Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services

arqiva

Version 3

Publication Date: 1 June 2012

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This Reference Offer is issued by Arqiva Limited ("Arqiva") in accordance with a request from Ofcom in respect of Local Digital Television Programme Services (the "Ofcom Direction") and supersedes the Reference Offers published by Arqiva on 9 March 2012 and 4 May 2012.

This Reference Offer sets out the terms and conditions and charges on which Arqiva is willing to provide Transmission Services (as such term is defined in the Undertakings) as described in the Ofcom Direction.

This Reference Offer is subject to the Reference Offer Terms and Conditions set out herein, and the defined terms used in this Reference Offer can be found at Schedule 1 of the Reference Offer Terms and Conditions.

The specification and prices in this Reference Offer are current at 1 June 2012 and valid until 1 September 2012 after which time they will be revalidated by Arqiva. A copy of this Reference Offer, as updated from time to time, will be placed on Arqiva's website: <u>www.arqiva.com</u> (or any replacement or successor website). A copy has been provided to the Adjudicator and to Ofcom.

Please note that prospective customers may request an alternative specification pursuant to paragraph 10.7 of the Undertakings subject to the process set out in that paragraph.

The Reference Offer Terms and Conditions are drafted on the basis that twenty-one (21) Phase 1 Locations are the minimum commitment required from the Customer. There are an additional twenty-eight (28) Phase 2 Locations which are optional. The Customer may request from Arqiva the addition of Phase 2 Locations. In respect of such requests, the Customer shall provide Arqiva with twelve (12) months written notice prior to the target service start date for the Phase 2 Location(s) requested. A two year delivery programme has been allowed. As Arqiva do not know which of the 28 Phase 2 Locations a Customer may require, Arqiva has spread the delivery of Phase 1 Locations across a two year period. This allows for Phase 2 Locations to be delivered (as required) across this two year period. To ensure a cost efficient rollout, no more than seventeen (17) of the Phase 2 Locations can be requested by the Customer in any one (1) calendar year. The Target Service Start Date for all Locations shall be no later than September 2014.

Ofcom's coverage requirement is based upon serving geographic Locations and Arqiva's technical design as set out in this Reference Offer is based upon the use of existing transmission Sites and some Locations will require multiple Sites in order to provide the required coverage.

DATED 201[]

ARQIVA LIMITED

and

[]

LOCAL DIGITAL TELEVISION PROGRAMME SERVICES TRANSMISSION SERVICES AGREEMENT



Legal Affairs Arqiva Limited Crawley Court Winchester Hampshire SO21 2QA

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THIS AGREEMENT dated

201[] ("Effective Date") is made between:

- (1) **ARQIVA LIMITED** of Crawley Court, Winchester, Hampshire, SO21 2QA with registered number 02487597 ("**Arqiva**"); and
- (2) [] of [] with registered number [] (the "**Customer**").

WHEREAS:

- (A) Pursuant to the auction of spectrum to be used for the provision of Local Digital Television Programme Services held by Ofcom on [], the Customer holds a Multiplex Licence.
- (B) These Reference Offer Terms and Conditions and the other documents comprising the Agreement (as defined herein) have been prepared by Arqiva in accordance with the Ofcom Direction.
- (C) The Customer requires, and Arqiva is willing to provide to the Customer, the Transmission Service on the terms and conditions set out in this Agreement.

TERMS AGREED:

1. **DEFINITIONS AND INTERPRETATION**

- 1.1 Capitalised terms shall have the meaning ascribed to them in Schedule 1 (Defined Terms).
- 1.2 Where the context so admits or requires, words denoting the singular include the plural and vice versa and words denoting any gender include all genders.
- 1.3 Clause headings are purely for ease of reference and do not form part of or affect the interpretation of this Agreement.
- 1.4 Unless otherwise stated, references to Clauses and Schedules are to clauses of and schedules to this Agreement, and references to parts and paragraphs are to parts of and paragraphs of a Schedule to this Agreement.
- 1.5 References to each party herein include references to its successors in title, permitted assigns and novatees.
- 1.6 All references to "include" and "including" shall be construed to mean "include without limitation" and "including without limitation" respectively.
- 1.7 All references to a statute or statutory provision include any consolidation or reenactment, modification or replacement of the same, any statute or statutory provision of which it is a consolidation, re-enactment, modification or replacement and any subordinate legislation in force under any of the same from time to time.
- 1.8 In the event of any inconsistency in this Agreement between any Clause and any term set out in any Schedule, the Clause shall prevail over the term in the Schedule to the extent of any inconsistency.

2. CONDITIONS PRECEDENT

- 2.1 This Clause 2 and Clauses 1, 21, 22, 23, 24, and 25 shall come into effect on the Execution Date.
- 2.2 Subject to Clause 2.1, the following are conditions precedent to the coming into full force and effect of this Agreement:
 - (a) the Guarantor (which must be a party which is acceptable to Arqiva) entering into the Guarantee; and

- (b) in relation to the Guarantee, Arqiva receiving a written legal opinion in the relevant jurisdiction for the benefit of Arqiva in terms which are satisfactory to Arqiva as to the validity and enforceability of the Guarantee.
- 2.3 These conditions precedent may be waived by Arqiva in whole or part at any time by written notice to the Customer.
- 2.4 As soon as reasonably practical following the satisfaction or waiver of the conditions precedent Arqiva shall give notice of the same to the Customer, and the date of such notice shall be the "Satisfaction Date".
- 2.5 This Agreement shall come into full force and effect on the Satisfaction Date.
- 2.6 If the conditions precedent have not been satisfied or waived by 31 December 2012, Arqiva may: (i) extend the period for satisfaction of the relevant condition(s) precedent by giving written notice to the Customer; or (ii) terminate this Agreement by giving written notice to the Customer.
- 2.7 Subject to Clause 2.9, if this Agreement is terminated by Arqiva under Clause 2.6, neither party shall have any further obligations under this Agreement.
- 2.8 By 30 September 2012 (which may be prior to the Satisfaction Date), Arqiva will require the Customer to enter into:
 - (a) an Advance Design Agreement to cover Arqiva's costs for design work; and
 - (b) an Advance Equipment Procurement Agreement to cover Arqiva's costs for equipment orders,

in each case in connection with the proposed L-DTPS Transmission Programme. If the provisions of this Clause 2.8 (or equivalent) are not complied with by the Customer, this will constitute an Exceptional Risk and Arqiva shall be entitled to set reasonable revised Target Service Start Dates and to adjust the Charges under the Change Control Procedure.

2.9 For the avoidance of doubt, the termination of this Agreement by Arqiva under Clause 2.6 shall not affect the validity of any Advance Design Agreement or any Advance Equipment Procurement Agreement entered into pursuant to Clause 2.8.

3. NETWORK ACCESS

Subject to the remaining provisions of this Agreement, in order to provide the Transmission Service to the Customer, Arqiva shall procure the necessary and appropriate Network Access in accordance with the terms of this Agreement.

4. THE SYSTEM

4.1 General

Subject to Clause 17.5, the System and Equipment will be owned by, and shall be and remain the exclusive property of, Arqiva throughout the Term and thereafter. So long as this Agreement remains in force, Arqiva shall ensure that the System is operated, installed and maintained for the provision of the Transmission Service in accordance with the terms of this Agreement. All Equipment shall be and remain Arqiva's insurable risk throughout the Term.

- 4.2 The Build Project
 - (a) The Customer shall provide all of the information and submit all of the documents required and shall comply with all of its applicable obligations in Schedule 19.

- (b) Subject to Clause 4.2(i), Arqiva shall procure the performance of the System specified in Schedule 6 in accordance with the dates outlined in Schedule 3 and with all reasonable care and skill and to the standards expected of competent and experienced builders of broadcasting systems using at all times suitably skilled personnel in accordance with prevailing Laws and shall, subject to Clause 4.2(i), complete installation of the System at each of the Stations for each Location by the relevant Target Service Start Date.
- (c) Arqiva shall procure performance of all requisite tests in accordance with the Acceptance Testing Plan agreed by the parties pursuant to Schedule 14, to verify that installation of the System at each Station has been duly completed. Arqiva shall then confirm to the Customer in writing whether the System has satisfied the relevant tests at each Station. The Customer shall not take issue with any notice from Arqiva to the effect that installation of the System has not been duly completed in accordance with the Acceptance Testing Plan, in which event it shall identify its concerns by notice in writing to Arqiva. If the parties are unable to agree whether any final testing has been satisfactorily completed, the matter shall be referred for determination by an independent expert appointed in accordance with the procedure set out in Clause 24.3.
- (d) Installation of the System at any Station shall be treated as having been completed once the Station and relevant Equipment are capable of operating in accordance with the standards required under this Agreement, as demonstrated by the tests to be carried out in accordance with Clause 4.2(c), and Arqiva has notified the Customer accordingly.
- (e) To the extent that the Customer is required to give its approval of or agreement to any element of the Build Project, the Customer shall respond as soon as possible. For the avoidance of doubt, Clause 13.5 shall apply where the Customer does not comply with its obligations in this Clause 4.2(e). The Customer shall meet regularly with Arqiva and other parties as necessary at meetings convened by Arqiva to coordinate activities to allow the L-DTPS Transmission Programme to progress as required.
- (f) Arqiva shall use reasonable endeavours to obtain all the Consents and the Customer shall give Arqiva such assistance in obtaining the Consents as Arqiva shall reasonably request.
- The Customer acknowledges that international frequency clearances, including (g) agreement to transitional restrictions, may be required for all or certain Stations. In the event that it appears likely that any such clearances will not be obtained in sufficient time to complete installation of the System at any Station by the applicable Target Service Start Date, the Customer shall inform Argiva immediately and the parties will consult and agree alternative, later Target Service Start Dates with respect to the applicable Stations (and any disagreement between the parties in this respect shall be referred to the expert in accordance with Clause 24.3). If international frequency clearance in respect of transmission from any Station is refused but there is a viable alternative transmitting station in the same geographical area which the parties agree to adopt as a Station in substitution for the original, then such substitution shall be effected, and any additional charges levied, pursuant to the Change Control Procedure. However, if no such substitution is made, while Argiva shall divert to another Station any Equipment that it is reasonably able to reuse, the Customer shall reimburse Argiva the cost of any Equipment that cannot reasonably be put to such alternative use together with any other costs that Argiva has incurred in connection with the Build Project in accordance with this Agreement at the Station in respect of which international clearance has been refused. In turn, the Charges shall be reduced proportionately

and the application of this Agreement to the affected Station(s) shall be considered terminated.

- (h) Each party shall appoint an appropriate member of its staff as principal contact with respect to the Build Project. The parties' respective appointees shall meet on a regular basis, but not less than once in each calendar quarter, during the Term to monitor progress and Arqiva's representative shall provide to the Customer's representative at each such meeting an updated project plan detailing progress since the previous meeting. Each party may replace its appointee at any time on prior written notice to the other party.
- Arqiva shall not be liable for any failure to complete installation of the System at any Station by the applicable Target Service Start Date to the extent that: (i) Clause 13.5 applies; or (ii) such failure results from an Exceptional Risk.

