to the Department for Communities and Local Government.

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Summary

Planning Policy Guidance 8 (PPG8) gives guidance on planning for telecommunications development - including radio masts and towers, antennas of all kinds, radio equipment housing, public call boxes, cabinets, poles and overhead wires.

This replaces PPG8 of December 1992 'Telecommunications' and Circular 04/99 'Planning for Telecommunications'.

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Preface

Planning Policy Guidance notes set out the Government's policies on different aspects of planning. They should be taken into account by local planning authorities as they prepare their development plans, and may be material to decisions in individual applications for planning permission and prior approval and appeals.

This PPG, which is effective from 22 August 2001, replaces PPG8 of December 1992 Telecommunications and Circular 4/99 Planning for Telecommunications. It gives guidance on planning for telecommunications development - including radio masts and towers, antennas of all kinds, radio equipment housing, public call boxes, cabinets, poles and overhead wires. Other guidance which may affect the determination of an application for telecommunications development may particularly be found in PPG2 Green Belts, PPG7 The Countryside and the Rural Economy, PPG9 Nature Conservation and **PPG15** Planning and the Historic Environment. The provision of telecommunications services and the functions of the Director General of Telecommunications are governed by the Telecommunications Act 1984. Local planning authorities need to bear in mind the requirements imposed on telecommunications operators by that Act.

The main changes to PPG8 are:

- to update guidance to take account of developments in telecommunications technology and the growth of the telecommunications industry;
- to update guidance to take account of changes to the permitted development rights that apply to telecommunications code system operators;
- to provide advice about taking account of health considerations in making planning decisions about telecommunications development.

This PPG consists of two parts. The first sets out planning policy and the second consists of an appendix with two annexes which provide guidance on the policy, the prior approval procedure under part 24 of the GPDO and technical developments within the telecommunications industry. There should be no distinction between the first and second part of this PPG as both should be given equal weight when being considered.

Planning Policy

General Policy

- 1.** The Government's policy is to facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum. The Government also has responsibility for protecting public health.
- 2.** The aim of telecommunications policy is to ensure that people have a choice as to who provides their telecommunications service, a wider range of services from which to choose and equitable access to the latest technologies as they become available.
- 3.** The Government places great emphasis on its well established national policies for the protection of the countryside and urban areas - in particular the National Parks (including the Broads and the New Forest), Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, the Green Belts, the Heritage Coast and areas and buildings of architectural or historic importance.
- 4.** Whilst local planning authorities are encouraged to respond positively to telecommunications development proposals, they should take account of the advice on the protection of urban and rural areas in other planning policy guidance notes.
- 5.** Material considerations include the significance of the proposed development as part of a national network. In making an application for planning permission or prior approval, operators may be expected to provide evidence regarding the need for the proposed development.
- 6.** Authorities should not seek to prevent competition between different operators and should not question the need for the telecommunications system which the proposed development is to support.

Technical Limitations

- 7.** Each telecommunications system has different antenna types, siting needs and other characteristics. Planning authorities should have regard to any technical constraints on the location and proposed development.

Discussions And Consultation

Pre-rollout discussions

- 8.** Government strongly encourages telecommunications operators and local planning

authorities to carry out annual discussions about rollout plans for each authority's area.

Pre-application discussions

9. Pre-application discussions should be carried out between operators and local planning authorities on a specific development proposal and should be set in the context of the operators strategy for telecommunications development in the area.

10. Pre-application discussions should also be carried out between operators and other organisations with an interest in the proposed development, such as English Nature, the Countryside Agency, English Heritage, the Highways Agency, local highway authorities, residential groups, parish councils or amenity bodies.

11. Where a mast is to be installed on or near a school or college it is important that operators discuss the proposed development with the relevant body of the school or college concerned *before* submitting an application for planning permission or prior approval to the local planning authority.

Application consultation and publicity

12. In addition to any statutory consultation, authorities are strongly encouraged to undertake any additional publicity that they consider necessary to give people likely to be affected by the proposed development an opportunity to make their views known to the authority.

13. Where a mast is to be installed on or near a school or college the local planning authority should consult the relevant body of the school or college concerned and should take into account any relevant views expressed.

Environmental Considerations

14. Protection from visual intrusion and the implications for subsequent network development will be important considerations in determining applications.

15. Local planning authorities and operators should work together to find the optimum environmental and network solution on a case-by-case basis.

16. In accordance with PPG7 high priority should be given to the need to safeguard areas of particular environmental importance. In National Parks and Areas of Outstanding Natural Beauty proposals should be sensitively designed and sited and the developer must demonstrate that there are no suitable alternative locations.

17. In Green Belts, telecommunications development is likely to be inappropriate unless it maintains openness. Inappropriate development may proceed only if very special circumstances are demonstrated which outweigh the degree of harm to the Green Belt. The lack of a suitable alternative site that would meet the needs of network coverage or capacity

might be considered as very special circumstances.

18. Permitted development rights should not be withdrawn (by a direction under Article 4 of the General Permitted Development Order) unless there is a real and specific threat to the locality in which development is to take place. Blanket directions aimed at imposing full planning controls over a wide range of telecommunications development will not normally be approved.

Mast and site sharing

19. In order to limit visual intrusion, the Government attaches considerable importance to keeping the numbers of radio and telecommunications masts, and of the sites for such installations, to the minimum consistent with the efficient operation of the network.

20. The sharing of masts and sites is strongly encouraged where that represents the optimum environmental solution in a particular case. Authorities will need to consider the cumulative impact upon the environment of additional antennas sharing a mast or masts sharing a site.

21. Use should also be made of existing buildings and other structures, such as electricity pylons, to site new antennas. Local planning authorities may reasonably expect applicants for new masts to show evidence that they have explored the possibility of erecting antennas on an existing building, mast or other structure.

22. Authorities are encouraged to help applicants identify existing and potential sites by making suitable local authority owned property available to users and by encouraging others to do the same with their property.

23. With the closure of the analogue mobile phone network, the re-use of the existing sites is encouraged to minimise the need for new second and third generation base station sites.

Design

24. In seeking to arrive at the best solution for an individual site, authorities and operators should use sympathetic design and camouflage to minimise the impact of development on the environment. Particularly in designated areas, the aim should be for apparatus to blend into the landscape.

25. The telecommunications industry is encouraged to continue to develop innovative design solutions, in terms not only of the structure of masts and antennas but also the materials and colouring.

26. Operators are encouraged to provide to the local planning authority examples of different design solutions.

27. Local planning authorities and operators are encouraged to explore possible alternative approaches, particularly the opportunities for mast and site sharing and also in terms of the

location and alternative design of the apparatus.

28. In considering the design of an individual development, and particularly any mast development, careful consideration should be given to screening and planting.

Health Considerations

29. Health considerations and public concern can in principle be material considerations in determining applications for planning permission and prior approval. Whether such matters are material in a particular case is ultimately a matter for the courts. It is for the decision-maker (usually the local planning authority) to determine what weight to attach to such considerations in any particular case.

30. However, it is the Government's firm view that the planning system is not the place for determining health safeguards. It remains central Government's responsibility to decide what measures are necessary to protect public health. In the Government's view, if a 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.

31. The Government's acceptance of the precautionary approach recommended by the Stewart Group's report "*mobile phones and health*"¹ is limited to the specific recommendations in the Group's report and the Government's response to them. The report does not provide any basis for precautionary actions beyond those already proposed. In the Government's view, local planning authorities should not implement their own precautionary policies e.g. by way of imposing a ban or moratorium on new telecommunications development or insisting on minimum distances between new telecommunications development and existing development.

Other Development

32. In considering planning applications for other forms of development, planning authorities will wish to consider telecommunications issues. They should encourage prospective developers of new housing, office and industrial estates to consider with all relevant telecommunications operators how the telecommunications needs of the occupiers will be met.

33. The construction of new buildings or other structures, such as wind turbines, can interfere with broadcast and other telecommunications services, and the possibility of such interference can be a material planning consideration.

