



ARQIVA LTD

***Arqiva Rouncefall Transmitting Station
Ashingdon
Rochford
Essex
SS4 3JD***

DIGITAL SWITCHOVER PROJECT

**WRITTEN STATEMENT IN SUPPORT OF AN APPLICATION
FOR PLANNING PERMISSION
INCORPORATING THE DESIGN AND ACCESS STATEMENTS
*March 2010***

**Arqiva Ltd
Crawley Court
Crawley
Winchester
Hampshire
SO21 2QA**

Our Ref: MS3274

1. INTRODUCTION

1.1 This statement is submitted in support of an application for planning permission made in respect of the existing Arqiva transmitting station at Ashingdon, Rochford, Essex. The key feature of the existing installation is a 22.5 metre lattice steel tower with assorted antenna arrays and associated equipment housing accommodated within a fenced compound below.

1.2 The facility now needs to be altered to accommodate apparatus required as part of the Digital Switchover Project which is explained in more detail in the next section. The proposed works are shown on the application drawings, but to assist, comprise the following:

- ***The removal of the top 2.5 metres of the existing tower and the installation of a new 5.0 metre section raising the overall height of the tower by 2.5 metres***
- ***The installation of a 6.0 metre climbable pole surmounting the new tower extension supporting two 4-tiers of UHF panel antennas***
- ***The installation of one 0.75 metre VSAT dish antenna on the existing tower at a height of 5.0 metres***
- ***The installation of one equipment cabin with an associated GPRS antenna and GPS antenna***
- ***The installation of a feeder gantry and one meter cabinet***

1.3 In the next sections we highlight the benefits of the proposal and provide a reasoned justification for its approval in the context of relevant planning policy and other material considerations. We also explain the community involvement in drawing together the proposals and set out the required Design and Access Statements.

2. THE DIGITAL SWITCHOVER PROJECT

2.1 The Digital Switchover (DSO) Project is a major transformation project that will see the UK switchover to fully digital TV region by region between 2008 and 2012.

- 2.2 Government and the industry regulator OFCOM are driving DSO. This is part of a wider and ongoing policy to improve and take maximum advantage of the many potential opportunities presented by electronic communications in all their diverse forms. A recent example of this is the report jointly published in March 2005, by the Prime Minister's Strategy Unit and the Department of Trade and Industry, entitled *Connecting the UK: the Digital Strategy*. The functions of the former DTI are now the responsibility of the Department for Business, Enterprise and Regulatory Reform.
- 2.3 Letters have been sent out to all UK planning authorities the one in England having been sent on 31 July 2006 from the Communities and Local Government, Culture Media and Sport and Trade and Industry Departments. This letter will have advised you about DSO, its implementation by Arqiva and National Grid Wireless (now owned and also trading as Arqiva Ltd) and the planned timetable. It also highlighted the significant public benefits associated with the project. The letter went on to provide specific planning policy guidance, which is referred to in more detail in the next section.
- 2.4 Government has identified three main public benefits and the letter gives a brief explanation about them. To help you better understand, we amplify upon these.

Switchover makes it fairer

- 2.5 A clear digital divide exists between different parts of the UK. Some already benefit from terrestrial digital television services via the Freeview platform, but even then, customers in different areas may only receive some of the channels potentially available. In addition, the current digital services are not robust in that most of the installations that provide service do not have sufficient reserve antennas to allow for continuous broadcasting in the event of a major failure to the primary system or to allow major maintenance works.
- 2.6 DSO will largely end this digital divide, which means with few exceptions the population at large will be able to enjoy:
- Picture and sound quality which is consistently good
 - A greater range of channels
 - Interactive channels

- New types of services that might include shopping, games and community information
- 2.7 The latter illustrations will be of particular benefit to rural populations and less affluent sectors of society who are unable to afford personal computers. Interactive programming means, for example, that when the Olympics are staged in London in 2012, viewers will have greater control over the events they are able to watch, rather than have to watch the events selected by programming editors.