4.3 Liquidated Damages

- (a) Subject to the remaining provisions of this Clause 4.3 and Schedule 15, if, in relation to any Location, Arqiva is unable to provide the Transmission Service on the relevant Target Service Start Date, it shall, from the relevant Target Service Start Date, incur a liability to pay Liquidated Damages to the Customer in respect of the period of delay and until the Actual Service Start Date in respect of such Location.
- (b) Where the Antenna System(s) for a Location can be used operationally but it is agreed that the Antenna pattern(s) require modification, Arqiva shall use reasonable endeavours to rectify the situation as soon as possible and shall not be liable to pay Liquidated Damages if it is not able to do so by the Target Service Start Date.
- (c) For the avoidance of doubt, Arqiva shall have no liability to pay Liquidated Damages pursuant to Clause 4.3(a) in the circumstances described in Clause 4.2(i).
- (d) The Customer acknowledges that any liability of Arqiva to pay Liquidated Damages under this Clause 4.3 that may arise shall represent the Customer's sole and exclusive financial remedy in respect of Arqiva's failure to provide the Transmission Service on the relevant Target Service Start Date for the applicable Location.
- (e) The parties agree and acknowledge that the Liquidated Damages payable pursuant to this Clause 4.3 represent a genuine pre-estimate of the loss likely to be incurred by the Customer as a direct consequence of any delay in achieving the Target Service Start Date for any Location.
- (f) Where Arqiva is not able to meet a Target Service Start Date as a result of any of the circumstances described in Clause 4.2(i), Arqiva shall be entitled to set a reasonable revised Target Service Start Date under the Change Control Procedure.

5. THE TRANSMISSION SERVICE

- 5.1 Authority To Provide the Transmission Service
 - (a) Arqiva warrants that, in relation to each Location, from the Actual Service Start Date and for the remainder of the Term, it shall have the Licences and all other licences, consents, authorities or dispensations which are necessary for it to provide the Transmission Service in respect of such Location and it shall during such period comply the terms of such licences, consents, authorities and dispensations in all respects.

- (b) Arqiva shall comply with the terms of any WTA Licence(s) from time to time issued to the Customer and applicable to Arqiva's provision of the Transmission Service and shall not by act or omission do anything which would place the Customer in breach of such WTA Licences, in each case to the extent that the Customer discloses (or procures the disclosure of) such WTA Licences to Arqiva. The Customer shall consult with Arqiva on any proposed changes to the terms of the WTA Licences and any Changes required as a result of such changes to the terms of the WTA Licences shall be implemented pursuant to the Change Control Procedure.
- 5.2 Transmission Service

Subject to the terms and conditions of this Agreement, on and from the Actual Service Start Date in respect of each Location, Arqiva shall provide the Transmission Service.

- 5.3 Total Time of Service Availability
 - (a) From the Actual Service Start Date at each Location, Arqiva shall use reasonable endeavours to provide to the Customer the Transmission Service using the System, comprising the transmission of the fully multiplexed Customer Signals delivered by the Customer for 100% of Regular Hours albeit that Arqiva shall not be in breach of this Agreement if it fails to achieve such target, provided that the Transmission Service meets the Total Time of Service Availability. In this context, the Customer acknowledges that, subject to Clause 10.2, in the event of a failure by Arqiva to achieve the Total Time of Service Availability, Arqiva's liability to pay service credits to the Customer under Clause 10.1 shall represent the Customer's sole and exclusive financial remedy in respect of such failure.
 - (b) In this context, the Customer acknowledges that 100% availability cannot be assured and accepts that Arqiva's investment in and provision of the System shall not be required to be greater than that which is reasonably needed to achieve transmission of the Customer Signals for the Total Time of Service Availability.
 - (c) The parties acknowledge that, save for the Transmission Service to be provided by Arqiva, the Customer shall procure the provision of all elements of its overall transmission solution including the delivery of Customer Signals in accordance with Clause 6.2(a), multiplexing, distribution, central service information (where applicable - as defined in EN300 468: DVB Specification for Service Information) and logical channel number services that may be required. Without prejudice to Clause 13.5, Arqiva's obligations to provide the Transmission Service as provided in this Agreement shall apply only to the extent that the Customer complies with the first sentence of this Clause 5.3(c).

5.4 Service Standards

Arqiva warrants and undertakes that, on and from the Actual Service Start Date in respect of each Location, the Transmission Service will be provided in a competent and professional manner to the standards reasonably expected of a competent and experienced provider of transmission services in the United Kingdom and with all reasonable skill and care using at all times suitable skilled personnel and in accordance with the Licences and any other prevailing Laws. Without prejudice to the foregoing, Arqiva shall ensure that, on and from the Actual Service Start Date in respect of each Location, the System complies in all material respects with the System Specification. In the event of any conflict or inconsistency between the relevant WTA Licence shall prevail (to the extent that the Customer discloses (or procures the disclosure of) such specifications to Arqiva) and Arqiva shall notify the Customer of any such conflict or inconsistency. Arqiva acknowledges that the aforesaid obligations continue throughout the Term.

- 5.5 Substitution of Station/Equipment and Movement
 - (a) Subject to Clause 4.2(g), Arqiva may substitute, on a permanent or otherwise basis, any Station (after consultation with the Customer) or any Equipment (without consultation with the Customer) (collectively "relevant item"). Arqiva shall ensure that taken as a whole the performance of any substitute relevant item shall be broadly equivalent to and in any event not result in a deterioration of service from the service that had been previously available or result in a reduction in the availability of the Customer Signals to the public, (save for any deteriorations or reductions of a *de minimis* nature), and, without prejudice to the generality of the foregoing, shall not cause any Station to transmit the Customer Signals at an ERP outside the parameters specified in the System Specification.
 - (b) Arqiva may at any time move the Antenna or other technical Equipment (including the Exclusive Contracted Equipment) at the Station or structure located on it. Where practicable Arqiva shall give reasonable prior notice to the Customer of any such movement. Arqiva shall ensure that taken as a whole the performance of the Antenna and/or the technical Equipment (as applicable), once moved, shall be broadly equivalent and in any event not result in a material deterioration of the Transmission Service.
- 5.6 Loss of Network Access Licence

The Customer acknowledges that Arqiva is only a licensee or tenant of some Sites and that, if the owner of any Site wishes to dispose of it or in any other way terminate Arqiva's possession of it, Arqiva's licence or lease may be terminated. In these circumstances, Arqiva shall seek to procure the provision of a suitable substitute for any Station or Equipment used from or on the relevant Site and Arqiva shall be entitled to pass on to the Customer: (a) the costs of decommissioning the former Site; and (b) the costs of procuring and bringing into service the substitute Station subject to agreeing the same under the Change Control Procedure. If Arqiva has any Site licence or tenancy terminated as contemplated by this Clause 5.6, and is unable to locate a substitute Site before such termination becomes effective, this Agreement shall terminate insofar as it relates to the affected Station and the Charges shall be reduced on a pro rata costs basis.

5.7 Technology Fit for Purpose

Arqiva shall ensure that the Equipment is provided and maintained so as to enable it to provide the Transmission Service in accordance with the Agreement.

6. CUSTOMER OBLIGATIONS AND RESTRICTIONS

- 6.1 The Customer shall not be permitted to visit any Site or to access any Station except with Arqiva's prior written consent and subject to Arqiva's supervision, which shall be chargeable pursuant to Clause 9.8. Such access shall be subject to the rules notified to the Customer's representative by Arqiva which the Customer shall procure are observed by the Customer's representative at all times. In any event the Customer shall indemnify and keep indemnified Arqiva from and against all claims, costs (including, without limitation, legal costs), damages and expenses awarded against Arqiva or agreed in any settlement resulting from the acts or omissions of any of the Customer's agents, employees or contractors on any Site.
- 6.2 The Customer shall be responsible for:
 - (a) procuring that the Customer Signals are delivered, throughout the Term, to each of the MTS Insertion Points and in accordance with the technical standards contained in the Multiplex Licence and to the technical standards set forth in Schedule 8;
 - (b) throughout the Term, obtaining, maintaining and complying with the Multiplex Licence and any other licences required to be held by the Customer that are

relevant to this Agreement. The Customer shall also throughout the Term be responsible for procuring that the Content Providers obtain, maintain and comply with any licences required to be held by the Content Providers that are relevant to this Agreement;

- (c) procuring permission from Ofcom in respect of the transmission of the Customer Signals for test purposes prior to Target Service Start Dates as reasonably required by Arqiva;
- (d) providing Arqiva with all reasonable cooperation to facilitate Arqiva's efficient discharge of its obligations under this Agreement and, in particular, providing Arqiva with accurate information in relation to matters that Arqiva reasonably considers pertinent to its provision of the Transmission Service from time to time;
- (e) transmitting its Customer Signals on a 24/7 basis, unless otherwise agreed by the parties in writing.
- 6.3 For the avoidance of doubt, the provisions of this Clause 6 are in addition to, and without prejudice to, the Customer's obligations under any other provisions of this Agreement and Clause 13.5 shall apply in the event that the Customer does not procure any of the matters set out in Clause 6.2(a) to (e).

7. MONITORING, MAINTENANCE AND PLANNED WORKS

7.1 Monitoring

Arqiva shall provide status monitoring, fault diagnosis and remote control of the Equipment and the Transmission Service, through the SMC, at each Station as more particularly described in Schedule 9. For the avoidance of doubt, Arqiva will not monitor the Customer Signals or any transmission characteristics of any Customer Signals.

7.2 Maintenance Services

Subject to the remainder of this Clause 7, Arqiva shall, in accordance with and subject to the terms and conditions set out in this Agreement:

- (a) ensure that on and from the Actual Service Start Date at each Location and during the period of this Agreement it has or it shall procure the provision of such facilities, spares and maintenance services as is necessary to enable Arqiva to provide the Transmission Service; and
- (b) plan and carry out maintenance necessary to provide the Transmission Service.

7.3 Urgent Maintenance

Without prejudice to Clause 7.4, Arqiva may at any time interrupt the Transmission Service to carry out maintenance of or other work (collectively "work") on any Equipment that it reasonably regards as urgent or essential PROVIDED THAT if there is no reasonable likelihood that the failure to carry out any such work will materially affect services provided to any third parties, such work will be only performed at times and for estimated durations approved by the Customer and in any event so as to minimise any interruptions or disruption to the Transmission Service. If the Customer does not approve any Arqiva request to interrupt the Transmission Service to perform such work, Arqiva reserves the right to carry out and make additional reasonable charges for any corrective maintenance that subsequently becomes necessary and Arqiva accepts no liability whether by way of service credits or otherwise arising from the Customer failing to give or delaying in the giving of its approval in such circumstances.

