



**MuxCo Surrey & North Sussex Limited**

**An application to Ofcom for the  
Surrey & North Sussex local DAB digital radio multiplex**

**Part A – Public Section**

**March 2008**

## Executive summary

Please provide a summary of your application, of no more than four pages in length.

### MuxCo Surrey & North Sussex Ltd

1. MuxCo Surrey & North Sussex Ltd (for ease 'MuxCo S&S') was created to establish local DAB digital radio in Surrey & North Sussex in an efficient and cost effective manner, and to help enable UKRD Group to participate fully in DAB digital radio as both an owner and service provider within its home area.

2. The shareholders behind MuxCo S&S are:

- UKRD Group Ltd 50%
- MuxCo Ltd 50%

Each has digital radio experience, through multiplex ownership and digital broadcasting.

3. The ethos of the company is to provide DAB in a cost and operationally efficient manner to enable as many organisations as possible to broadcast. Through its various applications, MuxCo has already demonstrated its commitment to offer a wide range of broadcast options, such as variable bit rates and hours of broadcast, to make DAB as economical as possible. We believe this is the best way to encourage more stations to join the platform and provide compelling propositions for digital radio listeners.

4. Analogue stations will be provided an opportunity to broadcast on DAB to help ensure a consistent DAB focused message is broadcast to existing radio listeners and will help create cross-promotional opportunities for radio's digital platform. The new multiplex also provides opportunities for established local services to increase revenue and to grow their businesses by broadcasting to a wider area.

### The Surrey & North Sussex Marketplace

5. Compared with the UK, Surrey and North Sussex is generally older, with a higher proportion of adults aged 35 plus. Younger age groups, particularly under 25s, comprise a lower than average proportion.

6. As a result of its proximity to London, consumers in much of the area are able to hear many London-wide stations. These stations, often the flagships of the respective groups, have considerable programming and marketing budgets. As a result, they collectively account for almost 20% of listening, which is higher than the total achieved by the local BBC and ILR services (14.1%). Whilst many adults within the market appreciate localness, it appears they increasingly view the area as part of an ever-expanding London.

## The Surrey & North Sussex multiplex

7. The multiplex has been advertised to cover Surrey, parts of north east Hampshire and parts of north West Sussex and East Sussex – an area of 1.4m adults, using 2 frequencies which split the area into western and eastern halves. This provides opportunities to localise each half to super-serve their communities, although with an increased cost base, this is an area of development which will be reviewed during the licence period.
8. Our proposals are based on a thorough review of the market and the opportunities available. Our proactive involvement of shareholders, cost management, bitrate policies and innovative use of data services provides an excellent opportunity for a range of organisations to broadcast and MuxCo has already attracted (and will continue to attract) new operators to local radio.
9. Local radio has a strong commercial future – there will always be demand for local services that cater for local tastes and interests from both listeners and advertisers. It is important for the multiplex to provide opportunities for a wide range of local services, both existing and new, and for local radio operators to have the opportunity to provide these in an efficient and economical way. Indeed, we believe a local focus will be the unique selling point that allows these services to compete with those operated by the larger, London centric radio groups.
10. MuxCo S&S will provide opportunities for existing analogue services to broadcast in stereo and for a range of new services that collectively will broaden listener choice, cater for local tastes and interests, expanding the number of providers in the market.
  - 96.4 Eagle Radio
  - County Sound
  - Mercury FM
  - BBC Southern Counties Radio
  
  - *Shuffle - a service comprising music and listener-generated content for teenagers and young adults*
  - *Easy Radio - an easy listening melodic music service*
  - *NME Radio - a modern rock service*
  - *Traffic Radio - a traffic and travel service*
11. MuxCo S&S will maintain a dialogue and explore opportunities with Bright FM and Delta FM for these local services to launch on the multiplex. We also hope to launch additional audio services during the licence term.
12. In addition, we will carry a local Podcast Service providing opportunities for niche services to cater for a diversity of passions, interests and communities. Downloadable podcasts will include news from ITN, a local guide from Itchy, specialist music downloads, Asian programming, as well as locally produced podcasts.
13. The above analogue services are listened to by 28.3% of adults each week, and collectively account for 13.1% of total radio listening. In total, our proposed complement of simulcast and new services result in the multiplex having appeal to 84% of the adult population.

14. Capacity has been reserved for additional and complementary data services, such as EPG, downloads, traffic services, DABverts and slideshow. All radio stations able to utilise DLS and EPG from launch.

## **Meeting the Award Criteria**

### ***Our proposed coverage and timetable to launch***

15. Our proposals will deliver solid coverage of the major population centres and travel routes from launch. Our initial 4 transmitters will provide 'outdoor coverage' (e.g. to in-car and mobile receivers) to 87.4% of the adult population, and higher strength 'indoor coverage' (e.g. to kitchen radios) to 56.6% (noise limited). It is our intention is to launch the multiplex by July 2009.
16. We have identified a further 2 transmitters that if implemented would strengthen around the north of the area as well as increase outdoor coverage to 92.9% (indoor to 65.5%)

### ***Our ability to establish and maintain the service***

17. The shareholders behind MuxCo S&S have considerable analogue and digital radio experience:
  - UKRD Group operates 10 services, including 96.4 Eagle Radio and County Sound within the multiplex area, and has DAB experience through its involvement in South West Digital Radio and MuxCo Gloucestershire.
  - MuxCo is an ambitious and developing company with substantial digital radio experience and interests in a number of local multiplexes. Ofcom has described its management team as having "extensive experience in the management of local DAB multiplexes and the operation of digital radio services".
18. The shareholders are committed to their digital futures and are well-resourced companies that can support the multiplex throughout the licence term.
19. Our chosen transmission provider, National Grid Wireless, has considerable experience in building and operating local, regional and national DAB multiplex networks and delivering on time and on budget.

### ***Catering for local tastes and interests and broadening choice***

20. We have undertaken a comprehensive programme of research to underpin our application. This has included population profiling and analysis of existing radio listening habits, as well as a comprehensive survey of local tastes and interests, helping to ensure that the service we will provide reflects and serves the various tastes, interests and demographics of the population.
21. Our research supports the simulcasting of local analogue services (helping promote digital radio and drive listeners from analogue to digital) and for the proposed new services which will significantly broaden choice by providing something for all age groups, as well as more specialised communities of interest.

22. Locally relevant content will be included in the simulcast services and in at least two digital only services. Altogether, our proposals will provide further incentives for consumers to buy a DAB digital radio and will, we believe, help commercial radio grow further.

### ***Demonstrating local demand and support***

23. RAJAR provides strong evidence of demand and interest in the simulcast services. Our commissioned consumer research supports RAJAR and enables us to measure local demand for our proposed digital only services. This research demonstrates strong interest in the complement of services proposed, which collectively appeal to 84% of the adult population.

### ***Being fair and effective***

24. We have established fair and transparent policies for negotiations with potential programme and additional service providers, and maintain full records of contacts and discussions which take place, in whatever form, prior to, during and after the application process.
25. We have engaged with potential service providers in an open and non-exclusive manner allowing operators to ensure a digital future, whoever is awarded the licence.

### **Summary**

26. We believe that MuxCo S&S will be the most credible operator for the multiplex.
  - We will deliver robust local DAB coverage.
  - Our understanding of the market coupled with our comprehensive local research has helped ensure that our plans relate to the needs of local citizens and consumers. This will help ensure that we deliver services that truly appeal to Surrey & North Sussex and help commercial radio improve its market share. This information will also assist future development.
  - The multiplex is well resourced, in terms of both management and finance, and will be led by a management team with an unparalleled track record in applying for and successfully operating local multiplexes.
  - The shareholders have impressive track records in operating both local and digital-only stations. This expertise will be invaluable to the multiplex, as well as assisting the development of new programming streams. The involvement of UKRD Group as a shareholder also enables us to guarantee the carriage of 96.4 Eagle Radio and County Sound.
  - MuxCo S&S will deliver a cost effective local DAB solution, collectively benefiting all service providers and ensuring a long-term commitment to DAB digital radio.

## General information

### 1. Name of Applicant, Address, Telephone and Fax Nos., E-mail address

This must be a single legal entity: either a body corporate or a named individual person. If the former, a copy of the certificate of incorporation must be included with the application.

MuxCo Surrey & North Sussex Ltd

Registered Number            06204572  
Address:                         96a Curtain Road, London EC2A 3AA  
Telephone (daytime):         020 7739 7879  
E-mail address:                info@muxco.com

### 2. Main Contact (For Public Purposes)

Please nominate at least one individual to deal with any press or public enquiries, stating:

Name:                             Gregory Watson  
Telephone (daytime):         07917 413700  
Address:                         96a Curtain Road, London EC2A 3AA  
E-mail address:                gregory@muxco.com

### 3. Main Contact (For Ofcom Purposes)

Please nominate one individual to whom questions of clarification and/or amplification should be sent.

As above.

## Section 51(2)(a) and (b): Extent of proposed coverage area and timetable for coverage roll-out

### 4. Summary of coverage proposals

Provide a summary, fully consistent with the more detailed information about transmission sites supplied separately (see Q.6 below), of the coverage areas proposed to be achieved by the applicant's technical plan, and an estimate of the adult (aged 15+) population which will be served by this local radio multiplex service. For the avoidance of doubt, Ofcom's assessment of coverage, and the concomitant roll-out obligations applied in the licence, will be based solely on the transmission data supplied in response to Q.6 of the application.

27. The transmission proposal is designed in conjunction with National Grid Wireless ('NGW') to provide optimum population coverage across the licensed area, taking into account urban areas and the main road network. The plan also takes into account the footprints of existing local multiplexes, the footprints of the existing analogue services and their spheres of influence.
28. Our proposals are to launch the multiplex with common services across the two frequencies. We will work with NGW to explore opportunities to provide solutions to enable service providers to broadcast to either half of the multiplex in a cost effective and efficient manner.
29. At launch, we will use 4 transmitters to provide outdoor coverage to 1,225,339 adults (87.4%) and indoor coverage to 793,940 adults (56.6%):

#### **Guildford**

A medium power transmitter using the existing National DAB antenna providing:

- Robust indoor coverage to most of West Surrey.
- Outdoor mobile coverage to the M3, M25, A3 and A31.
- Mobile device coverage in a large proportion of key settlements.

#### **Reigate**

A medium power transmitter utilising a directional antenna to provide:

- Robust indoor coverage to most of East Surrey and Crawley.
- Outdoor mobile coverage to the M23, M25, A22, A23, A24 and A25.
- Mobile device coverage in a large proportion of key settlements.

#### **Midhurst**

A high power transmitter using a highly directional antenna to serve West Sussex.

- Robust indoor coverage to most of west Sussex including unserved parts of Midhurst, Cranleigh, Haslemere and Billingshurst.
- Outdoor mobile coverage to the A3 and A272.
- Mobile device coverage in a large proportion of key settlements.

#### **Leatherhead**

A medium power transmitter using the existing National DAB antenna providing:

- Robust indoor coverage to the Leatherhead and Great Bookham area.
- Outdoor mobile coverage to fill a large unserved section of the M25 and sections of the A3 towards the London.
- Mobile devices coverage in a large proportion of key settlements.

30. In planning the network, NGW has assumed the following service levels:
- 58dBuV/m outdoor mobile.
  - 65dBuV/m indoor portable.
  - 76dBuV/m indoor handheld.
  - Interference Limited coverage is calculated using the interfering transmitter data and ERPs per Ofcom.
31. We are not currently proposing to implement any further transmitters. However, we have identified two additional transmitter sites which we would like to review and introduce during the licence term.

### Crowborough

A medium power transmitter utilising a directional antenna to provide:

- Robust indoor coverage to most of East Sussex.
- Outdoor mobile coverage to most of the transport corridors including the A22, A26 and A272.
- Mobile devices coverage in a large proportion of key settlements.

### Crystal Palace

A medium power transmitter utilising a directional antenna to provide:

- Reinforcing indoor coverage to parts of Surrey and West Sussex north of the M25 and the boundary of the licence area, including Epsom, Ewell, Esher, Walton-on-Thames.
- Outdoor mobile coverage to most of the transport corridors from London into the area including the M25, M3, A3, A23, A24 and A217.

32. Ofcom's advertisement identifies a potential adult 15+ population of 1,400,000. NGW calculates a potential adult 15+ population of 1,401,989 within the PPA, and percentage coverage is based on the NGW population. Coverage forecasts with combined Block 10C and 10B channels are:

Initial 4 transmitters	Outdoor Coverage (58 dB)		Indoor Coverage (65 dB)	
	Adults '000	% Covered	Adults '000	% Covered
Noise Limited	1,225,339	87.4%	793,940	56.6%
Interference Limited	1,118,140	79.8%	778,776	55.6%

Initial plus Crowborough	Outdoor Coverage (58 dB)		Indoor Coverage (65 dB)	
	Adults '000	% Covered	Adults '000	% Covered
Noise Limited	1,271,608	90.7%	864,387	61.7%
Interference Limited	1,169,676	83.4%	849,061	60.6%

Initial plus Crystal Palace	Outdoor Coverage (58 dB)		Indoor Coverage (65 dB)	
	Adults '000	% Covered	Adults '000	% Covered
Noise Limited	1,256,583	89.6%	847,391	60.5%
Interference Limited	1,149,744	82.0%	824,732	58.8%

Initial plus Crystal Palace and Crowborough	Outdoor Coverage (58 dB)		Indoor Coverage (65 dB)	
	Adults '000	% Covered	Adults '000	% Covered
Noise Limited	1,302,806	92.9%	918,714	65.5%
Interference Limited	1,202,078	85.8%	896,194	63.9%



## Standalone Coverage

33. The following table shows the coverage (Interference Limited) within the PPA of each individual site, demonstrating the considerable overlap between transmitters which will ensure a reliable signal to a significant proportion of the licensed area, even should one transmitter be on reduced power or have failed.

Transmitter Site	Standalone Coverage: Outdoor	Percentage Licence Area	Standalone Coverage: Indoor	Percentage Licence Area
Guildford	399,293	28.5%	239,372	17.1%
Midhurst	339,504	24.2%	185,744	13.3%
Leatherhead	184,608	13.2%	107,750	7.7%
Reigate	357,521	25.5%	265,459	18.9%
<b>Proposed Future Sites</b>				
Crowborough	153,708	11.0%	99,278	7.1%
Crystal Palace	86,723	6.2%	61,811	4.4%

## Cumulative Coverage

34. The table below shows how the PPA coverage (Interference Limited) using Block 10C is achieved up through the use of a network of transmitters.

Transmitter Site	Cumulative Coverage: Outdoor	Percentage Licence Area	Cumulative Coverage: Indoor	Percentage Licence Area
Guildford	399,293	28.5%	239,372	17.1%
Leatherhead	556,001	39.7%	349,955	25.0%
Midhurst	887,430	63.3%	547,234	39.0%

35. The table below shows how the PPA coverage (Interference Limited) using Block 10B is achieved up through the use of a network of transmitters.

Transmitter Site	Cumulative Coverage: Outdoor	Percentage Licence Area	Cumulative Coverage: Indoor	Percentage Licence Area
Reigate	357,521	25.5%	265,459	18.9%

## Network Resilience

36. The following table shows the impact (Interference Limited) on Block 10C from the loss of one transmitter at a time, demonstrating its contribution to the overall network.

Transmitter Site	Cumulative Population Loss: Outdoor	Percentage Lost	Cumulative Population Loss: Indoor	Percentage Lost
Loss of Guildford	312,256	22.3%	241,976	17.2%
Loss of Leatherhead	144,967	10.3%	116,032	8.2%
Loss of Midhurst	331,429	23.6%	197,297	14.0%

37. The following table shows the impact (Interference Limited) on Block 10B from the loss of one transmitter at a time, demonstrating its contribution to the overall network.

Transmitter Site	Cumulative Population Loss: Outdoor	Percentage Lost	Cumulative Population Loss: Indoor	Percentage Lost
Loss of Reigate	357,521	25.5%	265,459	18.9%

## 5. Timetable for coverage roll-out

Outline the timetable in accordance with which the coverage proposed at Q.4 would be achieved, and the technical means by which it would be achieved. This should also be fully consistent with the more detailed information provided confidentially in response to Q.6.

38. We believe that an early launch of the multiplex brings the greatest possible advantage to the development of the digital radio audience in Surrey & North Sussex. We therefore propose to launch by July 2009 with all 4 transmitters.
39. However we are aware that in 2009 DSO air-works for will be undertaken at Guildford, Midhurst and Reigate. Our proposed use of the NGW national DAB antenna minimises construction constraints on the DSO programme and means that potentially we can be ready for an April 2009 launch. Nearer the time, when the impact of DSO in terms of power reductions, and certainty of dates is more clear, we would discuss with Ofcom the optimum time to bring this licence on air.
40. Subject to above we have made contingent arrangements with NGW to ensure that this launch date can be achieved. In making this assertion we have assumed the multiplex licence would be awarded by May 2008.
41. We have identified Crowborough and Crystal Palace as areas for potential network enhancement. At present, no transmitters are planned and no dates proposed. However, we wish to reserve the right to consult with Ofcom during the licence term to examine these and other opportunities to enhance and increase population coverage in an economically viable manner.

### Antenna Systems and Combiner

42. NGW will be the owner of all the required antenna systems. Discussions on all the antenna systems have taken place between NGW and NGW Network Access, and we are advised that no obstacles are expected to meeting the timetable for launch other than the impact of DSO discussed above.

### Transmitter systems

43. NGW propose to use transmitters from a major European supplier, Rohde & Schwarz (R&S) with whom they have a Frame Agreement. R&S has confirmed their ability to provide the necessary transmitter systems and installation services within the required timescales.

### Distribution

44. The distribution between the multiplex centre and the transmitters will be contained on NGW SHF link circuits. NGW confirms that it is able to install the new SHF link infrastructure within the timescale of the transmission roll-out.

### Accommodation and Power Requirements

45. NGW Network Access have confirmed that it can provide suitable accommodation and power supply at two of the sites. At the remaining two launch sites, NGW has negotiated new accommodation and power supply agreements with Arqiva Network Access.

## 6. Detailed coverage proposals

Provide, in an electronic text file, details of the technical plan, which should consist of the following components: assignment details, implementation table, and implementation data.

