

## Scottish Executive

### Satellite Dishes and Other Antennas: Consultation on Possible Changes to Planning Regulations.

#### Response from Intellect

This paper comprises Intellect's response to the questions set out in the above consultation document. The questions are repeated for ease of reference.

#### General Principles

*Q1. We [therefore] propose that all antennas (except conventional TV aerials) should be treated the same way within the GPDO irrespective of what is being transmitted. Do you agree with this principle?*

**Yes, Intellect agrees in principle with this proposal.** A residential property should be able to receive any radio transmission intended for their reception regardless of the content (within the requirements of the appropriate legislation and licensing criteria) or the specific technology used to deliver it. *Planning* law should not cover what content a person may receive through any transmission medium.

Intellect notes that the question implies that a person may be *transmitting* a variety of information/content from their property. In some cases (duplex radio and satellite systems) this may be true, but the content type is still beyond the remit of the planning regulations under consideration in the consultation document.

*Q2. Do you agree that the provisions should be drafted so that they are flexible enough to cope with future technological developments?*

**Yes, Intellect endorses this approach.** The GPDO legislation covering this subject has changed each year for the last three years. Intellect would wish to see stability in the legislation that affects householders and telecommunications service providers and so we would welcome future proof legislation (in as far as that is possible) in this area.

*Q3. Do you agree with the proposed methods to measure antenna to safeguard technological neutrality? If not, what means would you suggest?*

**Yes, Intellect considers that a volumetric measurement is a logical solution for non- reflector (dish) antenna structures.** This will permit new technology to be developed in a flexible way in order to minimise the visual impact of antenna installations.

Q4. *We propose to retain the existing regulations that stipulate two conditions: that antennas are sited so as to minimise visual impact on the building; and that any redundant equipment is removed. Do you agree?*

**Yes, Intellect agrees with this proposal.** It is important to maintain the balance between amenity of a property in terms of access to telecommunications services and the associated visual impact on its immediate surroundings. It is appropriate to place the onus on the property owner to meet these requirements.

Q5. *Scotland's topography and population distribution differs from the rest of the UK and this may necessitate the use of larger antennas for technological reasons. Do you agree?*

**Yes, Intellect gives qualified agreement to this proposal.** All else being equal, larger antennas have higher gain and can support longer distance links. In the case of terrestrial radio this can reduce the need for other, possibly environmentally damaging, civil works such as repeater towers. In the satellite case, limiting the size of an antenna can reduce the number of satellites that can be used to provide service and thus artificially constrain the user's choice of services.

Intellect understands the aspiration to identify a maximum antenna size for protected and unprotected areas, but recognises that Scotland's topology and population distribution makes this more difficult than for other parts of the UK. For domestic broadband delivery, Intellect supports the 35 litres *volume* limit as a replacement for the 'small antenna' concept. However, Intellect would prefer minimal *size* limitations for installations in rural areas so that consistent service delivery is possible, provided the deployment is carried out sensitively.

Satellite services, including TV and broadband, are delivered over a wide range of systems at different orbital locations. Scotland's high latitudes mean that received signal strength can be considerably lower than that received at other UK locations due to increase distance from the satellite and an increase in atmospheric effects on the signals. Similarly, the amount of transmit power required on the return path of two-way satellite systems is correspondingly higher.

Some satellites, especially those which deliver digital television, have sufficient power to allow satellite antenna sizes of less than 70cms to be used on the mainland but on the outlying islands would require up to 90cms, and these fall within the existing GPDO. Other satellites can require antennas much larger than 90cms diameter, depending on factors such as the service data rate (received and transmitted) and frequency band. Larger antennas are needed as they provide more transmit gain, capture more of the received power and therefore overcome the additional signal losses incurred at Scotland's latitudes. The north of Scotland can have signal levels that are 6dB or more lower than the south of England. This 6dB extra gain required is the equivalent to doubling the size of antenna.

Intellect is not certain that antenna volume based calculations would provide an effective means of permitting efficient dish antenna restrictions, due to the geometry of the feed element relative to the parabolic surface of the dish. Therefore, Intellect prefers dish antennas to be limited by the diameter dimension alone.