¹ A copy of the report can be found at www.iegmp.org.uk

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Appendix Supporting Guidance

Introduction

- 1.** Modern telecommunications² are an essential and beneficial element in the life of the local community and in the national economy. Much of the telephone network is, of course, long established. However, the growth in the UK mobile communications sector over the past 15 years has been remarkable. New communications technology has spread rapidly to meet the growing demand for better communications at work and at home, in business, in public services and in support of electronic commerce.
- 2.** Fast, reliable and cost-effective communications can attract business to an area and help firms remain competitive, thus contributing to the achievement of other policy goals, including increased employment opportunities. This is particularly important in the development of the single European market and in the creation of an environment in which major national and international companies would want to expand. It is equally important for broadcasting and for small businesses, and for new methods of employment, such as home-working. Good communications can enrich life at home and offer new choices in education and entertainment, in shopping and banking. Modern telecommunications can benefit the environment through reducing the need to travel, and hence reducing vehicle emissions of carbon dioxide and other pollutants.
- 3.** The aim of telecommunications policy is therefore to ensure that people have more choice as to who provides their telecommunications service, a wider range of services from which to choose and equitable access to the latest technologies as they become available.
- 4.** Investment in new technology and the maintenance and improvement of the established networks can entail the physical development of land, and so have implications for both development plans and development control. Development in the form of new buildings and other structures can impede the reception of broadcasting and telecommunications signals, thus affecting commercial activities and the interests of residents. This revised guidance takes account of the growth of the industry and technology, of the new social and economic demands for communications, and of the Government's environmental policies.

Telecommunications Planning Policy

- 5.** The Government's policy is to facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum. The Government also has responsibility for protecting public health.
- 6.** The Government recognises that many rural areas do not yet benefit from access to modern telecommunications systems, particularly high speed / bandwidth datalinks. Government policy as set out in its White Paper 'A Fair Deal for Rural England' is to encourage the rollout of systems in these areas whilst managing potentially undesirable impacts upon the environment.
- 7.** The Government places great emphasis on its well established national policies for the protection of the countryside and urban areas - in particular the National Parks (including the

Broads and the New Forest), Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, the Green Belts, the Heritage Coast and areas and buildings of architectural or historic importance. Whilst local planning authorities are encouraged to respond positively to telecommunications development proposals, they should take account of the advice on the protection of urban and rural areas in other planning policy guidance notes and the advice in paragraphs 66-79 below on mast-sharing and siting and design.

8. Authorities should not seek to prevent competition between different operators and should not question the need for the telecommunications system which the proposed development is to support. The aim should be for authorities and operators to work together to find optimum solutions to development requirements. The Government strongly encourages pre-development and pre-application discussions between operators, and between operators and authorities, local people and other interested bodies. Advice on this is given in paragraphs 57-60.

Telecommunications Systems

9. The following paragraphs describe the principal telecommunications systems and the physical developments associated with them.

Public telecommunications

10. The Government opened up the public telecommunications market to wider competition by granting licences to operators under the Telecommunications Act 1984. This Act gives some operators special rights and obligations (set out in Schedule 2 to the Act - the "Telecommunications Code"). These operators are therefore known as code system operators. Operators use various systems to deliver signals to the customer. Where services are delivered to customers by means of radio, the operators require a licence to use the radio spectrum, as well as the Telecommunications Act licence. Radio licences are issued by the Government under the Wireless Telegraphy Act (1949 and 1998).

11. Each system, whether operated under the "Telecommunications Code" or otherwise, has different antenna types, siting needs and other characteristics, which planning authorities need to take into account in carrying out their planning and development control responsibilities. The principal systems are:

(i) Fixed-link

12. Fixed-link systems operate through cable connections (copper wire or optical fibre), and radio signals transmitted through line-of-sight antennas or satellites.

13. The trunk networks may use fixed radio links as well as underground or above ground cables. These radio links require the provision of radio relay stations. A station usually consists of a small building to accommodate the radio equipment and a tower normally of up to 60 metres in height supporting a number of antennas. Antennas can also be located on buildings or other structures. Radio fixed link antennas are normally round "dishes", with typical diameters of 0.3, 0.6 and 1.2 metres, although reflectors may be of other shapes and sizes.

14. Radio fixed links operate at frequencies which require direct line of site, with range diminishing as frequency increases. The radio links must be free from obstruction, such as hills, buildings, trees or large moving objects. These factors, together with the need to take account of the curvature of the earth and differing atmospheric conditions, affect the siting and height requirements of antennas. To cover long distances, or to circumvent obstacles, intermediate repeater radio stations are often necessary. They require at least two antennas, one to receive and the other to relay the signal; other antennas may be required for additional capacity or for fallback use.

15. Radio links via satellites are also a form of fixed-link communication. A single antenna points towards a satellite in orbit over the earth, or, in the case of a "satellite earth station", a number of antennas point at a number of satellites.

16. The antennas used for transmitting and receiving radio signals via satellite should not be confused with satellite television antennas. Whilst these use the same principles for receiving radio signals from satellites, and look similar, they provide a different function.

17. Television broadcasters use fixed links to distribute programmes and to link to studios and some businesses also use them for private commercial networks. Another example of a fixed-link system is the local cable network, which can supply subscribers with a multi-channel service of national and local television material, films, information, inter-active data and voice telephony. The cable is installed underground and requires the erection of usually small junction boxes at intervals, while a large satellite dish is used for television reception for cable "head-ends".

(ii) Fixed Wireless Access

18. Fixed Wireless Access (FWA - also known as Radio-Fixed Access (RFA)) provides a different sort of wireless distribution, the point to multipoint distribution of information. Instead of connecting residential and commercial properties to the public switched network by wires, like copper cable, it is possible to use radio. New networks for "Broadband Fixed Wireless Access" (BFWA) services are currently being deployed with further spectrum licences to be offered later this year, and are aimed at conveying large volumes of information (e.g. high data rate services) over short distances. Narrowband FWA services are used for local telephony and other services. FWA operators provide important additional competition in the local loop. They generally need to have line of sight to the served premises. A typical pattern would be to have a multi-point antenna on a central tall point with a circle of point radios antennas facing the central point. Such transmitters/ receivers do not need large antennas and most are likely to be very discreet.

(iii) First Generation Mobile (Analogue)

19. The original analogue cellular networks have now closed down, and have been replaced by GSM (see below). They are therefore not described in this guidance. However, with the closure of the analogue network, the re-use of the existing sites is encouraged to minimise the need for new second and third generation base station sites.

(iv) Second Generation Mobile (Global System for Mobile, GSM)

20. Digital Cellular GSM systems are the current generation of mobile networks, introduced in the UK in the early 1990s. They cater for mobile telephone users, and now cover an area encompassing over 98% of the population of the UK. Whilst the operators have met their initial second generation coverage targets required by the conditions of their licence, they are still required to provide a high quality service which includes the need to meet reasonable customer demand.

21. The coverage of a cellular system is provided by a network of radio base stations, each with a certain coverage area (cell). A base station is a facility that provides transmission and reception for radio systems.

Macrocells provide the main structure for the base station network. The base stations for macrocells have power outputs of tens of watts and communicate with phones up to about 35 kilometres (22 miles) distant.

Microcells are used to infill and improve the main network, especially where the volume of calls is high. They are sited in places such as airports, railway stations and shopping malls. The microcell base stations emit less power than those for macrocells and their range is a few hundred metres.

Picocell base stations have a lower power output than those of microcells (a few watts) and are generally sited inside buildings.

22. These systems are demand-led. Increase in the use of mobile phones has meant that operators are continually expanding their networks to accommodate customer requirements of service and quality. The greatest need for base station sites is usually in built-up areas where there is the greatest density of mobile users, and within a mile or two of the main roads, where the demands on network capacity are greatest.

23. The size of each cell is planned by the network operators. It is determined by a number of factors, but particularly the number of subscribers expected to require access to the system during the peak usage period. In areas where traffic density exceeds the limits of the network, capacity can be expanded either by introducing new sites (macro or microcells), or by splitting existing cells, thus effectively doubling capacity. Cell splitting requires the erection of additional antennas at the base station site or a new base station site.

24. The location of transmitter antennas is important, as signals from one cell will interfere with nearby cells on the same frequency. To avoid blind spots from buildings and hills, antennas must usually be placed high up. In urban areas antennas are often best placed on existing buildings.

25. Cellular operators typically use vertical multiple pole type antennas about 1-3m in length, some with reflectors attached. In addition, a number of small terrestrial microwave antennas (0.3m-1.2m) may be required to be mounted on the cellular antenna installation to provide links from the base station to the exchange, for example. Associated equipment housing is usually between 4 and 35 cubic metres in volume.

26. There are four national GSM networks, all four operating at 1800 MHz, with two also using 900 MHz.

(v) Third Generation Mobile ("3G" or "UMTS" Universal Mobile Telecommunications System)

27. 3G describes a set of digital standards for future mobile telecommunications. UMTS is one of the 3G standards, and the one which all the UK operators have chosen to adopt. These standards enable mobile users to have access to enhanced services via higher data rates than GSM. In April 2000 the Government auctioned five new licences to third generation mobile operators. Each operator is licensed to operate a national 3G network. All 3G operators have a requirement in their licenses to build out a network covering 80% of the population by 2007.