7.4 Routine Maintenance

To the extent that the Transmission Service is provided using Equipment or facilities which are also used for the benefit of third parties (whether by Arqiva or another person) Arqiva may interrupt, or permit the interruption of, the Transmission Service for such work to be performed as is required either to ensure that the said Equipment and facilities are maintained in reasonable repair and condition or to enable new or replacement equipment safely to be installed. Arqiva shall consult with and give the Customer reasonable advance notice of such maintenance (usually not less than seven (7) days), agree estimated timing and duration and perform the work during periods when the transmission priority is low, paying due regard to any equivalent obligations owed by Arqiva to other users of the equipment and facilities. Where seven (7) days' notice is not practicable, Arqiva shall give notice to the Customer as soon as practicable.

7.5 Maintenance from a Site

The Customer acknowledges and accepts that Arqiva may be required to interrupt the Transmission Service provided at and from a Site forthwith in case of emergency, so that safe access may be gained to any Mast or the Equipment at such Site. That said, Arqiva may interrupt such Transmission Service only:

- (a) in the event of any life or property threatening emergency;
- (b) where any interference caused by the Equipment is creating significant degradation to the services of other users of the Site and the degradation still exists after Arqiva has taken all reasonable measures (to the extent possible without interrupting the Transmission Service) to remedy any such interference; or
- (c) where it is required to do so by a Government Authority;

and (wherever possible) Arqiva shall in any event ensure that interruptions occur at an estimated time and for a duration agreed with the Customer beforehand and during periods when transmission priority is low.

7.6 Planned Works

The Customer acknowledges and accepts that Arqiva may interrupt the Transmission Service in order to carry out any planned works of the nature described in paragraph 3 of Schedule 11. Arqiva shall consult with and give the Customer reasonable advance notice of such planned works.

8. BREAKDOWNS

8.1 Notification by Arqiva

Arqiva shall notify the Customer's relevant nominated representative of (i) a Breakdown, (ii) any planned transmission of a Customer Signal with a reduction in power by more than 3dB at a Station for a continuous period exceeding 4 hours as soon as the relevant information is available. Arqiva shall also issue to the Customer a Fault Notice giving details of (a) any Breakdown at a Station lasting for a period of more than 2 minutes and/or (b) the transmission of a Customer Signal with a reduction in power by more than 3dB at a Station for a continuous period exceeding 4 hours (as applicable) in each case as soon as reasonably practicable after the occurrence of the relevant event. Within a reasonable time thereafter (not being more than five Business Days) Arqiva shall present a report to the Customer explaining the reasons for the Breakdown or planned interruption or transmission with reduced power levels.

8.2 Notification by Customer

The Customer shall and/or shall procure that the Content Providers shall (as applicable) notify the SMC by telephone of any Breakdown or other impairment of the System of which it becomes aware as soon as the information is available to the Customer and confirm this as soon as reasonably practicable by issuing a Fault Notice. Moreover, the Customer shall procure that the Multiplex Service Provider and/or the Distribution Service Provider (as applicable) immediately notifies the SMC by telephone or other agreed means of communication of any fault with the Multiplex Service or the Distribution Service (as the case may be) as soon as it becomes aware of the same.

8.3 Response Times

Arqiva shall ensure that any Breakdown or other impairment of the System is repaired as soon as practicable after the time from detection by the SMC or receipt by the SMC of notification of the Breakdown or other impairment of the System. In the case of a Breakdown or other impairment of the System which cannot be dealt with by remote control Arqiva shall use reasonable endeavours to ensure that the time from when the SMC detects or is notified of the Breakdown or other impairment of the System until the time an engineer attends at the site of the Breakdown or other impairment does not exceed the relevant Target Response Time.

8.4 Full Restoration

The restoration of the Customer Signals at a reduced level so as to bring a Breakdown to an end shall not relieve Arqiva of its obligation fully to restore the Customer Signals as soon as practicable thereafter.

8.5 Monthly Report

Arqiva shall provide to the Customer a monthly report on performance with details of any Breakdowns and other impairments and actual response times in relation thereto.

8.6 Breakdowns Caused by Customer Signals

Without prejudice to Clause 19, the Customer shall hold Arqiva harmless from any actual loss and/or expense incurred by Arqiva as a consequence of any time spent by Arqiva or its subcontractors in investigating apparent Breakdowns or other faults arising from the failure of the Customer or the Multiplex Service Provider or the Distribution Service Provider to deliver the Customer Signals.

9. CHARGES AND PAYMENT

9.1 Subject to the remainder of this Clause 9, as consideration for Argiva's provision of the Transmission Service, the Customer shall pay to Argiva the Charges. For Phase 1 Locations, twenty-five percent (25%) of the Network Access Initial Fee and twenty-five percent (25%) of the MTS Initial Fee shall become due on the Effective Date. For Phase 2 Locations. twenty-five percent (25%) of the Network Access Initial Fee and twenty-five percent (25%) of the MTS Initial Fee shall become due on the Request Date. For all Locations, a further twenty-five percent (25%) of the Network Access Initial Fee and twenty-five percent (25%) of the MTS Initial Fee shall become due on the Transmitter System Specification Date. For all Locations, a further thirty percent (30%) of the Network Access Initial Fee and thirty percent (30%) of the MTS Initial Fee shall become due on the System Test Date. The remainder of the Network Access Initial Fee and MTS Initial Fee shall become due on the Actual Service Start Date for that Location. The Transmission Annual Fee and the Forecast Pass-Through Costs shall become payable in respect of each Location from the Actual Service Start Date applicable to such Location. The Charges are subject to adjustments under a number of cost incentive mechanisms as set out in Schedule 4.

9.2 Indexation

- (a) Until the Actual Service Start Date for the last Location has occurred the Network Access Initial Fee, the MTS Initial Fee and the Transmission Annual Fee shall be adjusted by a percentage equal to the percentage increase in RPI.
- (b) Once the Actual Service Start Date has occurred for the last Location, the Transmission Annual Fee in respect of all Locations shall be adjusted by a percentage equal to the percentage increase in RPI minus 1%.
- (C) The percentage increase shall be calculated by comparing the RPI published in the September preceding the Year for which the relevant Charge is being reviewed, with the RPI published twelve months before the September immediately preceding the Year for which the relevant Charge is being reviewed and expressing the difference as a percentage of the first (i.e. first published) of such RPIs and (where applicable) then subtracting one percentage point. If any such number is a negative number, it shall be treated as zero for the purposes of the indexation mechanisms set out in this Clause 9.2. Any percentage increase in RPI that is required to be calculated under this Agreement shall be calculated to two decimal places and conventional rounding shall apply. (By way of illustration only, to calculate the indexation for the Transmission Annual Fee for the Year commencing 1 November 2011, the relevant increase in RPI is obtained by comparing the RPI for September 2010 and the RPI for September 2011 and expressing the increase between these two values as a percentage increase of the RPI for September 2010 and (where applicable) then subtracting one percentage point.)
- 9.3 Prior to the Actual Service Start Date for the last Location, Arqiva shall invoice and the Customer shall pay any Transmission Annual Fees and the Forecast Pass-Through Costs which have become payable in accordance with Clause 9.1 annually in advance on the first Business Day of the month of the anniversary of the Actual Service Start Date for the relevant Location, which shall constitute the Due Date.
- 9.4 On the Actual Service Start Date for the last Location (and annually thereafter), Arqiva shall invoice and the Customer shall pay the Transmission Annual Fee and the Forecast Pass-Through Costs in respect of all Locations in advance for the following Charging Year. In respect of the first Charging Year after the Actual Service Start Date for the last Location, Arqiva shall credit all payments already made by the Customer in respect of the Transmission Annual Fee and Forecast Pass-Through Costs for that Charging Year. Payment of the Transmission Annual Fee shall be effected by banker's direct debit. All invoices hereunder shall be raised in, and all debts due hereunder shall be settled in, GB pounds sterling. If the United Kingdom becomes a participating member state for the purposes of European Monetary Union and the Euro accordingly becomes the lawful currency of the United Kingdom, then:
 - (a) that shall not affect the validity of this Agreement or the rights and obligations of the parties hereunder, nor shall it give either party the right to alter or terminate the Agreement unilaterally; and
 - (b) with effect from the date on which it occurs, any amount referred to in this Agreement in GB pounds sterling shall be redenominated in Euros at the rate and in the manner determined by the relevant legislation.
- 9.5 Except as otherwise provided for under this Agreement, all charges of Arqiva hereunder shall be payable within 28 days of the date of the relevant invoice, the invoice date being the Due Date for such charges.
- 9.6 Arqiva shall be entitled to adjust any of the Charges (including, for the avoidance of doubt, any capital expenditure or operating expenditure element of the same) in accordance with the

Change Control Procedure to take account of the occurrence of any of the following: (i) any change in the Baseline Specification; and/or (ii) any Exceptional Risk.

- 9.7 All fees and charges referred to in this Agreement are exclusive of Value Added Tax and any other tax or duty which shall, if applicable, be payable by the Customer at the rate and in the manner from time to time prescribed by Law.
- 9.8 Arqiva's charges for any work to be performed under any provision of this Agreement which expressly cross-refers to this Clause, and its charges for any work outside the scope of the Transmission Service and the Build Project, shall be calculated by reference to Arqiva's prevailing rates of charge, as amended from time to time (unless agreed otherwise by the parties in writing).
- 9.9 The Customer shall promptly reimburse to Arqiva the annual cost of holding and renewing any WTA Licence or similar licences that Arqiva is required to hold in connection with this Agreement, where the same are required to be held by Arqiva pursuant to the terms of this Agreement.
- 9.10 If the Customer fails to pay any amount payable by it under this Agreement within twenty-eight (28) days from the Due Date, without prejudice to Arqiva's other remedies:
 - (a) the Customer shall be liable for and, on Arqiva's demand from time to time, it shall pay interest on such overdue amount from the Due Date up to the date of actual payment in full whether before or after judgement at the rate of 4% per annum over the base rate of the Bank of England, such interest to accrue from day to day and to be computed on the basis of a year of 365 days for the number of days elapsed; and
 - (b) Arqiva reserves the right to suspend the Transmission Service until the Customer has made payment in full of the outstanding amount (together with any accrued interest). The Customer shall not be relieved of any liability to pay the Charges in respect of any period during which the provision of the Transmission Service is suspended pursuant to this Clause 9.10(b).
- 9.11 Where any fee or charge is expressed to be payable in respect of a Year, unless otherwise indicated that means a full Year comprising twelve (12) months. Accordingly if this Agreement terminates, in whole or in part, other than at the end of a full twelve (12) month Year, the fee or charge in question shall be prorated on a daily basis to determine the actual amount due in that Year.
- 9.12 At any time during the Term, where Arqiva deems it appropriate in the circumstances, Arqiva may request that the Customer procure a parent company guarantee in favour of Arqiva or provide another form of financial security acceptable to Arqiva. The Customer shall promptly comply with any such request (and a failure to do so shall be deemed a material breach of this Agreement).
- 9.13 Commencing with the first Year in which the Customer is expected to be invoiced for the Transmission Annual Fee, Arqiva shall forecast the Pass-Through Costs likely to be payable by the Customer during that Year ("Forecast Pass-Through Costs") on a Location by Location basis. Arqiva shall conduct such forecast and notify the Customer of the Forecast Pass-Through Costs by, at the latest, the end of April prior to the start of the relevant Year.
- 9.14 The Customer's share shall be calculated on a Location-by-Location basis, using the following methodology:
 - Arqiva shall first calculate the total amount of Pass-Through Costs (except for any directly attributable Pass-Through Costs) incurred by Arqiva at each Station in respect of the provision of Network Access to all customers at that Station;

(ii) Arqiva shall then determine each customer's share of the total Pass-Through Costs (including the Customer's share) at each Station on a fair and reasonable basis that is reflective of the attributes/criteria that incur/drive these Pass-Through Costs. The Customer's share shall be this amount, plus (i) any directly attributable Pass-Through Costs, and (ii) the total cost of electricity for its Customer Equipment in the relevant period.