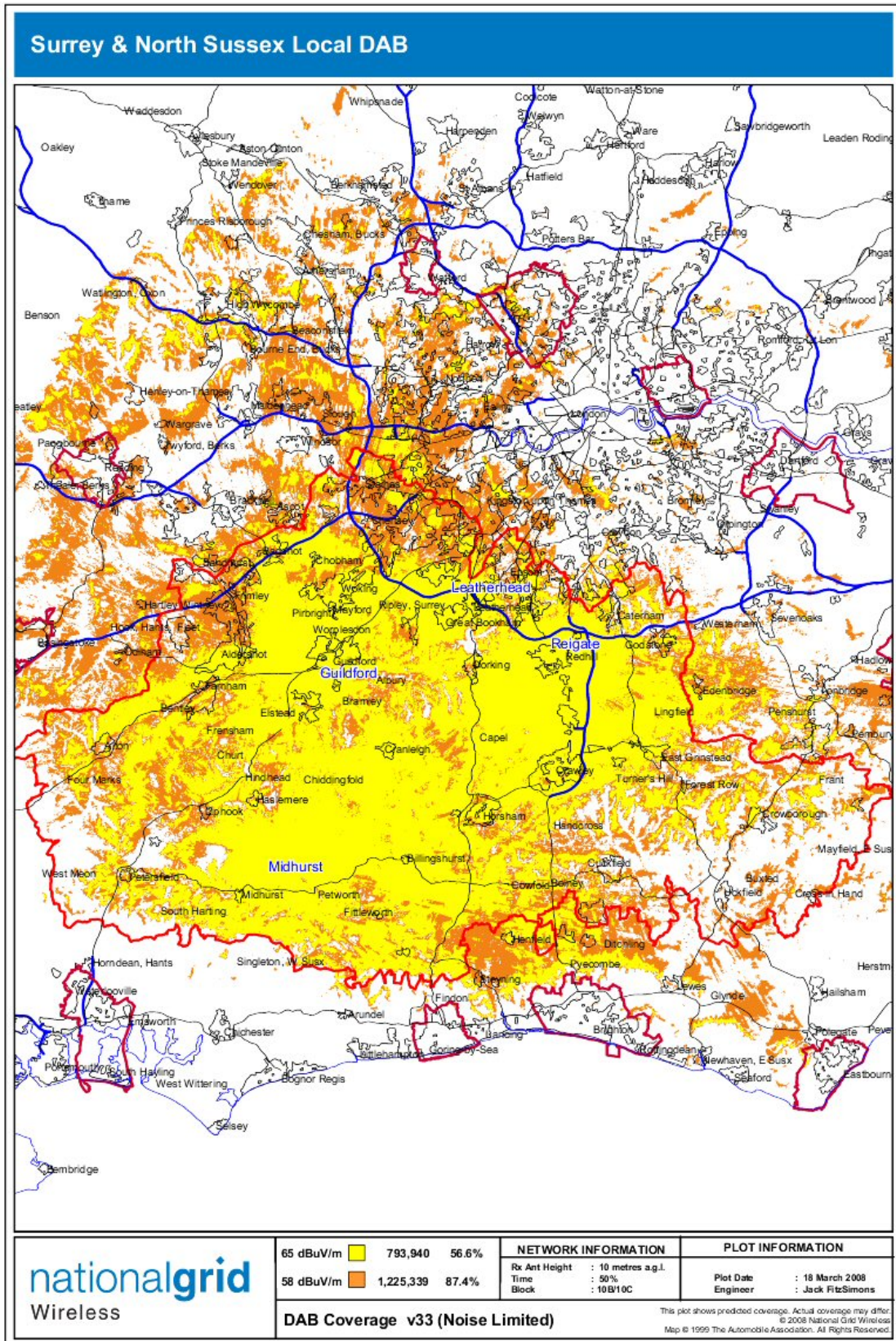
a) The first part of the technical plan is an electronic file of assignment details. This gives the relevant technical detail of each transmitting station which the applicant is undertaking to provide as part of its network. It will be used to enable Ofcom to estimate the coverage which will be achieved by the applicant, on a basis consistent with other applicants. It will also enable confirmation of the plan's compliance with Ofcom's various technical requirements. If more than one Technical Plan is proposed, a separate file should be submitted for each one. Each file of assignment details must be submitted in the data format specified at <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>. All files must be supplied in flat text format. This is the data format in which all transmitter co-ordination requests to Ofcom have been supplied to date, and is based upon ASCII97 defined by the European Radiocommunications Office – the Wiesbaden 1995 Plan management body.

46. The assignment details accompanying this application are provided under separate cover as an electronic text file.

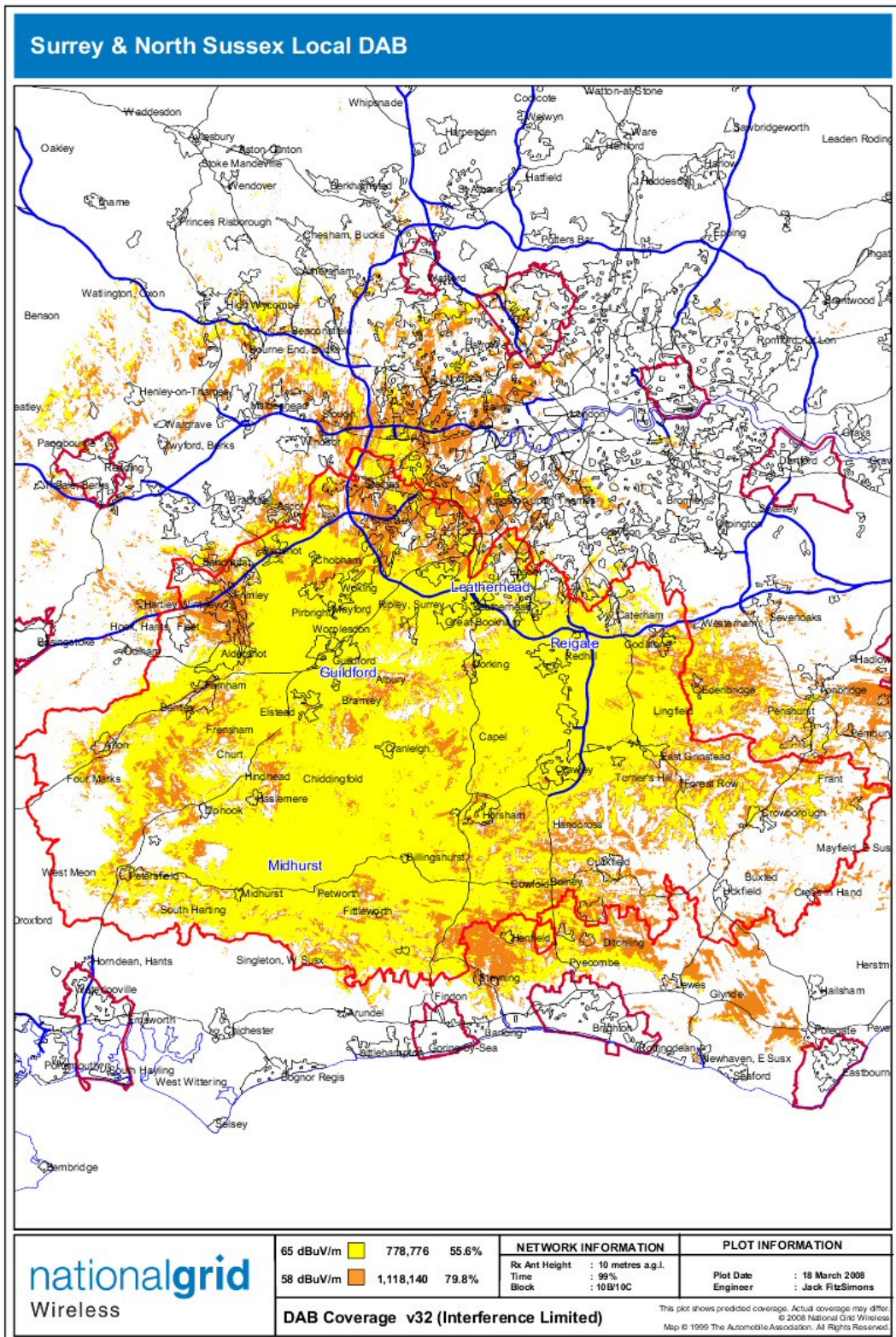
b) A separate table, the implementation table, should also be provided for the technical plan. This should list, for each proposed transmitter, the date of implementation promised with the parameters promised in the transmission plan, the owner/lessor of aperture space on the mast/tower, and any relevant accompanying notes. If it is proposed to introduce a transmitter with different parameters (typically lesser power or height) for an interim period, then on both lists there should be one entry for the initial assignment, and a second entry for the one which replaces it, with a note stating which transmission assignment is replaced.

Site Name	NGR	Date of Implementation (see note below)	Owner/lessor of aperture space on mast/tower	Antenna height (metres)	Notes
Guildford	SU 974 485	July 2009	NGW	39m	NGW Network Access has offered a share of the existing National Digital Radio Antenna.
Midhurst	SU 912 250	July 2009	NGW	82m	NGW Network Access has offered to install 2 tiers of new 3 element yagi antennas at this site.
Leatherhead	TQ 135 590	July 2009	Arqiva	52m	Arqiva Network Access has offered a share of the existing National Digital Radio Antenna.
Reigate	TQ 256 521	July 2009	NGW	40m	NGW Network Access has offered to install new Cardioid antennas at this site.

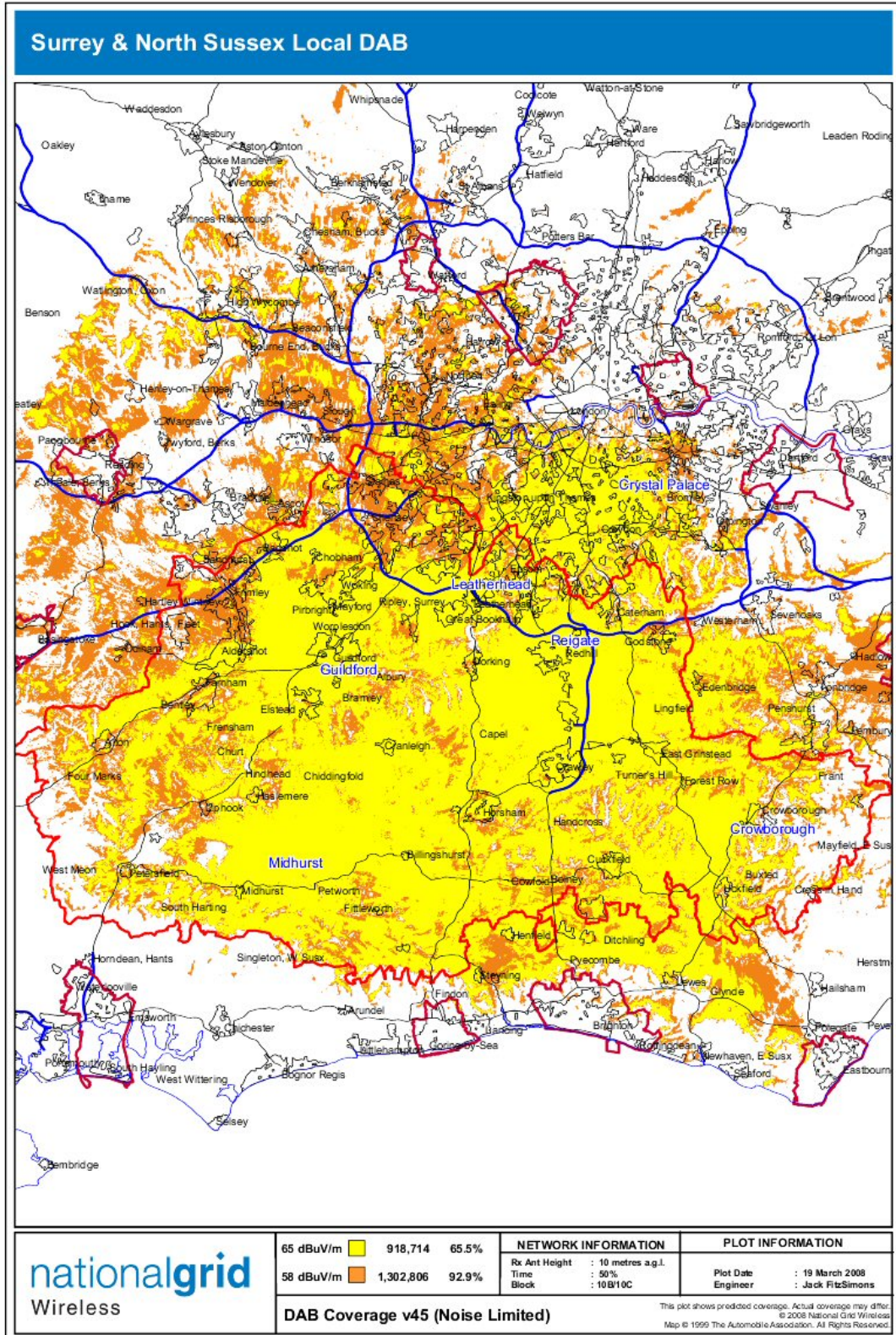
47. The following map highlights proposed noise limited coverage at launch.



48. The following map highlights proposed interference limited coverage at launch.



49. The following map shows (noise limited) coverage if both Crowborough and Crystal Palace were to launch (detailed maps for Crowborough and Crystal Palace are included in Part B).



c) Each transmission assignment should also be represented by site implementation data, specific to each transmission site (only one set of data for each site should be submitted). This detail is intended to elicit the practicability of the technical plan. For each site name (corresponding to assignment details and implementation table):

- i) If existing aerials are to be used, this needs to be stated and an explicit reference made. If not, then applicants should provide a sketch diagram (or set of diagrams), approximately to scale, of the portion of the supporting structure on which the radiating aerials are to be mounted. Show the radiating aerials, and the aerials of other services mounted immediately above, below, and at the same level as, the radiating aerials of the applicant's service.
- ii) Provide details of the building at the site in which the transmission equipment is to be housed.
- iii) Provide confirmation from each of the relevant parties that they have seen and agreed the applicant's proposals (to the extent that this includes new works) in respect of:
  - aerial mounting on the supporting structure, as proposed in the sketch
  - diagram;
  - running of feeder cable from transmission system to aerial(s);
  - sharing of aerials and insertion/use of combiners, where relevant;
  - siting of transmission equipment;
  - supply of power;
  - building works (if any).

The relevant party in each case, namely whoever controls the infrastructure (mast, cableways, building, power), should be named explicitly.

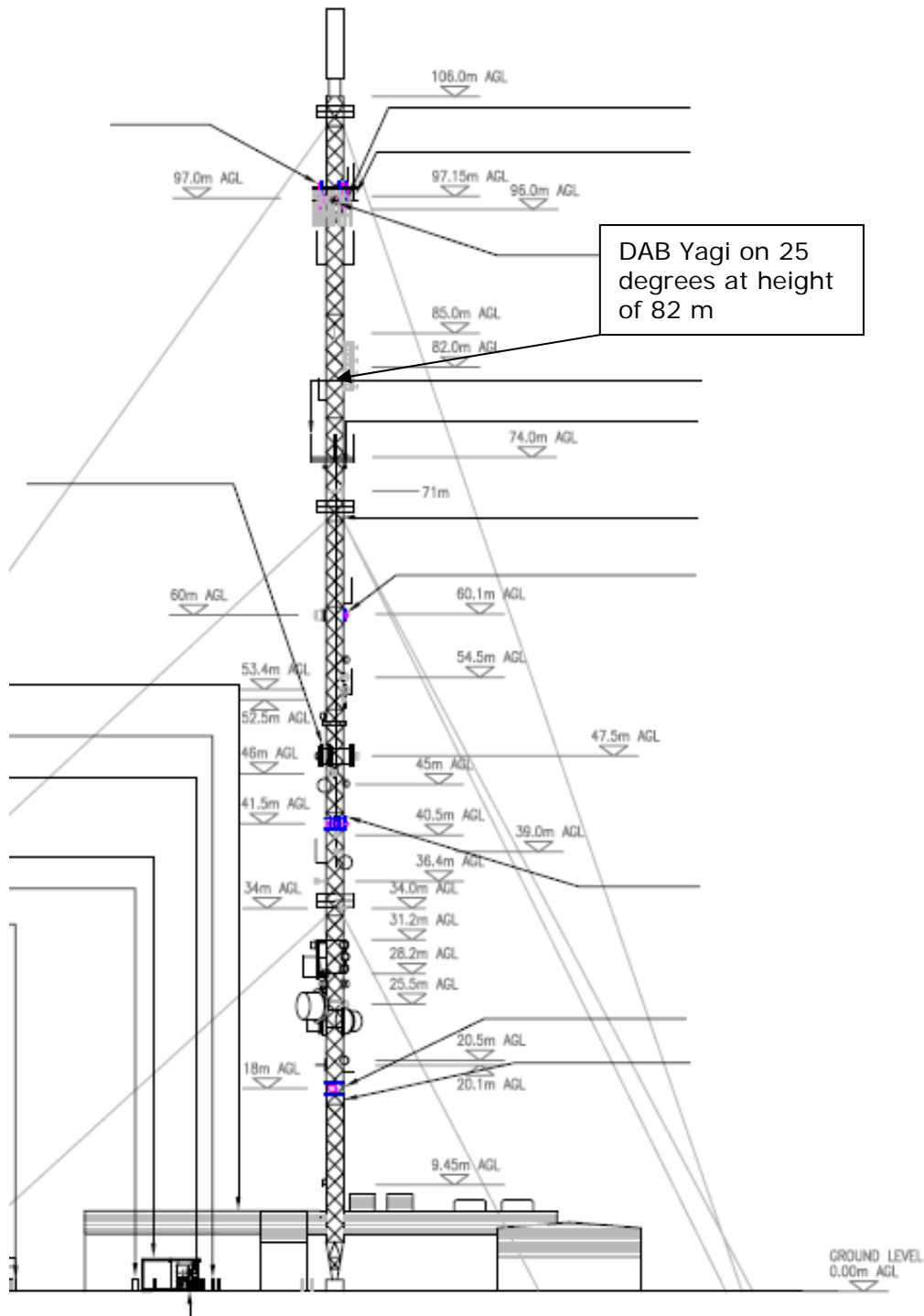
- iv) State whether and if so how the transmission arrangements are expected to change due to the TV digital switchover programme.

Note: submission of this information does not imply that Ofcom will validate the design of the aerial system. The licensee will be required to adhere as far as is reasonably practicable to the antenna pattern proposed in the assignment details, and in all cases to limit the maximum radiated power in any given direction as may be required by Ofcom.

**i) Diagrams**

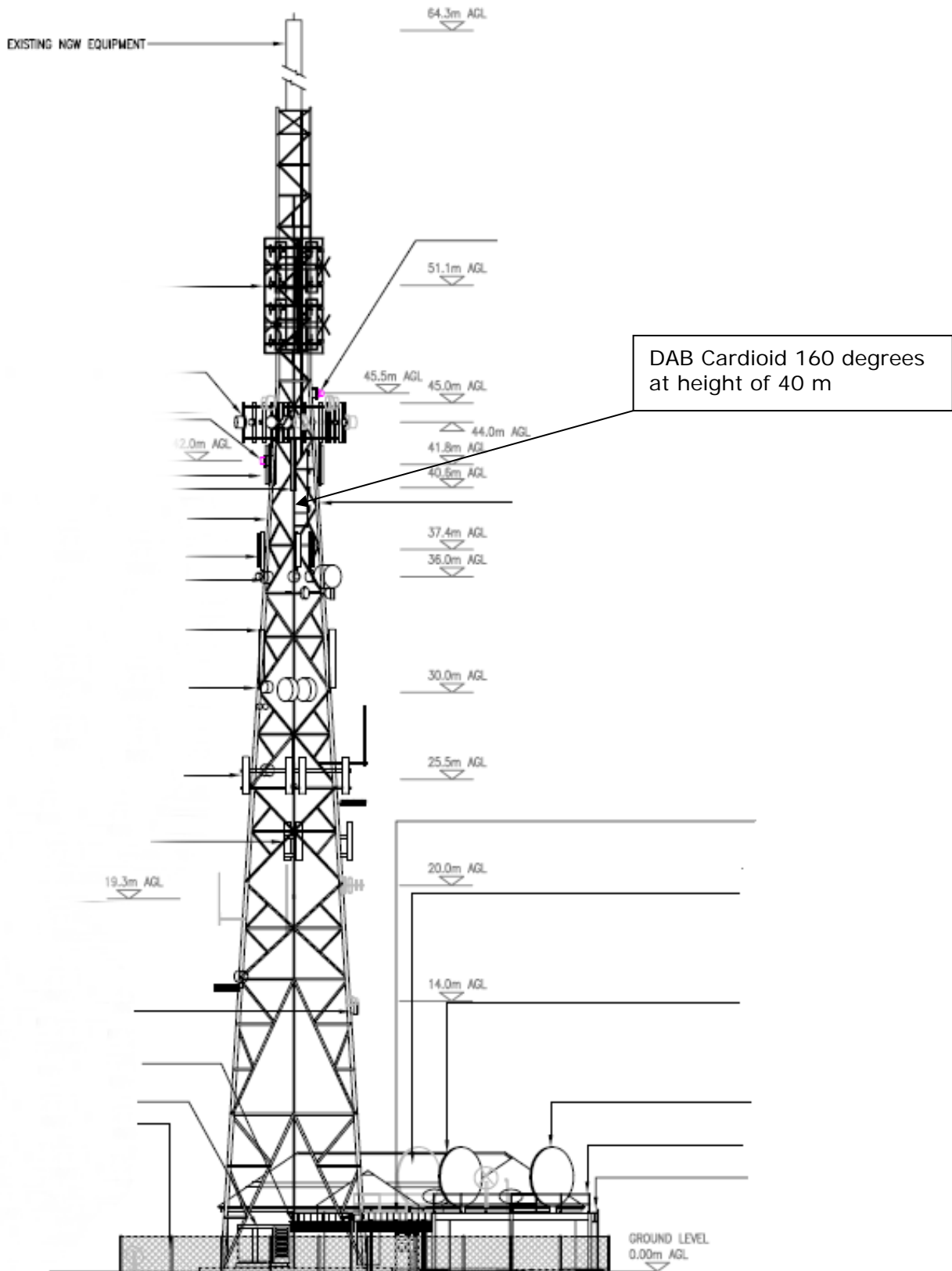
50. Drawings of each of the new proposed antenna at the transmitter sites are shown below in this document. All existing antennas are not shown as details are already known.