28. Four of the 3G operators are the UK GSM operators and it is expected that they will be able to re-use their current infrastructure in many cases to accommodate some of their new 3G network requirements. The fifth operator needs to build their 3G network from scratch. They are expected to use existing structures where possible (including those owned by other operators and radio site management organisations) though they will likely also need to develop a substantial number of new sites.

(vi) Terrestrial Trunk Radio System (TETRA)

29. TETRA is an advanced digital technology standard, promoted by Europe. It is a digital standard ideal for Public Access Mobile Radio or for private network users needing multi-channel operation (such as road breakdown services, use at airports or for large construction sites). Two national TETRA systems were licensed for public use in the UK, but these merged into one, which has been in operation for around two years. The UK Emergency Services new network being rolled out is a TETRA standard too and there are a few private services now in operation. TETRA base stations operate in a similar way to mobile phone base stations, in that they can be configured in cellular patterns and operate with similar powers and calling patterns. TETRA has added special features to allow local networking and override features for safety calling.

(vii) Other national and local networks

30. In addition to those mentioned above there are national public networks for data and paging, national networks for maritime, aeronautical, defence, police and a number of other official services. There are also public interest national networks for rail, road breakdown, utility support, and regional networks for local health authorities, local government and many private networks (e.g. for road haulage, retail, security, taxis and couriers, agriculture and so on). These services use a variety of both analogue and digital services. Frequency bands range widely, with mobile services needing lower frequencies and fixed services needing higher bands.

31. Radio is also used for hobby and leisure purposes. Many UK industry participants have learnt about radio through being licensed amateurs, and the Government encourages this interest. Amateurs have to pass examinations to be licensed to operate, but may then install fixed antenna subject to planning rules. Because many want to use low short- wave frequencies, these need long wire type antenna.

Satellite television broadcasting

32. In the field of broadcasting, there has been significant growth in the range and use of

satellite television. Satellite television is a multinational activity in view of the very high infrastructure costs. Several broadcasters transmit signals from the UK or other European countries. Television signals are beamed direct-to-home from the satellite to individual receiving antennas, the more common ones known as satellite dishes. Antennas have to be in direct line-of-sight of the geo-stationary satellite, and almost always have to be mounted outdoors. The satellites for the various services are in different orbital positions, and have to be received by separate antennas, unless steerable or other specialist antennas are used.

33. The location of a satellite dish on a building will therefore depend on the direction of the satellite. The size of the dish will depend on the technology used, the strength of the signal and the possibility of interference from transmissions from other satellites that may be located nearby. In many cases, dishes of 60cm in size or less can be used, but larger dishes of 80 or 90cm may be necessary in the more westerly and northerly parts of the country and for particular satellite television services, such as those beamed from other European countries. A larger dish may also be necessary where it supplies programmes to more than one television. New developments in antenna technology are bringing to the market new kinds of antennas with different visual characteristics.

34. Antennas for reception of digital satellite broadcasting signals are generally much smaller and more discrete than their analogue predecessors.

Terrestrial broadcasting

35. Digital terrestrial broadcasting uses existing TV rooftop aerials for domestic reception.

Reception of signals

36. Licensees providing broadcasting and other telecommunications services generally depend upon good radio signal access to their intended receivers. For example, good television reception needs to be in good range from transmitter to receiving aerial, within the intended service area of a transmitter. While the broadcasters cannot guarantee good reception for everyone, they are required by their licence conditions to provide a high quality of service; they must ensure and maintain a satisfactory signal across each area for reception on recommended equipment (see Annex 2). The construction of new buildings or other structures, such as wind turbines, can interfere with broadcast and other telecommunications services, and the possibility of such interference can be a material planning consideration (see paragraphs 102-104).

Development Plans

37. Development plans provide a framework for the development and use of land within an area. Individual development control decisions should be made in accordance with the development plan unless material considerations indicate otherwise. Development plan policies should take account of:

- the Government's overall policy approach to planning for telecommunications development, set out in this PPG;

- the requirements of the Telecommunications Act 1984;
- the need to minimise the impact of development, and in particular the need to protect the best and most sensitive environments;
- the limitations imposed by the nature of the telecommunications network and the technology; and
- the results of early consultation between planning authorities and telecommunications operators to enable the requirements of telecommunications networks and routing and phasing of network development to be taken into account;

38. *Structure plans* (and UDPs-Part 1) should cater for telecommunications development by taking account of the strategic requirements of telecommunications networks, and providing an appropriate framework for local plan policies.

39. *Local plans* (and UDPs-Part 2) should set out policies and proposals for the location of telecommunications developments, in general conformity with the structure plan. In certain circumstances, they may allocate particular sites for major telecommunications developments, such as tall masts, so as to encourage site sharing (taking account of the technical limitations on siting). Otherwise, plans should normally include criteria-based policies to guide telecommunications developments where sites other than those identified in the plan are proposed. Criteria should be flexible enough to allow for the efficient development of the network and the demands imposed by the technology.

40. Local plans should also include general policies on:

- the siting and external appearance of apparatus, including any location and landscaping requirements designed to minimise the impact of such apparatus on amenity, without inhibiting operational efficiency;
- the circumstances in which the local planning authority:

(i) may decide prior approval is required for the siting and appearance of certain telecommunications development (see paragraph 49);

(ii) might intervene to seek the relocation of an antenna installed under permitted development rights, in order to minimise its effect on the external appearance of a building (see paragraph 47).

41. The reasoned justification associated with these policies may include criteria under which particular telecommunications development will be treated as *de minimis*.

Development Control

42. All telecommunications development is subject to development control. However, relatively minor development does not require express permission as it is granted planning permission

under the Town and Country Planning (General Permitted Development) Order 1995, as amended, (GPDO).

Minor telecommunications development

43. Some minor operations or changes of use of land may not constitute development which requires planning permission. For example, many of the smallest antenna systems may be covered by the normal principle of *de minimis*; or they may not have a material effect on the external appearance of the building on which they may be installed, and therefore may not fall within the legal definition of development. Most conventional television aerials and their mountings or poles have long been treated in this way, and this approach should continue to be applied to small telecommunications apparatus in general (regardless of who installs it). The installation of some microcells, such as those similar in appearance to burglar alarms, may be treated in this way.

44. Telecommunications code system operators are required under the terms of their licences to provide 28 days notification to LPAs of their intention to install any telecommunications equipment, except where they are submitting an application for prior approval or for planning permission. This notification does not command a fee.

Permitted development rights

45. Much minor telecommunications development is permitted under the GPDO. However, there may be circumstances where the exercise of a permitted development right may have a serious impact on amenity. Where a local planning authority believes that the withdrawal of the right is necessary, it may serve a direction under Article 4 of the Order.

46. Permitted development rights should not be withdrawn unless there is a real and specific threat to the locality in which development is to take place. Article 4 directions made in respect of satellite antennas on dwelling houses take effect immediately but expire at the end of six months from the date on which they were made, unless disallowed or approved by the Secretary of State. A direction made in respect of code system operators' apparatus and other telecommunications developments will require the prior approval of the Secretary of State. Blanket directions aimed at imposing full planning controls over a wide range of telecommunications development will not normally be approved. But where a particular rural or urban location seems likely to attract obtrusive or inappropriate telecommunications development which would seriously threaten amenity, the Secretary of State will give sympathetic consideration to directions submitted for approval.

47. There are also opportunities for a local planning authority to intervene, where appropriate, in the details of certain permitted development, without going so far as withdrawing the right itself. It is a condition of the permitted development right to install certain telecommunications apparatus on a building so that it is, so far as practicable, sited so as to minimise its effect on the external appearance of the building on which it is installed. If, in the view of the local planning authority, an antenna, for example, has not been so sited, taking into account technical and safety requirements (for example, in the case of a satellite television antenna, line-of-sight and picture quality requirements), they may serve a breach of condition notice requiring the resiting of the antenna. The grounds for such a notice would be that the condition

of the permitted development right has not been complied with, and that therefore the development itself did not enjoy permitted development rights. This constraint on the permitted development right does not allow the local planning authority to take away the right to install the antenna, only to control the details of the installation; therefore, in any such intervention, the authority should suggest their preferred siting to minimise the impact of the antenna.

48. Under permitted development rights telecommunications apparatus should be removed from the land, building or other structure, as soon as reasonably practicable after it is no longer required for telecommunications purposes. Such land, building or structure should be restored to its condition before the development took place, or to any other condition as may be agreed in writing between the local planning authority and the developer. If this is not carried out the local planning authority may serve a breach of condition notice requiring the removal of the equipment. The grounds for such a notice would be that the condition of the permitted development right has not been complied with, and that therefore the development itself did not enjoy permitted development rights.