In procuring electricity required for the operation of the Equipment, Arqiva shall use all reasonable endeavours to ensure best value for itself and in turn for the Customer.

- 9.15 As soon as reasonably practical and no later than four (4) months after the end of the relevant Year, the Customer's share of actual Pass-Through Costs for the relevant Year ("Actual Pass-Through Costs"), determined in accordance with Clause 9.14 above, will be compared to the Forecast Pass-Through Costs for the relevant Year. Any overpayment or underpayment by the Customer shall be notified in writing by Arqiva. In the event of any overpayment by the Customer, Arqiva shall issue the Customer with a credit note to the value of any overpayment within thirty (30) days, save where no more Charges are due from the Customer to Arqiva, in which case Arqiva shall pay the amount within thirty (30) days. In the event of any underpayment, Arqiva shall issue an invoice to the Customer for this amount, such invoice being payable in accordance with the terms of this Agreement. In this Clause 9.15 "Year" shall mean the Charging Year, once the first Charging Year has elapsed.
- 9.16 Arqiva shall, on the Customer's written request and subject to payment by the Customer of Arqiva's reasonable incurred costs, provide copies of all documentation evidencing and/or supporting the calculation of the Actual Pass-Through Costs for any Year. Arqiva shall not however, be required to provide copies of such documentation to the Customer where by so doing Arqiva would be in breach of or otherwise contravene confidentiality or contractual commitments with other customers or users of Station facilities. Under these circumstances Arqiva will ensure that a reputable third party independently validates that the Customer's Pass-Through Costs have been derived and/or calculated in accordance with the methodology agreed between Arqiva and the Customer, and provide confirmation of such independent validation to the Customer on request. The Customer shall not be entitled to request this information more frequently than once per annum. Arqiva shall provide such information promptly and in any event within thirty (30) days, of the Customer's written request. In this Clause 9.16 "Year" shall mean the Charging Year, once the first Charging Year has elapsed.
- 9.17 In addition to the Charges and the Pass-Through Costs the Customer shall also be liable to pay for electricity required to provide the Transmission System as further described in Schedule 4.

10. SERVICE CREDITS AND SUPER CREDITS

- 10.1 Service Credits
 - (a) Subject always to Clause 10.1(b), if at the end of any calendar month after the applicable Actual Service Start Date, Arqiva has failed to achieve the Total Time of Service Availability applicable to any Station, Arqiva shall incur a liability to pay service credits to the Customer which shall be calculated by reference to Schedule 12 and payable in accordance with Clause 10.1(d).
 - (b) Subject to Clause 10.2, Arqiva's aggregate liability to pay service credits to the Customer under Clause 10.1(a) shall not exceed, in respect of any Year, 25% of the Transmission Annual Fee excluding Pass-Through Costs payable by the Customer to Arqiva under this Agreement in that Year.
 - (c) Subject to Clause 10.2, the Customer acknowledges that any liability of Arqiva that may arise under this Clause 10.1 shall represent the Customer's sole and exclusive

financial remedy in respect of Arqiva's failure to meet the Total Time of Service Availability.

- (d) At the end of each Year, the aggregate of any service credits arising during that Year shall be calculated by Arqiva. Any liability of Arqiva to pay service credits to the Customer shall be satisfied by means of an appropriate adjustment to the Customer's payments to Arqiva in the following Year or by means of a direct payment to the Customer in the case of the final Year. Any dispute as to the amount of any service credits due shall be resolved in accordance with Clause 24.3.
- 10.2 Super Credits
 - (a) If Argiva commits a Persistent Failure:
 - (i) the Customer may submit a Super Credit Notice to Arqiva; and
 - (ii) Arqiva shall have one (1) month following receipt of a valid Super Credit Notice within which to rectify its poor performance as set out in the Rectification Process to the Total Time of Service Availability.
 - (b) Where Arqiva fails to rectify its poor performance as required under Clause 10.2(a)(ii) above then the Customer shall be entitled to claim a Super Credit by issuing a Super Credit Claim.
 - (c) If the Customer issues a valid Super Credit Claim, Arqiva shall pay the applicable Super Credit within ninety (90) days of receipt of the Super Credit Claim.
 - (d) Payment of the Super Credit to the Customer shall be conditional upon the Customer waiving its right to terminate in respect of the relevant Persistent Failure but shall be without prejudice to any right to terminate which may arise thereafter under this Agreement, provided that performance issues that have occurred prior to the date on which the liability to pay the Super Credit arose and which contributed to that liability shall be disregarded for the purposes of measuring Arqiva's performance under the relevant contractual mechanisms after that date.
 - (e) Any liability of Arqiva to pay Super Credits will be in addition to any other liability of Arqiva for service credits under this Agreement.
 - (f) No more than one (1) Super Credit shall be payable by Arqiva in any Year.

11. SUSPENSION

- 11.1 The Customer shall have the right at any time to suspend broadcasting of the Licensed Service (in whole or in part) for any reason and upon receipt of written notification to that effect signed by a director or other nominated signatory of the Customer, Arqiva shall suspend the Transmission Service (in whole or in part) for the period notified by the Customer. Save where such suspension arises from Arqiva's breach of the Licences or any act or default of Arqiva or its employees, agents or subcontractors, the Customer shall remain liable to pay the full Charges during such period of suspension.
- 11.2 Arqiva shall have the right at any time to suspend provision of the Transmission Service (in whole or in part) where:
 - (a) the Customer is overdue with payment of any instalment of the Charges more than thirty (30) days after the Due Date, save that, in the event that Arqiva issues a notice in respect of terminating this Agreement under Clause 16.2(a), Arqiva shall not have the right to issue a concurrent suspension notice under this Clause 11.2(a);

- (b) Arqiva receives directions from any competent authority or is ordered by a court of competent jurisdiction to suspend transmission of the Customer Signals, provided that Arqiva shall give the Customer as much advance notice as it is reasonably able of such suspension to the extent that it is practicable and lawful for it so to do and shall use all reasonable endeavours to minimise its duration and impact;
- (c) the Customer ceases to hold the Multiplex Licence, WTA Licences or any other licences required to be held by the Customer that are relevant to this Agreement; or
- (d) the Content Providers cease to hold any licences required to be held by the Content Providers that are relevant to this Agreement,

in each case until the Customer has rectified such matters or until Arqiva has received appropriate directions from a competent authority or court of competent jurisdiction in respect of recommencement of the provision of the Transmission Service (as the case may be), and Arqiva shall not by reason of such suspension of the Transmission Service be in breach of its obligations to the Customer and the Customer shall remain liable to pay the full Charges during such period of suspension.

11.3 The Customer shall indemnify and keep indemnified Arqiva from and against all claims, costs (including, without limitation, legal costs), damages and expenses awarded against Arqiva or agreed in any settlement resulting from any failure by: (i) the Customer to comply with the Multiplex Licence or any other licences required to be held by the Customer that are relevant to this Agreement; or (ii) the Content Providers to comply with any licences required to be held by the Content Providers that are relevant to this Agreement.

12. CHANGE CONTROL PROCEDURE

- 12.1 Except as otherwise expressly provided in this Agreement, if the Customer or Arqiva wishes to make any change to the terms and/or scope of the Transmission Service provided hereunder (including, for the avoidance of doubt, any change whatsoever related to transmission) ("**Change**"), the parties shall follow the Change Control Procedure set out in Schedule 13, and the timing and manner of applying any such change shall be processed pursuant to and in accordance with such Change Control Procedure. Without limitation to the foregoing, any change to the Baseline Specification and any change resulting from the occurrence of an Exceptional Risk shall be dealt with through the Change Control Procedure.
- 12.2 Each of Arqiva and the Customer will nominate a representative who will be responsible for submitting requests for Changes to and receiving such requests from the other party. Approval of any such request by its representative in accordance with the procedure in Schedule 13 shall bind the relative party. The identity of either party's representative may be changed at any time by written notice to the other party.
- 12.3 Arqiva shall notify the Customer in advance of the impact of any such Changes through the Change Control Procedure. If the Customer does not accept the impact of any such Changes (including as to any adjustment to the Charges), the Customer shall have the right to have the matter referred to an expert pursuant to Clause 24.3.
- 12.4 The parties acknowledge that it may become appropriate for Changes to the technical requirements of the System to be made during the course of or after the Build Project and that requests for such Changes, all of which must be in writing, may be generated from several possible sources, including Arqiva, the Customer, Ofcom, DCMS or the Content Providers. All requests for such Changes initiated by the Content Providers must be channelled through and be endorsed by the Customer before being submitted to Arqiva pursuant to the Change Control Procedure.
- 12.5 There will be regular technical progress meetings which will be the forum at which requests for Changes to the technical requirements of the System are discussed and, if agreement is reached, jointly endorsed pursuant to the Change Control Procedure. For the avoidance of

doubt, save where expressly stated otherwise in Schedule 13, the Customer must approve any changes to fees and timescale, as advised by Arqiva, before Arqiva begins implementation.

12.6 The target timescale for processing requests for a Change will be within the timescale specified in the Change Control Procedure (or as otherwise agreed from time to time). It is recognised that minor changes should be processed more quickly but that major changes will be subject to a longer agreed time scale.

13. LIABILITY

- 13.1 Arqiva accepts liability to the Customer only as expressly provided or contemplated in this Clause 13, Clause 10 and Clause 4.3, and otherwise shall have no liability to the Customer under or in connection with this Agreement whether arising in or for breach of contract, tort (including negligence), breach of statutory duty, indemnity or otherwise.
- 13.2 Without prejudice to Clause 13.4, Arqiva's maximum aggregate liability to the Customer arising under or in connection with this Agreement, whether arising in or for breach of contract, tort (including negligence), breach of statutory duty, indemnity or otherwise, in respect of claims relating to any Year for any Location shall be limited to the greater of:
 - (a) an amount equal to £36,000 plus 125% of the Transmission Annual Fee excluding Pass-Through Costs payable by the Customer to Arqiva under this Agreement in respect of that Location and that Year; and
 - (b) £52,000.

