



# Communications Infrastructure

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# Communications Infrastructure

## Introduction

This document sets out guidance for applicants seeking consent for electronic communications equipment installations within Edinburgh.

These guidelines apply to electronic communications related installations including masts, poles, equipment cabins etc (including fixed radio access aerials) on a city wide basis.



## Policy Context

### National Guidance

Scottish Planning Policy (SPP) states that the planning system should support:

- development which helps deliver the Scottish Government’s commitment to world-class digital connectivity;
- the need for networks to evolve and respond to technology improvements and new services;
- inclusion of digital infrastructure in new homes and business premises; and
- infrastructure provision which is sited and designed to keep environmental impacts to a minimum.

Planning Advice Note: PAN62 “Radio Telecommunications” provides advice and best practice on the siting and design of these developments, in particular with regard to the historic environment and areas of natural heritage, as well as technical background information.

## Local Development Plan

The adopted Local Development Plan Policy RS7 supports communications equipment provided the visual impact has been minimised, that all practical options or alternatives have been considered, and the proposal would not harm the built/natural environment.

### Further Information

[www.edinburgh.gov.uk/planning](http://www.edinburgh.gov.uk/planning)

or contact the Planning Helpdesk on 0131 529 3550

## Statutory and Other Requirements

### Permitted Development Rights

Class 67 of the General Permitted Development (Scotland) Order 1992 (GDPO), as amended grants limited permitted development rights to electronic communications developments and sets out various conditions that apply to proposals that fall within Permitted Development. The Electronic Communications Code (Conditions and Restrictions) 2003 is designed to facilitate the installation and maintenance of electronic communications network. It confers rights on providers of such networks, and on providers of systems conduits, to install and maintain apparatus in, over and under land resulting in considerably simplified planning procedures.

### Health Issues

It should be noted that National Planning Guidance (SPP) makes it clear that issues such as health in the context of telecommunications are matters that are controlled and regulated by other legislation, not the planning system. It is not necessary for planning authorities to treat radiofrequency radiation as a material consideration. Similarly the perception of health risk is not a matter that the planning system is expected to address.

Town and Country Planning (Development Management Procedure) (Scotland) regulations 2013 Regulation 3(f) states that planning applications for electronic communications developments involving installation of an antenna must be accompanied by a declaration that the development is designed to comply with public exposure guidelines of ICNIRP (International Commission on Non-Ionising Radiation). This declaration is required to meet the current government requirements and satisfactorily addresses the issues of potential or perceived health risk. The planning authority is not the statutory body responsible for dealing with the public health issues arising from these regulations.

It is recommended that individuals with concerns about the health issues should contact Ofcom.

<http://www.ofcom.org.uk>

## Other Information Requirements

### Pre - Application Information

PAN 62 encourages network operators to contact local authorities before submitting applications. The Council will require the following information to be provided with each proposal;

- The search area.
- A list of alternative sites.
- Details of any public consultation exercises.

In addition, network operators are also encouraged to discuss forthcoming network intentions well in advance of detailed site planning exercises.

### Application Information

When an application is submitted, information on the following must be provided;

- The existing equipment in the vicinity of the required coverage area.
- The alternative sites and designs that have been explored, and the reasons for discounting these.
- Supporting information and details that have been explored, and the reasons for discounting these.
- A plan showing the coverage plot and photo montage of the proposed development.
- A certificate of ICNIRP.

### Development Briefs and Masterplans

It is important that electronic communications development is taken into account when preparing development briefs and masterplans for new developments. Failure to take this into account can result in developments with poor network coverage and a lack of appropriate sites within them for subsequent installation of electronic communications equipment. Such an approach is short sighted and will result in poor quality installations. Therefore, it is important that the electronic communications issue is addressed at an early stage.



## Policy Guidance

### Site Options

All telecommunications proposals will be considered on their own merits with reference to relevant planning policies. The aim is that the equipment should become an accepted and unobtrusive feature of both urban and rural areas. The design should be the least visually intrusive solution for its immediate environment. Where possible Distributed Antenna Systems should be considered as an alternative to standard equipment as the majority of such equipment is either not development or permitted. In assessing planning applications proposals for new sites, the Council expects operators to demonstrate that they have considered the following options, in order of preference, before a new ground mast is considered.

1. The use of existing structures with the potential to disguise/camouflage equipment, for example floodlighting towers and electricity pylons.
2. The sharing of existing electronic communications sites on masts, structures and buildings provided the additional apparatus does not result in an adverse visual impact.
3. Electronic communications equipment on existing buildings and structures where there are no existing sites, and where it would have an adverse visual impact.

Where there are no opportunities to install apparatus on/within buildings or structures, the erection of ground based masts may be acceptable. In this case, it will be expected that operators will;

1. Share new masts where this represents the best environmental solution (Note, this will depend on the cumulative visual impact of the additional apparatus) or
2. Group installations together where this has a lesser environmental impact, or
3. Locate equipment near existing suitable structures and vertical elements, for example pylons, street lamps etc.