Digital TV is also more efficient

- 2.8 The second reason is that analogue television broadcasting uses a large amount of the radio spectrum, which is a finite and scarce resource. This is because the signals convey the full range of sound and visual content. By contrast digital technology converts this range into numbers, which can be compressed and transmitted in bursts or packages– the receiving equipment then converts this back into the appropriate sound and picture. By these means several audio-visual services can be carried in the same spectrum which is used for a single analogue channel. The day to day comparisons where we have already seen the switch between technologies are, for example, old LP's to CD's, and videos to DVD's.
- 2.9 The switchover to digital will therefore free up a large amount of radio spectrum that the Government intends to make available to other users or services that might include mobile TV or high definition TV. Some of these services will add to the range of electronic communication services available and stimulate competition to the benefit of the public at large.

A World Leader in Broadcasting

- 2.10 The UK has always been a world leader in broadcasting, but as other countries move towards a digital platform, so the UK risks being overtaken. High quality transmissions and a wide choice of services offer obvious benefits to the viewing public. In addition, a high quality platform is critical to thriving culture and media industries, whose success brings about considerable benefits to the UK economy.

3. TECHNICAL CONSIDERATIONS

General Description

- 3.1 The terrestrial television network was largely developed by the BBC and the Independent Broadcasting Authority (IBA) during the 1950's and 1960's. The whole network is now owned and operated by Arqiva.
- 3.2 Under the current arrangements, the BBC and the commercial broadcasters are responsible for the programming content, with Arqiva being responsible for the actual broadcasting into customer homes.
- 3.3 So that viewers only need to orientate their television aerials and tune into one broadcast transmitter, the original BBC and IBA networks were shared, i.e. all ITV services could be obtained through a BBC owned and operated site and vice versa. The only exception to this is with the more recent Channel 5, which is not available through al BBC sites and hence many viewers are still unable to obtain this channel through terrestrial television.
- 3.4 The analogue television network extends to a total number of 1,154 sites, which provide television coverage to about 99% of the UK population. There are three types of sites as follows:
 - a. 50 Main Transmitter Stations (MTS) providing direct coverage to more than 80 % of the UK Population
 - b. 120 High Powered Relay Stations (HPRS) providing coverage to almost 15% of the UK Population
 - c. 984 Low Powered Relay Stations (LPRS) providing coverage to just under 5% of the UK Population
- 3.5 The MTS's typically range from 150 to 250 metres in height, the most well known probably being our site at Crystal Palace. They are usually guyed masts located in rural areas.
- 3.6 The HPRS sites are generally 45 metres high lattice towers, but can extend to around 100 metre high guyed masts.

- 3.7 The LPRS sites are as low as 12 metres in height and many are like telegraph poles.
- 3.8 Programming is sent from the television studios by broadcast or cable link to the MTS sites where they are then broadcast across the country. The MTS sites can serve millions of viewers over a sub regional geographical area.
- 3.9 Owing to topography the MTS sites cannot provide high quality transmissions to all parts of their areas and so HPRS sites are used to pick up the signal from the MTS and then effectively boost coverage into where it is required. An HPRS based on the edge of an urban area could therefore provide coverage over tens of thousands of viewers.
- 3.10 Even with an HPRS pockets of poor coverage can remain and hence LPRS sites are deployed to provide localised infilling. LPRS sites therefore tend to serve only a few hundred viewers or households, but can serve several thousand.
- 3.11 The programme feed to an HPRS or a LPRS is (with limited exceptions) derived by off-air reception either direct from their parent MTS or from another relay station, which is itself dependant on the MTS. In this way the programme feed may involve a series of links using the HPRS sites.
- 3.12 Because the programme links are fed into the MTS sites and they provide direct coverage over the bulk of the UK population and indirect coverage over the rest, they are absolutely critical to the television broadcast network.
- 3.13 The HPRS sites are also very important being they still serve large populations and are often used as a link in the chains of rebroadcast signals.
- 3.14 In addition to the analogue network, all the MTS and some of the HPRS sites are also used to provide a digital television broadcast network that is transmitted under the Freeview package. Freeview is consortium formed by the BBC, BSkyB and Arqiva following the demise of OnDigital. This network only covers about 73% of the UK population and as indicated above, because it has been squeezed into spectrum already occupied by an established analogue television platform, does not have the same resilience as the analogue network.