For the avoidance of doubt any amounts payable by Arqiva to the Customer by way of service credits or Super Credits under Clause 10 or Liquidated Damages under Clause 4.3 shall count towards the limits on liability set out in this Clause 13.2.

- 13.3 Arqiva shall not be liable to the Customer under or in connection with this Agreement, or any collateral contract, for any loss of income, loss of actual or anticipated profits, loss of contracts, loss of goodwill or reputation, loss of business, loss of anticipated savings, loss of, damage to or corruption of data, or for any indirect or consequential loss or damage of any kind, in each case howsoever arising, and whether arising in or for breach of contract, tort (including negligence), breach of statutory duty, indemnity or otherwise. Without limitation to the generality of the foregoing, Arqiva hereby excludes all and any liability to compensate the Customer that Arqiva might otherwise incur in respect of: (i) any loss of advertising revenue, subscription fees or pay-per-view fees; and (ii) any third party claims brought against the Customer (including claims brought against the Customer by any Content Provider or any other of its customers).
- 13.4 Nothing in this Clause 13 or otherwise in this Agreement shall exclude or in any way limit either party's liability: (i) for fraud; (ii) for death or personal injury caused by its negligence (including negligence as defined in s. 1 Unfair Contract Terms Act 1977); (iii) for breach of terms regarding title implied by s. 12 Sale of Goods Act 1979 and/or s. 2 Supply of Goods and Services Act 1982; (iv) under the indemnities set out in Clause 15.2 and Clause 15.7 respectively; or (v) to the extent the same may not be excluded or limited as a matter of Law.
- 13.5 Arqiva shall have no liability to the Customer, and the Customer shall have no right or remedy against Arqiva, for any delay by Arqiva in performing or complying with, or any failure by Arqiva to perform or comply with any obligation under this Agreement, to the extent that such delay or failure is attributable to any act, omission or delay of or by the Customer or any of its employees, agents or contractors (including any breach by the Customer of any obligation under this Agreement or of any licence required to be held by the Customer relevant to this Agreement and/or any failure by the Customer to comply with any of its obligations under Schedule 19).

- 13.6 The exclusions and limitations of liability under this Clause 13 shall have effect in relation both to any liability expressly provided for or contemplated under this Agreement and to any liability arising or incurred by reason of the invalidity or unenforceability, in whole or in part, of any term of this Agreement.
- 13.7 This Agreement sets forth the full extent of Arqiva's obligations and liabilities arising out of or in connection with this Agreement, and there are no conditions, warranties, representations or terms, express or implied, that are binding on Arqiva except as specifically stated in this Agreement. Any condition, warranty, representation or term which might otherwise be implied into or incorporated in this Agreement, whether by statute, common law or otherwise, is hereby expressly excluded.

14. **FORCE MAJEURE**

- 14.1 Neither party shall be liable for its failure to perform or its delay in performing its obligations for any period or for resulting loss, injury or damage to the extent only that such performance is prevented or directly adversely affected by any of the following events: any act of god, insurrection or civil disorder, war or military operations, national or local emergency, acts or omissions of Government Authority, highway authority or other competent authority, industrial disputes of third parties (excluding the affected party's agents and subcontractors), fire, flood, severe inclement weather or national epidemic or any other cause whether similar or dissimilar outside the affected party's control (each a "Force Majeure Event"), all to the extent that these events are beyond the affected party's control and have not occurred as a result of any act or default of the affected party, its employees, agents or subcontractors and provided also that the occurrence of any such Force Majeure Event shall not have the effect of discharging or postponing the affected party's payment obligations or liabilities hereunder. Any party seeking to rely on this Clause shall promptly notify the other in writing. The period of excused non-performance shall be limited to the duration of the applicable Force Majeure Event.
- 14.2 Termination
 - (a) In the event that a Force Majeure Event has prevented Arqiva from providing the Transmission Service in accordance with this Agreement for a period of one hundred and twenty (120) consecutive days at a Station and Arqiva has failed, during such period, to restore the Transmission Service the Customer shall be entitled to terminate this Agreement forthwith upon written notice to Arqiva in respect of such affected Station and the Charges shall be reduced proportionately (with a pro rata adjustment for the then current Year to reflect the number of days left in the Year).
 - (b) In the event that a Force Majeure Event has prevented the Transmission Service from being provided at at least 50% of Locations for a continuous period of 60 consecutive days the Customer shall be entitled to terminate this Agreement in its entirety on written notice to Arqiva.
 - (c) If the Customer is prevented from performing its obligations under this Agreement for a continuous period exceeding one hundred and twenty (120) days, Arqiva may by notice in writing to the Customer, immediately terminate this Agreement.
 - (d) In the event that a Force Majeure Event has prevented Arqiva from completing the Build Project in respect of any Location, within six (6) months of the relevant Target Service Start Date, either party shall be entitled to terminate this Agreement in respect of that Location.
 - (e) In the event of any termination pursuant to this Clause 14.2, the provisions of Clause 17.4 shall apply.

15. **INTELLECTUAL PROPERTY**

15.1 Licence Of Customer Signal

The Customer hereby grants to Arqiva for the period of transmission of the relevant Customer Signal a non-exclusive royalty free licence (with the right to sub-license to sub-contractors) to transmit the Customer Signals in the United Kingdom for the sole purpose of providing the Transmission Service. The Customer hereby represents that it has or will have all requisite authority to enable it to grant such licence to Arqiva.

15.2 Indemnity regarding Customer Signals

The Customer agrees during this Agreement and thereafter to indemnify and keep indemnified Arqiva from and against all claims, actions, liabilities, losses, damages and expenses (including legal expenses) incurred by Arqiva resulting directly or indirectly from any claims by third parties that any of the Content, the Customer Signals or the transmission in accordance with the terms of this Agreement by Arqiva, or sub-contractors of Arqiva, of any transmitted service signal relating to any Customer Signals:

- (a) is in breach of any duty of confidentiality or privacy;
- (b) infringes any existing or future Intellectual Property Rights;
- (c) is defamatory or obscene;
- (d) infringes any applicable Law or any voluntary codes of conduct in relation to the broadcasting of programmes or provision of data services; or
- (e) causes damage to any viewer's DTT set top box or other DTT reception device.
- 15.3 Notice and Conduct of Claim
 - (a) Arqiva shall notify the Customer as soon as reasonably practicable of any claim from a third party as referred to in Clause 15.2 (a "Claim") and, subject to Clause 15.3(b), at the Customer's sole cost, shall provide reasonable assistance in connection with the Claim when requested. Subject to Clause 15.3(b), the Customer shall be entitled to resist, compromise or settle a Claim in the name of Arqiva at the Customer's own expense and to have the sole conduct and control of any appeal, dispute, compromise, settlement or defence of a Claim and of any incidental negotiations and Arqiva shall give the Customer, at the Customer's cost, all reasonable cooperation, access and assistance for the purposes of considering and resisting such Claim and shall not make any admissions or statements prejudicial to the Customer. The Customer shall keep Arqiva reasonably informed and consult with it as to the conduct of the Claim.
 - (b) If within ninety (90) days after Arqiva's receipt of notice of any Claim, the Customer fails to take action to defend the same, Arqiva may at the Customer's expense undertake the defence, compromise or settlement of the Claim. Upon the assumption of the defence of the Claim, Arqiva may defend, compromise or settle the Claim as it sees fit provided that Arqiva shall take reasonable steps to monitor and mitigate the fees and costs associated with the same and shall keep the Customer informed of any reasonable settlement proposals made by the claimant and shall not agree any settlement without the Customer's prior written consent (not to be unreasonably withheld or delayed).
- 15.4 Existing and Future Intellectual Property Rights

The Customer agrees that any original document, hardware or prototype produced by Arqiva in its performance of the Transmission Service and all Intellectual Property Rights developed

or created by Arqiva in the performance of the Transmission Service or any other services hereunder shall vest in and be owned by Arqiva provided that Arqiva shall grant the Customer a licence of such Intellectual Property Rights solely as are required for the exercise of the Customer's rights under this Agreement.

15.5 Intellectual Property Rights in Customer Signals

Nothing in this Agreement shall operate to vest in or transfer to Arqiva any Intellectual Property Rights in the Content or Customer Signals transmitted by Arqiva pursuant to this Agreement and any such rights shall, as between Arqiva and the Customer, vest solely in the Customer.

15.6 Warranty re Operation of Transmission Service

Arqiva warrants that the operation and provision of the Transmission Service per se:

- (a) will not infringe the Intellectual Property Rights of any third party; and
- (b) will not cause physical damage to any viewer's DTT set top box or other DTT reception device, provided always that such box or other device has been designed and tested by the relevant manufacturer to meet the applicable DVB and other relevant standards; and
- (c) will not interfere or otherwise adversely affect the transmission or broadcast of any third party's signals.
- 15.7 Indemnity regarding Operation of Transmission Service

Subject to the Customer's compliance in all respects with Clause 15.8, Arqiva shall indemnify the Customer against all claims, costs (including reasonable legal costs) damages and expenses incurred by or awarded against the Customer in respect of any breach of the warranty in Clause 15.6.

15.8 Notice and Conduct of Third Party Claim

The Customer shall notify Arqiva in writing as soon as reasonably practicable of any claim from a third party as referred to in Clause 15.7 (a "**Third Party Claim**") and, at Arqiva's sole cost, shall provide all information and assistance in connection with any Third Party Claim as Arqiva may reasonably require. Arqiva shall be entitled to resist, compromise or settle a Third Party Claim in the name of the Customer at Arqiva's own expense and to have the sole conduct and control of any appeal, dispute, compromise, settlement or defence of a Third Party Claim and of any incidental negotiations and the Customer shall give Arqiva, at Arqiva's reasonable cost, all reasonable cooperation, access and assistance for the purposes of considering and resisting such Third Party Claim and shall not make any admissions or statements prejudicial to Arqiva. Arqiva shall keep the Customer fully informed and consult with it as to the conduct of any Third Party Claim.

16. **DURATION AND EARLY TERMINATION**

16.1 Term

Subject to the remainder of this Clause 16, this Agreement shall come into force on the Execution Date and shall continue thereafter for a fixed term expiring at 24:00 hours on [1 October 2026] whereupon it shall automatically and immediately terminate unless renewed by mutual written agreement of the parties.