As required by permitted development rights or through conditions, operators will have to remove old electronic communications equipment when it is redundant.



Good example of equipment disguised within existing structures  
Photographs courtesy of Dynamic Concepts

## General Design Guidelines

### Siting



Good example of disguised equipment

1. Electronic communications development and its associated equipment, for example, equipment housings, fencing etc, will be considered together to ensure they are all sited and designed to minimise visual impact. Planning permission will not be granted unless full details of all equipment is submitted.
2. Electronic communications development, that is likely to have an adverse impact on the city's skyline or views into/out of the city including views of landmark buildings should be avoided.
3. Where equipment is to be sited on a building or structure the Council encourages electronic communications companies to negotiate with the property owners to ensure equipment cabins are located within the building or adjacent to existing plant housings.
4. If sharing a site, equipment cabins should be grouped to ensure that they read as one element or a group feature, rather than a series of single elements.

## Design

5. In all locations techniques to disguise or conceal equipment (discreet designs) will be encouraged.
6. Where vertical features are present, the design of a mast should reflect these. For example, a tapered lattice mast to fit with the existing pylons, or monopole to fit with the telegraph poles.



Good and bad examples of lattice mast location

7. Subject to technical feasibility, the type and location of antenna should be the least visually intrusive. For example, omni directional antenna on a single lattice mast.
8. Electronic communications equipment should be painted an appropriate colour (matt finish) to relate to the background/surroundings or existing features (e.g. lampposts). Where a mast breaks the skyline it should be painted grey. A palette of colours can be found at the end of this guideline.
9. Equipment cabins should be kept to a minimum, preferably one, in the smallest size currently available. As new smaller sized cabins become available, the Council will expect them to be used as a first choice.
10. Electronic communications companies should liaise with the Council's relevant Local Area Roads

Manager to ensure that equipment meets the requirements of the Roads Scotland Act 1984. Where feasible masts and equipment should be located within the verge and off the footway. Where equipment is located on a footway, companies should aim to achieve the following standards:

- Equipment should be located to the back of footways.
- Equipment should avoid being within 20m of a pedestrian crossing or corner.
- Equipment with doors open should avoid reducing footpath width to less than 2m.
- Equipment should avoid being located on the approach side of bus stops if the view of buses is obstructed.
- Equipment should not be located within the visibility splays for pedestrians and vehicular traffic.



Suitability of mast sharing depends on location

The design of fencing and gates for base stations should reflect the character of the surrounding area/landscape in which the station is located.

- Any security measures should not unnecessarily detract from the location/environment.
- Any form of lighting should not cause light pollution to neighbouring properties or have an adverse impact on the natural landscape.

- Where there is an existing power supply, cable runs should be unseen, including installations on existing buildings/structures and overhead poles; otherwise architectural detailing or area of shadow should be used to minimise visibility.

## Detailed Design Guidelines

Comprehensive advice and best practice guidance on the design and location of electronic communications equipment is set out in PAN62. This guideline, in addition to the general design guidelines that should be applied to all proposals, sets out the following area specific advice.

### Countryside

#### Siting

1. The siting of electronic communications developments should take advantage of existing topography and vegetation to help integrate the development with its surroundings.
2. Sites that are located on the skyline should be avoided. Where hilltop locations are unavoidable, the equipment should be located below the brow of the hill to create a backdrop for the development.

#### Design

3. Planting to integrate equipment with the surroundings will be encouraged and should reflect the existing landscape/native species. Information on its management during its establishment phase must be provided.



Bad example of monopole location



4. Where a mast is located against a landscape backdrop then an open mast design that would allow visual permeability would be preferred.
5. Where vertical features are present, the design of a mast should reflect these – for example, a tapered lattice mast to fit with pylons, or monopole to fit with telegraph poles.

### Power supply

6. Where there is no existing power supply, the design of any supply will be considered in the context of its 'fit' with the surrounding character. Undergrounding cabling will be the preferred option in most cases.
7. A generator may be acceptable where there is a lack of an underground supply subject to mitigation of its environmental affects including noise. The location and design of the equipment should be sympathetic to the site.

### Access

8. New access tracks should be avoided and preferably new equipment should be located next to existing tracks.
9. Where a new access track is unavoidable, the track and ancillary features must be integrated into the landscape, responding to the existing landform by relating it to the field boundaries, boundaries of natural vegetation and other features. Appropriate surface material must be used e.g. green road.

### Industrial/Commercial Areas

1. Where a mast is located against an industrial/commercial backdrop then an open lattice design that would allow visual permeability would normally be required.