**Midhurst**





**Reigate**



## ii, iii & iv) Transmitter Accommodation Antenna Systems, Power, and Building Works

51. The Network Access supplier has confirmed that the designs of the existing and new antennas and feeder systems are suitable for use at the powers indicated in the Assignment Details, and that the sites can be made available for the proposed transmitter systems. Electrical power is available. Minor building works are required in a small number of cases and the Network Access supplier has confirmed that it will undertake these.

Site Name	Antenna System	Antenna Height (m)	Antenna Owner Permission	Accommodation Permission	Power Supply	Impacted By DSO
Guildford	Existing Digital Radio Antenna	39m	NGW Network Access.	NGW Network Access is providing accommodation in the existing NGW Area.	To be provided by NGW Network Access	See Note 1
Midhurst	New 2 tier Yagi Antenna	82m	NGW Network Access.	NGW Network Access is providing accommodation in the existing NGW Area.	To be provided by NGW Network Access	See Note 1
Leatherhead	Existing Digital Radio Antenna	52m	Arqiva Network Access.	Arqiva Network Access are providing new accommodation	To be provided by Arqiva Network Access	No UHF TV on site
Reigate	New 2 tier Yagi Antenna	40m	NGW Network Access	NGW Network Access is providing accommodation in the existing NGW Area.	To be provided by NGW Network Access	See Note 1

### Note 1

The DSO (Digital Switch Over) program for Guildford, Midhurst and Reigate is still being agreed. However the impact is expected to be:

#### 2009 works

- There will be mast strengthening work. This is not expected to have a major impact on the new DAB multiplex

#### 2010 works

- To facilitate the DSO UHF antenna works, a small number of short periods of quarter power working are expected.

#### d) Provide the following details regarding transmission arrangements:

##### i) Any transmission contracts that have been agreed

52. In the event of winning the licence, NGW will undertake the provisions for transmission and multiplexing.

##### ii) The status of these agreements

53. Initial agreements exist with NGW to put the proposed contracts in place.

## 7. Other technical proposals

- a) Supply a network diagram, with associated tables and labels as necessary, showing in terms of functionality and (in principle) location: the source of each proposed digital sound programme service, digital additional service or television licensable content service, the point(s) of multiplexing, the point(s) of control of the elements of the multiplex (both FIC and MSC) and the distribution circuits to the transmitters. State the nature of the bearer circuit in each case, and its possible provider.
- b) For each of the data services proposed in Q.11(d) and Q.12, show: the transport mechanism within the multiplex on which it would be carried; whether stream or packet mode; the average net data rate (including any protection or encryption bits additional to those provided for in the ETS 300 401 specification); the range of data rates which might apply in any one transmission frame in support of the service, both net and (specifically attributable to the service concerned) gross; the protection mechanisms applying to their effective transmission (with reference to the options available in the ETS 300 401 specification, quantified where the specification provides for different numerical values to afford protection); whether it should be regarded as an additional service, a television licensable content service or an ancillary service; whether encrypted or not, and the encryption system envisaged; the use to which the data service would be put, including a justification for the multiplex capacity required. Outline how compliance will be achieved with the requirement that no more than the statutory proportion of the total multiplex capacity will be devoted to non-programme related data services; the figure excludes Synchronisation, MCI and SI). See also Q.20, about audio services.
- c) With reference to the response to Q.20, supply a diagram showing the relationship between the following elements of the multiplex: services; service components; transport elements (MSC sub-channels: dedicated, and X-PAD; FIDC).
- d) List any of the services in the multiplex which it is proposed be susceptible to interruption by announcements common to more than one service. If announcements are to be made on a geographically-selective basis, describe how this is to be achieved within the provisions of the ETS 300 401 specification.
- e) Describe how it is anticipated that the features of the ETS 300 401 will be used, if at all, in consideration of continuity of a programme service, or the offering of an alternative service, to listeners who lose reception of the multiplex signal, particularly in vehicles.

*The response to this question should be submitted in confidence.*

54. Our response to this question is submitted in confidence in Part B.

## **Section 51(2)(b): Timetable for commencement of services**

### **8. Commencement of services**

If it is envisaged that any of the digital sound programme services or their related ancillary services will not begin broadcasting from the start of the radio multiplex licence period, provide details of which service(s) will not commence from the launch of the radio multiplex service, the reason(s) for this, and an indication of the expected timescale for the commencement of the service(s).

55. It is envisaged that all services will broadcast from the start of the licence period.

## **Section 51(2)(c): Ability to establish and maintain proposed service**

### **9. Ownership and control of company which will operate the licence**

#### **(a) Board of Directors**

i) Provide the name, occupation, other directorships, other media interests, background and relevant media experience of each director (executive and non executive), including the proposed chairperson.

56. Please see the following pages. It is proposed that the chair will rotate between the directors.

ii) If there are firm plans to appoint any further directors, provide information (with details of any specific individuals in mind). This information may be submitted in confidence.

57. There are no plans to appoint any further directors.

## **William Rogers**

Occupation:  
Chief Executive, UKRD Group Ltd

Other directorships:  
5 Valleys Radio (Stroud) Ltd, Bristol Community Radio Ltd, Cambridge Radio Ltd, Community Ads on Line, County Sound Ltd, County Sound Radio Ltd, Eagle Radio Ltd, Extreme Radio Ltd, KLFM Ltd, Net-Additions Ltd, Net-Leads Ltd, Netrank Ltd, Norwich Broadcasting Ltd, North Gloucestershire Radio Ltd, Pirate FM Ltd, Pirate Radio Group Ltd, Pirate Radio Ltd, Pirate Television Ltd, Save Buckets Ltd, Star Media Group Ltd, Star Radio Group Ltd, Star Radio Network Ltd, South West Digital Radio Ltd, Surrey & North East Hampshire Radio Ltd, Swansea Radio Ltd, Today FM Ltd, UKRD Radio Services Ltd, UKRD Group (EBT) Ltd, UKRD Group Ltd, UKRD Support and Development Ltd, Web Gifts Online Ltd, Westcom Media Ltd, X-Cel F.M. Ltd, Oldham FM Ltd, The Small Business Bureau, William Rogers Insurance Brokers, MuxCo Gloucestershire Ltd.

Other Media Interests:  
None

William, a Cornishman by birth, became involved in radio in 1990 as part of the founding group of directors applying for the Cornwall licence; successfully now on air as Pirate FM102.

Leaving school at the age of 17, he embarked upon a career in the insurance broking world, eventually becoming a Registered Insurance Broker and setting up his own firm in 1984.

In 1982, William became an elected member of Penwith District Council at the age of 22 and Leader of the Council in 1988. In 1990 at the age of 30, he was awarded the MBE for political and public service.

He has played an active part in charitable and political work in the South West for twenty years having been a school and college governor, Chairman of a Housing Association, one of twelve regional treasurers for the Conservative Party and fighting a seat in the 1997 General Election.

With the merger of Pirate FM and UK Radio Holdings to form UKRD Group Limited in 1994, William joined the new board. Following a spell as Chief Operating Officer in 2000, he became Group Managing Director in October 2001 and Chief Executive four years later.

UKRD Group owns and operates radio stations across the UK, including Surrey, Bristol, Cornwall and East Anglia. Its first DAB involvement was as a shareholder and service provider on the Plymouth & Cornwall multiplex.



## **Gregory Watson**

Occupation:  
Managing Director, MuxCo Ltd

Other directorships:  
Reception Media Ltd, Folder Media Ltd, MuxCo Ltd, MuxCo North Yorkshire Ltd, MuxCo Northeast Wales & West Cheshire Ltd, MuxCo Hereford & Worcester Ltd, MuxCo Gloucestershire Ltd, MuxCo Wales Ltd, MuxCo Lincolnshire Ltd, Radio Academy, Radio Academy Trading Ltd, Children's Radio UK Ltd, Children's Radio UK (London) Ltd

Other Media Interests:  
None

Gregory graduated from the University of Exeter in 1986 with a degree in Accountancy studies, and commenced his career with KPMG Peat Marwick in Guildford as a trainee accountant, where he qualified as a Chartered Accountant in 1990.

In 1991, he moved to the Radio Authority as Deputy Head of Finance. In this role his responsibilities were split between the management of the day-to-day financial operations of the Authority, the licensing and regulation of commercial radio and analysis of the radio and related media industries.

In 1998, Gregory joined GWR Group plc as Head of Special Projects, with responsibility for looking at all new analogue and digital opportunities. In this capacity, Gregory was involved in the submission by Digital One for the application to run the national digital radio multiplex, and played a significant role in the pre-operational period of that multiplex prior to its launch in November 1999. Gregory also oversaw the development of GWR's local multiplex network, NOWdigital, and of the consortia multiplex businesses of DRG London, South West Digital Radio and NOWdigital East Midlands.

In 2001, Gregory was promoted to Group Corporate Development Director; a role under which he oversaw GWR's strategic development in new media alongside the development of local and regional analogue and digital radio licences. Gregory played a central role in the merger of Capital Radio plc and GWR Group plc which led to the formation of GCap Media plc in May 2005.

Gregory has always been passionate about commercial radio broadening its horizons and developing new commercial opportunities. In 2005, Gregory orchestrated the establishment of Children's Radio UK Ltd as a joint venture between GWR Group, HIT Entertainment and Susan Stranks. The company launched FUN radio as the UK's first (and still only) radio station dedicated for pre and primary school children and their parents and carers.

In 2007, recognising that a significant proportion of the radio industry was being left behind by digital advancements, not because they were unable to take an active role but often were not encouraged to do so, Gregory left GCap Media to provide digital media advice to a number of independent radio and media companies, and to create MuxCo.

Gregory is a Trustee of the Radio Academy, and is Chairman of Radio Academy Trading Ltd. Gregory takes an active role in the development of the radio sector, and in the past has sat on the RadioCentre's Public Affairs Sub-Committee and ad-hoc committees. In 2007 Gregory was appointed a Public Member of Network Rail.

## **Deanna Hallett**

Occupation:  
Managing Director, Hallett Arendt

Directorships:  
Hallett Arendt Ltd, Folder Media Ltd, MuxCo Ltd, MuxCo North Yorkshire Ltd, MuxCo Northeast Wales & West Cheshire Ltd, MuxCo Hereford & Worcester Ltd, MuxCo Gloucestershire Ltd, MuxCo Lincolnshire Ltd

Other Media Interests:  
Fellow of the Radio Academy, Full member of the Market Research Society, Radio Centre RAJAR Research Committee

Deanna has more than 35 years experience in marketing and research. Her career began in 1972 at NOP working on audience and programming research with the first wave of radio licence applicants.

She developed her radio research skills at Independent Radio Sales where she ran a mini RAB working with advertisers, agencies and client radio stations to improve the position of radio within the media and specifically with agencies to heighten their knowledge and understanding of planning, buying and researching radio. With IRS client radio stations she advised in all areas of programming research, sales product knowledge training and station marketing. She was appointed to the board as Marketing and Research Director in 1982.

Deanna set up Hallett Arendt in 1986 to work with radio stations in sales training, programming research and all aspects of station marketing having launched Essex FM as the first format driven station in the UK. Deanna was also involved in the first stage of cable franchise applications. At NOP, she was instrumental in developing the now established radio diary research methodology and has sat on the RAJAR research committee since its inauguration.

Deanna is acknowledged as one of the top licence consultants in the country, with Hallett Arendt holding a record of unparalleled success, both in the UK and Ireland. They have worked as part of the winning teams for Classic FM - the first Independent National radio station - and Digital One - the first national digital radio multiplex operator. They also have successfully worked on a host of local and regional analogue licences as well as the new generation of digital services, again, both local and regional.

In 2003 Deanna set up a training programme, specifically with programmers in mind – 'The Programmers Development Plan', which has already been implemented across the Bauer group. This interest in training has been consolidated through the launch of a joint venture with Francis Currie to form Currie Hallett Radio Skills Development Ltd.

Moving forward, Deanna aims to bring all her expertise to the MuxCo network by offering training, research and marketing advice to service providers to help them maximise audiences and revenue.

## (b) Proposed Investors and Shareholding Structure

Full details of the proposed shareholding structure should be provided, including:

iii) Names and addresses of all existing or proposed shareholders.

Shareholder	Shares	% Shareholding	% Loan stock
<b>UKRD Group Ltd</b> Carn Brae Studios Wilson Way Redruth Cornwall TR15 3XX	20,000	50%	50%
<b>MuxCo Ltd</b> 96a Curtain Road London EC2A 3AA	20,000	50%	50%

iv) Total number, class/classes of shares and issue price of shares (specify voting, non-voting, preference, other etc.).

58. 40,000 £1 ordinary shares issued at par.

v) All voting shareholders and holders of 5% or more of non-voting shares and loan stock should be named. State the number, class/classes and price of shares to be issued to each investor.

59. See above.

vi) Outline any shareholders agreements or arrangements which exist.

60. A shareholders agreement will be entered into after the award of the licence. The shareholders have agreed terms which cover key issues of governance relating to the company including shareholdings, board composition, funding, pre-emption and confidentiality.

vii) Where a corporate body other than a current Ofcom licensee will be providing 30% or more of the required funding, details should be given of its directors and main shareholders, and of its activities.

61. Not applicable.

viii) Ofcom may request additional information regarding the shareholders, or any other providers of finance, listed in the application.

62. We would be happy to provide any information as requested by Ofcom.



### **(c) Involvement of the Applicant in Specified Activities**

Details are required of the involvement by the applicant and its participants (including shareholders or other subscribers of more than 5% of the applicant's total funding requirements) in any of the activities listed below, and the extent of the interest. For these purposes, the applicant includes associates of the applicant (i.e. directors and their associates and other group companies).

**i) Advertising agencies**

None

**ii) Newspapers**

None

**iii) Other broadcasting interests**

**UKRD Group Ltd**

UKRD has interests in the following companies:

- Bristol Community Radio Ltd (86.95%)
- Cambridge Radio Ltd (100%)
- KLFM Ltd (100%)
- Oldham FM Ltd (50%)
- Pirate FM Ltd (100%)
- North Gloucestershire Radio Ltd (100%)
- Westcom Media Ltd (100%)
- X-Cel F.M. Ltd (100%)
- South Hams Ltd (23%)
- Eagle Radio Ltd (98.193%)
- South West Digital Radio Ltd (33.3%)
- MuxCo Gloucestershire Ltd (25%)

**MuxCo Ltd**

MuxCo has interests in the following multiplex companies:

- MuxCo Hereford & Worcester Ltd (33.3%)
- MuxCo North Yorkshire Ltd (40%)
- MuxCo Lincolnshire Ltd (49%)
- MuxCo Northeast Wales and West Cheshire Ltd (25%)
- MuxCo Gloucestershire Ltd (25%)
- MuxCo Wales Ltd (30%)

**iv) Bodies whose objects are wholly or mainly of a religious nature**

None

**v) Bodies whose objects are wholly or mainly of a political nature**

None

**vi) Local authorities**

None

**vii) Other publicly-funded bodies**

None

## 10. Financial and business plan

### (a) Overall Financial Strategy

Explain how the applicant considers it is able to establish and maintain, throughout the licence period, its proposed service. This explanation should include an assessment of each of the following, but is not restricted to these factors:

- i) The network construction phase
- ii) The operational start-up phase
- iii) Marketing
- iv) Ongoing operation of the service

### The Strategy behind MuxCo S&S

63. The strategy is:

- To establish an efficient and progressive business that reduces the financial burden on service providers to broadcast on DAB
- To provide opportunities for existing analogue services to simulcast on DAB
- To create an environment that encourages businesses, both new and existing, local and national, to provide services that broaden choice and provide new commercial opportunities
- To re-emphasise local radio as an important part of radio's digital future
- To be part of the MuxCo Network and share best practice and future opportunities
- To provide a return on investment to shareholders

### The Shareholders and their Digital Strategies

64. **UKRD Group Ltd ('UKRD')** owns and operates a number of analogue radio stations across the UK. It was formed in 1994 when Pirate FM Ltd merged with UK Radio Holdings Ltd to form UKRD, cementing a relationship between individuals who had been working together directly or indirectly for several years. Following the merger UKRD acquired controlling shareholdings in Star FM and Wey Valley Radio, and a minority share in Kiss 102. In 1995 UKRD was awarded the AM and FM licences for Surrey. In November 2000, a new management team was put in place, with a strategy of enhancing existing assets' output and developing regional clusters of stations. As part of the strategy, a number of stations were re-branded as 'Star'. UKRD has been involved in DAB since 2003, when as a founding shareholder in the Plymouth & Cornwall multiplex it launched Pirate FM on DAB. UKRD are keen to ensure that its stations have a future in the digital landscape, but recognise that with additional costs incurred through duplication of transmission, this needs to be achieved in a cost efficient manner. It believes the MuxCo concept, of shared ownership and efficient planning, is such a model.



65. **MuxCo Ltd** was established to provide viable digital radio solutions to local radio companies and other parties interested in developing on DAB. The MuxCo management team has extensive experience as a multiplex operator at local, regional and national level. The team established and operated the NOWdigital network for GCap Media, and has managed local multiplexes owned by consortia in which GCap Media was a partner (CE Digital, DRG London, South West Digital Radio and Now Digital East Midlands).



66. The Folder Media management team are currently managing UTV's multiplex network, as well as overseeing the launch of MuxCo's new multiplexes. MuxCo's strategy is to build a network of local multiplexes in association with local partners in each area, to ensure opportunities exist for all analogue operators to broadcast on DAB. Working with local partners helps encourage and make them more confident to take a more active role in digital radio, as part of the multiplex as well as being a service provider. Under this model, partners receive financial benefits of ownership which helps reduce their net cost of investment in DAB. MuxCo believes that there is a strong business model to be developed for local multiplexes - one that provides a range of interesting services demanded by local residents.

### The Business Plan and its Objectives

67. MuxCo S&S has established a business model that will drive the company to provide a premium digital radio service. Its key objectives are:
- To operate a multiplex that offers a wide choice of live and on-demand programme services which address local tastes and interests, broaden choice and increase plurality.
  - To promote and maximise take-up of digital radio receivers, by working with our analogue and digital service providers and through membership of industry bodies, such as the DRDB.
  - To operate in a manner ensuring fair and effective competition.
  - To operate a sound financial business, with confirmed service providers helping to demonstrate viability.
  - To ensure that digital radio is successfully established.
68. The shareholders are satisfied that MuxCo S&S is well resourced technically as well as financially to support the needs of the service providers.
69. The following chart summarises the reporting structure of the company.



70. The Board, which will meet at least quarterly, has the following responsibilities:
- The company's business strategy
  - Monitoring and reviewing trading performance
  - Appointing and contracting with service providers
  - Developing multiplex bandwidth policies
  - Developing pricing structures
  - Appointment and supervision of the Multiplex Manager
  - Regulatory compliance

71. Folder Media will provide multiplex management services. Folder Media has unparalleled experience in the day-to-day management of successful local multiplexes. It is currently managing UTV's local multiplex network, as well as the launch of other MuxCo multiplexes. It will ensure that changes and any requirements from the service providers can be enacted in a timely and cost-effective manner, and will ensure that the multiplex is responsive to the changing radio marketplace.

**(i) The network construction phase**

72. There are three stages to the network construction phase – planning, building and testing. MuxCo S&S will contract with NGW to provide a transmission solution, who, on the basis of this commitment, will fund the capital expenditure and installation of the infrastructure.