Q6. *The list of designated areas within which permitted development rights for antennas on buildings other than dwellings are restricted might be considered unduly long. Do you agree? If yes what designations do you feel could be removed from the list.*

**Intellect is in qualified agreement with this view.** Remote communities may sometimes require the use of radio-based communication because of the difficulties encountered with deploying wire-based systems. Intellect believes that communities of significant size within National Parks could be less restricted in their antenna options than other areas within the Park, unless they are also designated in some other way. This would aid equality of access to advanced communications services and contribute to the viability of the local economy. This relaxation in antenna planning constraints could be achieved by a mechanism similar to Local Development Orders, contained within the England Planning Compulsory Purchase Act, 2004.

### **Options for Change**

#### ***Dwellings that are not within designated areas***

Q7. *Which of the proposed options do you prefer? Would you prefer an alternative option not set out in this paper? Why?*

**Intellect generally supports the proposals put forward under Option 4.** Intellect believes that a homeowner should be able to receive terrestrial television (analogue or digital), digital radio and a range of satellite and terrestrial wireless services. Options 1 to 3 restrict the number of antennas that can be installed to the point where a homeowner may not be able to support delivery of digital broadband by means of radio/optical 'mesh' systems that may require more than one antenna to complete the network (due to local clutter such as trees) if they already have a satellite TV antenna.

Intellect believes that a chimney mount will enable the delivery of broadband services by radio/optical 'mesh' networks (within the limits of local clutter). Also, the lack of limit for non-fronting antenna enables the evolution of networks and systems without the need to revisit GPDO legislation again in the future.

Q8. *Do you agree that the number of antennas should be limited? If so, what limit would you prefer?*

**Intellect agrees that the number of 'visible' antennas should be limited.** Intellect prefers a limit of three visible antennas and believes that they should be positioned so as to minimise their visual impact. For parts of a property that are not easily visible to the public (e.g. the rear, or non-fronting aspect), Intellect believes that a homeowner should be free to deploy the number of antennas necessary to access all required telecommunication services.

*Q9. Do you agree that the size restrictions are appropriate? If not, what restrictions would you prefer?*

**Intellect believes the size restrictions are appropriate for non-dish antennas, but does not support the proposal for dish antennas.** Intellect supports the 35-litre limit for non-dish antennas, but the 120cm restriction for dish antennas will restrict service availability and performance over much of Scotland. Dish antenna size is dependant upon the choice of satellite and services provided; service providers and end-users would not want to be overly restricted in this choice. The space segment costs, which contribute significantly to (and sometimes dominate) service cost and therefore price to the customer, is lower for the lower powered satellites. Therefore, access to low cost satellites services (which are still typically more expensive than their direct terrestrial equivalents) can require a larger dish at the end user. In addition, broadband speeds will increase over time and certainly will not remain static. Therefore, in order to deliver improved broadband data services across the Scotland without prejudice to location, Intellect proposes a 180cm linear dimension for the first satellite dish to provide more flexibility in choice in satellite and service offerings.

*Q10. The siting restrictions are intended to prevent the poor siting of antennas. Do you agree that these siting restrictions are appropriate? If not, what restrictions would you prefer?*

**Intellect believes that the proposed siting restrictions are appropriate for non designated areas.** Intellect is committed to the appropriate use and sympathetic deployment of radio and satellite antennas. Intellect notes that poor visual appearance can be due to the relationship between an antenna and other building features (e.g. being placed between two windows, but not equidistant from each window) or other nearby installations (e.g. antennas placed in different locations on the two parts of a semi-detached property). Intellect would welcome updated guidance for homeowners in this respect.