### Heritage/Conservation Areas

#### Listed Buildings

1. Consent will not be granted for electronic communications installations in, on or near a listed building where the proposal adversely affects the character or setting of the listed building.
2. The most appropriate location of any installations will be within buildings, preferably in areas of secondary importance such as basements and attics, as long as the internal character is not compromised and no associated external alterations are required. Where it is not possible to locate installations internally without external changes, consideration will be given to installations in or on buildings or structures where the following criteria can be met:



*Good example of disguised equipment*

- The installation (including all base station components and associated equipment) must be effectively hidden or disguised in an appropriate manner that respects the character and architectural detailing of the listed building, and
- There would be no physical damage to the building or structure; and

There would be no removal of important original or historical fabric; and



*Louvre replaced on a listed building with radio transparent replica*  
Photographs courtesy of Dynamic Concepts

- No additional architectural features will be permitted, although like for like reinstatement of architectural features that have been lost maybe be acceptable through the use of discreet designs.
3. Where it is proposed to site installations near a listed building, such installations must be located in a manner that preserves or enhances the character of a listed building's setting. For example, it will be necessary to ensure that important views of and from the building are not interrupted by electronic communications equipment.

### Conservation Areas

The following additional guidelines apply to proposals in these areas:

1. Any electronic communications development must preserve or enhance the particular character, appearance, setting and context of the area, and not adversely affect its integrity or the objectives underlying its designation.

2. Operators must give special consideration to the location and appearance of electronic communications equipment, to ensure minimum intrusiveness.
3. Whilst the Council is prepared to respond positively to electronic communications proposals and will examine any appropriate site and design, the importance of certain locations may preclude any form of installation from being acceptable.



A silicon mould was taken from the original pinnacle



Replica chimney housing equipment  
Photographs courtesy of Dynamic Concepts

### Other Sensitive Areas

The additional guidelines below apply to proposals in the following sensitive locations:

- Green Belt
- Pentland Hills Regional Park
- Special Protection Areas and Sites of Special Scientific Interest
- Designed Landscapes and Special Landscape Areas
- Local Nature Reserves or Local Nature Conservation Sites
- Schedules Ancient Monuments
- Sites of known or suspected Archaeological Importance.

1. Any electronic communications development must respect the particular character, appearance, setting and context of the area and not adversely affect its integrity or the objectives underlying its designation.
2. Operators must give special consideration to the location and appearance of electronic communications equipment, to ensure minimum intrusiveness.
3. In areas of importance for natural heritage, development should not contribute to loss or damage of habitats. In addition, construction should be timed to avoid disturbance to wildlife during sensitive periods e.g. breeding season.

## Palette of Colours

Electronic communications equipment should normally be painted with a matt finish in one or more of the following approved colours:

### Grey

RAL 7047 (Telegrey 4)

### Brown

RAL 8008 (Olive Brown)

### Green

RAL 6001 (Emerald Green)

RAL 6002 (Leafy Green)

RAL 6003 (Olive Green)

RAL 6004 (Blue Green)

RAL 6005 (Moss Green)

RAL 6009 (Fir Green)

### Black

RAL 9004 (Signal Black)

RAL 9005 (Jet Black)

There may be circumstance where alternative colours are required to help blend equipment in with its surroundings. Alternative colours should only be used with the prior approval of the planning authority.





## Reasoned Justification

The Telecommunications Act de-regulated the British telecommunications industry, opening up the market for other companies. Under the terms of their licence, the new companies had a legal obligation to provide extensive coverage of the UK. Each company requires a network of installations and, in the city centres, where there is a concentration of users, there is a need to provide more installations close together to cater for network demand. The installations generally consist of a microwave antenna, either face mounted to a building or supported on a pole/mast and are linked to an equipment cabin.

The telecommunications industry continues to expand, and new generations of mobile technology with improved network functionality continue to be brought forward. These are world-wide trends, and Scotland must be part of these changes in order to maintain and improve its position in the global economy. This also helps to reduce the disadvantage of a peripheral location in Europe.

The Council accepts the need for new electronic communications equipment in the Edinburgh area. However, as service provision grows, the potential impact is significant particularly within environmentally sensitive parts of Edinburgh and its surrounding area. Nevertheless, the companies have to provide coverage and there are significant advantages of mobile communications. Therefore, installations will be considered in sensitive area or on listed buildings. However, serious consideration must be given to visual impact and companies must aim to find the best solution. There will always be certain locations where installations are not acceptable.

## Glossary

### Antenna:

A passive electrical component which can transmit and receive radio waves.

### ICNIRP:

International Commission on Non-Ionising Radiation Protection. Responsible for coordinating knowledge of protection against various non-ionising radiations. Work encompasses environmental health criteria on different aspects of non-ionising radiation.

### Fixed Radio Access:

A low power radio system for connecting individual subscribers in buildings to a base station.

### Non-ionising radiation:

Radiation that does not produce ionisation in matter e.g. light, ultraviolet and radio. When these radiations pass through the tissues of the body they do not have sufficient energy to damage DNA directly.

### Radio Base Station:

A fixed radio transmitter/receiver which electronically relays signals to and from handsets and other data terminals.

### Microconnect Distributed Antenna:

This system involves, in areas of high mobile usage, the use of small antennae located on existing lamp posts, street signs etc, connected by fibre optics to mobile base stations.



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