73. **Planning** – the design of our transmission plan has taken into account the requirements of service providers, including the BBC, to ensure that key population centres and major roads are well covered, and local geographical issues are taken into account. A number of iterations have been produced before settling on a commercially prudent plan that maximises coverage and meets our planning criteria. NGW has provided strategic support during this stage and will liaise with Ofcom for transmission matters on behalf of MuxCo S&S.

74. **Building & testing** – Following award, we will work with NGW to finalise our plan and prepare milestones to the launch of the multiplex. This will include international clearance, the build timetable and service provider installation. As an established and respected transmission service provider, NGW has considerable existing resource and the infrastructure to build the proposed transmission network.

**(ii) The operational start-up phase**

75. The operational start-up phase includes contracting with service providers, monitoring the installation of multiplex equipment at service providers' studios (for both audio and data services) and ensuring that the necessary testing is undertaken prior to launch; liaising with Ofcom over the build process; ensuring regulatory issues are followed, including the issuing of DSP licences; and liaising with the DRDB and service providers on marketing activity, including ensuring the postcode checker is up to date with the new coverage and service information.

**(iii) Ongoing operation of the service**

76. As multiplex manager, Folder Media will be responsible to the MuxCo S&S board for the launch of the multiplex and its subsequent day to day operation; in particular:

- Overseeing bit rate variations, enhancements or projects required by service providers, such as EPG provision, temporary services and data developments.
- Working with service providers and the transmission subcontractor to maximise multiplex functionality and efficiency.
- Monitoring and fault reporting, ensuring that the output of all service providers is correctly logged and compliant with legislation and codes
- Helping to develop new revenue streams.

77. NGW has considerable resource and infrastructure to support the multiplex and as such will provide 24 hour monitoring of the network. By using a secure remote control system, NGW will control multiplex re-configurations, something MuxCo S&S will have remote access to should the need arise to take direct control. Multiplex reconfiguration will be undertaken in line with our policies and contractual agreements with service providers.
78. Folder Media will provide ongoing management cover for the multiplex, including purchase and sales ledgers, IT, secretarial, legal, research, marketing co-ordination and technical support.
79. Through the MuxCo website, we will promote digital radio generically and the services specifically. The main aim of the site, as well as providing a conduit of information between MuxCo S&S and service providers, will be to help educate and inform listeners, advertisers and equipment retailers.

#### **(iv) Marketing**

80. There is still a significant DAB marketing campaign that needs to be undertaken on both a national and local level. We recognise that as a sole body, our voice will be too small and inefficient. We will therefore seek to join the DRDB (or any successor) and will actively support industry-wide generic promotion of digital radio. We also propose to co-ordinate our local marketing activity with 4 Digital Group. We also believe that the planned analogue TV switch off will provide opportunities for the marketing of DAB digital radio.
81. The key objectives of our press and communications activity will be to:
  - Build interest and knowledge of DAB and specifically the radio services available
  - Build audience awareness and raise the profile of DAB and content offerings to the consumer
  - Build awareness amongst the trade audiences including advertisers and retailers
82. We will work closely with our service providers to help co-ordinate locally focused marketing of digital radio generically, as well as of the services on the multiplex, with advice provided where relevant by Folder Media.
83. Service providers are likely to undertake their own brand marketing highlighting their appearance on DAB. We will work with service providers, particularly local analogue operators, to use their airtime to promote DAB digital radio in a consistent manner across all MuxCo partner stations.
84. To fund membership of the DRDB, a contribution proportional to contracted capacity will be levied at cost from the month following the launch of the multiplex.
85. We believe that for listeners, the identity of the multiplex owner is of little or no importance (and is potentially confusing). We will work with the DRDB to use a national through-the-line identity and graphic style that makes both digital radio and station brands the 'heroes'.

**(b) Funding**

Detail the sources of finance that will be used to fund the licence, under the following headings:

Source of finance	£
Share capital	40,000
Loan stock	40,000
Leasing/HP facilities (capital value)	0
Bank overdraft	0
Grants and donations	0
Other	0
<b>Total</b>	<b>£80,000</b>

Applicants should provide evidence that sufficient funds are available to each investing shareholder to cover their proposed investments.

86. Letters of investment are provided in Part B.

Applicants should also provide a copy of the most recent unabbreviated accounts for each investing shareholder.

87. The accounts for the shareholders will be provided to Ofcom under separate cover.

Where relevant, provide information on:

- i) Loan terms (e.g. interest rate, repayment terms, redemption/conversion terms);
- ii) Assets leased.

All of the funding identified above should be confirmed to the applicant. Explanation should be provided if this is not the case.

88. Loan stock will be issued interest free, as and when required. Loan stock will be repaid in a timely manner as permitted by the cash position of the company.

### **(c) Financial Projections**

The purpose of this question is to allow the applicant to demonstrate its understanding of the market. The forecasts should be based on reasonable assumptions, which are logically applied and justifiable.

The applicant should confirm in writing to Ofcom that:

- a) The projections contained in the financial model have been properly and accurately compiled on the basis of the assumptions listed and explanatory notes accompanying the projections
- b) That the policies adopted follow generally accepted UK accounting standards
- c) Such accounting policies have been properly and consistently applied.

Ofcom may request independent confirmation of the above, in the form of a letter from a firm of authorised UK accountants, addressed to the board of directors of the applicant.

The applicant should provide financial projections for the pre-operational period and on an annual basis for the subsequent 12 year licence period. The projections must include:

- i) Profit and loss accounts
- ii) Balance sheets
- iii) Cash-flow forecasts
- iv) Appropriate supporting schedules

The forecasts should be supplied on an Excel spreadsheet or similar and guidance notes should be provided. The applicant must also complete and submit the spreadsheet located at <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/> using information from its business model. Guidance notes for completion of the Template can be found in Annex 3 to this Notice. This section must include a full listing of the underlying assumptions on which the financial projections are based.

The application should detail how revenue figures were derived, distinguishing between:

- i) access fees
- ii) fees based on audience or revenue shares
- iii) other fees (please specify)

Revenue forecasts should also distinguish between digital sound programme services, digital additional services and television licensable content services.

The application should clearly set out the fee structure for each service provider, and explain the reasons for any differences in fees paid between providers.

*The response to this question may be submitted in confidence.*

89. Our response to this question is submitted in confidence in Part B.

## (d) Audience Projections

Provide the following information:

i) The projected adult (aged 15+) population of the Total Survey Area (TSA) within which it is intended to measure the audience of the digital sound programme services to be broadcast on this local radio multiplex service

90. The projected adult population of the multiplex TSA for the purpose of the application has been assumed at 952,000. We are aware that service providers may elect alternative TSAs for their own RAJAR research purposes.

ii) Projections for audience ratings (e.g. weekly reach, average weekly hours of listening) of the digital sound programme services to be broadcast on this local radio multiplex over at least the first four years of the service, with detailed demographic breakdowns as appropriate

91. The following table summarises our audience projections for simulcast and digital only services.

	Year 1	Year 2	Year 3	Year 4
<b>96.4 Eagle Radio</b>				
• Weekly Reach %	13.2%	13.1%	13.0%	12.9%
• Ave Hours	8.7	8.7	8.7	8.6
• Total Hours '000s	1093	1085	1077	1057
• Digital Hours '000s	102	172	231	315
<b>County Sound</b>				
• Weekly Reach %	1.5%	1.5%	1.6%	1.6%
• Ave Hours	10.0	10.0	10.0	10.0
• Total Hours '000s	143	143	152	152
• Digital Hours '000s	20	32	46	51
<b>Mercury FM</b>				
• Weekly Reach %	7.7%	7.6%	7.5%	7.4%
• Ave Hours	9.3	9.3	9.3	9.2
• Total Hours '000s	682	673	664	648
• Digital Hours '000s	64	107	143	193
<b>Easy Radio</b>				
• Weekly Reach %	2.2%	2.6%	2.8%	3.1%
• Ave Hours	4.0	4.3	4.6	5.0
• Total (& Digital) Hours '000s	84	106	123	148
<b>NME Radio</b>				
• Weekly Reach %	2.5%	3.2%	3.5%	3.8%
• Ave Hours	5.0	6.0	6.6	6.9
• Total (& Digital) Hours '000s	119	183	218	250
<b>Shuffle</b>				
• Weekly Reach %	2.0%	2.5%	2.8%	3.0%
• Ave Hours	4.0	4.9	5.6	5.8
• Total (& Digital) Hours '000s	75	117	149	166
<b>Traffic Radio</b>				
• Weekly Reach %	1.0%	1.5%	1.8%	2.0%
• Ave Hours	1.5	1.8	1.9	2.0
• Total (& Digital) Hours '000s	14	27	33	38



- iii) Projections for the total weekly number of listening hours anticipated for all digital sound programme services (national and local) both in absolute numbers, and as a proportion of all radio listening hours per week as recorded by RAJAR or equivalent audience measurement research, over at least the first four years of the service

	Year 1	Year 2	Year 3	Year 4
Population 15+ '000s	952	952	952	952
Reach %	93.2%	93.1%	93.0%	92.9%
Reach '000s	887	886	885	884
Ave. Hours	23.1	23.0	22.9	22.8
<b>All radio hours '000s</b>	<b>20,490</b>	<b>20,378</b>	<b>20,267</b>	<b>20,155</b>
All digital radio hours '000s	4,781	6,453	7,256	7,999
<b>All digital hours as % of all radio hours</b>	<b>4,781</b>	<b>6,453</b>	<b>7,256</b>	<b>7,999</b>
MuxCo S&S digital hours '000s	478	742	943	1,160
<b>MuxCo S&amp;S digital hours as % of all radio hours</b>	<b>2.3%</b>	<b>3.6%</b>	<b>4.7%</b>	<b>5.8%</b>

- iv) The basis on which the estimates above have been calculated, and any assumptions taken into account.

### Audience projections for programme services

92. In estimating audiences, we have based our assumptions on RAJAR (Q4 2007) within combined 96.4 Eagle Radio, Mercury FM and Delta FM area. This is an area covering 952,000 adults. Whilst smaller than the adult population numbers published by Ofcom, in relation to data available through RAJAR, this is currently the most appropriate figure.

### Projections for the total weekly number of listening hours

93. Projections for existing services are based on their current RAJAR performance, and for the proposed new services on our consumer research.
94. In order to calculate projections for the total weekly listening hours for all digital programme services (national and local) both in absolute numbers, and percentages, we looked at the following factors to create a robust audience model:
- Population
  - Radio consumption
  - Digital share of listening
  - The relative market shares of:
    - BBC Network
    - BBC Local
    - INR
    - ILR listening to stations originating in the area
    - Out of area ILR
    - Other radio listening

## Population

95. RAJAR has been reviewed using rolled 12 month data over the three years to Q4 2007. We have noted that during this time the population grew by less than 1%. The population also has an older profile compared to the UK average. For the purposes of our modelling, we have prudently held the population as a constant.

## Radio Consumption

96. Radio is an important component in the everyday lives of adults in Surrey & North Sussex.
- In the 12 month period to Q4 2007, 93.3% of adults within the area listened to the radio (compared to a UK average of 89%). The number of listeners has increased by 2.2% since 2005, a result we believe of both population growth and genuine increase in radio consumption.
  - Over the period under review, total hours of listening grew from 20.4m to 20.6m, a result in part of higher average hours of listening (23.2; against a UK average of 22.6) and also, we believe, the significant radio choice available in this market.
97. Whilst we believe that increased radio choice will help stimulate the total market, by attracting lapsed radio listeners or increasing time spent listening (a view confirmed by our research), we believe it prudent to model some decline in both reach and hours delivered to counter the growth of non-radio mobile devices, as well as competition from increased TV choice, mobile phones and the internet, especially amongst younger listeners.

## Digital Share of Listening

98. Through our consumer research, we calculate that a high 30% of the population within Surrey & North Sussex already own a DAB digital radio, and that a further 4% can access a DAB radio. This compares favourably to the UK average 22.2% of adults who live in a DAB household (source RAJAR Q4 2007).
99. To establish the potential share of listening attributable to digital, we have reviewed the digital radio penetration forecasts published by the DRDB, as well as other pertinent data as to the current and future take up. Our forecasts are based on the DRDB's 5 year forecast, which we have up-weighted using the 2007 penetration data, and then carried forward the forecast growth on the basis of this new base.
100. We are comfortable with the DRDB forecasts:
- Over 6.5m DAB sets have been sold in the UK (source DRDB)
  - 22.2% of the adult population live in a DAB household (source RAJAR Q4 2007).
  - 16.8% of adults have listened to a DAB digital radio service in the past week. (source RAJAR Q4 2007).
101. Our long-term digital listening forecasts uses industry data, as well as work undertaken by NGW, whose forecasts for digital share of listening have been used as the starting point for calculating digital listening.

## The relative market shares of the radio sectors

102. We have analysed the radio sectors of BBC Network, BBC Local, INR (i.e. services broadcast on national platforms), ILR listening to stations broadcasting from within the area, out of area ILR and other radio listening.
103. The following table summarises our views as to how each of these sectors will change in terms of the numbers of services provided under each and their relative markets shares between today, 2010 (the first full year of MuxCo S&S) and 2013. This analysis enabled us to establish a view on the overall radio market within Surrey & North Sussex and the changes that each sector would experience. The detailed workings behind these numbers are provided in Part B.

	Analogue Stations 2008	Digital Stations 2008	Total Stations 2010	Relative share 2008	Relative share 2010	Relative share 2013
<b>BBC Network</b>	5	6	11	52.8%	49.8%	46.3%
<b>BBC Local</b>	1	0	1	4.7%	4.9%	5.1%
<b>INRs</b>	3	7	20	9.9%	11.9%	15.0%
<b>MuxCo ILR services</b>	3	0	9	8.8%	10.5%	12.2%
<b>Other ILR services</b>	15+	15+	30+	21.6%	21.0%	19.9%
<b>Other</b>	-	-	-	2.1%	1.9%	1.5%
<b>Total</b>				<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Section 51(2)(d): Cater for local tastes and interests**

**11. Proposed digital sound programme services**

Provide, for each digital sound programme service for which capacity is to be allocated, a description of the service. This should include a short-form (no more than four or five words) description of the type of service (i.e. its 'format'), and should also include a summary of the type(s) of music and speech to be provided, together with a quantification of the proportions of these within the programme mix. The number of hours each day that the service will be broadcast, and details of any content unique to this local area (with trigger-points for when such content will be included if not from the commencement of broadcasting, as appropriate), must also be included. These format descriptions will form part of the licence. Therefore, questions of clarification may be asked prior to licence award and the wording amended to reflect this, if necessary. Examples of format descriptions included within existing radio multiplex licences can be viewed at: <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>.

- 104. MuxCo S&S will carry the existing commercial analogue services of 96.4 Eagle Radio, County Sound and Mercury FM. Together, these services are listened to by 22.2% of all adults (211,000), and represent 9.4% of total radio listening. Their RAJAR audience results demonstrate their popularity.
- 105. We have had an open dialogue with Bright FM and Delta FM as to carriage opportunities on the multiplex, and will continue this dialogue after licence award to enable these services to join the multiplex.
- 106. Capacity has also been reserved for BBC Southern Counties Radio. The inclusion of this local BBC service raises net reach to 28.3% and share to 13.1%.
- 107. Capacity has also been allocated for five digital only services. Our local research demonstrates that these services cater for demanded local tastes and interests.
  - A modern rock service – *NME Radio*
  - An easy listening melodic music service - *Easy Radio*
  - A service comprising music and listener generated content for teenagers and young adults - *Shuffle*
  - A traffic and travel service - *Traffic Radio*
- 108. Capacity has also been allocated for a Podcast Channel, which will provide opportunities for niche services to provide downloadable content offering a range of programming which will be targeted at specific interest groups.

**96.4 Eagle Radio**

Format	Full Service
Licence Description	A simulcast of 96.4 Eagle Radio (Ofcom Licence number AL081), a contemporary music service for Surrey and North East Hampshire.
Local Content	96.4 Eagle Radio is locally produced 24 hours a day. Local news and information relevant to its audience is provided during daytime.
Music to Speech	Minimum 75% music and 15% speech
Hours of Broadcast	24



### County Sound

Format	Classic Hits
Licence Description	A simulcast of County Sound (Ofcom Licence number AL080), a classic hits and melodic pop service for Surrey and North East Hampshire.
Local Content	County Sound is locally produced 24 hours a day. Local news and information relevant to its audience is provided during daytime.
Music to Speech	Minimum 75% music and 15% speech
Hours of Broadcast	24



### Mercury FM

Format	Contemporary Hit Radio
Licence Description	A simulcast of Mercury FM (licence AL117); a contemporary music station for Crawley and Reigate, broadcasting predominantly current chart hits, new releases and hits up to 10 years old.
Local Content	Mercury FM broadcasts local programming from 3am to 7pm weekdays (5am to 10am and Middy to 7pm Saturdays and 6am to 2pm Sundays). Local news bulletins are broadcast during daytime.
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24



### Easy Radio

Format	Easy Listening
Licence Description	A broad range of easy listening music, including soft rock, country, folk and blues.
Local Content	A network service offering a broadening of music choice. There are currently no plans to introduce local content on this service.
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24



### NME Radio

Format	Modern Rock
Licence Description	A music service targeting a broad 15 to 34 male audience, focusing on cutting-edge music, and the greatest rock anthems. Speech content will cover subjects of particular interest to the target audience such as reviews and gig-guides.
Local Content	A network station that will broadcast on other digital platforms and multiplexes but will provide news, what's on and events information relevant to the target audience
Music to Speech	Minimum 80% music and 10% speech
Hours of Broadcast	24



### Shuffle

Format	Youth
Licence Description	A music station comprising listener-generated content and chart, dance and rock tracks, and focusing on the tastes and interests of under 35 year olds.
Local Content	Shuffle will reflect the trends of young people in Surrey & North Sussex. It is a music intensive service, with programmes and features created by local listeners. Speech will include information of relevance to the target audience.
Music to Speech	Minimum 90% music and 5% speech
Hours of Broadcast	24



### Traffic Radio

Format	Traffic and Travel
Licence Description	Continuous traffic and travel information.
Local Content	The service forms part of the South East region. As such, it will cover all motorway and key trunk roads within the region.
Music to Speech	100% speech
Hours of Broadcast	24



### Podcast Service

Format	Varied
Licence Description	A wide selection of speech and music podcasts provided by a range of companies.
Local Content	Podcasts will include material of a local nature.
Music to Speech	Minimum 5% music and 5% speech
Hours of Broadcast	24



### Further information on the Podcast Service

109. The Podcast Service will provide an opportunity for those who have an interest to broadcast on the multiplex, but who are not yet in a position to finance a full service or who are currently unable to demonstrate a substantial listener base, to take an active role. In addition, there are providers who are established brands in other media but would like to test their content on a new platform, as well as providers of niche content carefully targeted at distinctive communities of interest.
110. We have had discussions with 4 Digital Group and other industry colleagues to align our podcast delivery system to ensure compatibility for listeners. We have also spoken with set manufacturers to ensure that new receivers are able to decode and store this material.
111. In our research, 11% of respondents and 23% of under 25s were interested in being able to download new specialist music and or speech programmes. Our research also highlights that the public are keen to experience downloadable material on a variety of different subjects. The Podcast Service will therefore carry content that reflects many of these interests and will complement the proposed range of live audio services.

112. We believe that podcasts are a good way to meet listeners' content requirements where the economic benefit of running a live service cannot be met. We believe that certain material, in particular speech content, is best delivered in an on-demand style, where the lower cost base for production and transmission makes material easier and cheaper to distribute to local listeners.

113. Initial podcast providers will include:

#### **News and Information**

- 'ITN On' will provide a news and information service. The service will initially be audio, but as technology develops ITN wish to review opportunities for video.
- 'Itchy Media', who produce Itchy Guides for major centres across the UK, will provide a dedicated guide.