16.2 Termination By Arqiva

Arqiva shall be entitled forthwith on serving a written notice on the Customer to terminate this Agreement immediately (unless otherwise stated below) in whole on any of the following events occurring:

- (a) if the Customer has not paid any amount due within thirty (30) days of the Due Date, provided that, in the event that Arqiva issues a suspension notice under Clause 11.2(a), Arqiva shall not have the right to issue a concurrent termination notice under this Clause 16.2(a);
- (b) if the Customer commits any other material breach of any provision of this Agreement and, where remediable, does not remedy the breach within sixty (60) days of Arqiva notifying the Customer in writing of the breach in question;
- (c) if:
 - (i) the Customer ceases or threatens to cease to trade (either in whole, or as to any part or division involved in the performance of this Agreement);
 - (ii) the Customer is unable or admits inability to pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness or the value of the assets of the Customer is less than its liabilities (taking into account contingent and prospective liabilities) or a moratorium is declared in respect of any indebtedness of the Customer; or
 - (iii) any corporate action, legal proceedings or other procedure or step is taken in relation to:
 - (A) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganisation (by way of voluntary arrangement, scheme of arrangement or otherwise) of the Customer other than a solvent liquidation or reorganisation;
 - (B) a composition, compromise, assignment or arrangement with any creditor of the Customer;
 - (C) the appointment of a liquidator (other than in respect of a solvent liquidation), receiver, administrative receiver, administrator, compulsory manager or other similar officer in respect of the Customer or any of its assets; or
 - (D) enforcement of any security over any assets of the Customer, or any expropriation, attachment, sequestration, distress or execution affects any asset the Customer having an aggregate value of £10 million and is not discharged within thirty (30) days,
 - (iv) or any analogous procedure or step is taken in any jurisdiction; or
- (d) if the Multiplex Licence or any other licences required to be held by the Customer that are relevant to this Agreement are: (i) revoked for any reason except in the context of the grant to the Customer of a replacement licence, or (ii) surrendered by the Customer; or (iii) breached by the Customer.
- 16.3 Termination by Customer For Cause

The Customer shall, without prejudice to its other remedies, be entitled forthwith on serving a written notice on Arqiva to terminate this Agreement immediately in whole on any of the following events occurring:

- (a) if Arqiva commits a material breach of any provision of this Agreement and, where remediable, does not remedy the breach or otherwise satisfactorily compensate the Customer in respect of such breach within sixty (60) days of the Customer notifying Arqiva in writing of the breach in question;
- (b) if:
 - (i) Arqiva ceases or threatens to cease to trade (either in whole, or as to any part or division involved in the performance of this Agreement);
 - (ii) Arqiva is unable or admits inability to pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness or the value of the assets of Arqiva is less than its liabilities (taking into account contingent and prospective liabilities) or a moratorium is declared in respect of any indebtedness of Arqiva; or
 - (iii) any corporate action, legal proceedings or other procedure or step is taken in relation to:
 - (A) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganisation (by way of voluntary arrangement, scheme of arrangement or otherwise) of Arqiva other than a solvent liquidation or reorganisation;
 - (B) a composition, compromise, assignment or arrangement with any creditor of Arqiva;
 - (C) the appointment of a liquidator (other than in respect of a solvent liquidation), receiver, administrative receiver, administrator, compulsory manager or other similar officer in respect of Arqiva or any of its assets; or
 - (D) enforcement of any security over any assets of Arqiva, or any expropriation, attachment, sequestration, distress or execution affects any asset of Arqiva having an aggregate value of £10 million and is not discharged within thirty (30) days,
 - (iv) or any analogous procedure or step is taken in any jurisdiction; or
- (c) if Arqiva ceases to hold any of the Licences.

17. CONSEQUENCES OF TERMINATION

17.1 Return of Property

Upon termination of this Agreement for whatever reason the Customer shall, at Arqiva's request, as soon as reasonably practicable, make available for collection by Arqiva, all of Arqiva's or its agents' or sub-contractors' documents or equipment as are in the Customer's possession or under its control and vice versa.

17.2 Accrued Rights

Any termination or expiry of this Agreement shall be without prejudice to either party's right to recover any sums due to be paid or to any other rights accrued to one party in accordance with this Agreement on or prior to the effective date of such termination.

17.3 Transition Assistance

If this Agreement expires or is terminated by the Customer under Clause 16.3(a) or 16.3(c) Arqiva shall provide reasonable transition assistance to the Customer upon the Customer's request as set out in Schedule 18 and subject to payment of Arqiva's applicable fees (applying Clause 9.8) at any time prior to or within six (6) months after the expiry or termination of this Agreement.

17.4 Termination Payments

If this Agreement is terminated pursuant to any of Clauses 16.2(a), (b), (c) or (d) or Clause 14.2, the Customer shall pay to Arqiva the termination payment set out in Schedule 21 in accordance with the provisions of that Schedule. The Customer's only liability to Arqiva following a termination of this Agreement pursuant to such Clauses shall be to pay the applicable termination payments pursuant to this Clause 17.4 and Schedule 21 but any such termination shall otherwise be without prejudice to the accrued rights and liabilities of the parties as at the effective date of termination including, without limitation, the Customer's obligation to pay, and Arqiva's right to recover, any sums due by the Customer under Clause 9 (and otherwise under this Agreement) up to and including the effective date of termination.

- 17.5 Purchase of Exclusive Contracted Equipment
 - (a) The Customer may at any time between six (6) months and eighteen (18) months prior to the date of expiry of this Agreement submit a written request to Arqiva to provide:
 - (i) a detailed inventory of all Exclusive Contracted Equipment, including an indication of the cost of such Exclusive Contracted Equipment (calculated in accordance with the Undertakings) (the "inventory"); and
 - (ii) a plan to facilitate transfer of ownership and control of such Exclusive Contracted Equipment to the Customer or its nominee upon expiry of this Agreement which will include the information set out in Schedule 18 (the "transition plan").
 - (b) Arqiva shall consult with the Customer in generating the transition plan and shall provide both the inventory and the transition plan referred to in Clause 17.5(a) to the Customer within three (3) months following receipt of the Customer's written request.
 - (c) Following receipt of the information referred to in Clause 17.5(a) by the Customer and, in any event, at least two (2) months prior to the expiry of this Agreement, the Customer may submit to Arqiva a written request to: (i) implement the transition plan; and (ii) transfer all of the Exclusive Contracted Equipment to the Customer (or its nominee).
 - (d) Arqiva shall implement this request upon expiry of the Agreement, subject to payment by the Customer of the cost of the Exclusive Contracted Equipment (as notified to the Customer pursuant to Clause 17.5(b)).
 - (e) The Customer may also exercise the rights set out in Clauses 17.5(a) to (d) in circumstances where the Customer terminates the Agreement pursuant to Clause 16.3(a) or 16.3(c), subject to the following amendments:
 - within five (5) Business Days following the date of the Customer's notice to terminate, the Customer shall submit a written request to Arqiva to provide the inventory of Exclusive Contracted Equipment referred to in Clause 17.5(a)(i) above and the transition plan referred to in Clause 17.5(a)(ii), receipt of which shall be acknowledged by Arqiva;

- Arqiva shall provide the inventory and the transition plan to the Customer within one (1) month following receipt of the Customer's written request pursuant to Clause 17.5(e)(i);
- (iii) the Customer shall submit a written request to Arqiva to: (i) implement the transition plan; and (ii) transfer all of the Exclusive Contracted Equipment to the Customer (or its nominee) no later than six (6) months following receipt of the information pursuant to Clause 17.5(e)(ii);
- (iv) Arqiva shall have one (1) month following receipt of this request in which to implement the request subject to the conditions set out in Clause 17.5(d);
- (v) Until such time as the transition plan in implemented and all of the Exclusive Contracted Equipment is transferred, this Agreement shall continue in full force and effect (save that no liability to pay Super Credits shall accrue following the notice to terminate) and Arqiva shall continue to provide the Transmission Service and the Customer shall continue to pay the Charges in accordance with the terms of this Agreement.
- (f) In the event that the Customer does not comply within the timescales set out in this Clause 17.5, then the Customer's right to purchase the Exclusive Contracted Equipment shall lapse (and, for the avoidance of doubt, the provisions of Clause 17.5(e)(v) shall not apply).

18. SUB-CONTRACTING OF WORK

Arqiva may sub-contract any of its obligations under this Agreement but shall remain fully liable to the Customer for the failure of any such sub-contractor to perform satisfactorily any obligation of this Agreement which may be sub-contracted to it.

19. EXTRA WORK

If Arqiva incurs costs at the Customer's request and no defect is found or the costs were otherwise needlessly incurred, Arqiva is entitled to full reimbursement from the Customer. Moreover, Arqiva may make separate additional charges for work (to be calculated in accordance with Clause 9.8) carried out by Arqiva as a result of incorrect or inadequate information provided by the Customer or any breach of this Agreement by the Customer requiring Arqiva to operate to different technical criteria.

20. **RELIANCE ON INSTRUCTIONS**

- 20.1 For communications other than those covered by Clause 23, each party shall be bound by and shall be entitled to rely on any communication whether in writing or by telephone or answer back facsimile process which that party has reasonable cause for believing has been given or made for or on behalf of the other. Each party shall adopt and ratify all such communications notwithstanding any lack of actual authority and will indemnify the other from and against all liabilities, obligations, claims, actions and expenses of any kind imposed on or incurred as a result of reliance on any such communication.
- 20.2 Notwithstanding Clause 20.1, Arqiva shall not act on the instruction or request of the Customer to suspend the Transmission Service or any material element thereof unless confirmed in writing by a director or other nominated signatory of the Customer.

21. **CONFIDENTIALITY**

21.1 Each party undertakes to maintain and procure the maintenance of the confidentiality of Confidential Information of the other party at all times and to keep and procure the keeping of all Confidential Information of the other party secure and protected against theft, damage, loss or unauthorised access, and not at any time, whether during the Term or at any time

thereafter, without the prior written consent of the disclosing party, directly or indirectly, to use or authorise or permit the use of or disclose, exploit, copy or modify any Confidential Information of the other party, or authorise or permit any third party to do the same, other than for the sole purpose of the performance of its rights and obligations hereunder.

- 21.2 Each party undertakes to disclose Confidential Information of the other party only to those of its officers, employees, agents, contractors, financiers and advisers to whom, and to the extent to which, such disclosure is necessary for the purposes contemplated under this Agreement, and to procure that such officers, employees, agents, contractors financiers and advisers are made aware of and observe the confidentiality obligations in this Clause 21.
- 21.3 Upon the earlier of a written request from the disclosing party, or the termination of this Agreement for any reason, the receiving party shall return any and all Confidential Information of the other party then in its possession or control and will not retain any copies of the same.
- 21.4 The receiving party shall immediately upon becoming aware of the same give notice to the disclosing party of any unauthorised disclosure, misuse, theft or other loss of Confidential Information of the other party, whether inadvertent or otherwise.
- 21.5 The terms of and obligations imposed by this Clause 21 shall survive the termination or expiry of this Agreement but shall not apply to any Confidential Information which:
 - (a) at the time of receipt by the receiving party is in the public domain, or subsequently comes into the public domain through no fault of the receiving party, its officers, employees, agents or contractors;
 - (b) is lawfully received by the receiving party from a third party on an unrestricted basis;
 - (c) is already known to the receiving party before receipt hereunder; or
 - (d) is independently developed by the receiving party or its employees, agents or contractors.
- 21.6 The receiving party may disclose Confidential Information of the other party as may be required by Law, provided that, to the extent practicable in the circumstances, the disclosing party is in each case given reasonable advance notice of the intended disclosure and a reasonable opportunity to challenge the same.
- 21.7 The specific terms of this Agreement shall constitute confidential information of both parties for the purposes of this Clause 21.