Development requiring an application for prior approval

49. Before installing certain telecommunications apparatus under permitted development rights, a code system operator must apply to the planning authority for a determination as to whether their approval of the siting and appearance of the development is required. Such an application will allow the local planning authority to consider, within 56 days, the siting and appearance of the proposed development. Guidance on the operation of the prior approval procedure is given in Annex 1. The inclusion of clear policies in development plans will help authorities make speedy and informed decisions on these applications.

50. In such cases where a mast is to be installed under permitted development rights within 3 kilometres of the perimeter of an aerodrome, an application for prior approval to the planning authority must include evidence that the Civil Aviation Authority³, the Secretary of State for Defence⁴ or the aerodrome operator, as appropriate, has been notified of the proposal. Their views should be taken into account by the local planning authority in determining whether prior approval is required.

51. It is important for the developer to establish who is responsible for managing the aerodrome. The developer may be able to establish this through the local planning authority or by contacting the aerodrome directly.

Development requiring an application for planning permission

52. Where development requires an application for planning permission, applications should be determined in accordance with the development plan unless material considerations indicate otherwise. In many cases, existing development plan policies are framed in terms of conventional buildings and land use, and may not be adequate to deal with telecommunications apparatus or other operational needs. Applications should not be refused on the basis of development plan policies which take insufficient account of the growth and characteristics of modern telecommunications.

53. For development that requires an application for planning permission the use of conditions

similar to those set out in paragraph 48 may be appropriate.

Technical constraints and the need for the development

54. 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. In making an application for planning permission or prior approval, operators may be expected to provide evidence regarding the need for the proposed development.

Radio site clearance procedure

55. All operators of radio transmitting apparatus need to go through a licensing process which includes, where necessary, putting the transmitting site(s) through the Radiocommunications Agency's radio site clearance procedure. The purpose of the procedure is to consider the impact of the establishment of new radio sites, or modifications to existing sites, from the point of view of potential radio interference to essential Government and safety services. In most cases, the site clearance procedure is initiated after any planning permission required has been obtained. The fact that clearance may not yet have been obtained is not relevant to the consideration of a planning application.

Property values

56. Authorities may receive representations about alleged impact of proposed telecommunications development on property values. PPG 1 notes that it is not for the planning system to protect the private interests of one person against the activities of another. Although in a particular case considerations of public interest may serve to protect private interests, the material question is not whether a particular development would cause financial or other loss to owners and occupiers of the neighbouring property, but whether the proposal would have a detrimental effect on the locality generally, and on amenities that ought, in the public interest, to be protected.

Consultation Arrangements

Pre-development discussions

57. It is a condition of telecommunications licences that on the first occasion an operator gives a local planning authority notice of a development proposal, it should provide the authority with written details of the development it expects to carry out in the authority's area. In addition, the mobile phone operators have made a commitment to provide local planning authorities with annual rollout plans for each authority's area. Government strongly encourages operators and local planning authorities to carry out annual discussions based upon these plans and other information. This will provide an early opportunity to discuss technical and environmental constraints and to explore possible alternative approaches, particularly the opportunities for mast and site sharing and also in terms of the location and alternative design of the apparatus.

58. Authorities may be able to reduce planning problems for applicants for telecommunications

developments and for the community by helping applicants to identify existing and potential sites, by making suitable local authority owned property available to users and by encouraging others to do the same with their property.

Pre-application discussions

59. Pre-application discussions between operators and local planning authorities on a specific development proposal should be set in the context of the operators strategy for telecommunications development in the area. Pre-application discussions should also be carried out by the operators with other organisations with an interest in the proposed development, such as residential groups, parish councils or amenity bodies.

60. Where it is proposed to carry out telecommunications development likely to affect an SSSI or which may affect protected species, discussions should involve English Nature. Where development is likely to affect National Parks, AONBs and Heritage Coasts discussions should involve the Countryside Agency. Discussions with English Heritage would likewise be helpful in circumstances where listed buildings and ancient monuments are affected. The Highways Agency or local highway authority should be consulted on proposed development affecting highways. Such discussions can identify possible conflicts of interest at an early stage. Costly planning inquiries and delay can often be avoided by agreeing, for example, relatively minor changes in route strategies and choice of site.

Publicity

61. Local planning authorities are advised to consider, on a case-by-case basis, whether the statutory consultation arrangements for applications for planning permission and prior approval will adequately provide for interested parties to be notified of a particular development. Pre-application discussions with the developer should have helped the authority to identify who those interested parties might be. Authorities are strongly encouraged to undertake any additional publicity that they consider necessary to give people likely to be affected by the proposed development an opportunity to make their views known to the authority. Local authorities should bear in mind that, on occasion, this may include people outside of the authority area.

Schools

62. Where the operator submits an application to the local planning authority for planning permission or prior approval for the installation, alteration or replacement of a mobile phone base station either on or near a school or college, it is important that operators discuss the proposed development with the relevant body of the school or further education (FE) college concerned *before* submitting any such application to the local planning authority. When making the application the operator should provide evidence to the local planning authority that they have consulted the relevant body of the school or college (e.g. the schools governing body or the corporation of the FE college).

63. When an application has been submitted to the local planning authority for planning permission or prior approval for the installation, alteration or replacement of a mobile phone base station either on or near a school or college, the local planning authority should consult

the relevant bodies, and should take into account any relevant views expressed. Consultation should be in the form of written notification to the schools governing body or the corporation of the FE college, inviting their comments by a specified date.

Environmental Considerations

64. Protection from visual intrusion and the implications for subsequent network development will be important considerations in determining applications. The nature of some telecommunications development may in some cases bring it into apparent conflict with established local and national planning policies. 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. But those may be exactly the prominent locations that pose challenges to policies for the protection of high quality landscapes and quality in urban areas. High priority should be given to protecting such areas and the need to safeguard areas of particular environmental importance. In National Parks and Areas of Outstanding Natural Beauty proposals should be sensitively designed and sited and the developer must demonstrate that there are no suitable alternative locations. (Advice on development in National Parks and Areas of Outstanding Natural Beauty is given in PPG7, and Nature Conservation in PPG9).

65. In Green Belts, telecommunications development is likely to be inappropriate unless it maintains openness. Protection of openness is the primary aim of Green Belt designation as explained in PPG2. Inappropriate development may proceed only if very special circumstances are demonstrated which outweigh the degree of harm to the Green Belt. The lack of a suitable alternative site that would meet the needs of network coverage or capacity might be considered as very special circumstances. As part of their case to prove very special circumstances, in making an application for planning permission or prior approval operators would normally be expected to show that there are no suitable alternative locations outside the Green Belt.

Mast and site sharing

66. In order to limit visual intrusion the Government attaches considerable importance to keeping the numbers of radio and telecommunications masts, and of the sites for such installations, to the minimum consistent with the efficient operation of the network. The sharing of masts and sites is strongly encouraged where that represents the optimum environmental solution in a particular case (see paragraph 68). Use should also be made of existing buildings and other structures, such as electricity pylons, to site new antennas. Local planning authorities may reasonably expect applicants for new masts to show evidence that they have explored the possibility of erecting antennas on an existing building, mast or other structure. Conditions in code operators' licences require applicants to explore the possibility of sharing an existing radio site. This evidence should accompany any application made to the local planning authority whether for prior approval or for planning permission.

67. If the evidence regarding the consideration of sharing existing masts and sites is not considered satisfactory, the planning authority, or the Secretary of State on appeal, may be justified in refusing prior approval or planning permission for the development. In such circumstances, the authority should give clear reasons why it considers the evidence before it

to be unsatisfactory. It is for the local planning authority in the first instance to satisfy itself as to whether the information which has been provided in this respect is satisfactory. An authority should, however, bear in mind the technical constraints upon network development in reaching any decision on an application before it.

68. In considering alternative sites, an authority should be mindful of the potential impact on the local environment of development on those sites. This will be particularly important where an alternative site would involve the redevelopment of an existing mast for shared use. In certain circumstances the shared use of an existing mast might necessitate an increase in the height or structural capacity, and therefore the visibility, of that mast. Depending upon the characteristics of the location, site sharing as opposed to mast sharing may be more appropriate. A second installation located alongside or behind the principal installation may, for example, provide a more beneficial solution in environmental and planning terms. Authorities will need to consider the cumulative impact upon the environment of a number of masts sharing a site. In other cases, technical and design considerations may point to a new site. Local planning authorities and operators should seek together to find the optimum environmental and network solution on a case-by-case basis.