#### **Music**

- 'Channelfly' produce one of the UK's biggest music magazines ('The Fly'), manage bands like Franz Ferdinand and the Kaiser Chiefs and operate a large network of music venues ('The Barfly'). Already a podcast producer, 'The Fly Podcast' will bring a unique new and live music service to the area.
- 'Totallyradio' is an internet delivered specialist music service. Covering genres from hip hop to nu jazz, they will provide a range of specialist music created by their producers and local talent.

#### **Charity and Learning**

- 'Headliners' (formerly Children's Express) is a charity that encourages learning through journalism. They act as a news agency with young people writing and recording their own stories for broadcast. DAB podcasts are an excellent opportunity for local children to get their stories on the air.

#### **Specialist**

- Passion for the Planet are keen to expand their world music and environmental issues service but need to do at so an appropriate and economical rate. Their podcast will include 'best of' material from their existing service with local features of interest to Surrey & North Sussex residents.
- 'Sabras Radio' are keen to develop a podcast for the local Asian population.
- 'Sunrise is keen to develop their youth Asian focused service, Yarr, through podcasts in markets were the potential audience size is not sufficient to maintain a full service.

#### **Local content**

We believe that digital radio should be open to as many broadcasters as possible. There are already many local podcasters in Surrey & North Sussex and DAB offers them a new outlet for their locally specific material. We have spoken with a number of local groups and organisations who want to take part in the project. We will actively seek other local Podcast service providers, but so far we have indications of interest from the University of Surrey's Student Radio Station – GU2, and the Calvary Chapel in Twickenham.

- a) Outline the expected target audience of each digital sound programme service to be accommodated on the multiplex, in terms of demographic profile (i.e. age range, gender, socio-economic background), ethnic composition, and/or any other relevant characteristics. To what extent will each of these services cater for local tastes and interests, general or particular?

<b>96.4 Eagle Radio</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• 126,000 adults listen to Eagle Radio each week, making it the leading non London ILR service in the TSA.</li> <li>• Broad age appeal, and particularly popular with 35 to 44 year olds.</li> <li>• Almost equal appeal among men and women.</li> <li>• A strong ABC1 profile, which reflects the local population profile.</li> </ul>
Local Tastes & Interests	<p>As Surrey's heritage local commercial service, many tune into Eagle Radio for its local news, travel and information features, as well as its broad music repertoire. Its strength as a local service is evident through RAJAR.</p> <p>Local programming is broadcast at all times, except for a weekly chart programme and the occasional syndicated special. Local news bulletins are broadcast between 6am and 7pm (7am and 1pm weekends). Bulletins contain local and national stories, sport, weather and entertainment news.</p>
Summary	<p>Eagle Radio is the most popular local service produced in the area, and the second most popular ILR service available.</p> <p>Research highlights that existing ILR listeners have above interest in DAB functionality than BBC radio listeners. Given its current strong market position, Eagle Radio will play an important role in the promotion of digital radio. In addition, as an existing service, it is also able to enhance its digital proposition with specific DAB only content.</p> <ul style="list-style-type: none"> <li>• Existing heritage service</li> <li>• Strong 35 to 44 age profile</li> <li>• Broad appeal</li> <li>• Promoter of DAB and encourages trial</li> </ul>



<b>County Sound</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• 15,000 adults listen to County Sound each week.</li> <li>• Particular appeal with 45 pluses, who account for 93% of listeners and where 70% are 55 plus.</li> <li>• A female bias.</li> <li>• Markedly C2DE (54.5%); reflecting its older audience.</li> </ul>
Local Tastes & Interests	<p>The local 'gold' style service for Surrey and North East Hampshire. Many listen for its local news, travel and information features, as well as its music repertoire targeting a 40 plus audience. Its strength as a local service is evident through RAJAR.</p> <p>Local programming is broadcast at all times. Local news bulletins are broadcast between 6am and 7pm (7am and 1pm at weekends). Bulletins contain local and national stories, sport, weather and entertainment news.</p>
Summary	<p>County Sound will benefit from the transition to DAB, being able to maintain listenership amongst its audience.</p> <p>As previously stated, ILR listeners have a high interest in DAB functionality. MuxCo's commitment to provide functionality to enable slideshow, music downloads and red button functionality will help both DAB and services such as County Sound.</p> <ul style="list-style-type: none"> <li>• Existing heritage service</li> <li>• 45 plus age profile</li> <li>• Male bias</li> <li>• Promoter of DAB and encourages trial</li> </ul>

<b>Mercury FM</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• 74,000 adults listen to Mercury FM each week (it achieves 23% reach within its own TSA).</li> <li>• Principal listening amongst those aged under 44.</li> <li>• Strong female profile (68%, against a TSA profile of 54%).</li> <li>• ABC1 profile audience.</li> </ul>
Local Tastes & Interests	<p>Crawley &amp; Reigate's heritage local commercial service. Many tune in for its local news, travel and information features, as well as its broad music repertoire. Its strength as a local service is evident through RAJAR.</p> <p>Half hourly news bulletins between 6am and 9am, with hourly bulletins between 9am and 7pm. At weekends, local bulletins are broadcast between 7am and 1pm. Bulletins contain local and national stories, sport, weather and entertainment news.</p>
Summary	<p>Appeals to those with an interest in contemporary hit radio. Despite recent declines in reach and average hours, it remains a popular local service.</p> <p>Our research highlights that existing ILR listeners have high interest in DAB functionality. Given its current strong market position and a predisposition of its listeners to utilise the ancillary advantages of DAB, Mercury FM will play an important role in the promotion of digital radio.</p> <ul style="list-style-type: none"> <li>• Existing heritage service</li> <li>• 25 to 44 age profile</li> <li>• Female bias</li> <li>• Promoter of DAB and encourages trial</li> </ul>

<b>Easy Radio</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• Research highlights high interest in the Easy Radio concept.</li> <li>• This service will appeal to a 35 plus listener, who will account for more than 80% of the audience.</li> <li>• There was a strong female bias and a significant ABC1 profile.</li> <li>• The service should be a strong motivator to stimulate DAB take up, with 71% of those choosing the service not currently owning a digital radio.</li> <li>• This service also has the potential to draw listeners away from the BBC – 31% of all BBC listeners and 32% of those who only listen to BBC stations said they would like to be able to listen this service.</li> </ul>
Local Tastes & Interests	Easy Radio is essentially a music experience, with a broad range of easy listening music from the 60s to today, and some music specialisation, such as country, creating a relaxing environment for the listener. Speech will include news, relevant information for the audience and an element of interactive programming.
Summary	<p>A popular format that would appeal to an older audience, bring new listeners to DAB digital radio and attract an audience from the BBC.</p> <ul style="list-style-type: none"> <li>• New service</li> <li>• 45 plus profile</li> <li>• Strong female appeal</li> <li>• Attractive to solus BBC listeners</li> </ul>

<b>Shuffle</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• The format has high appeal with its target under 35s, who will account for 64% of its audience.</li> <li>• Up market profile, with 62% of those interested being ABC1.</li> <li>• It is another new service that will stimulate digital take up, particularly among younger demographics, with 72% of those expressing interest not currently owning a DAB radio.</li> <li>• 74% of those choosing this format currently listen to ILR services (including those emanating from London) and 57% are listeners to BBC services.</li> </ul>
Local Tastes & Interests	A youth format, reflecting on the musical tastes and interests of listeners in the area. It will be the first station in the area specifically targeting the area's younger listeners, enabling them to submit their own music for airplay, as well as contribute to programming.
Summary	<p>The station's musical genres (of modern rock, chart and dance) are extremely popular with the target audience. In contrast to the broader focused analogue local services (and niche specialist formats available on other platforms), this format will super-serve its listeners with information relevant to the target audience, including music updates and what's on.</p> <ul style="list-style-type: none"> <li>• A popular new service</li> <li>• Under 35 profile</li> <li>• Female bias</li> <li>• Encourage DAB trial</li> <li>• Attractive to BBC listeners</li> </ul>

<b>NME Radio</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• The service would have a young profile. In our research, 47% of those interested were under 35 and 72% under 45, and the majority were male (60%).</li> <li>• The format would have ABC1 appeal.</li> <li>• It would serve as a draw to DAB with 72% of those who would listen to this service not yet owning a DAB set.</li> <li>• 68% of those choosing the format currently listen to BBC stations and 73% are listeners to commercial radio. Almost two thirds are listeners to ILR stations including those broadcasting from London.</li> </ul>
Local Tastes & Interests	A music led service, with speech and features focusing on the tastes and interests of its target audience. In particular, its mix of popular rock music, live sessions and specialist shows will cater for underserved local rock fans. Whilst a network service, what's on and events information for Surrey and Sussex will be provided. Produced by a well-regarded, national brand, NME Radio will be the first choice for listeners seeking out this type of music.
Summary	<p>The only service on the multiplex that specifically broadcasts this type of music. The inclusion of this service will help attract younger listeners back to commercial radio.</p> <ul style="list-style-type: none"> <li>• New service</li> <li>• Under 35 profile</li> <li>• Male bias</li> <li>• ABC1</li> <li>• Encourage DAB</li> </ul>

<b>Traffic Radio</b>	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>• The target for the service is broad, appealing not just to business commuters, but also housewives and parents with children.</li> <li>• Our research highlights very strong interest for a station broadcasting traffic and travel news and information.</li> </ul>
Local Tastes & Interests	An innovative service from the Highways Agency providing 24/7 regionalised traffic and travel information and focusing on all major road networks. On traditional radio services, traffic bulletins are provided sporadically, at a time when the station wishes to provide them rather than when an issue arises. Their frequency also varies across the week, with significantly lower non-peak and weekend updates. Traffic Radio is a service to which drivers are able to 'dip-in' prior to or during a journey.
Summary	<p>By making information about the road network more accessible, the proposed service will help reduce congestion by informing motorists about major congestion problems, thereby enabling them to divert, delay or cancel their journey. The benefit of the service is not just to individuals, but also to business. Reducing road journey times will help deliver environmental benefits through reduced emissions and improved driver safety. With broad appeal, the service should have a significant benefit on the take up of DAB receivers.</p> <ul style="list-style-type: none"> <li>• New service</li> <li>• Broad interest</li> <li>• Encourage DAB in-car listening</li> </ul>

Podcast Service	
Target Audience & Demographic Profile	<ul style="list-style-type: none"> <li>The Podcast Service will include content of interest to all age groups, males and females.</li> <li>Interest in the service is particularly strong amongst younger audiences; 81% would be under 45, with 58% aged under 25.</li> <li>The service will help promote DAB uptake, and therefore a move to DAB+, with 60% of those interested in the service not owning a DAB radio.</li> <li>67% of those interested are BBC listeners.</li> </ul>
Local Tastes & Interests	The service will carry a wide range of material, ranging from music to speech, and from content that will have national interest to content with a particular focus on Surrey & North Sussex.
Summary	<p>The Podcast Service will enable the multiplex to cater for niche tastes and interests and small communities of interest, which would not otherwise be sustainable on a 24/7 basis.</p> <ul style="list-style-type: none"> <li>An innovative new service</li> <li>Strong youth appeal</li> <li>Encourage DAB uptake</li> </ul>

b) If agreement has been reached (either firmly or provisionally; state which) with particular providers of some or all of the digital sound programme services to be accommodated on the multiplex, identify these programme providers. For each one, state whether it has already been issued by Ofcom with a licence to provide a local digital sound programme service.

Service	Service Provider	Confirmed	DSPS Held
96.4 Eagle Radio	UKRD Group	Yes	Yes
County Sound	UKRD Group	Yes	Yes
Mercury FM	GCap Media	No	Yes
NME Radio	DX Media Ltd	Yes	No
Easy Radio	Easy Radio Ltd	Yes	Yes
Shuffle	MuxCo S&S Ltd	Yes	No
Traffic Radio	Highways Agency	Yes	Yes
Podcast Service	Folder Media Ltd	Yes	No

c) Give details of any programme-related 'data' or other services to be provided to enhance the audio elements of the digital sound programme services proposed to be provided. List separately those provided by the relevant digital sound programme licensees themselves (as 'ancillary' services) and those, if any, provided by other parties under a digital additional services licence.

114. Service providers will have the opportunity to create new and innovative content streams. Our multiplex platform will support Dynamic Label Services ('DLS') and MOT carousel using simple, industry standard interfaces allowing service providers to use the "off-the-shelf" and well-supported software packages for generating content. Therefore, from launch, all service providers will have access to **Scrolling text functionality** and an **Electronic Programme Guide**. As data technologies and standards mature, we will work with service providers to launch other data services (such as Broadcast SlideShow etc).

### Dynamic Label

115. DLS is a very simple technology, which gives it enormous strengths. It provides an immediate point of difference between a digital radio and a traditional FM receiver. Consumers value the information provided unexpectedly highly – informal feedback from listeners is very positive about features such as displaying information on the currently playing song. The industry has recently begun to develop DLS into a commercial opportunity, with advertisers recognising the value of DLS as an additional communications tool.

116. We are supportive of recent extensions to the DLS spec, such as Pure Digital's IntelliText® technology, which stores the scrolling text to allow the user to navigate, by topic, straight to the news they want. Service providers can generate DLS very simply, using a range of software packages that integrate into their existing systems. DLS is transmitted in the XPAD.

### Electronic Programme Guide

117. EPGs are important in a multi-channelled environment – allowing listeners to find stations and programmes quickly, and enable functionality like "time-shifting" of stations. They enable service providers to promote their services and programmes, and also allow the user to take advantage of features such as programme summaries, search by subject or channel, immediate access to the selected programme and also to set reminders for their favourite shows.

118. We will make an EPG channel available to all service providers. This channel will conform to the ETSI TS 102 371 DAB EPG standard, currently broadcast by the two existing national multiplexes. Service providers will be encouraged to use some of the more advanced features of the EPG, such as 'series linking' and incorporating telephone, SMS, website and email addresses into the schedule data.

119. We have had detailed discussions with All In Media Ltd ('AIM') relating to the launch of an EPG channel on the multiplex. It is our intention to work with AIM to launch an EPG from the start of the licence term, which will be transmitted in a dedicated packet data channel. We also believe an enhanced EPG will allow listeners to navigate the podcasts that are available from the multiplex.

## Use of variable-XPAD

120. From launch, we will also enable each service provider to be able to run programme-related data services within their short XPAD data capacity. With Folder Media and other associates, we have a strong team who have substantial experience in the field of launching data services, ranging from the work that was undertaken on the world's first commercial data services in 2000 through to the development of standards such as the EPG and the launch of highly dynamic text services.
121. We intend to use our experience to help service providers to launch new programme-related data services. For example:

### **Tagging** (Book marking)

- The ability to log a song on your mobile phone/device in order to download it later.

### **Broadcast Slideshow**

- The ability to add visual content to make programmes and adverts more engaging, for example showing the cover of the record currently playing, or an image of the car being advertised.

### **"Red button" functionality**

- **Competitions and Voting** - a listener could use the red button to vote on the next tune to be played or select the correct answer to win a prize.
- **Enhanced Advertising** - an advert for a new car could be visually demonstrated through a screen, with red button functionality sending information via a URL link to the external car dealer's web site.
- **Rewards** – creating opportunities for listeners to get free content (perhaps music downloads) in return for responding to an advertiser's call to action, or clicking through to the web page could generate redeemable loyalty points.

## Podcast Channel

122. The multiplex will broadcast a Podcast Channel, managed by Folder Media. The channel will be a carrier for a variety of different podcasts (outlined in the answer to question 11) from a range of different service providers.

## Other services

123. Folder Media intends to provide a music download capability such as the new Instant Music Buying Service 'Cliq' from UBC, which will provide a value enhancing service for radio services, providing opportunities for listeners to access and acquire music on the go. Our general view is that we should encourage all types of data services to help organisations experiment with new DAB broadcast technologies.

d) If it is intended to use an encryption system, state that this is so, and make clear to which digital sound programme services it will apply, and how listeners will subscribe to the service.

124. It is not proposed that any services will be encrypted and none of the proposed service providers has indicated an interest in encryption.

## **12. Digital additional services and television licensable content services**

Provide details of any digital additional services and/or television licensable content services planned, other than programme-related data services (see Q.11(d) above), and the proportion of the total multiplex capacity which will be allocated to each of these.

*The response to this question may be submitted in confidence.*

*\* Applicants should note that this information is not relevant to section 51(2)(d), which relates only to digital sound programme services, but this question is positioned here for convenience.*

125. Our response to this question is submitted in confidence in Part B.

## Section 51(2)(e): Broadening of local commercial DAB choice

### 13. Broadening of choice

Outline how the programming provided by the local digital sound programme services (other than BBC services) proposed will broaden the range of local digital sound programme services available in the area, and describe the extent to which the proposed local digital sound programme services will cater for tastes and interests different from those already catered for by local digital sound programme services already available in the area. If the licence applied for is the first local radio multiplex licence to be advertised in an area, detail the breadth of programming delivered by the range of local digital sound programme services to be provided on that local radio multiplex alone.

126. The Surrey & North Sussex licence area is overlapped by the three London multiplexes – London 1 and 2 by 91% and London 3 by 70% (source Ofcom). The following services are provided on these multiplexes:

Service	Multiplex	Format
Capital 95.8	London 1	Simulcast contemporary hits
Gold	London 1	Simulcast classic hits
XFM	London 1	Simulcast modern rock
Magic 105.4	London 1	Simulcast music led service playing soft and melodic tracks
LBC 97.3	London 1	Simulcast speech
LBC 1152	London 1	Simulcast new
Sunrise Radio	London 1	Simulcast Asian
Kiss 100	London 1	Simulcast dance
Real Radio	London 1	Adult oriented easy listening music
Traffic Radio	London 1	Traffic and travel information
Heat	London 1	Rhythmic music
Heart 106.2	London 2	Simulcast adult contemporary
102.2 Smooth FM	London 2	Simulcast jazz, soul, blues and R&B
Virgin Radio Xtreme	London 2	Youth Rock
The Hits	London 2	Classic and Contemporary Hits
Spectrum Radio	London 2	Multi-Ethnic
UCB UK	London 2	Christian service
Galaxy	London 2	Dance and rhythmic hits
Yarr Radio	London 2	Young Asian
Zee Radio	London 2	Bollywood-based stations
Kerrang!	London 2	Modern and classic rock
Choice FM	London 3	Simulcast music service for African and Afro-Caribbeans
FUN radio	London 3	Children's Radio
Virgin Groove	London 3	Classic Soul and Disco
The Arrow	London 3	Adult Rock
Virgin Classic Rock	London 3	Classic Rock
Passion for the Planet	London 3	Adult contemporary and world music
Gaydar	London 3	A service for gays and lesbians
Easy Radio	London 3	Easy listening
Chill	London 3	Chill-out music
Panjab Radio	London 3	A service for the Panjabi community
Smash Hits	London 3	Pop music
Polish Radio	London 3	A service for the Polish community
Rainbow Radio	London 3	A service for the African community

127. Due to the large number of services available through the London multiplexes, there will inevitably be a higher level of format duplication. However, with 6 services including local programming or features of relevance to the local communities, MuxCo S&S will carry services that will be differentiated by their editorial focus. Other more music focussed services will be differentiated less by their localness but more by their plurality and difference in tone and voice.



128. We believe that MuxCo S&S will deliver a breadth of programming that will complement and increase commercial radio choice. In addition to existing local commercial services, the multiplex will carry a selection of locally focused services, as well as a number of networked services targeting specific communities of interest.