- 3.15 DSO will not change the category or hierarchy of any of the installations nor the basic technology of broadcasting signals over wide geographical areas to be picked up by individual receiving aerials. To that extent the main characteristics of the network will remain unchanged, but the particular technical and operational characteristics of the post – DSO network involve replacing the transmit antennas at many sites. Additionally, greater use of satellite technology is expected for active site monitoring and some programme feeds.

Site Specific Description

- 3.16 The existing well established Arqiva Rouncefall transmitting station comprises of a 22.5 metre lattice steel tower supporting antenna arrays for mobile phone operators T-Mobile and 3 with associated equipment accommodated within a fenced compound below. The site is managed by Arqiva, an international communications company, who operate the entire terrestrial television network in the UK.
- 3.17 Government has determined that at switchover the same level of population that can presently receive the analogue terrestrial transmissions should be able to receive digital services. Thus in addition to the 1054 existing television sites throughout the UK that will need to be altered to varying degrees approximately nine new sites will be required, including our Rouncefall site, to close identified gaps in coverage at switchover.
- 3.18 The new relay station will receive signals from the main station at Sudbury and will fall into the category of a HPRS within the transmission hierarchy. The inclusion of the application site into the new digital network will secure the continued provision of terrestrial television signals to in excess of **90,000 (ninety thousand) persons** post switchover, a significant coverage.

4. DESIGN AND ACCESS STATEMENT

- 4.1 The Design and Access considerations are examined in the context of the site and surrounding area, the national and local planning policy framework and the particular issues especially relevant to the determination of this application.

The Site and Surrounding Area

- 4.2 The site is an existing transmitting station and we have already identified its main characteristics and its role within the national network post switchover.
- 4.3 The site is located in a rural setting on elevated ground to the west of Ashingdon. The general area benefits from extensive blocks of woodland much of which helps shield the ground based apparatus and lower section of the tower from many public vantage points. In addition, given the topography of the surrounding land the site is only partially visible, or not visible at all, from the main settlement areas of Ashingdon and Hockley with only limited views from other populated areas. We regard to wider open views, the site is visible from parts of the nearby public footpath network however from more distant vantage points the visual impact of the transmitting station is greatly reduced against the backdrop of the nearby woodlands.
- 4.4 The current proposal may be clearly split into two categories for an assessment of visual impact, the works at ground level and the proposed tower works. As you may be aware, the site benefits from extensive natural screening which helps conceal the lower sections of the tower and the ground based apparatus thus the impact of the ground based development will have a negligible affect on the overall appearance of the site from any public vantage point.
- 4.5 The tower extension, pole-mount and antenna array may increase the prominence of the tower within the local landscape, given the increase in height of the existing structure, but we believe the impact will be limited and extremely localised. The main element of the development proposal which increases the structures overall height is the pole-mount supporting the new digital antenna array which has a diameter of 200mm and will appear as a slender addition surmounting the existing bulkier lattice tower. The antennas themselves will be mounted in a compact manner on the pole-mount, unlike the existing mobile phone antennas, and we believe little visual impact will arise as a result of this aspect of the proposed works.

National Policy Framework

4.6 Reference has already been made to the Government requirement to switchover broadcasting services from analogue to digital and the letter sent to all planning authorities advising them about this, a copy is attached to our submission for ease of reference. As PPG 8 – Telecommunications predates DSO, the letter also provides national policy guidance and we examine the main points under sub headings below.