69. Where it is agreed that the future sharing of a particular mast or site is desirable, authorities will wish to satisfy themselves that the site can accommodate any additional apparatus that would be required.

70. Where the local planning authority considers for reasons of visual amenity that it would be preferable for mast development in an area to be confined to a single site, the authority may wish to discuss with the operators and the relevant landowner the feasibility of entering into a planning obligation under section 106 of the Town and Country Planning Act 1990 in order to provide a binding and enforceable requirement that the mast site would be available for sharing.

71. Following the introduction of the Telecommunications (Interconnection) Regulations 1997⁵, in any instance where there is a dispute regarding the sharing of an existing mast or site, either party may ask the Director General of Telecommunications to resolve the matter. If the Director General considers it appropriate, he may direct the relevant telecommunications operators to share⁶. The powers available under the Regulations do not, however, cover the refusal by a third party, such as a landowner, to allow shared use of a mast.

72. Local planning authorities should have previously formed a view, particularly in the course of development plan preparation, on sites in their area that might be suitable for telecommunications development. These could include existing masts, buildings and other structures upon which antennas might be installed and sites where new masts might be acceptable. Authorities are encouraged to maintain a register of masts and other structures to which apparatus could be attached. Such a register will assist operators in considering possible antenna sites in the local authority area. If an operator makes an application relating to a location which is not on the register of sites, the authority may reasonably expect the applicant to show that no site on the register would present a practicable alternative to the location proposed.

73. In order to take full advantage of the opportunities for mast and site sharing, local planning authorities are encouraged to refer to the national database that is being set up by the

Radiocommunications Agency giving details of all mobile phone base stations and their emissions (see paragraph 91).

Siting and design

74. Siting and design concerns may centre particularly on the type of mast and its impact - particularly if located in a designated area (such as a National Park, the Broads or the New Forest, an Area of Outstanding Natural Beauty, a conservation area or a Site of Special Scientific Interest). Its height, ancillary development and the scope for landscaping and screening will also be important considerations. But many antennas have special siting needs because they have a limited range or require line-of-sight. Authorities should take account of these needs. Arbitrary restrictions in one area, such as limits on mast height, may encourage problems of interference and also create corresponding problems in a neighbouring area, such as the need to install a taller mast, or more than one mast, than would otherwise have been necessary to maintain line-of-sight. Authorities will need to ensure that they have before them all the relevant planning information, including details of any related mast proposals and of how the proposal is linked to the network, to enable applications to be properly considered.

75. In some cases, local planning authorities may be disposed to conclude that prior approval or planning permission ought to be refused because of siting or appearance considerations. But they should first seek to understand the constraints the operator faces, whether due to the nature of the technology or the legal requirement to provide a service. It will clearly improve the chances of an early decision if the operator is prepared to explain the limitations, and discuss the feasibility of alternative sites. Again, pre-application discussions should help to identify and resolve issues at an early stage and to facilitate the formal application process.

76. In seeking to arrive at the best solution for an individual site, authorities and operators should use sympathetic design and camouflage to minimise the impact of development on the environment. Particularly in designated areas, the aim should be for apparatus to blend into the landscape.

77. The telecommunications industry is encouraged to continue to develop innovative design solutions, in terms not only of the structure of masts and antennas but also the materials and colouring. A number of different design solutions are currently available. These include masts designed to look like trees or street furniture, and the redevelopment or restoration of existing properties to incorporate telecommunications apparatus. Authorities may wish to discuss with operators different design and camouflage options in connection with development proposals. Operators are encouraged to provide examples of different design solutions. It should be borne in mind that some designs may not be suitable for future sharing. Where it is agreed that a site is suitable for future mast sharing, it may be appropriate to install a mast specifically designed to facilitate its redevelopment for sharing.

78. In considering the design of an individual development, and particularly any mast development, careful consideration should be given to screening and planting. Care should be taken to accommodate the implications of seasonal leaf-fall. The boundaries of the site should be drawn large enough to accommodate the necessary landscaping.

79. In respect of satellite television antennas, for which permitted development rights have been granted, local plan policies should not directly or indirectly prevent a householder from

receiving a satellite television transmission. However, local planning authorities may provide guidance to householders, dealers and professional installers on the siting and colour of satellite television dishes. It is important that a dish blends in with its background; it should be sited, so far as practicable, so as to minimise its impact on amenity and on the external appearance of the building (see paragraph 47). The installation of dishes in close proximity to the windows and doors of neighbouring houses is likely to lead to complaints and should generally be avoided. In respect of blocks of flats, the installation of shared systems can help avoid the impact of an otherwise likely proliferation of dishes on walls and roofs. Further details on the siting of satellite television antennas can be found in "A Householder's Planning Guide for the Installation of Satellite Television Dishes" available from the DTLR (see endnote 7)⁷.

80. Applications for planning permission to install the masts often used by amateur radio operators, radio taxi firms and other private and commercial users, usually present few potential planning problems in terms of size and visual impact over a wide area. Such masts need to be high enough for technical efficiency and located as far as possible from other antennas, in order to minimise the possibility of interference. However, they will not normally be of such a scale as to have a serious impact on local amenity. Such applicants will generally have less scope for using alternative sites or for sharing sites, and masts will often need to be located on the premises.

Listed Buildings and Scheduled Monuments

81. All telecommunications development is subject to the normal statutory procedures insofar as listed building consent is concerned. No exceptions have been made to the requirement to obtain such consent under Sections 7, 8 and 9 of the Planning (Listed Buildings and Conservation Areas) Act 1990 before executing works affecting a listed building. Any operator intending to carry out work which is likely to affect the character or appearance of a listed building is advised to consult the local planning authority. When installing equipment at a listed building, it is important to note that internal as well as external works, even if small in scale, may require consent. Further advice on listed building consent can be found in [Planning Policy Guidance 15: Planning and the Historic Environment \(PPG15\)](#). Similarly, any works to, or on the site of, a scheduled ancient monument require scheduled monument consent from the Department for Culture, Media and Sport⁸ under Section 2 of the Ancient Monuments and Archaeological Areas Act 1979. Advice on discovery of archaeological remains during works is contained in [Planning Policy Guidance 16: Archaeology and Planning \(PPG16\)](#).

Health Considerations

What are EMFs?

82. Mobile phones and their base stations transmit and receive signals using electromagnetic waves (also referred to as electromagnetic fields (EMFs) or radio waves). EMFs are all around us. They occur naturally, such as the earth's magnetic field which causes compass needles to point north. Natural biological processes also produce electric and magnetic fields within animals and humans. EMFs also arise from a wide range of man-made sources and will be present wherever there is electricity. Sources of man-made EMFs include domestic wiring and appliances (such as lamps, hairdryers and television sets), visual display units, mobile phones,

electric trains and security systems used in shops.

83. Man-made sources of EMFs also include electricity power lines, broadcasting transmitters and telecommunications base stations (which includes those used by the emergency services and those which form part of mobile communications networks). It is these sources which are most commonly encountered by the planning system. It is also such sources of EMFs that often give rise to the greatest levels of public concern about possible health effects.

84. The Governments statutory advisers on radiological protection matters are the National Radiological Protection Board (NRPB). They provide expert advice on the health implications of EMFs, drawing upon the most up-to-date research world-wide. The NRPB are able to offer advice to local planning authorities and the general public and have themselves produced a number of leaflets and other publications in this field. Further information can be found on the Boards website (www.nrpb.org.uk) or by ringing their public enquiry line (01235 831 600).

Health effects of Exposure

85. The public has become increasingly aware of the presence of EMFs in the environment. This growing awareness has been accompanied by concern that exposure to EMFs may have possible adverse effects upon health. It is clearly important that the public be protected where an adverse health effect exists.

86. Established health effects of exposure to radio waves from mobile phone systems are associated with the heating of tissues. Both the NRPB and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) have published guidelines on limiting exposure to radio waves.

87. However, a particular point of public concern is whether exposure to low-level EMFs might cause other, non-established health effects, such as headaches, sleep disturbance, depression, stress and also long term health effects such as cancer.

Independent Expert Group on Mobile Phones

88. In 1999, the Government asked the NRPB to set up the Independent Expert Group on Mobile Phones (IEGMP). This Group, under the chairmanship of Sir William Stewart FRS FRSE, considered concerns about health effects from the use of mobile phones, base stations and transmitters. They conducted a rigorous and comprehensive assessment of existing research and gathered a wide range of views. The Group published its report on 11 May 2000.

89. In respect of base stations, the report concludes that "the balance of evidence indicates that there is no general risk to the health of people living near to base stations on the basis that exposures are expected to be small fractions of the guidelines. However, there can be indirect adverse effects on their well-being in some cases". They also say that the possibility of harm cannot be ruled out with confidence and that the gaps in knowledge are sufficient to justify a precautionary approach.