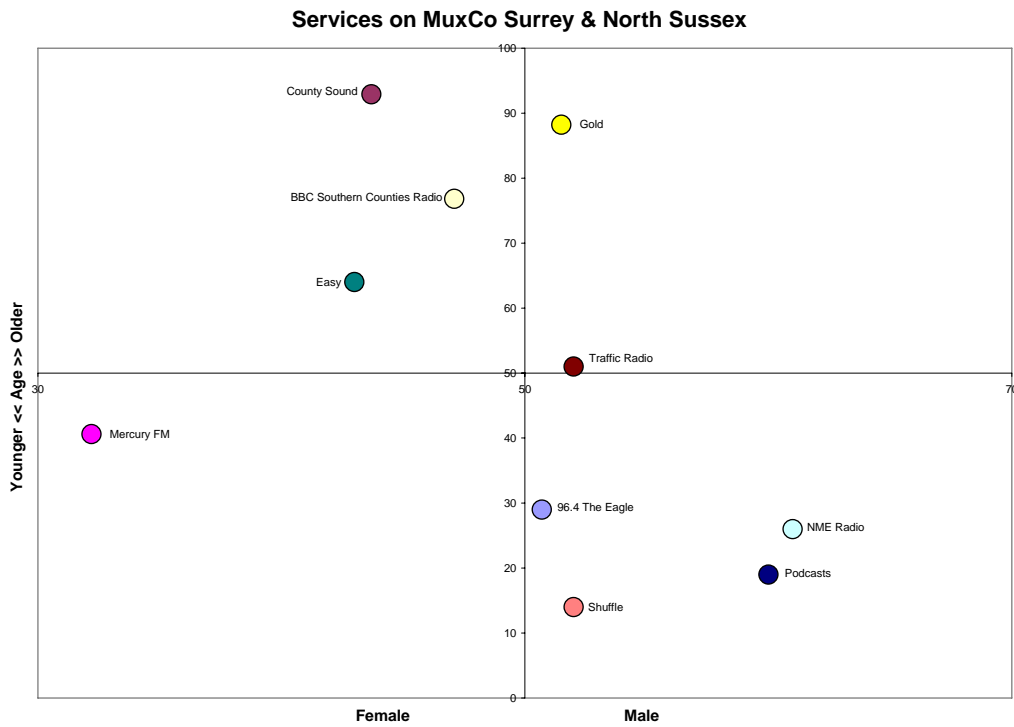
<b>Eagle Radio</b>	Eagle Radio is an adult contemporary music and information station for Surrey & North East Hampshire. It plays a wide variety of music, but mostly a spread of hit music and classic rocks from the last 5 decades. Whilst the station is music led, local news and information features are provided across daytime. As a broad appeal format, it will overlap to a degree with the music played on some other music focused services and similar formatted London centric services on other multiplexes. However, none of the new services cover the range of music played by Eagle Radio. In addition, Eagle Radio's heritage position and editorial focus will ensure that it continues as a key local service. Eagle Radio's inclusion on the multiplex will ensure all current listeners can hear the station in digital. In addition, the ability of Eagle Radio to increase its broadcast area through DAB will enable this popular service to be heard across a wider area.
<b>County Sound</b>	A complementary service to Eagle Radio, County Sound targets a 40 plus audience playing a mix of classic oldies and melodic pop music from the last 5 decades. It provides a comprehensive local news and information service focusing on Surrey & North East Hampshire, which includes weather, travel and community news. There will be some musical overlap with broad formatted services and similar London centric services on other multiplexes, but County Sound is differentiated by its local editorial focus. In addition, the ability of County Sound to increase its broadcast area through DAB will enable this popular service to be heard across a wider area.
<b>Mercury FM</b>	A contemporary and chart hit music and information station for 15 to 44 year olds. Music is predominantly current chart hits, new releases and hits up to one year old. Mercury FM is a music led station, providing information of local relevance throughout its programming. Its format is to provide a broad appeal service for under 45s playing contemporary and current chart hit music. As such, some of the new services will overlap in relation to music played. None, however, will cover the range of music played by Mercury FM. In addition, Mercury FM's heritage position and editorial focus Crawley & Reigate will ensure that it continues as a key local service.
<b>Shuffle</b>	A youth station focusing on the tastes and interests of under 35s, with an emphasis on under 25s, playing a mix of chart, dance and rock tracks. Whilst a number of specialist services on the London multiplexes play the music genres that Shuffle will cover, these focus on particular genres and none carry the range of music that Shuffle will play and its commitment to listener-generated content. In addition, as part of quasi-national networks, none are able to include locally generated content. They are also only available in the northern half of the area. Musical overlap with Eagle Radio and Mercury FM arises from the latter's broader formats. However, Eagle Radio and Mercury's positioning as older targeted services provides greater differentiation in style as well as editorial focus. The range of music will be Shuffle's principal differentiator, as will its positioning and style as a youth service. In addition, Shuffle will have a commitment to listener generated content. For younger listeners, Shuffle will be a welcome addition to the radio landscape, providing local commercial competition to BBC Radio 1.

<b>NME Radio</b>	A modern rock service with the uniqueness of its association with the world famous music magazine. The service will bring additional listening choice and an editorial style of its own. Whilst elements of its music repertoire will be audible on Mercury FM and Shuffle, this will be a unique service on the multiplex given its dedication to this genre, and will broaden choice against London centric rock services available on other multiplexes.
<b>Easy Radio</b>	A music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library. Whilst there will be some music overlap with County Sound, and to a lesser extent Eagle Radio and Mercury, Easy's broad music mix includes music from artists with country, rock, folk and blues influences, and provides a point of difference and a broadening of choice over other proposed services. Speech, with news and relevant information for the audience and an element of interactive programming, will also act as another point of differentiation. In addition, plurality of ownership provides additional broadening of choice. Although Easy Radio is available on the London 3 multiplex, as that multiplex's overlap into the area is limited, the inclusion of Easy Radio will boost the reception quality of the service in the northern half of the area, whilst broadening choice in the southern half.
<b>Traffic Radio</b>	A service providing regular and up to date traffic and travel information across the South East. It will be distinct from London focussed Traffic Radio service already available from the London 2 multiplex. While existing services provide traffic and travel bulletins, these are often limited in scope and only broadcast during peak programming. Only Traffic Radio will provide traffic information 24/7.
<b>Podcast Service</b>	A mixture of music and speech content, serving a broad range of tastes and interests that will complement the full time services carried by the multiplex. The inclusion of a Podcast Service will bring additional listening choice to all, and especially younger demographics.

129. As a whole, our proposed complement of services caters for:

- People interested in hearing local news and information, with at least 3 services providing such content and with the Podcast services providing further localness, and catering for different tastes and interests.
- A wide age range, albeit with more choice for the 35 pluses because of their dominant position within the population and because of a willingness to switch from the BBC with the right choices available. Additional choice for younger listeners will be provided through Shuffle and the Podcast Service.
- A significant proportion of the population, as well as for a broad range of listeners' tastes and interests.

130. The following chart summarises the profiles of each service to be carried on the multiplex in relation to their age and male to female interest. It highlights how the proposed new services will complement existing choice. Information for existing services is taken from RAJAR and for the new services from our commissioned research.



## Section 51(2)(f): Local demand or support

### 14. Audience requirements

Summarise the main findings of any original market research undertaken, or any analysis of existing audience research information, or any other form of evidence which demonstrates demand for the types of programme service and/or programme-related data or other data services proposed, or has otherwise influenced the applicant's proposals.

If original market research has been undertaken, please provide the following information for each piece of research:

- a) A statement of the key objectives of the research;
- b) The specific questions that the research sought to answer;
- c) How the research was conducted;
- d) The size and composition of the sample(s);
- e) When and where the research was conducted;
- f) A summary of the main findings from the research, showing how these demonstrate evidence of demand for the service proposed – this summary should represent a fair and accurate summary of the full results;
- g) A copy of any detailed audience research report or analysis, from which the summary provided in the main application document has been derived, full data tables for any quantitative research undertaken, and any questionnaire used (these may be submitted in confidence).

Please provide your responses to (a) – (e) in tabular format.

Key Objectives		Specific Questions	How Conducted	Size and Composition	When
<b>Desk Research</b>	<p>To analyse the local market</p> <p>To get an up to date picture of the digital landscape.</p>	<p>To review population growth and change.</p> <p>To track digital penetration.</p>	<p>Analysis of Census 2001 data.</p> <p>Review of DRDB and relevant RAJAR data on digital audiences.</p> <p>Analysis of existing multiplexes.</p>	Not relevant	January to March 2008
<b>Consultation with local councillors</b>	To gain further insight into local needs and issues.	The issues which the area faces	Email and Internet based questionnaire	105 local councillors	January to February 2008
<b>Consultation with local business</b>	To gain further insight into local needs and issues from the perspective of business people	To gain some reaction to likely formats and interest in target groups to be served.	Email and Internet based questionnaire	37 local businesses	January to February 2008
<b>RAJAR</b>	To understand the local radio market.	To track the performance, strengths and weaknesses of existing services.	Using the Octagon analysis system and RAJAR data.	Not relevant	February 2008
<b>Consumer Study</b>	<p>To further understand the local radio market.</p> <p>To gauge consumer awareness, understanding and usage of DAB digital radio.</p> <p>To quantify interest in potential formats and data usage applications.</p> <p>To estimate audience levels, individually and collectively, for the proposed complement of services.</p>	<p>To investigate the performance, strengths and weaknesses of existing services.</p> <p>To identify the likely audience profiles for each planned service and to see how these services work collectively to enhance the total audience potential for DAB digital radio.</p> <p>To look at the propensity to listen and the impact that the new services collectively would have on the existing market.</p>	<p>Consumer survey conducted by Fieldvision.</p> <p>All interviews conducted face to face.</p>	<p>500 adults 15+ from across the PPA.</p> <p>Sampling PPS Quota controls to known demographic profile.</p>	23 <sup>rd</sup> January to 2 <sup>nd</sup> February 2008
<b>Local listener survey</b>	To understand current Eagle listeners' interest in potential DAB services.	To look at level of interest for existing analogue to broadcast in digital, and interest in other formats.	Online survey through the "Eagle Radio" website.	115 responded	January to February 2008

131. We have provided an analysis of our research under the following headings:

- A. The Surrey & North Sussex market
- B. Consultation with locally elected representatives
- C. Consultation with local business people
- D. Radio choice
- E. Current radio listening habits
- F. Uptake of DAB digital radio
- G. What people would like from digital radio
- H. What does the future hold for digital radio?
- I. Eagle Radio listener survey

### A – The Surrey & North Sussex market

132. The Surrey & North Sussex multiplex covers the county of Surrey, parts of north east Hampshire and parts of north West Sussex and East Sussex – an area of 1.4m adults.

133. The following table analyses the adult population within the TSA (Q4 2007 data), highlighting the relative demographic splits of the population, with comparison to the UK as a whole.

	Surrey & North Sussex	UK	Index on UK
15 to 24	12.6%	16.1%	78
25 to 34	15.4%	15.5%	99
35 to 44	19.6%	18.4%	107
45 to 54	16.8%	16.0%	105
55 to 64	14.8%	14.5%	102
65 plus	20.8%	19.5%	107
ABC1	69.9%	53.6%	130
C2DE	30.1%	46.4%	65
Male	46.4%	48.6%	95
Female	53.6%	51.4%	104

- Compared to the UK, Surrey & North Sussex has an older population skew, with fewer under 34s.
- It also has a significant ABC1 profile.

134. The multiplex covers a wide and diverse area, comprising both densely populated commuter belt towns and more rural, countryside and farming areas. The influence of London is significant, not just as a source of work, but also as a destination for entertainment. As such, London is a significant influence on the day-to-day lives of local residents.

135. In our research, we asked what people felt the key issues for the area were, these being topics which they may be interested in hearing more about through the stations and podcast services carried on the multiplex:

	Adults
Health services	50%
Road traffic issues	39%
Environmental issues	32%
Employment	29%
Immigration	24%
Education for young people	22%
Rail travel issues	13%
The ageing population	13%
Further education	12%

- Those 35 to 54 were generally more concerned about a wider range of topics than either their younger or, more surprisingly, older counterparts.
- 35 to 44 year olds were more concerned than most with health (63%), employment (41%) and education for young people (33%), compared to those aged 65 plus who were more concerned with health (56%), immigration (33%) and the ageing population (25%).

## B - Consultation with locally elected representatives

136. In association with Eagle Radio, all county and local councillors were written to explaining DAB digital radio and the local opportunity, and asking them to complete an online survey about radio. The strong response – 105 responded, shows the strong relationship that Eagle Radio and its sister service County Sound have with the community.
137. 63% of councillors said that they listened to Radio 4 (in part reflecting the area's locality to London and its demographic breakdown), and Radio 4 was also recorded as the station listened to most often. 28% listened to Eagle Radio, just ahead of those claiming to listen to BBC Southern Counties Radio (26%). In relation to how they listen to the radio, 43% claimed to have listened to radio on a DAB radio, with 28% listening via the internet.
138. In relation to new formats, councillors were most keen about a station that played classic hits and provided local news and information (53%), followed by a travel and traffic station (39%). They also felt that services needed to reflect the older age profile of the area, for which services focusing on easy listening and timeless hits scored well.
139. Most councillors felt that there was scope for improvement in the range of services to meet specific age groups in the area, with children and the elderly in particular noted to have special needs. Councillors appeared to be far more concerned with environmental issues than businessmen (see below). However, both agreed that road traffic issues were extremely important.

## C - Consultation with local businesses representatives

140. Also in association with Eagle Radio, local business people were contacted, with an explanation on DAB and the opportunity for increased radio choice. They were also asked to complete a short online survey. 37 responded.
141. Their satisfaction with local commercial radio was high with 89% claiming that they regularly listened to Eagle Radio (which was the most listened to local station by 35%). By comparison, 46% listened to Radio 2, 35% to Radio 4 and only 5% to BBC Southern Counties Radio. A high 38% stated that they have listened to radio via a DAB radio in the past month, a level that was just a little higher than the number claiming to have listened via the Internet.
142. In response to how satisfied they were with the choice of services available, response was evenly divided between at least very satisfied and quite satisfied, indicating that there is room for some improvement.
143. In relation to new services they would like to listen to, local business people were interested in a range of proposed new services, especially a hits and album tracks service from the last 30 years, a classic hits and speech service and a dedicated travel and traffic station, all of which were mentioned by more than 40% of those responding.
144. In relation to the services which they felt would best allow them to target their main consumers, these included a classic hits and speech service (62%), timeless hits from the past 40 years, hits and album tracks from the past 30 years and a travel and traffic information service. Overall, business people showed a high (above 20%) interest in half of the formats reviewed.
145. Business people felt the main critical issues concerned the road network, the health service and environmental issues, all which received scores in excess of 50% and where the roads were mentioned by just over 70%.

## D - Radio choice

146. Six commercial analogue services and one BBC service currently serve the area. These services are listened to by 285,000 adults each week, and account for 14.1% of all radio listening:
- 96.4 Eagle Radio
  - County Sound
  - Mercury FM
  - Gold
  - Delta FM
  - Bright FM (*not in RAJAR*)
  - BBC Southern Counties Radio
147. Due to the proximity to London, all Greater London services are audible in that section of the area closest to London. These services, which account for 19.8% of all radio listening, are in the main already available on one of the three London multiplexes.
148. With regard to national radio, the national services of the BBC and commercial services carried by Digital One are audible across the county, as will be the services proposed by 4 Digital Group from late 2008.



## E - Current radio listening habits

149. RAJAR audience data has been analysed within the combined Eagle Radio, Mercury FM and Delta FM TSA, using rolled 12 month periods ending Q4 in each of the last 3 years. The following table details total audience and hours over this period.

	2005	2006	2007
<b>Population '000s</b>			
Reach %	91.6%	90.8%	93.3%
Reach '000s	869	868	888
Total Hours '000s	20,390	20,348	20,627
Ave. Hours	23.5	23.4	23.2

- Despite a small decline in all radio listening in 2006, 2007 saw a dramatic improvement in total radio listening levels.
- Average time spent listening to the radio has remained remarkably consistent over the past three years at a little over 23 hours per week per person.
- Reach and average hours are higher than the UK averages (89% and 22.6 respectively).

150. We have reviewed radio listening in the area against the UK as a whole to gauge how listening compares. The following table summarises RAJAR performance for the 12 months ended Q4 2007.

Market Share	Surrey & N Sussex	UK	Index
<b>All BBC</b>	<b>56.1%</b>	<b>55.1%</b>	<b>102</b>
• BBC Network	50.6%	44.9%	113
• BBC Local	5.5%	10.2%	54
<b>All Commercial</b>	<b>42.7%</b>	<b>42.7%</b>	<b>100</b>
• INR	11.9%	11.1%	107
• ILR	30.8%	31.6%	98
<b>Other</b>	<b>1.2%</b>	<b>2.2%</b>	<b>55</b>

- Commercial services collectively perform on par with the UK average.
- National services, both BBC and Commercial, perform slightly above average, reflecting the area's population and its proximity and relationship with London.
- Given the importance of national services, local services (and especially the BBC, a function we believe of its very broad geographic remit) underperform.

151. The following table details the relative historical market shares between the BBC and commercial radio within the area for three key age groupings, and compares 2007 data with results for the UK as a whole.

Market Share by Age	2005	2006	2007	UK 2007
<b>15 to 34</b>				
All Commercial	60.0%	55.9%	56.4%	55.3%
All BBC	39.0%	42.0%	42.3%	42.0%
<b>35 to 64</b>				
All Commercial	42.7%	43.0%	44.4%	43.3%
All BBC	56.4%	55.7%	54.1%	54.5%
<b>65 pluses</b>				
All Commercial	21.4%	26.7%	26.4%	24.9%
All BBC	76.5%	72.8%	73.0%	73.5%

Source RAJAR 12 mths ending Q4

- Whilst commercial radio deliver the majority of listening with the 15 to 34 age group and at a higher level than the UK average, trend analysis shows that the BBC is gaining share, up 8% over the 3 years.
- Amongst those aged 35 to 64, the BBC continues to super-serve this demographic, although overall commercial radio is improving its share.
- As expected, the BBC dominates listening amongst the 65 plus age group. However, the commercial sector is improving, up from 21.4% to 26.4% which is now ahead of the UK average for commercial radio.

152. The table below details reach and hours profiles for BBC, all commercial radio and all ILR within Surrey & North Sussex, and their indexation against the population.

Reach	All BBC Radio	Index on Population	All Commercial	Index on Population	All ILR	Index on Population	Population Profile
	%		%		%		%
15-24	11.0	87	14.9	118	16.3	129	12.6
25-34	14.4	94	16.4	106	17.9	116	15.4
35-44	18.1	92	22.2	113	25.3	129	19.6
45-54	17.1	102	18.2	108	19.3	115	16.8
55-64	16.3	110	13.7	93	12.1	82	14.8
65+	23.1	125	14.6	70	9.0	43	20.8

Hours	All BBC Radio	Index on Population	All Commercial	Index on Population	All ILR	Index on Population	Population Profile
	%		%		%		%
15-24	6.8	54	13.5	107	14.5	115	12.6
25-34	9.8	64	15.7	102	17.4	113	15.4
35-44	15.3	78	23.3	119	26.9	137	19.6
45-54	16.4	98	19.8	118	21.9	130	16.8
55-64	20.2	136	12.7	86	10.9	74	14.8
65+	31.5	151	15.0	72	8.4	40	20.8

In relation to the BBC:

- The BBC performs above average in all groups aged 45 plus. The BBC's above average performance actually improves as consumers get older.
- Analysis of hours underpins the BBC's strength as primarily 55 plus.

In relation to all commercial radio:

- By comparison, commercial radio has a much broader appeal, with an above average performance in all age groups under 55. It performs especially well with 25 to 34s and with 45 to 54 year olds.
- Analysis of hours profile for all commercial shows it over performs in all groups under 55 and more particularly with 35 to 54 year olds

In relation to ILR:

- Much like total commercial radio, ILR has a broad appeal and performs above average in all age groups under 55.
- However, the profile of ILR is younger and with a strong profile with 15 to 24s and 35 to 44 year olds.
- In relation to its hours profile, ILR over performs in all groups under 55 and, like the total commercial profile, does especially well with 35 to 54 year olds.

153. The following table summarises the historical performance of each local service over the last three years (Bright FM does not RAJAR).