A Consultative Approach

4.7 A two stage consultative approach is encouraged. To that end, Arqiva or what was NGW wrote to you to forewarn you again about the DSO project and to identify the particular sites in your area that will need to be converted.

4.8 As you will be aware, prior consultation has been previously carried out for a much larger scheme for DSO at this site. The original scheme was to redevelop the site to include a replacement 40.0 metre tower in order to achieve the necessary signal coverage. At this stage pre-application details were sent to the following for comment: -

- Leigh Palmer, Planning Officer, Rochford DC – It was advised that the transmitting station is located within the Metropolitan Green Belt and locally designated Special Landscape Area. As such the proposal to construct a replacement 40.0 metre tower was considered to compromise the Green Belt designation and would not gain local planning authority support
- Ashington Parish Council – No comments received
- Councillor Capon - No comments received
- Councillor Cutmore - No comments received
- Private residences - Chase Cottage, Ferndale, Crouch View, Abbeyville, Coroden, Ivy Chimneys, Marie Celeste, Colwood, Avoca Lodge, Wychwater, Glen Gorse, Rainbow, River View - No comments received
- Private residences - All of the Chase, Ashingdon - No comments received

- 4.9 Due to the negative feedback from Rochford District Council at the pre-application consultation stage Arqiva discussed other solutions to resolve the coverage deficit with Digital UK and Ofcom. The result has been to reduce the antenna height at our Rouncefall site and increase coverage from existing sites to fill the gaps. Thus we would respectfully suggest the balance between operational and environmental considerations has been struck in this instance, in accordance with best practice guidance.

The Reuse of Existing Sites

- 4.10 The Government clearly encourages the reuse of existing sites and this is notwithstanding any designated area within which they may lie. In this instance the site is included within the Green Belt, where the general presumption against inappropriate development applies.
- 4.11 With reference to paragraph 65 of the Supporting Guidance to PPG8, the development will not materially affect the openness of the green belt and so falls outside the definition of inappropriate development. In addition, the operational needs explained above constitute very special circumstances to outweigh the limited harm that may be perceived. In particular DSO is a Government mandated project of national importance and any shortfall in signal coverage will have a substantial negative effect on communities. In this particular instance the shortfall in terrestrial television signals will affect in excess of 90,000 people without the application site included into the UK network.
- 4.12 With regard to an alternative site for the DSO installation outside the Green Belt you will be aware that the majority of the surrounding land is also included within the Green Belt or within residential areas. Due to technical constraints it is not possible to substantially move the source of the digital signals, which we propose to supply from our Rouncefall site, without having dire consequences on the provision of those signals to the target areas.
- 4.13 However an alternative site at Bullwood Hall Prison (TQ8237 9124) was initially considered but discounted as it provided only limited coverage to the east of Ashingdon, through Rochford and into Southend. Therefore there are no other suitable and available sites outside the Green Belt that would lead to a better environmental solution that can be used in this case.

- 4.14 Finally, with regard to PPG2 – *Green Belts*, it is significant that the development proposed will not offend any of the five purposes behind including land within the green belt. To the contrary, the current proposals make an important contribution to sustainability objectives and will if anything help support those purposes.