90. The Independent Expert Group recommended a precautionary approach, comprising a series of specific measures, to the use of mobile phone technologies until we have more

detailed and scientifically robust information on any health effects.

91. In its response to the Groups report, the Government indicated that it accepted the precautionary approach advised by the group. The Governments acceptance of this precautionary approach is limited to the specific recommendations in the Groups report and the Governments response to them. These include:

- the emissions from mobile phones base stations should meet the ICNIRP guidelines for public exposure⁹. Most mobile phone base stations already meet the ICNIRP guidelines. However, the mobile phone operators are assessing and adjusting, where necessary, all their existing sites to ensure that they meet the ICNIRP guidelines. All new mobile phone base stations will do so.
- that a national database be set up by Government giving details of all base stations and their emissions. The Government has accepted this recommendation. The database will be developed and maintained by the Radiocommunications Agency (RA) and should be available in the later part of 2001. Information about the database is on the RA website.
- an independent audit of emissions should be established to give the public confidence that base stations do not exceed approved guidelines. The RA is carrying out this audit and, in line with the recommendations of the Stewart Report, is currently focused on base stations located on school premises. It is planned that after 100 surveys have been undertaken the results will be analysed to identify any emerging trends and decisions will then be taken on how to progress the audit. The results from the surveys are published on the RA website.
- clear exclusion zones should be in place around all mobile phone base station antennas to prevent the public from exposure to radio frequency radiation above ICNIRP guidelines. (These exclusion zones relate to an area directly in front of and at the height of the antenna). Clear warning signs should be on microcells and picocells to minimise the risk of undue exposure to radiation from being opened during use.
- a substantial research programme, overseen by a demonstrably independent panel, should be financed by the mobile phone companies and the public sector. The Government has launched a joint Government/industry research programme, costing around £7 million and with an independent programme management committee led by Sir William Stewart. It will carry out research into the effects of mobile phone technology on health. This will ensure that this area is kept under review and that Government and the public are kept up to date with new research findings.
- The NRPB to review further research in this area and to report on progress in three years time or whenever significant new information becomes available.
- The Department of Health has published leaflets on mobile phone hand sets and base stations. These are available on their website at www.doh.gov.uk or copies can be obtained from the NHS Response line on 0541 555 455.

92. The Government shall continue to keep the whole area of mobile phone technologies under review in the light of further research.

Health and Safety legislation

93. Operators have responsibilities under health and safety legislation. The operators of any telecommunications apparatus must abide by the Health and Safety at Work Act 1974. They have a responsibility under this Act, and the Management of Health and Safety at Work Regulations 1999, to assess any risk to health and safety which may arise, including any risk of established health effects from exposure to EMFs, and to take any corresponding measures to restrict public access (e.g. through suitable locked and signed anti-personnel barriers). The practical effect of health and safety legislation should be to ensure protection of the public in respect of the established health effects of telecommunications apparatus.

94. It is not for the local planning authority to seek to replicate through the planning system controls under the health and safety regime. Enforcement of health and safety legislation in this area is a matter for the Health and Safety Executive (HSE) and not the local planning authority. If, once a mast is in operation, there is evidence that an operator is not meeting its statutory responsibilities in a particular case, HSE may investigate and, if necessary, require action to be taken. HSE do not need to be consulted on individual planning applications (except where required under Article 10 of the Town and Country Planning (General Development Procedure) Order 1995).

95. When assessing compliance with health and safety legislation HSE refers to the guidelines for restriction produced by the NRPB. These are designed to prevent the occurrence of established health effects. However, as noted in paragraph 91, the Government has accepted the Stewart Groups recommendation that mobile phone base stations should, as a precautionary measure, meet the ICNIRP guidelines for limiting exposure. The ICNIRP guidelines for public exposure are 5 times more restrictive than those of the NRPB. It follows that, in complying with the ICNIRP guidelines, operators will also be complying with those of the NRPB.

96. Specific advice on interference with medical devices can be obtained from the Medical Devices Agency.

Taking account of health and public concern about mobile phone base stations

97. Health considerations and public concern can in principle be material considerations in determining applications for planning permission and prior approval¹⁰. Whether such matters are material in a particular case is ultimately a matter for the courts. It is for the decision-maker (usually the local planning authority) to determine what weight to attach to such considerations in any particular case.

98. However, it is the Government's firm view that the planning system is not the place for determining health safeguards. It remains central Government's responsibility to decide what measures are necessary to protect public health. In the Government's view, if a 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.

99. All new mobile phone base stations are expected to meet the ICNIRP guidelines. However,

all applicants should include with their applications, a statement that self-certifies to the effect that the mobile phone base station when operational will meet the guidelines. In line with the Groups recommendations the mobile phone network operator should also provide to the local authority a statement for each site indicating its location, the height of the antenna, the frequency and modulation characteristics, and details of power output. Where a mobile phone base station is added to an existing mast or site, the operator should confirm that the cumulative exposure will not exceed the ICNIRP guidelines.

100. Mobile phone operators already keep their RF power outputs to the lowest possible levels commensurate with effective service provision. They need to do this to ensure risk of interference within the network and with other radio networks is minimised. Whilst levels of power output are likely to go up and down during the day (depending on factors such as the number of people using their phones at any one time and the distance they are from the base station), the operators have confirmed that the base stations will, at all times, remain within the ICNIRP guidelines for public exposure.

Precautionary Approach

101. As noted above, the Groups report suggested a number of specific precautionary actions, which have been accepted by Government. The report does not provide any basis for precautionary actions beyond those already proposed. In the Governments view, local planning authorities should not implement their own precautionary policies eg by way of imposing a ban or moratorium on new telecommunications development or insisting on minimum distances between new telecommunications development and existing development.

Radio Interference From Proposed Development

102. In any development, significant and irremediable interference with other electrical equipment of any kind can be a material planning consideration. There are essentially two types of interference. The first type is electromagnetic interference, caused by a radio transmitter or by unwanted signals emitted by other electrical equipment. The Radiocommunications Agency has statutory powers for dealing with this type of interference under the Wireless Telegraphy Act 1949. Only if there is clear evidence that significant electromagnetic interference will arise, or will probably arise, and that no practicable remedy is available, will there generally be any justification for taking it into account in determining a planning application.

103. Where the potential for interference to telecommunications or broadcast signals is expected, co-ordination with the Radiocommunications Agency and the broadcasters or fixed-link operators will be required, to ascertain whether an engineering solution to the problem is feasible. In such instances, they should be contacted at the earliest possible stage in the planning process and their advice taken into account. Where such problems are likely, local planning authorities may grant planning permission subject to a condition that, before development commences, the developer will ensure that the quality of any reception affected by the development will be restored. (See Annex 2 for further details of radio interference).

104. The second type of interference problem is physical interference. Large, prominent structures such as tower blocks, cranes, warehouses or football stadiums can cause

widespread disruption to analogue television reception and other telecommunication services due to the physical obstruction or reflection of the wanted signals. Digital television signals are far more robust than analogue and, as viewers change to digital over time, offer the prospect of the elimination of such problems as interference caused by reflections from structures. Local planning authorities will need to satisfy themselves that the potential for interference has been fully taken into account in the siting and design of such developments, since it will be more difficult, costly and sometimes impossible to correct after the event. Certain factors can be taken into account at the planning application stage, in particular the height and width of each face of the structure, the material and outside surface finish, and the orientations of the sides of the structure in relation to any local transmitter. If it is clear, by the nature of the development, that such disruption to television reception will be a significant problem, the solution may be for the developer to incorporate a television relay (repeater) or cable system. However, a practical remedy may not always be possible. In this case, where broadcast transmitters are involved, there should be full consultation with the broadcasting authorities before such a course is adopted.

Telecommunications Aspects In Other Development

105. In considering planning applications for other forms of development, planning authorities will wish to consider telecommunications issues. They should encourage prospective developers of new housing, office and industrial estates to consider with all relevant telecommunications operators how the telecommunications needs of the occupiers will be met. Developers should provide adequate ducting for telecommunications cables (and for other services where appropriate) to be installed at the outset both underground and in the structure of the building, sufficient to meet foreseeable demand for competitive services likely to be provided to those estates. This will help to minimise the disruption and expense if provision has to be made later, and reduces the need for new telecommunications apparatus above ground. Provision of such apparatus to serve the occupiers, such as communal or master antenna systems, should normally be the subject of close consultation and co-operation between the developer and the telecommunications operators. It may be appropriate to include in development plans that developers constructing tall buildings may wish to incorporate antennas into the design of their building.