	2005	2006	2007
<b>96.4 Eagle Radio</b>			
Weekly Reach %	13.9%	12.6%	13.2%
Total Hours '000	1,025	987	1,104
Market Share	5.0%	4.9%	5.4%
<b>County Sound</b>			
Weekly Reach %	1.6%	1.2%	1.5%
Total Hours '000	81	117	150
Market Share	0.4%	0.6%	0.7%
<b>Mercury FM</b>			
Weekly Reach %	9.1%	7.5%	7.7%
Total Hours '000	881	693	687
Market Share	4.3%	3.4%	3.3%
<b>Gold</b>			
Weekly Reach %	0.6%	0.2%	0.3%
Total Hours '000	75	17	31
Market Share	0.1%	0.1%	0.1%
<b>Delta FM</b>			
Weekly Reach %	1.8%	1.9%	1.8%
Total Hours '000	122	146	178
Market Share	0.6%	0.7%	0.9%
<b>BBC Southern Counties Radio</b>			
Weekly Reach %	8.0%	8.4%	8.3%
Total Hours '000	806	973	765
Market Share	4.0%	4.8%	3.7%

Source RAJAR rolled years ending Q4

- Audience levels for Eagle Radio have been remarkably consistent across the period and despite a blip in 2006, the station's performance has improved.
- Similarly, County Sound has seen a significant improvement in its market share, with reach held steady since 2005.
- Mercury FM, by comparison, has seen a rather sharp decline in audience levels, which has further trended downward in line with a loss of share.
- Gold Crawley is the worst performing service in the UK - ever.
- Delta FM performs comparatively strongly with reach consistent and share growing over the past three years.

154. Our consumer research highlights:

- A greater strength for commercial radio in total than is shown by RAJAR, with 70% claiming to listen each week.
- With a similar ILR score to RAJAR, this underpins the value of the national services in this market.
- Radio 2 was the most popular service, reaching 27% of adults, with Radio 4 at 21%.
- Capital 95.8 performed on par with Radio 1, with weekly reaches of 24% and 23% respectively.
- Eagle Radio was the best performing local service.
- In general, those owning a DAB radio scored the vast majority of stations higher, indicating that more choice does improve overall levels of radio listening.

## F - Uptake of DAB digital radio

155. The adoption of DAB is strong, with over 6.5m DAB sets sold. With recent set developments, such as the iPod adapter and in-car receivers, over the next 12 to 18 months, by the time the multiplex launches, the potential DAB audience in Surrey & North Sussex will be significant.
156. RAJAR Q4 2007 highlights that 34% can access one or more digital radio platforms, with 21% stating that they listen to radio on a DAB set.
157. Our research showed:
- 30% of adults own a DAB digital radio, with a further 4% claiming access. This takes overall access to over a third of the adult population.
  - There is no significant difference in ownership by age, though under 35s showed the highest level of overall access (38%).
  - Reflecting the population, ownership is higher among ABC1s.
  - Listeners to BBC stations showed higher than average DAB ownership (38%), though only slightly higher than among ILR listeners (37%).
158. The following table details the profiles of adults in DAB homes (per RAJAR) in Surrey & North Sussex against the UK profile.

	Profiles of		Surrey & North Sussex Index on UK DAB Population
	UK Population DAB Profile	Surrey & North Sussex Adults in DAB Homes	
	%	%	
<b>Men</b>	51.0	47.7	92
<b>Women</b>	48.1	52.3	109
<b>16 to 24</b>	17.0	11.6	68
<b>25 to 34</b>	15.4	13.0	84
<b>35 to 44</b>	20.3	19.6	97
<b>45 to 54</b>	18.1	20.3	112
<b>55 to 64</b>	15.6	19.7	126
<b>65 plus</b>	13.6	15.8	116

Source RAJAR 12 mths ending Q4 2007

- The profile of DAB ownership in the TSA is older than the UK DAB profile, but in line with the population profile of the area itself.
159. In our survey, DAB owners were asked what led them to purchase a set in the first place and having acquired a set, whether DAB had met their expectations:

Adults	Original motivator to buy	Has DAB met expectations?
Improved sound quality of existing analogue (FM/AM) radio stations	77%	53%
To have interference free reception	42%	23%
To hear new stations that are not currently available on your FM/AM radio	27%	10%
Because I like to keep up with new technology	16%	5%
Ease of tuning, finding stations by name not by frequency	10%	2%
To see information on the screen of the digital radio	5%	1%

- Whilst percentage levels change, the same three motivators are key in both buying and using a DAB radio, highlighting that the experience of DAB radio has lived up to its expectations

- Enabling existing analogue services to simulcast on DAB is an important consideration, and MuxCo S&S has approached all existing services with opportunities to broadcast. This was a motivator rated highly by under 35s.
- Robust coverage across the area is also important, and our proposed transmitter network will deliver DAB reception to 87%.
- Adding complementary new services that broaden choice is also an important consideration.

160. Non DAB owners were asked what would tempt them to acquire a DAB set:

	Adults
Improved sound quality of existing analogue(FM/AM) radio stations	30%
To have interference free reception	22%
To hear new stations that are not currently available on your FM/AM radio	14%
Ease of tuning, findings stations by name not by frequency	5%
Because I like to keep up with new technology	5%
To see information on the screen of the digital radio	2%

- The same motivators remain important for consumers who do not currently own a DAB set to acquire one.

Since Q2 2007, RAJAR has quantified radio listening by platform. Generally, the level of non-attribution is high. It is of interest to note that in Surrey and North Sussex, where DAB ownership is higher than average, the response to this additional aspect of data collection in the survey has been more clearly attributed. The following table summarises the split of total UK digital listening between each platform, and details the relative digital splits between each category for all radio, for the BBC and for commercial radio.

	Surrey & North Sussex % of All Digital Hours*	UK % of All Digital Hours	UK % of All BBC Digital Hours	UK % of All Commercial Digital Hours
DAB	63.1%	59.9%	71.0%	49.6%
DTV	16.5%	18.7%	13.6%	23.9%
Internet	12.5%	11.3%	11.1%	9.4%
Other digital	7.9%	10.1%	4.3%	17.1%
	<b>100%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Q4 2007(50 weeks) Published for Surrey & North Sussex TSA  
Q4 2007 UK National figures

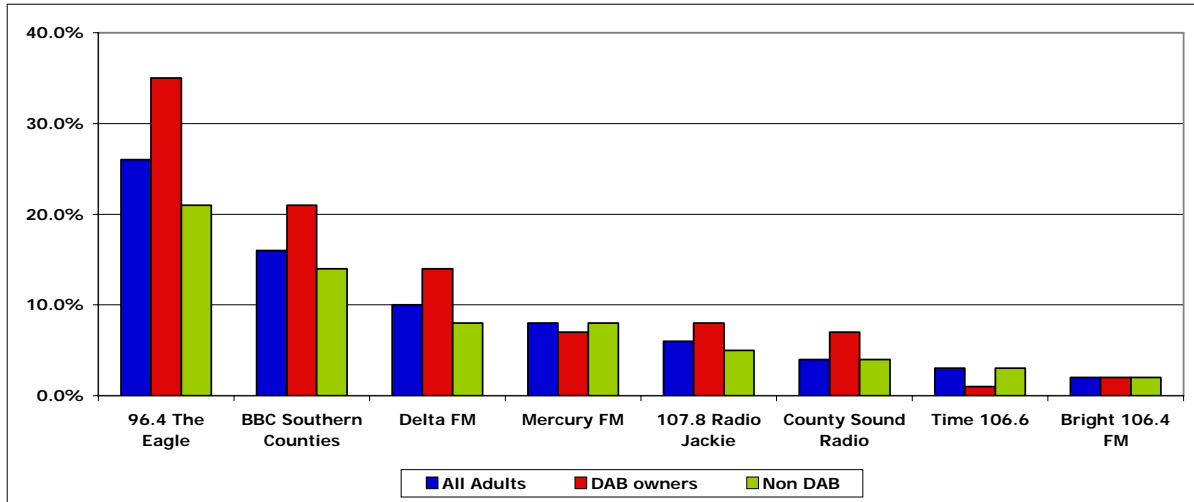
- In overall terms, 30% of the population now claim to listen on one or more digital platforms.
- There are strong variations between commercial and BBC listeners, with the latter more likely to listen on a DAB radio and the commercial sector showing higher DTV listening.
- In the proposed TSA, DAB is currently the preferred platform, with DTV only marginally ahead of Internet.

161. Those with access to DAB were asked what impact their DAB radio had had on their radio listening:

- 16% of DAB owners claimed to listen to more radio having acquired a set.
- 3% said they now listened to a lot more.
- Listeners to commercial radio, and ILR, were more likely to say they now listened to more radio.

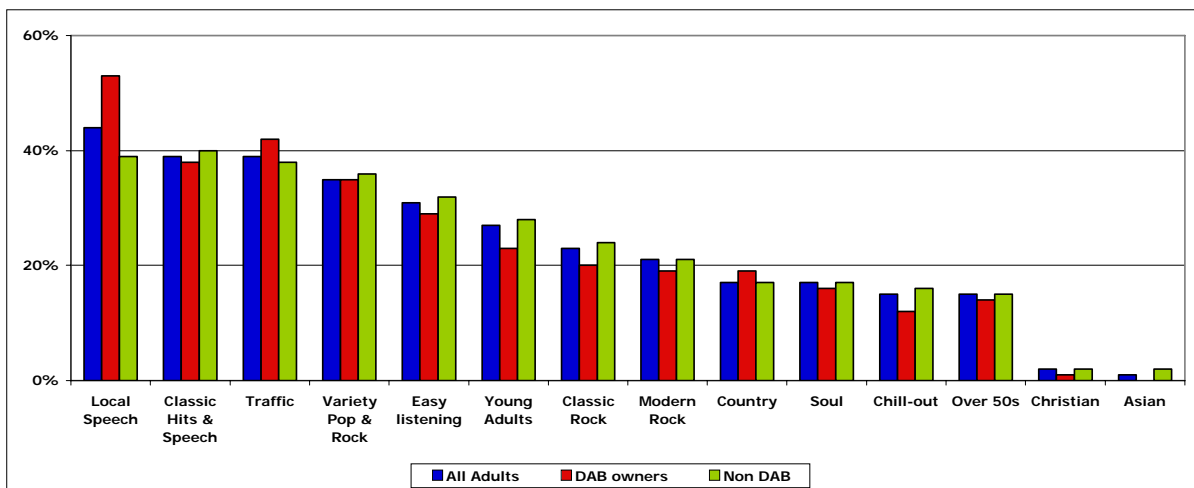
## G – What people would like from digital radio

162. Having reviewed existing radio listening habits through RAJAR and our consumer research, the next stage of our research was to evaluate interest in existing radio services, new formats and data services. The following chart summarises the results for existing local services.



- More than half of all adults would like to be able to hear one or more of the existing commercial services in digital quality, with the principal local stations of interest being 96.4 Eagle Radio, BBC Southern Counties and Delta FM.
- Whilst not a service from within the area, Radio Jackie attracted high interest as a local service which people would like to hear on DAB.
- Those who already own a DAB radio generally showed an above average interest in hearing existing services in digital quality.

163. Our consumer research also sought to gauge interest in a range of music genres and lifestyle genres. The majority of formats tested were ones for which we were confident that a service provider would be forthcoming, either at the time of the application or during the licence period. In addition, we felt that having consumer reaction to additional alternative format choices would be particularly relevant when expanding the choice of services in the future.



164. In selecting formats for inclusion on the multiplex, the following factors were considered:

- The profile of the population
- Existing commercial analogue services
- Research findings for new services
- Interest from programme and podcast service providers

***The profile of the population***

165. Surrey & North Sussex's profile is different from the UK average:

- It is older
- It is female biased
- It is extremely up market

***Existing commercial services***

166. There are a number of existing local services within Surrey & North Sussex, although only one currently serves the whole area (BBC Southern Counties Radio).

- Eagle Radio and Mercury FM are local contemporary hit services targeting under 45s within their core broadcast areas of Surrey and Crawley & Reigate respectively.
- County Sound is a classic hits service within Surrey and the sister station to 96.4 Eagle Radio with a broad 35 plus appeal.
- Gold is a networked classic hits service for Crawley & Reigate, and the sister station to Mercury FM.
- Delta FM is a local service for east Hampshire, south west Surrey and north west Sussex, with a mix of classic hits and local news, information and features.
- Bright FM is a local service for Burgess Hill, Haywards Heath and Lewes, providing a mix of music and locally relevant news and information.

***Research findings for new services***

167. In evaluating formats, we have analysed scores in overall terms, as well as by ten year age groups (which is detailed in Part B). Whilst research assists in the selection of formats, it is not the primary driver. Having an identified and confirmed service provider for a format was deemed of higher importance than purely the score of a particular format. We are aware that we could have included certain formats in our line up which would have further increased overall interest in the multiplex. However, from our experience, we know the implications of including unsupported formats in an application. Whilst they make the overall complement of services look better during the application process, such services have tended never to appear in reality, with the multiplex having to seek changes in the services carried. We have therefore elected only to include services where there is a confirmed service provider. When we are able to provide new services, our research will help support any request to Ofcom to amend our licence to include such additional services.

***Interest from programme and podcast service providers***

168. We have actively sought interest from a variety of service providers and have explored opportunities for the provision of podcast service. It is our belief that this will increase choice of content significantly in the market whilst allowing new entrants to explore the medium in an affordable way. We have in particular sought the involvement of local groups and organisations to provide content.

## Maximising Appeal

169. The following table summarises the anticipated audience profiles for the new services based on those who would listen at least weekly to that service.

	Modern rock %	Easy %	Teens & young adults %	Traffic %	Podcasts* %
Male	61	43	52	52	60
Female	39	57	48	48	40
15-24	26	4	39	6	30
25-34	23	12	31	18	28
35-44	25	20	16	25	23
45-54	17	27	9	23	12
55-64	5	17	2	16	4
65+	4	20	3	12	3
ABC1	60	71	60	71	65
C2DE	40	29	40	29	35

- *In the case of Podcasts, the profile is based on those who would like to have access to these as an additional audio service.*

## Frequency of Listening

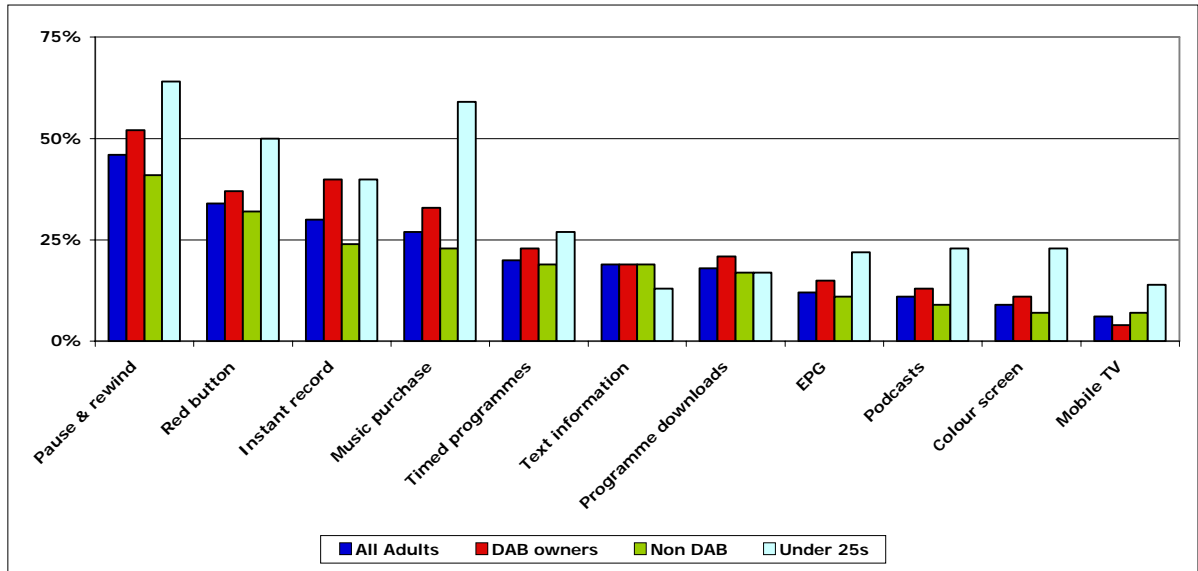
170. For each format, respondents were asked to say how frequently they would listen. The table below shows the likely weekly reach percentages based on those choosing the formats and how this would translate as a percentage of the total adult population

	Weekly Reach – All adults %	Weekly Reach - Choosers %
Local news, what's on and features	42	95
A mix of classic and contemporary hits with local news, information and features	37	95
Traffic and travel information	36	93
A broad mix of hits and album tracks from the last 30 years	32	90
Melodic, easy listening music from the last 4 decades and today	27	89
Pop, rock and dance music for teenagers and young adults	24	88
The greatest classic rock tracks	19	84
Modern rock music	18	90
Motown, Soul and R'n'B music	15	87
Classic and modern country music	13	75
Music and speech for the over 50s	13	83
Modern chill out music	12	82
Music and speech reflecting the Christian faith	1	56
A mix of speech and music for the Asian population	*	29



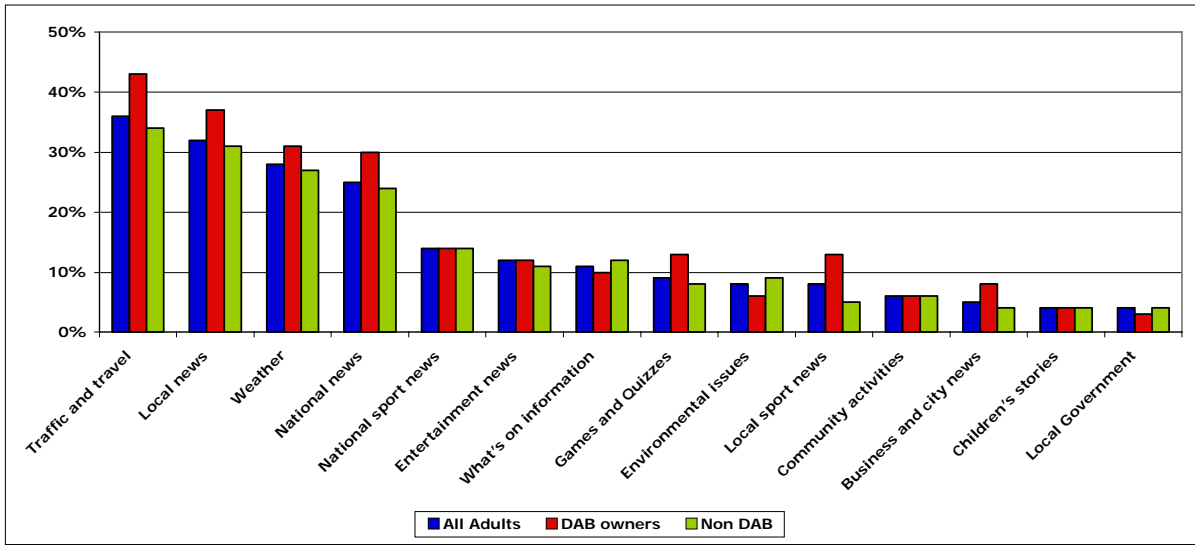
## Data Functionality and Services

171. The opportunities for DAB to provide a range of data services that will complement radio services, or provide additional services, is an important aspect. The following chart summarises views on a range of functionality that DAB sets could provide.