### ***Dwellinghouses within Designated Areas***

*Q11. Which of the proposed options do you prefer? Would you prefer an alternative option not set out in this paper? Why?*

**Intellect gives qualified support to the proposals put forward under Option 5.** Intellect understands the ambition to preserve the visual appearance of properties within designated areas. However, such areas need to be able to exploit advanced entertainment and communications services to the same extent as non-designated areas. This will contribute to the maintenance of the local economies, rather than exacerbating the perceived 'digital divide'. Under Option 5 the householder has a greater choice of service delivery options (see previous comments in our response to Q8), in line with non-designated areas. Intellect believes that the way of delivering advanced service availability in designated areas is not to restrict the total number of antennas that can be deployed, but rather focus on the overall visual impact of multiple antennas on a single property (see previous comments on non-visible antenna placement guidelines).

*Q12. Do you agree that the number of antennas should be limited? If so, what limit would you prefer?*

**Intellect believes that the number of publicly visible antennas should be limited.** However, Intellect also believes that if an antenna is considered de minimis or is not visible from the front of a property, a homeowner in a designated area should be able to install the number of antennas necessary to receive the TV and broadband services of their choice.

*Q13. Do you agree that the size restrictions are appropriate? If not, what restrictions would you prefer?*

**No, Intellect does not believe that the antenna size restrictions are appropriate.** The restriction to 100cm for the first satellite antenna will restrict performance over much of Scotland. The antenna size is very much dependant upon the choice of satellite and service type. End-user costs are lower for low powered satellites that require a larger dish at the receive end. As previously stated, Intellect proposes a 180cm linear dimension for the first satellite dish to provide appropriate flexibility in service offerings (see question 8). However, Intellect would support an obligation upon householders to minimise the visual impact of any antenna installation.

*Q14. The siting restrictions for designated areas are tougher, in recognition of the impact that poor siting have on visual amenity. Do you agree that these siting restrictions are appropriate for designated areas?*

**Intellect agrees that that designated areas should be protected.** However, Intellect also believes that homeowners living in protected areas should have access to the same telecommunications services as homeowners in non-designated areas. Intellect believes that the impact of antenna installations can be minimised through the numerical and position restrictions under Option 5 coupled with the selection of appropriate installation points on the property (see response to Q8). Intellect believes that the best way to minimise visual impact is to place a firm obligation upon the householder to minimise the impact of installations on local surroundings, but reduce or remove the limits for the number of antenna that are not visible from a public place.

### ***Other buildings not in designated areas***

*Q15. Which option do you prefer? Would you prefer an alternative option not set out in this paper? Why?*

**Intellect believes that Options 2-4 are positive proposals, but they fail to acknowledge the difference between blocks of flats and commercial premises.** Blocks of flats present a particular problem in terms of the potential number of individual residences. In such situations, shared installations with cable distribution should be encouraged wherever possible, although this is not always possible. Commercial premises typically have less individual entities that require telecommunication services with an associated reduction in antenna requirements. Therefore, Intellect proposes that flats and Commercial premises are dealt with separately.

Intellect supports Option 4 for a block of flats with the restriction that all antenna are roof mounted, or mounted on the wall immediate to the roof. This restriction is proposed in order to minimise the possibility of copycat behaviour (“my neighbour mounted an antenna just outside their window, so I can too”), and the possible consequential uncontrolled proliferation. The building owner should be responsible for any breach of these regulations and not the occupier.

Intellect supports Option 4 as currently defined for commercial premises. Intellect considers that on most commercial premises the antenna would be mounted at the roof level and therefore a greater deregulation at the roof would be appropriate. The building owner should be responsible for any breach of this regulation and not the occupier.

*Q16. Do you agree that the number of antennas should be limited? If so, what would you prefer?*

**This is a complex question for reasons alluded to in earlier responses.** Intellect acknowledges that the visual impact of antennas needs to be minimised in all circumstances. However, commercial properties and some multi-dwelling properties need to be considered in the light of their size, shape and location, rather than just their use. Some commercial premises are already likely to have established antenna systems upon the roof. If there were a restriction, upon the number of antenna at any one roof, this may drive commercial providers to seek new roofs (if available) where there has been no development so far and hence no requirement to seek planning permission, thus avoiding cost and delay. Intellect believes that it is not always necessarily the best alternative to limit the number of antenna, just their appearance, e.g. antennas blending or integral with the building structure. Planning authorities have tended to equate de-minimis with *small* and not with *near invisible* from a defined public viewpoint. Intellect would welcome a removal of a limit to the number of antenna not visible from a public space. This position would be ideal for satellite antenna located in the central part of flat roof spaces.