Local Development Framework

- 4.15 The Proposals Map shows the site is within the Metropolitan Green Belt and near to a designated Local Nature Reserve and Wildlife Site. We believe the relevant document is the Rochford District Replacement Local Plan and in the absence of specific Green Belt policies which were not saved the relevant policy is the saved policy UT4 - Telecommunication Development. We are also mindful of policy NR7 – Local Nature Reserves and Wildlife Sites given the location of the transmitting station near to such a site.
- 4.16 With regards to Green Belt policy, you will be aware these have not been saved, and in the absence of supplementary guidance we would refer you to the review of PPG2 above.
- 4.17 Although the current proposals are not related to telecommunications in the usual sense, broadcasting television and radio signals now fall under the wider umbrella of the Communication Act 2003 and as such consideration is given policy UT4. The overriding principle of policy UT4 is that of mast and site sharing wherever possible in order to reduce the proliferation of telecommunication sites. Insofar as it is applicable the development accords with this policy as it involves the reuse of an existing, well established transmitting station and the development been confined to what is required, which helps minimise potential impact, objectives of the policy. In any event we believe consideration of the development proposals should weigh the benefits of maintaining terrestrial television signals within the area, for the benefit of a large population, against the minimal impact on the local environment.
- 4.18 With reference to policy NR7, the current development proposals will be accommodated entirely within the existing site compound and will not adversely affect the nearby designated area to any degree or compromise the nature conservation of the area.

Design and Access as Part of a National Network

- 4.19 The Government clearly advises that material considerations include the significance of the development as part of a national network. The particular role of the site has been explained together with the population dependent upon it for terrestrial television services. Network considerations also guide the shape and form of the development proposed.
- 4.20 The **amount and scale** of the new apparatus has been confined to what is operationally required for DSO. This is important to Arqiva to maintain the overall costs of the project, which would be unnecessarily high if the works were over specified.
- 4.21 As the proposals involve the alteration of an existing mast, the **layout, design and appearance** is necessarily guided by that and the associated structural implications. Likewise the new antennas must be compatible with both the digital technology and the antennas adopted for the whole new network. That said, the consultative approach adopted did allow for detailed observations to be made and to be taken into account where practicable.
- 4.22 For technical reasons, the broadcast antennas must be well clear of trees and foliage, which would otherwise affect viewers' reception. This is not therefore a form of development that can be substantially surrounded with **landscaping**. There is however a reasonable degree of landscaping along the boundary of the site which helps shield the compound. As described above the topography of the area and the existing trees and other foliage help screen the site from many wider views.
- 4.23 With regard to **access**, once installed and operational the permanent works should not result in any material change to the existing level of activity and traffic already generated through the lawful use of the site as part of a national television broadcast network.

ICNIRP Compliance

- 4.24 The Government advises that applications should be accompanied by an ICNIRP certificate. The installation will remain compliant with the relevant ICNIRP guidelines on public exposure and a certificate to this effect has accordingly been submitted with this application.

5. SUMMARY AND CONCLUSIONS

- 5.1 The application relates to works necessary to ensure the continued provision of terrestrial television signals to the sub-region post switchover. This is required by Government as part of a national transformation project known as the Digital Switchover.
- 5.2 Digital switchover will bring about a number of significant benefits. Of especial importance at local level, existing terrestrial services will be improved through greater universal choice and quality. The spectrum released through the project will also spur the next generation of electronic services available to the public, such as mobile TV and high definition TV.
- 5.3 The existing installation is a High Powered Relay Station and is of sub - regional importance as it provides direct and indirect television coverage to in excess of ninety thousand people.
- 5.4 In bringing forward the application, due prior consultation has taken place.
- 5.5 The reuse of the existing site results in an environmentally sound and sustainable solution to provide the necessary signal coverage and accords with the relevant Local Plan policy, insofar as applicable. These policies apply regardless of any designation.
- 5.6 The additional apparatus has been confined to the minimum that is required to facilitate DSO. The design and appearance of the apparatus is necessarily guided by the technical requirements of DSO and the existing apparatus on site.
- 5.7 The site will continue to comply with the relevant ICNIRP guidelines on public exposure and a certificate has been supplied to this effect.
- 5.8 In spite of the additional apparatus proposed, the net increase in visual prominence of the existing transmitting station will be within acceptable parameters. In any event any increase in visual prominence will be outweighed by the need to provide digital television signals as part of DSO required by Government.



5.9 To conclude, the development is in accordance with the local development framework and National Policy and we respectfully request the planning permission sought.

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Arqiva Limited