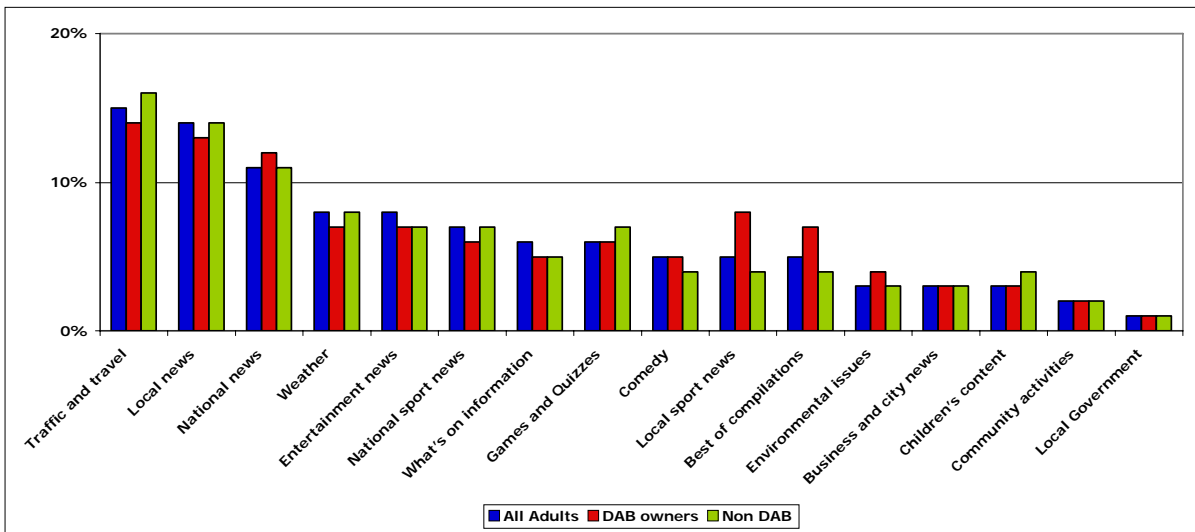


- The ability to pause, record and rewind programmes in the event of being disturbed was a potential new feature of digital radio that appealed to 46% of the sample, followed by red button functionality at 34%.
- DAB owners showed above average interest in additional functionality. In particular, DAB owners showed above average interest in being able to pause, record and rewind programmes, the ability to instantly record programmes, red button functionality and being able to purchase music. By contrast, non DAB owners showed slightly below average interest in additional features, perhaps revealing that the potential of DAB only becomes apparent through exposure to the medium and the features already available.
- Younger adults also generally showed more interest in additional functionality, especially music downloads, the ability to pause, record and rewind programmes and being able to instantly record programmes. In addition, they showed significantly interest in colour screens, EPGs and podcasts.

172. The following chart summarises reaction to a range of possible services that could be accessed through a screen on the radio.



173. And as audio downloads.



## H - What does the future hold for digital radio?

174. The multiplex will help increase the amount of time spent listening to the radio.

	Adults	Own DAB	Non DAB	Solus BBC
I would spend more time listening to the radio in order to include some or all of these new digital stations in my weekly listening	55%	55%	35%	34%
I would spend less time listening to some of my current choices of stations in order to include some or all of these new digital stations in my weekly listening	7%	2%	7%	2%
I would stop listening to one or more of my existing choices of station in order to include some or all of these new digital stations in my weekly listening	2%	1%	1%	0%

175. In relation to which stations people would listen to less (in order to accommodate the new ones):

- Just 7% of listeners wanting to listen to the new digital services would want to do so at the expense of their listening to existing services. Of these, almost a quarter would listen less often to a BBC station, while only 18% would listen less often to one or other of the existing Surrey and Sussex based ILR stations. Far more would choose to listen less often to the overlapping ILR stations emanating from London. This finding reinforcing our belief in the appeal of new local services in Surrey and Sussex.
- These new stations would also draw some audience away from the BBC, with 14% of those who currently only listen to BBC services saying they would be likely to listen less often to them in order to listen to the new digital stations.

176. In relation to which stations people would cease to listen to:

- Only 2% of future listeners to the new digital stations said they expected to stop listening to some of the existing services in order to tune in to the new digital services of interest to them.
- Again, overlapping London commercial services are the most likely stations to suffer, in particular LBC 97.3 and Magic 105.4. 11% of those who expected to stop listening to an existing service currently only listened to BBC Southern Counties Radio.

177. Among those who claimed not to listen to any radio at the moment, having gained some insight into what DAB might bring, 6% now said they might be interested in getting a digital radio in order to start listening. This could have the overall effect of increasing total radio reach in the market as well as total hours of listening.

178. If the new digital services were available today, their effect on listener behaviour would be such that more than 4 out of every 10 hours (or around 40%) spent listening to the radio would be devoted to the new digital services.

- Existing DAB owners would spend even longer, more than 4½ hours out of every 10 listening to the new services. Even those who had yet to purchase a DAB radio could see themselves devoting more than a third (3.9 hours) listening to the new digital services.
- Men were likely to spend longer listening than women (4.37 v 3.89), while under 25s demonstrated an intention to listen for longest (4.76 hours out every 10).
- Listeners to existing ILR stations were likely to spend longer listening to the new services than their BBC radio listening counterparts.

## **Propensity to Buy Digital Radio**

179. Finally, we asked those people who do not currently own a DAB digital radio how interested they would be in purchasing a DAB radio in order to be able to listen to the range of new stations they expressed an interest in. Overall, 45% said they were at least quite interested in buying a digital radio in order to listen to the new services that interested them. 22% were at least very interested, while 6% told us they were definitely interested in buying a new DAB set.
180. If all those who said they were at least quite interested in buying a digital radio actually went forward to buy one, then digital penetration would rise from 30% to 61%.
181. Take up of digital radio would be particularly strong amongst under 25s. Almost two thirds of those in this age group who do not yet own a digital radio now expressed some degree of interest in buying one. There was above average interest too, from all those under 55, but in particular all those under 35 (60%).
182. 63% of listeners to existing ILR stations who do not yet own a digital radio expressed a desire to go digital, which was higher than the proportion of listeners to BBC stations (52%) and solus listeners to BBC stations in particular (34%).

## **I – 96.4 Eagle Radio listener survey**

183. An online survey was undertaken with Eagle Radio listeners through its website. The survey sought their views on the radio station, on the opportunities presented by digital radio and on their new media use. It was designed to accompany the more representative local study that we commissioned. A total of 115 listeners completed the survey. The profile of those responding to the survey was similar to the audience profile, with the exception of a lower representation of 15 to 24s than might have been expected.
184. The vast majority, 94%, claimed that they had been listeners to Eagle Radio for more than 2 years. Of the balance, 3% had listened for less than a year and this coincides with the station seeing its weekly reach in RAJAR grow over this period.
185. The key reasons for listening to Eagle Radio were its presenters, the music played and its traffic and travel news, which is clearly a vital ingredient in this commuter belt area. Respondents also mentioned three other important considerations – its mix of music, news and information, that it helped them find out about what was happening locally and because they like to hear local news. All were mentioned by more than 50% of respondents. Other stations listened to included BBC Radio 1 and Capital 95.8.
186. Within the last month, 39% said that they had listened to the radio via a DAB digital radio, a figure a little higher than the 36% who listened via the internet and significantly higher than those who tuned in via TV.

187. Listeners were interested in hearing a wide range of new types of radio service, with only 4% not interested in any of the options put forward. Of most interest was a station playing music from the 80s and 90s, followed by a station playing a broad mix of album tracks from the last 30 years (47% and 45% respectively). Listeners were also interested in hearing rock music, with almost equal numbers for classic and modern rock.
188. In relation to improved functionality, 54% were interested in the notion of pause and rewind, and 41% in both red button functionality and an EPG.

### **Overall conclusions from our research**

189. We believe that our research findings have given the citizens of Surrey & North Sussex an opportunity to shape their radio choice for the future. The area already commands an above average level of DAB ownership and the proposed new radio choices will help erode the BBC dominance in this market.
190. Information on likely levels of listening to each service has helped underpin our audience projections, helping to demonstrate the viability of each service and therefore the multiplex's ability to establish and maintain the service.
191. Overall, we are confident that our research demonstrates that our services are demanded, will increase choice and will stimulate the purchase of digital radios.

## 15. Local support

Provide any evidence which has been gathered of local support for the provision of the proposed local radio multiplex service.

192. We believe that interest in the complement of services is best measured by the level of support for the services to be broadcast on the multiplex. We have assessed interest in existing services through RAJAR, and both existing and new through our commissioned research. Through this research (detailed in Q.14), demand for each format was evaluated, both individually and collectively on the basis of the chosen complement of services. Our research also evaluated interest in digital radio and the key drivers for the new technology, over and above pure choice of formats.

### ***Local Consultation***

193. We have consulted with MPs and local councillors as to their views of the issues that the county is likely to face over the next 10 years and how radio can assist. We have also discussed the DAB opportunity with a number of local businesses, organisations and individuals to make sure that the opportunities to broadcast as full services or as part of the Podcast Service are recognised, and to build local relationships. We have also sought feedback from the listeners of Eagle Radio through the station's website.

### ***Research***

194. We will undertake on-going consumer research during the licence term. This, in the main, will be undertaken in association with service providers through bodies like RAJAR. Such 'RAJAR' style research will assist service providers to measure audiences and the level of take-up, with obvious benefits to the subscribers. However, there may be times when there is a need to undertake original research, such as to evaluate demand for further potential services or to assess the style and level of content in programmes for contractual reasons. This research may be undertaken through quantitative, focus groups or desk research.

### ***Marketing***

195. We will also have a marketing role in generating awareness of digital radio both as a concept and, alongside the service providers, of the complement of services carried on the multiplex.

### ***Internet***

196. MuxCo S&S will be served by a website at [www.muxco.com](http://www.muxco.com). Through the site, MuxCo outlines its proposals and plans to apply for local multiplexes and seeks interest from prospective service providers. A copy of this application and further information about MuxCo and the licence opportunity are provided on the site.
197. In addition, the site promotes DAB digital radio and links to other multiplex operators elsewhere in the country. The website will also provide a means of communication between the multiplex and service provider, in particular providing information on transmission issues and fault notices.
198. Whilst a local multiplex is a virtual company, there is still a need to develop a relationship with the listeners about the services it carries. We will want to ensure that we understand the local population, their likes and dislikes, the market gaps and what other services it can provide. Therefore, although there is no wish to have a dialogue with the audience, there is a need to provide a means of access and communication.

## **Section 51(2)(g): Fair and effective competition**

### **16. Measures taken to ensure fair and effective competition**

Detail the measures that have already been taken, and will be taken before and during the licence period, to demonstrate that "in contracting or offering to contract with persons providing digital sound programme services or digital additional services or television licensable content services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of those services".

199. Our intention to apply for the licence has been documented on our website ([www.muxco.com](http://www.muxco.com)), which has provided an opportunity for prospective applicants to register their interests.
200. We have not advertised our proposals in local newspapers or the trade press, as our experience has identified that during the licence application process, such activity generates little response. Once operational, however, and with greater awareness of the multiplex in the locality, any new opportunities will be advertised in the trade press and local newspapers, as well as through the MuxCo website.
201. Following the advertisement of the licence opportunity, we contacted the identified local analogue licensees to discuss their digital aspirations and invite expressions of interest in providing programme services, as well as local community groups and organisations. We also contacted other radio groups who have known digital aspirations or operate digital service elsewhere.
202. All companies who registered expressions of interest were sent a Service Provider Questionnaire. They were advised that information received would be used alongside research to decide which formats would be included and therefore which service providers would be accommodated in the multiplex application. A summary of all contacts is included in Part B.
203. Headline terms including approximate carriage costs have been supplied to the proposed service providers.
204. During the licence period a similar process will be adopted, with a standard questionnaire being used to assess applicants.
205. During the application process, we have engaged with all potential service providers in an open and non-exclusive manner.

### ***Fair and Effective Competition during the Licence Period***

206. Each service provider will enter a Service Provider Agreement; the key terms of which will be identical for all service providers. All fees charged will be based solely on a 'cost plus' basis, pro-rata to capacity contracted by each service provider. No fees will be related to audience or revenue.
207. We will establish a Service Level Agreement with service providers. This will set out our communications and work policies, especially those relating to planned work and emergency outage notification.

## **17. Contacts with prospective service providers**

Provide a comprehensive list of all prospective providers of digital sound programme services and/or digital additional services and/or television licensable content services with whom the applicant has had contact prior to and during the preparation of this application, at the initiative of either party, and in whatever form. Summarise the nature of the proposals discussed and, for each proposal which is not among those planned for inclusion on the multiplex (as per Q.11 and Q.12 above), state the reason(s) why the prospective provider and/or the service(s) proposed by that provider has not been included.

*The response to this question may be submitted in confidence.*

208. Our response to this question is submitted in confidence in Part B.

## **18. Contractual and other arrangements with service providers**

For each digital sound programme service provider and/or digital additional service provider and/or television licensable content service provider named in this application:

- a) Supply details of the terms of access, including financial agreements;
- b) To what extent are any or all of these terms of access conditional? Clarify and conditions that exist.
- c) In respect of each named service provider for which details of terms of access are provided, supply a letter from the service provider confirming its agreement with the account of the terms of access provided above, and in particular with the fees it expects to pay.

*The response to this question may be submitted in confidence.*

209. Our response to this question is submitted in confidence in Part B.



## Technical quality

### 19. Division of multiplex capacity

Show, by means of a pair of clearly-labeled tables, the proposed division of the available multiplex capacity into digital sound programme services and other services during all time periods. The tables should depict the proportion of the total available capacity (in kbits/sec) which it is proposed to allocate individually to each of the digital sound programme services listed in response to Q.11, plus any capacity reserved for expansion, inclusive of any which it is proposed to allocate to digital additional services and television licensable content services. Please also indicate what proportion of these services will be programme-related (see paragraph 4.35). One of the tables should refer to the capacity units taken by each service (i.e. inclusive of capacity used for error protection), and the other table should refer to the bitrate net of error protection capacity, together with the associated protection level (1 to 5) which it is proposed to use, in accordance with ETS 300 401.

210. Increased choice of popular quasi-national and more local brands is a strong driver for the purchase of DAB receivers. When allocating capacity, we have sought to achieve an optimum balance between existing and new services, quasi-national and local, ensuring that there is sufficient capacity to develop ancillary and additional data applications which will help place radio at the centre of a multi-media, multi-platform UK.
211. We are aware of a number of recent listening tests undertaken to evaluate the latest 'state of the art' MPEG 1 Layer II audio codec. These tests demonstrated that there was only slight degradation (1.7 points on the ITU scale).
212. The following table details the division of multiplex capacity by kbits between the proposed audio channels, data capacity and EPG.

Kbits Allocation	Service Type	UEP	6am to Midnight	Midnight to 6am
BBC SCR	MPEG1L2	UEP3	128	128
Eagle Radio	MPEG1L2	UEP3	112	112
County Sound	MPEG1L2	UEP3	112	112
Mercury FM	MPEG1L2	UEP3	112	112
Easy Radio	MPEG1L2	UEP3	96	96
NME Radio	MPEG1L2	UEP3	96	96
Shuffle	MPEG1L2	UEP3	112	112
Traffic	MPEG1L2	UEP3	48	48
Podcast Service	AAC	EEP3A	16	80
Data	DATA	EEP3A	56	8
EPG	EPG	EEP3A	8	8
<b>Total</b>			<b>896</b>	<b>912</b>
<i>Allocated as % Total</i>			<i>78%</i>	<i>79%</i>
<i>Data as % Total</i>			<i>7%</i>	<i>8%</i>

213. The following table details the division of multiplex capacity by Capacity Units (CUs) between the proposed audio channels, data capacity and EPG, during two time periods.

<b>CUs Allocation</b>	<b>Service Type</b>	<b>UEP</b>	<b>6am to Midnight</b>	<b>Midnight to 6am</b>
BBC SCR	MPEG1L2	UEP3	96	96
Eagle Radio	MPEG1L2	UEP3	84	84
County Sound	MPEG1L2	UEP3	84	84
Mercury FM	MPEG1L2	UEP3	84	84
Easy Radio	MPEG1L2	UEP3	70	70
NME Radio	MPEG1L2	UEP3	70	70
Shuffle	MPEG1L2	UEP3	84	84
Traffic	MPEG1L2	UEP3	35	35
Podcast Service	AAC	EEP3A	12	60
Data	DATA	EEP3A	42	6
EPG	EPG	EEP3A	6	6
<b>Total</b>			<b>661</b>	<b>673</b>

## 20. Basis of allocation of multiplex capacity

On what basis have technical decisions on the allocation of multiplex capacity to each of the proposed digital sound programme services been made?

How has the balance been determined between the number of services to be accommodated and the audio quality and robustness of reception which each will enjoy?

214. In allocating capacity between services, the following factors have been taken into account:
- A desire to increase listener choice and to provide a range of value enhancing data services
  - A need to provide a reasonable level of sound quality
  - To ensure robustness of reception
  - The wishes of individual service providers
  - The reserved capacity of the BBC
215. Our aim is to provide each service provider with the ability to broadcast in stereo. However, for smaller stations and new digital only services, a further decision that service providers need to make is the benefit of broadcasting in stereo, especially during the initial years of digital, versus the financial saving of broadcasting in quality mono. We confirm that the decisions on bit rate are those of each service provider.
216. NGW has evaluated two different audio codecs at various different bitrates. They have found subjective differences that may lead to preferences for use of one codec over another, but dependent on the content and bitrate chosen. MuxCo S&S therefore intends to offer a choice of codecs to our service providers. At low bit rates of 64 kbits or below, we will consider the use of half rate coding at the request of our service providers.
217. We have chosen an error protection level of UEP 3 as it has been shown through widespread experience to give a good balance between CU allocation on the multiplex and robust reception.
218. We note that the WorldDMB Forum has now released the DAB<sup>+</sup> specification. This specification brings with it a significant improvement in spectrum efficiency over the existing standard, but raises a number of migration challenges. We believe that this technology offers an opportunity in the longer term to increase the choice of audio services and enhanced data services on our multiplex.
219. In reaching agreement with service providers, we will seek to contract flexible capacity allocations that will reflect the expected listening patterns of their individual audiences. As audiences vary in size and their daily activity changes, we will seek to provide service providers with the opportunity to vary their capacity up and down to meet their particular requirements, by varying bandwidth to suit listening patterns. As the requirements of service providers develop, and enhanced data services are implemented, there may be increasing demand for regular multiplex re-configurations.

## 21. Audio characteristics

For each local digital sound programme service proposed to be provided, state whether it will be broadcast in 'stereo' or 'mono', and whether it will operate at 'full-rate coding' or 'half-rate coding'. The response to this question should be consistent with the proposed division of multiplex capacity set out in response to Q.20.

	Service Type	Stereo / Mono	Coding	Protection Level	Audio Sampling
BBC SCR	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Eagle Radio	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
County Sound	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Mercury FM	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Easy Radio	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
NME Radio	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
Shuffle	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Traffic	MPEG1L2	Mono	Half Rate	UEP3	24kHz UEP3 Mono
Podcast Service	AAC	Mono or Stereo	Full Rate	EEP3A	48kHz EEP3A Mono / Stereo

220. The Podcast Service will be licensed under a DSP licence. The nature of the downloaded content will define the format of the coded audio; files with a majority of music content will be in stereo but those with predominately speech content may be encoded as mono to conserve data capacity. The use of AAC audio encoders will, however, allow us to maximise the audio quality at lower bit rates by employing the Parametric Stereo and Spectral Band Replication options.
221. The inclusion of an AAC based podcast service will also ensure that the new receivers that support it will be able to decode this codec, something that will likely make them capable of decoding DAB+ services when they come to the UK.

## Declaration

Applicants are required to conclude their submission by responding to the following question:

Do you confirm that, to the best of your knowledge and belief:

- a) the applicant is not a disqualified person in relation to the licence by virtue of the provisions of section 143(5) of the Broadcasting Act 1996 (relating to political objects);
- b) no director or person concerned directly or indirectly in the management of the company or the applicant group is the subject of a disqualification order as defined by section 145(1) of the Broadcasting Act 1996;
- c) no person involved in the application has been convicted within the past five years of an unlicensed broadcasting offence and that the applicant will do all it can to ensure that no person so convicted will be concerned in the provision of the service, the making of programmes included in it, or the operation of a radio station if the applicant is granted a licence; and
- d) any matters which might influence Ofcom's judgement as to whether the directors and substantial shareholders involved in the application are fit and proper persons to participate in a radio licence have been made known to Ofcom?

Applicants should note that Ofcom reserves the right to revoke a licence if at any time any material statement made is found to be false and to have been made by the applicant or any member or officer thereof knowing it to be false, and that in the circumstances of section 144 of the Broadcasting Act 1996, the provision of false information or the withholding of relevant information with the intention of misleading Ofcom could incur a criminal conviction and a disqualification from the holding of a licence.

222. MuxCo Surrey and North Sussex Ltd is not aware of any issues which would prevent the award of a licence to the company.