106. In general, it is preferable to locate new cabling underground or along the external surfaces of buildings, but the method of distribution already prevailing in the area may be a relevant factor. Code system operators' licences contain specific provisions about the undergrounding of apparatus (with the exception of service lines), and about the need to service new development in close co-operation with the developer and the other utilities so that underground ducting for a number of undertakings can be provided during development or any existing suitable ducting used.

107. In the past some local planning authorities have sometimes used their powers to impose conditions to require all future cables and wires serving a new estate to be installed underground. However, it may not be possible for future occupiers of land to ensure that future wires are placed underground (that will be a matter for the operator) and, even if it is possible, it may involve the occupier in considerable expense. Such conditions might not be enforceable and may also be unreasonable (see DOE Circular 11/95). It is therefore better to encourage the installation of adequate ducting as part of the development at the outset. Telecommunications operators will normally wish to make use of it, if it is available and suitable

for their purpose.

²References to telecommunications throughout should be read as including all forms of communications by electrical or optical wire and cable and radio signals (whether terrestrial or from satellite), both public and private, except where otherwise stated.

³Address of the CAA: CAA Safeguarding Coordinator, Aerodrome Standards Department, Second Floor West, Aviation House, Gatwick Airport South, RH6 0YR Tel: 01293 573264.

⁴Address of the MOD: Safeguarding, Defence Estates, Blakemore Drive, Sutton Coldfield, West Midlands, B75 7RL. Tel: 0121 311 3818.

⁵SI 1997 No 2931

⁶For further information, see statement of 6 November 1998 by the Director General of Telecommunications. This is available on the OFTEL website (www.oftel.gov.uk/publications/1995_98/competition/mast1198.htm) or from the Research and Intelligence Unit, OFTEL, 50 Ludgate Hill, London, EC4M 7JJ (tel 020 7634 8761).

⁷DTLR free literature PO BOX 236, Weatherby, West Yorkshire, LS23 7NB, Tel: 0870 122 6236.

⁸BMS, DCMS, 2-4 Cockspur Street, London, SW1Y 5DH.

⁹As 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 300GHz). Off J Eur Commun, L199, 59 (1999/519/EC).

¹⁰Newport B.C. v S.S. for Wales and Browning Ferris Environmental Services Ltd [1998] Env. LR at 174 and [1998] JPL 377.

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Annex 1 - Guidance On Prior Approval Procedures For Telecommunications Permitted Development

Introduction

1. Telecommunications code system operators¹¹ enjoy a general planning permission under Part 24 of Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995 (GPDO) (as amended)¹². This allows an operator to carry out the development permitted by Class A of Part 24 - subject to the exclusions in paragraph A.1 and the conditions in paragraph A.2 and A.3 - without making a planning application to the local planning authority.
2. Under paragraph A.2(4), certain development permitted under Part 24 is conditional upon the operator making a prior approval application, as set out in A.3, to the local planning authority. Such an application will allow the local planning authority to consider, within 56 days, the siting and appearance of the proposed development. Guidance on the operation of the prior approval procedure is given below.
3. An application under paragraph A.3 is *neither* a notification *nor* an application for planning permission. An application under the paragraph is an application for the authority's determination concerning prior approval of siting and appearance. Where permission is granted under Part 24 subject to a condition that a prior approval application to the local planning authority is required, failure to comply in full with that condition will mean that the development is not authorised under the Order, and may be subject to enforcement action by the local planning authority.

The Prior Approval procedure

4. A number of forms of telecommunications development which are permitted under Part 24 of the GPDO are subject to a 56-day prior approval procedure under paragraph A.2(4) of Part 24. This procedure applies to the construction, installation, alteration or replacement (unless in an emergency) of:
 - (i) a ground based mast of up to and including 15 metres in height;
 - (ii) a mast of up to and including 15m in height installed on a building or structure;
 - (iii) an antenna (including any supporting structure) which exceeds the height of the building or structure (other than a mast) by 4 metres or more at the point where it is installed or to be installed;
 - (iv) a public call box;
 - (v) radio equipment housing with a volume in excess of 2.5 cubic metres;
 - (vi) development ancillary to radio equipment housing (e.g. fences, access roads);
 - (vii) Class A development on Article 1(5) land or an SSSI which has not been excluded by paragraph A.1.
5. For such types of development the developer must apply to the local planning authority for

its determination as to whether prior approval will be required to the siting and appearance of the proposed development. The local planning authority will have 56 days, beginning with the date on which it receives the application, in which to make and notify its determination on whether prior approval is required to siting and appearance and to notify the applicant of its decision to give or refuse such approval. There is no power to extend the 56 day period. If no decision is made, or the local planning authority fails to notify the developer of its decision within the 56 days, permission is deemed to have been granted.

6. The regulations require that an application to the local planning authority must be accompanied by :

- a. a written description of the proposed development;
- b. a plan indicating its proposed location;
- c. evidence that the owner or agricultural tenant of the land to which the application relates has been notified of the proposed development;
- d. where the proposed development consists of the installation of a mast within 3 kilometres of the perimeter of an aerodrome, evidence that the Civil Aviation Authority, the Secretary of State for Defence or the aerodrome operator (as appropriate) has been notified of the proposal; and
- e. the appropriate fee.

7. The applicant should also forward to the local planning authority:

- a. evidence that the possible use of an existing mast, building or structure has been considered before submitting an application to erect a new mast;
- b. information about the purpose and need for the particular development;
- c. where the proposed development consists of the installation, alteration or replacement of a mobile phone base station on or near a school or college, evidence that the relevant body of the school or college have been consulted about the proposal;
- d. a statement that a proposed mobile phone base station, when operational, will meet the ICNIRP guidelines;
- e. a statement indicating the height of the proposed antenna, the frequency and modulation characteristics, and details of power output.

8. The Code of Best Practice on prior approval procedures is currently being revised and updated to reflect the changes to the legislation. It will include advice on additional information which operators are strongly encouraged to provide to the local planning authority in making an application.

Consultation

9. The public consultation requirements for the local planning authority under the 56-day prior approval procedure are the same requirements as for development requiring applications for planning permission.

10. The local planning authority should begin the consultations and notification as set out in the regulations as early as possible on receipt of the application in order to allow sufficient time in

which to consider the application in the light of the representations received.

11. Local planning authorities should take into account any relevant representations received in determining whether to give or refuse approval for a proposed development. A local planning authority may wish to discuss with the developer possible modifications to the proposed development to mitigate the concerns raised by particular consultees.

Siting and appearance

12. Factors to be considered concerning the appearance of the mast and ancillary apparatus include materials, colour and design. The use of appropriate materials and colouration may allow a mast to blend more easily into its surroundings. Features of design which an authority may wish to consider include dimensions; overall shape; and whether the construction is solid or forms an open framework. They should also consider with the developer the availability of alternative designs which might be more suited to the local environment.

13. Factors concerning siting may involve :

- the height of the site in relation to surrounding land;
- the existence of topographical features and natural vegetation;
- the effect on the skyline or horizon;
- the site when observed from any side, including from outside the authority's own area;
- the site in relation to areas designated for their scenic or conservation value;
- the site in relation to existing masts, structures or buildings, including buildings of a historical or traditional character;
- the site in relation to residential property; and
- any other relevant considerations.

14. In considering the siting and appearance of a mast together with its associated development, the scope for landscaping and screening to reduce the impact of the development on its surroundings will be an important consideration.

Determination not to require prior approval

15. If the local planning authority determines that prior approval is not required, the development may proceed (a) when the operator receives written notice of such a determination, or (b) after the 56-day period has expired. The authority should give notice of any determination as soon as possible, rather than allowing the 56-day period to expire without notifying the applicant. The development must be carried out in accordance with the details submitted with the application for the determination or as otherwise agreed in writing by the

authority.

Determination to require prior approval

16. If the local planning authority decide that prior approval is required for the siting and/or appearance of the development, it should give the operator prompt written notice of that determination.

Giving or refusing approval

17. Where the local planning authority notifies an applicant that prior approval is required, the local planning authority should ensure that the applicant receives its written decision to give or refuse approval before the end of the 56-day period. Local planning authorities will want to ensure that the necessary arrangements are in place to serve a decision on the applicant within the 56-day period.

18. Where the local planning authority notifies the applicant that prior approval is required but then fails to give or refuse approval within the 56-day period, the development may proceed after that period has expired. In such circumstances, the development must be carried out in accordance with the details submitted with the application or as otherwise agreed in writing by the authority.