22. ASSIGNMENT

- 22.1 Subject to Clause 22.2 and except where expressly stated otherwise in this Agreement, neither party may transfer, novate, assign or sub-license this Agreement or their respective rights or obligations under it in whole or in part without the prior written consent of the other, such consent not to be unreasonably withheld or delayed.
- 22.2 Notwithstanding Clause 22.1, Arqiva may on written notice to the Customer transfer, novate, assign or sub-license this Agreement or its respective rights or obligations under it in whole or in part to any of its Associated Companies, or to any person acquiring all or substantially all of the assets of Arqiva (and the Customer hereby consents to the same). Further Arqiva may assign its rights to payments, revenues and any similar rights, pursuant to any fixed or floating charge or other security arrangement required under any funding arrangements applicable to its business.

23. NOTICES

- 23.1 Any notice, consent, request or other communication required to be given under any provision of this Agreement shall, unless otherwise indicated in that provision, be in writing and be served under this Agreement by being hand delivered or sent by first class recorded delivery post or answer back facsimile process to the party to be served at its address appearing in this Agreement or at such other address as it may have notified to the other party in accordance with this Clause 23.
- 23.2 Any notice or document shall be deemed to have been served:
 - (a) if hand delivered, at the time of delivery; or
 - (b) if posted, at 10.00 a.m. on the second Business Day after it was put into the post; or
 - (c) if sent by facsimile and acknowledged by the correct answer back facsimile process, at the expiration of 2 hours after the time of despatch, if despatched before 3.00 p.m. on any Business Day, and in any other case at 10.00 a.m. on the Business Day following the date of despatch.
- 23.3 In proving service of a notice or document it shall be sufficient to prove that delivery was made or that the envelope containing the notice or document was properly addressed and posted as a prepaid first class recorded delivery letter or that the answer back facsimile message was properly addressed and despatched as the case may be.

24. GOVERNING LAW AND DISPUTE RESOLUTION

24.1 Governing Law

The construction, validity and performance of this Agreement, and all non-contractual obligations arising from or connected with this Agreement, shall be governed by English Law and, subject to Clauses 24.2 to 24.4, the parties hereby submit irrevocably to the exclusive jurisdiction of the English courts to resolve any dispute between them.

24.2 Dispute Procedure

Without prejudice to Clause 24.3 and 24.4, any unresolved question or difference which may arise concerning the construction, meaning, effect or operation of this Agreement or any matter arising out of or in connection with this Agreement shall in the first instance be referred to the persons listed at Level 1 in the escalation table below, who shall meet to discuss the matter within 5 Business Days. If the matter is not resolved at such meeting, the matter shall be referred to the persons listed at Level 2 in the escalation table below who must meet within a further ten (10) Business Days or such other period as the parties may agree to attempt to resolve the matter. If the matter is not resolved at such meeting, the matter shall be referred to the persons listed at Level 3 in the escalation table below who must meet within a further (15) Business Days or such other period as the parties may agree to attempt to resolve the matter. If the unresolved matter is having a serious effect on the performance of this Agreement, the parties shall use all reasonable endeavours to reduce the elapsed time in completing the process. Nothing in this Clause 24.2 shall prevent either party from seeking emergency or injunctive relief from any court of competent jurisdiction in relation to any damage or anticipated damage to property or proprietary rights.

Customer	Arqiva
First Level:	First Level:
[]	Customer Account Director

Second Level:	Second Level:
[]	Managing Director, Broadcast and Media
Third Level:	Third Level:
[]	Company Secretary

If any of the above is unable to attend a meeting, a substitute may attend provided that such substitute has at least the same seniority or reasonably comparable managerial or directorial responsibility and is authorised to settle the unresolved matter. Any matter which remains unresolved following exhaustion of the escalation procedure set out in this Clause 24.2 shall be dealt with in accordance with Clause 24.1.

24.3 Expert Determination

If a dispute arises in relation to any factual or financial matter under any provision of this Agreement which cross refers to this Clause 24.3, then either party shall be entitled, by notice in writing to the other, to refer the matter to an independent expert. In the absence of agreement between the parties as to the identity of the expert within 30 days of either party's aforesaid notice, the expert shall be appointed by a nominee of President of the Institute of Chartered Accountants in England and Wales. Arqiva and the Customer shall cooperate in providing to the expert such information as the expert reasonably requests to assist in his deliberations. Where relevant, pending the expert's decision the direct debit for the Charges shall not be changed. Arqiva and the Customer shall (in the absence of manifest error) accept as final and binding the decision of the expert. Where the expert finds in favour of one party, such sum as the expert determines shall be paid by the other party within 28 days of such decision, plus interest from the Due Date in respect of the sum. Following the expert's decision. Any fees, costs and/or expenses payable to any expert appointed under this Clause 24.3 shall be shared as determined by the expert.

24.4 Undertakings

The Customer may refer any dispute to the Adjudicator in accordance with the Adjudicator Scheme and Adjudicator Rules (as such terms are defined in the Undertakings).

25. GENERAL

- 25.1 Except as otherwise expressly agreed in writing between the parties, each party shall be responsible for its own costs incurred in performing its obligations under this Agreement.
- 25.2 The failure of either party to enforce or to exercise at any time or for any period of time any term of or any right pursuant to this Agreement does not constitute, and shall not be construed as, a waiver of such term or right and shall in no way affect that party's right later to enforce or to exercise it.
- 25.3 If any term of this Agreement is found to be illegal, invalid or unenforceable under any Law, such term shall, insofar as it is severable from the remaining terms, be deemed omitted from this Agreement and shall in no way affect the legality, validity or enforceability of the remaining terms.
- 25.4 Notwithstanding any other provision of this Agreement, neither of the parties hereto shall be:
 - required to do anything in contravention of any Laws, Consents or other consents, approvals, licences, authorisations or permissions, or directions of any Government Authority; or

- (b) required to refrain from doing anything the party is required to do under such Laws, Consents or other consents, approvals, licences, authorisations or permissions, or directions of any Government Authority; or
- (c) liable to the other party for failing to do anything which if done would be in contravention of any such Laws, Consents or other consents, approvals, licences, authorisations or permissions, or directions of any Government Authority.
- 25.5 This Agreement contains all the terms agreed between the parties regarding its subject matter and supersedes any prior agreement, understanding or arrangement between the parties, whether oral or in writing. No representation, undertaking or promise shall be taken to have been given or be implied from anything said or written in negotiations between the parties prior to this Agreement except as expressly stated in this Agreement. Neither party shall have any remedy in respect of any untrue statement made by the other upon which that party relied in entering into this Agreement (unless such untrue statement was made fraudulently) and that party's only remedies shall be for breach of contract as provided in this Agreement.
- 25.6 Provisions of this Agreement which either are expressed to survive its expiry or termination or from their nature or context it is contemplated that they are to survive such expiry or termination, shall remain in full force and effect notwithstanding such expiry or termination.
- 25.7 The relationship of the parties is that of independent contractors dealing at arm's length. Except as otherwise stated in this Agreement, nothing in this Agreement shall constitute the parties as partners, joint venturers or co-owners, or constitute either party as the agent, employee or representative of the other, or empower either party to act for, bind or otherwise create or assume any obligation on behalf of the other, and neither party shall hold itself out as having authority to do the same. The Customer acknowledges that no provisions in this Agreement are intended to create nor shall be treated or construed as creating the relationship of landlord and tenant between Arqiva and the Customer, which relationship shall be merely that of the provider and recipient of services and the Customer makes no claim and shall not make any claim in this respect.
- 25.8 The parties shall do and execute all such further acts and things as are reasonably required to give full effect to the rights given and the transactions contemplated by this Agreement.
- 25.9 No person who is not a party to this Agreement is granted or shall acquire any rights under it or be entitled to benefit from any of its terms, whether by virtue of the Contract (Rights of Third Parties) Act 1999 or otherwise.
- 25.10 Except as expressly provided in this Agreement, no alteration to or variation of this Agreement shall take effect unless and until the same is in writing and signed on behalf of each of the parties by a duly authorised representative in accordance with the Change Control Procedure.
- 25.11 This Agreement may be executed in several counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.

SCHEDULE 1

Defined Terms

In this Agreement the following expressions shall have the meanings ascribed to them:

"Acceptance Testing Plan" means the acceptance testing plan agreed by the parties pursuant to Schedule 14 of this Agreement;

"Act" means the Broadcasting Act 1996;

"Actual Service Start Date" means in relation to each Location, the date on which Arqiva's provision of the Transmission Service commences pursuant to Clause 5.2;

"Adjudicator" means the adjudicator appointed under the Undertakings;

"Advance Design Agreement" means the agreement referred to in Clause 2.8(a) to allow Arqiva to commence the design process in October 2012 prior to the signature of this Agreement;

"Advance Equipment Procurement Agreement" means the agreement referred to in Clause 2.8(b) to allow orders to be placed for Equipment prior to the signature of this Agreement;

"Agreement" means these Reference Offer Terms and Conditions, all Schedules hereto, and any other documents which are referred to in any of the foregoing;

"Antenna" means any antenna, dish or other item of equipment, apparatus, appliance or instrument installed on or affixed to any Mast at any Station for the reception, transmission or relay of radio or electromagnetic waves;

"Antenna ADS Approval Date" means any date so specified in Schedule 3 (Location Dates);

"Antenna Design Proposal" means a document prepared by Arqiva which will set out the Antenna options available to the Customer;

"Antenna Design Specification" or "ADS" means the specification for the Antenna System which shall include the selected Antenna physical configuration, computer modelled HRPs, the computer modelled VRPs, provisional system gain calculations and provision implementation plans;

"Antenna System" means the assembly of Antenna(s) and the supporting fixtures and feeders for that assembly;

"Arqiva Licence" means (i) any radio spectrum licence granted to Arqiva under Part I of the Wireless Telegraphy Act 1949; and/or (ii) any conditions imposed on Arqiva under the General Authorisation as applicable;

"Associated Company" means in relation to any company: any subsidiary of that company, that company's holding company or any subsidiary of such holding company from time to time. A company or other entity shall be a "holding company" for the purpose of this definition if it falls within either the meaning attributed to that term in Section 1159 of the Companies Act 2006 or the meaning attributed to the term "parent undertaking" in Section 1162 of the Companies Act 2006, and a company or other entity shall be a "subsidiary" for the purposes of this definition if it falls within either the meaning attributed to that term in Section 1159 of the Companies Act 2006 or the companies Act 2006 or the meaning attributed to the term "subsidiary" for the purposes of this definition if it falls within either the meaning attributed to that term in Section 1159 of the Companies Act 2006 or the meaning attributed to the term "subsidiary undertaking" in Section 1162 of the Companies Act 2006;