*Q17. Do you agree that the size restrictions are appropriate? If not, what restrictions would you prefer?*

**No, Intellect does not agree with the proposal for the size of the first satellite dish.** The proposed restriction to 130 cm will limit performance over much of Scotland. The antenna size is very much dependant upon the choice of satellite and service type. End-user costs are lower for low powered satellites that require a larger dish at the receive end. As previously stated, Intellect proposes a 180cm linear dimension for the first satellite dish to provide appropriate flexibility in service offerings (see question 8). However, Intellect would support an obligation upon building owners to minimise the visual impact of any antenna installation.

Q18. *The siting restrictions are intended to prevent the poor siting of antennas. Do you agree that these siting restrictions are appropriate? If not, what restrictions do you consider would be appropriate?*

**Intellect recognises that the positioning of antennas on tall buildings is a difficult issue.** Even if the number of antennas is limited as proposed in Options 2-4 in the consultation document, poor positioning of a handful of antennas could damage the appearance of a building far more than a higher number of antennas arranged in a sympathetic manner.

Therefore, Intellect proposes that appropriate guidelines be produced for large building owners that advise on how best to deploy multiple antennas on a building while minimising their visual impact.

### **Other Buildings in designated areas.**

Q19. *Which option do you prefer? Would you prefer an alternative option not set out in this paper? Why?*

**Intellect gives qualified support to the proposals put forward under Option 5.** Intellect understands the ambition to preserve the visual appearance of properties within designated areas. However, such areas need to be able to exploit advanced entertainment and communications services to the same extent as non-designated areas. This will contribute to the maintenance of the local economies, rather than exacerbating the perceived 'digital divide'. Under Option 5 the building owner has a greater choice of service delivery options (see previous comments in our response to Q8), in line with non-designated areas. Intellect believes that the way of delivering advanced service availability in designated areas is not to restrict the total number of antennas that can be deployed, but rather focus on the overall visual impact of multiple antennas on a single property (see previous comments on non-visible antenna placement guidelines).

Q20. *Do you agree that the number of antennas should be limited? If so, what would you prefer?*

**Intellect believes that the number of publicly visible antennas should be limited.** However, Intellect also believes that if an antenna is considered de minimis or is not visible from the front of a property, a building owner in a designated area should be able to install the number of antennas necessary to receive the TV and broadband services of their choice.

Q21. *Do you agree that the size restrictions are appropriate? If not what restrictions would you prefer?*

**No, Intellect does not agree with the proposal for the size of the first satellite dish.** The proposed restriction to 130 cm will limit performance over much of Scotland. The antenna size is very much dependant upon the choice of satellite and service type. End-user costs are lower for low powered satellites that require a larger dish at the receive end. As previously stated, Intellect proposes a 180cm linear dimension for the first satellite dish to provide appropriate flexibility in service offerings (see question 8). However, Intellect would support an obligation upon building owners to minimise the visual impact of any antenna installation.

Q22. *The siting restrictions for designated areas are tougher, in recognition of the impact that poor siting would have on visual amenity. Do you agree that these siting restrictions are appropriate for other buildings in designated areas? If not what restrictions would you prefer?*

**Intellect agrees that that designated areas should be protected.** However, Intellect also believes that building owners in protected areas should have access to the same telecommunications services as those in non-designated areas. Intellect believes that the impact of antenna installations can be minimised through the numerical and position restrictions under Option 5 coupled with the selection of appropriate installation points on the property (see response to Q8). Intellect believes that the best way to minimise visual impact is to place a firm obligation upon the building owner to minimise the impact of installations on local surroundings, but reduce or remove the limits for the number of antenna that are not visible from a public place.

Q23 *Any other comments*

Intellect has no further comments.

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