19. Where the authority notifies the applicant that approval has been given to the siting and appearance of the proposed development within the 56-day period, development may commence upon receipt of that decision. In such circumstances, the development must be carried out in accordance with the details submitted with the application or as otherwise agreed in writing by the authority.

20. The local planning authority may refuse approval to siting and/or appearance if it considers that this is justified. The authority must do so by notifying the applicant, within the 56-day period, of its decision to refuse approval. Reasons for refusal should be given. Where an authority considers that a refusal of approval may be justified, it should first explore with the operator the possibility of modifying the siting and/or appearance of the proposed development. In exercising this power, the local planning authority should take account of the obligations on code system operators to provide a service, and of technical constraints upon network development.

Action following refusal of approval

21. Under section 78(1)(c) of the Town and Country Planning Act 1990, applicants enjoy a right of appeal against a refusal of approval made under the prior approval procedure. Such appeals must be made to the Secretary of State within six months of the date of the notice of the local planning authority's decision.

22. If approval is refused, or if refusal is upheld on appeal, an applicant may make a fresh application for prior approval determination to the local planning authority. Any fresh application may include details of different siting and/or appearance. Each individual

application must again be considered by the local planning authority on its individual merits.

23. It should be noted that a refusal of prior approval under either procedure does not remove permitted development rights for an individual site. It is simply a refusal of the particular application under consideration. Removal can only be effected by the serving of a direction under Article 4 of the GPDO. A direction made in respect of code system operators apparatus will require the prior approval of the Secretary of State. General guidance on Article 4 directions is set out in Appendix D to Department of the Environment Circular 9/95.

Notification Of Emergency Development

24. The prior approval procedure does not apply in respect of emergency development carried out under Part 24. Any Part 24 development carried out in an emergency is subject, under paragraph A.3(10), to the requirement that the operator shall give written notice to the local planning authority of such development as soon as is possible after the emergency begins. It should be noted that the requirement to notify the local planning authority is separate from the requirement under the Wildlife and Countryside Act 1981 where English Nature is notified as soon as possible after emergency development has taken place on an SSSI.

25. Although there is no statutory definition of what would constitute emergency development under Part 24, the definition of emergency works given in paragraph 1(1) of Schedule 2 to the Telecommunications Act 1984 may be helpful as a general guide in the context of development by telecommunications code system operators. This is reproduced at Note A to this Annex. Whether a particular development constitutes emergency development will be determined on the facts of the individual case.

Notification under terms of licence

26. The procedures for making a prior approval application under paragraph A.3 and the requirement for notification of emergency development under paragraph A.3(10) of Part 24 are separate from the notification procedure required by the licences granted to operators under the Telecommunications Act 1984.

¹¹ A list of telecommunications code systems operators can be found at: www.oftel.gov.uk/ind_info/licensing/oftlic_c.htm#1.1

¹² SI 2001 No 2718

Note A - Extract From Schedule 2 To The Telecommunications Act 1984

"emergency works", in relation to the operator or a relevant undertaker for the purposes of paragraph 24, means works the execution of which at the time it is proposed to execute them is requisite in order to put an end to, or prevent, the arising of circumstances then existing or imminent which are likely to cause -

- (a) danger to persons or property,
- (b) the interruption of any service provided by the operators system or, as the case may be, interference with the exercise of any functions conferred or imposed on the undertaker by or under any enactment; or
- (c) substantial loss to the operator or, as the case may be, the undertaker, and such works as in all circumstances it is reasonable to execute with those works.

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Annex 2 - The Control Of Radio Interference

1. All users of radio equipment are required by the terms of wireless telegraphy legislation to avoid creating undue radio interference with other radio users, including domestic television sets, and their equipment must be designed to minimise it. There are also regulations made under the Wireless Telegraphy Act 1949 that set limits for unwanted radio frequency emissions from certain types of non-radio equipment, such as household appliances and some office machinery (but not computers). There are also European Regulations governing the compatibility and immunity to electromagnetic interference of electrical devices. Up to date details of the current regulations can be found on the RA website. In most situations, therefore, questions of potential interference are of no relevance to the determination of planning applications for the masts or antennas needed to operate a transmitter. Other controls will generally be available to deal with radio interference problems.
2. However, significant interference can arise despite these controls. For example, the source of the interference may be a type of equipment that is outside the scope of the regulations; or there may be site-specific factors that give rise to interference, even though the legislation is complied with. In addition, interference may be caused by the building itself, perhaps because it physically blocks signals or reflects them, causing "ghosting". This type of interference cannot be dealt with under the radio legislation. Whether any such interference is significant enough to warrant treatment as a material planning consideration, and the weight to be attached to it if it is, will be a matter of fact and degree in each individual case and the local planning authority should form a view in the light of the individual circumstances.
3. If the development has yet to take place but potential interference is causing genuine local concern, one or other of the parties may wish to seek the help of experts to assess the likelihood and degree of interference, but authorities should not seek out such problems for critical examination unnecessarily.
4. It is unlikely that refusal of planning permission would be justified on the grounds of radio interference from a transmitter or non-radio equipment alone except in extreme cases. It may sometimes be appropriate to grant temporary planning permission to allow for a trial period of operation, but this course should not be adopted unless there is evidence of significant interference, and only as an alternative to refusal. At the end of the trial the final decision can be taken. However, for national broadcasting and telecommunications services a temporary planning consent would generally not be considered acceptable by the operators. Where applications which are turned down solely or mainly on interference grounds come to appeal, the Secretary of State will expect planning authorities to produce full details of the evidence of interference, or likely interference, and evidence that there are no reasonable remedies that would be satisfactory.
5. A blanket planning condition that requires that no interference shall occur will not normally be appropriate or reasonable. Some types of interference can be controlled under the legislation on radio and it will normally be better to rely on that legislation in such a case than to resort to planning conditions. Moreover, it is necessary to take into account the ability of the affected equipment to resist unwanted signals. If this is inadequate, interference may arise through no fault of the source.

6. If the installation giving rise to interference is already in operation, (eg in cases where an application is made to retain an existing mast following a time-limited planning permission, or the original development took place without permission and the local planning authority are considering enforcement action), it will be relatively easy to ascertain whether the interference can and should be remedied, whether it is a matter for radio licensing control and, if not, whether remedies under planning controls are necessary. Trial transmissions may indicate the likely scale of any problem, although it should be recognised that trial transmissions may not always precisely reproduce the conditions of the final installation or continue for long enough to enable occasional adverse circumstances to arise.

7. In cases in which interference from a transmitter or from non-radio equipment has occurred, complainants should first approach their service engineer, aerial contractor, equipment supplier or dealer. Experience has shown that, in the majority of cases, the affected equipment has insufficient immunity to interference or there is a defect in its installation. Such interference can often be alleviated by means of suitable technical measures to improve the immunity of affected equipment to unwanted signals.

8. Domestic viewers and listeners can also request an interference investigation from the RA, which is responsible for enforcing the legislation on radio interference. The RA will not charge for an investigation unless they diagnose the problem as being due to deficiencies in the complainants' own equipment. The RA produces a leaflet for householders titled "Television and Radio Interference" (RA179) which details their investigation service. This may be obtained by telephoning the RA on 020 7211 0211 and asking for the library, or by accessing the RA website. Businesses suffering interference may consult their local office of the RA (contact details available in RA leaflet RA 206).

9. Where advice is sought, the following may be able to assist:

The Association of Consulting Engineers
Alliance House, 12 Caxton Street, London SW1H 0QL
Tel: 020 7222 6557
Website: www.acenet.co.uk

British Broadcasting Corporation
BBC Reception Advice, Television Centre,
Wood Lane, London W12 7RJ
Tel: 0870 010 0123
Website: www.bbc.co.uk/reception

Independent Television Commission
ITC Engineering Information
Staple House
Staple Gardens
Winchester SO23 8SR
Tel: 01962 848647
Website: www.itc.org.uk

The Radio Authority
Holbrook House, 14 Great Queen Street

Holborn, London WC2B 5DG
Tel: 020 7430 2724
Email: info@radioauthority.org.uk
Website: www.radioauthority.org.uk

The Institution of Electrical Engineers
Savoy Place, London, WC2R 0BL
Tel: 020 7240 1871
Email: postmaster@iee.org.uk.
Website: www.iee.org.uk

Radiocommunications Agency
Wyndham House, 189 Marsh Wall
London E14 9SX
Tel: 020 7211 0502 or 0505
Email: library@ra.gsi.gov.uk
Website: www.radio.gov.uk

Radio Society of Great Britain
Lambda House, Cranborne Road, Potters Bar
Hertfordshire EN6 3JE
Tel: 0870 904 7373
Email: postmaster@rsgb.org.uk
Website: www.rsgb.org.uk