"Baseline Specification" means the configuration and description of the System which is current as at the Execution Date, as set out in Schedule 6;

"Breakdown" means a fault in the System or Equipment or other event which causes either: (i) a Loss of Transmission; or (ii) a Quality Impairment;

"Build Project" means the project to construct and install all elements of the System as set forth in Clause 4.2 and in accordance with the programme set forth in Schedule 3;

"Business Day" means any day which is not a Saturday, Sunday or a public holiday in the United Kingdom;

"Change" has the meaning given to it in Clause 12.1;

therewith; or

"Change Control Procedure" means the procedure set out at Schedule 13;

"Change in Broadcasting Law"	means any of the following:
	(i) any change to the Wireless Telegraphy Acts 1949, 1967, 1998 and 2006, the Telecommunications Act 1984, the Broadcasting Act 1990, the Broadcasting Act 1996, the Communications Act 2003 and any other statutes or regulations relating to broadcasting, wireless telegraphy or telecommunications as are from time to time in force during the term of this Agreement (the "Statutes");
	(ii) any extension, enactment or re-enactment of any of the Statutes;
	(iii) any change to any licences required to be held by Arqiva pursuant to any of the Statutes which requires Arqiva to carry out further work in order to be in compliance in all material respects

(iv) any relevant technical standards notified by any Competent Authority to Argiva from time to time;

"Change in Law" means any of the following (i) a change in the judicial interpretation or application by any Government Authority of any Law in the United Kingdom; (ii) the enactment or introduction of any new Law in the United Kingdom; (iii) the modification or repeal of any Law in the United Kingdom; (iv) the termination, amendment or revocation of any Consent; or (v) the introduction of new or amendment of existing non-binding guidelines, rules and guidance issued by any Government Authority or (vi) any Change in Broadcasting Law;

"Change Log" has the meaning given to it in Paragraph 5.1 of Schedule 13;

"Change Proposal" has the meaning given to it in Paragraph 1.4 of Schedule 13;

"Change Request" has the meaning given to it in Paragraph 1.2 of Schedule 13;

"Charges" means the MTS Initial Fee, the Network Access Initial Fee and the Transmission Annual Fee, each of which has the meaning given to it in Schedule 4;

"Charging Year" means the period of 12 months from the Actual Service Start Date for the last Location and any subsequent period of 12 months starting on an anniversary of the Actual Service Start Date for the last Location or, where the context requires, part thereof while this Agreement remains in force;

"**Common Equipment**" means the Equipment which is wholly or partly used to provide Network Access and which is shared or available for shared use by Arqiva, the Customer, and/or any other party authorised by Arqiva from time to time;

"Competent Authority" means Ofcom or H.M. Government;

"Confidential Information" means in relation to either party, information (in any form) belonging or relating to the disclosing party, its Associated Companies, its or their business, clients, customers, business plans, affairs or activities, which information is confidential to the disclosing party, its Associated Companies, clients or customers (as the case may be), including trade secrets, information and data relating to existing or potential customers, technical and business information relating to the disclosing party's inventions or products, research and development, production, manufacturing and engineering processes, employees or officers, customer lists or requirements, price lists or pricing structures, marketing and sales information, business plans or dealings, financial information or plans, designs, product lines, any document marked Confidential, or any information which the receiving party has been informed is confidential or which the receiving party might reasonably expect that the disclosing party would regard as confidential, and any confidential information of clients, customers, suppliers or other third parties;

"**Consents**" means the consents, approvals, licences and permissions that Arqiva legally requires from any government department, national or international regulatory body to complete the Build Project and operate the Transmission Service;

"Content" means any television, audio, radio or other programming, data or other material, whether free to air, subscription, pay-per-view or otherwise which the Customer wishes to have broadcast as part of the Licensed Service;

"**Content Providers**" means any provider of Content utilising the Licensed Service during the term of this Agreement;

"Customer Equipment" means any Equipment agreed in advance with Arqiva and used exclusively by the Customer or otherwise under the Customer's exclusive control;

"Customer Signals" means signals comprising Content to be delivered by the Customer to Arqiva under Clause 5.3(a) and Schedule 8;

"CRO" or "Change Request Order" has the meaning given to it in Paragraph 1.6 of Schedule 13;

"DCMS" means the Department of Culture, Media and Sport and any successor body;

"Distribution Service" means the distribution service using the Distribution System comprising the conveyance of the Customer Signals to the MTS Insertion Points;

"Distribution Service Provider" means the entity or entities that the Customer shall advise Arqiva from time to time as being responsible throughout the term of this Agreement for conveying the Customer Signals by means of the Distribution System to the MTS Insertion Points;

"Distribution System" means the system used by the Distribution Service Provider to convey the Customer Signals to the MTS Insertion Points;

"DMOL" means DTT Multiplex Operators Limited;

"Due Date" means the date on or, as the case may be, by reference to which payment of any amount owed to Arqiva or the Customer, as the case may be, is to be made under any provision of this Agreement;

"Equipment" means any equipment used by Arqiva in the provision of the Transmission Service;

"ERP" means Effective Radiated Power;

"Exceptional Risk" means any risk so identified in Schedule 17;

"Exclusive Contracted Equipment" means such Equipment as is used by Arqiva solely in the provision of the Transmission Service and comprised in the Managed Transmission Elements but not including any Equipment which is used to provide Network Access;

"Execution Date" means the date this Agreement is executed by both parties;

"Fault Notice" means a written notice of a Breakdown and/or other impairment of the System (as applicable);

"Force Majeure Event" has the meaning given to it in Clause 14.1;

"Forecast Pass-Through Costs" has the meaning given to it in Clause 9.13;

"Government Authority" means any supranational, state or local governmental entity or instrumentality (including any ministry, department, regulatory body, political subdivision, agency, corporation or other person exercising the delegated authority of any such person or entity) having jurisdiction (whether legislative, executive, regulatory, administrative, judicial or otherwise howsoever) over the subject matter of, or any matter pertaining to, this Agreement; either or both of the parties; and/or any persons employed, engaged or contracted by either of the parties;

"Guarantor" means the guarantor or other provider of security as set out in Schedule 23;

"Guarantee" means the guarantee or other form of security in the form set out in Schedule 23;

"HRP" means horizontal radiation pattern;

"Intellectual Property Rights" means all rights to copyrights, inventions, registered or unregistered designs, trade marks, patents (and all applications for trade marks or patents), trade secrets, know-how, rights of confidence, moral rights and any other intellectual or industrial property rights of any nature, whether like those described above or otherwise, throughout the world for the full permitted duration of such rights and all renewals and extensions to the same;

"L-DTPS Network Access Programme" means the implementation programme set out in the relevant Network Access agreement;

"L-DTPS Transmission Programme" means the implementation programme set out in Schedule 3;

"Laws" means all legislation, statutes, regulations, degrees, ordinances, and other laws, regulations, by-laws, regulatory requirements and codes of practice of or issued by any Government Authority and "**Law**" means any of them;

"Licences" means the licences and/or authorisations required by Arqiva under the Communications Act 2003, and any other licences which Arqiva may at any time require in relation to the Transmission Service (as amended from time to time) from the commencement of the same;

"Licensed Service" means the multiplex service (as defined in Section 1(1) of the Act) which the Customer has the right and duty to provide pursuant to the Multiplex Licence;

"Liquidated Damages" means the liquidated damages payable by Arqiva under Clause 4.3, as set out in Schedule 15;

"Local Digital Television Programme Services" or "L-DTPS" means the digital television programme services as referred to in the Ofcom Specification (i.e. two National Services and a series of local services);

"Location" means the locations listed in Schedule 5, which may refer to more than one Station;

"Loss of Transmission" means the cessation by a Station of the transmission of Customer Signals, or a Material Degradation, for a continuous period exceeding 30 seconds;

"Managed Transmission Elements" means the System elements as specified in the System Specification required to provide the Transmission Service from the MTS Insertion Points to the input of the combiner unit at each Site;

"Managed Transmission Annual Fee" that part of the Transmission Annual Fee that does not comprise the Network Access Annual Fees and which is described in Schedule 4;

"Mast" means any radio mast, tower, pole, rooftop, stub-mast, building elevation face mounting, head-frame or other aerial support pole or structure (located at height or at ground level);

"Material Degradation" means any degradation of the Customer Signals identified in Table 2 of Schedule 12, other than a Quality Impairment;

"MTS Initial Fee" has the meaning given to it in Schedule 4;

"MTS Insertion Points" means the interface between the Distribution System and the Transmission System at each of the Stations, as more particularly described in Schedule 7;

"Multi-Party Change" has the meaning set out in paragraph 1.4.8 of Schedule 13;

"Multiplex Licence" means the digital terrestrial television multiplex licence granted by Ofcom to the Customer pursuant to Part I of the Act (as amended and renewed from time to time);

"Multiplex Service" means the digital terrestrial television encoding and multiplex service applied to the Customer Signals;

"**Multiplex Service Provider**" means the entity or entities that the Customer shall advise Arqiva from time to time as being responsible for providing the Multiplex Service during the Term of this Agreement;

"National Services" means services other than those provided by a local digital television provider;

"Network Access" means access to the mast and site network and shared or shareable antenna systems acquired, constructed or installed by Arqiva, as required for the purpose of providing the Transmission Service;

"Network Access Annual Fee" means that part of the Transmission Annual Fee that does not comprise the Managed Transmission Annual Fee and which is described in Schedule 4;

"Network Access Initial Fee" has the meaning given to it in Schedule 4;

"Ofcom" means the Office of Communications, its predecessor(s) and any successor body;

"Ofcom Specification" means the document entitled "Draft Note for Applicants on Coverage for Local Television - Minimum Coverage Requirements and Transmission Arrangements" dated 27 January 2012. A copy of the Ofcom Specification is available at: http://stakeholders.ofcom.org.uk/binaries/consultations/localtv/annexes/Note_on_Local_TV_coverage.pdf;

"Pass-Through Costs" has the meaning set out in paragraph 2.2.1 of Schedule 4 (Charges);

"Persistent Failure" means a service performance failure by Arqiva in respect of the Transmission Service which gives rise to either of the following:

- (a) a right for the Customer to terminate for material breach pursuant to Clause 16.3(a); or
- (b) where, in any Year, Arqiva is (or would be but for the cap on service credits set out in Clause 10.1(b)) liable to pay service credits to the Customer pursuant to Clause 10.1(a) in an amount equal to or greater than twenty-five percent (25%) of the Transmission Annual Fee for that Year;

"Phase 1 Location" means a Location specified as such in Schedule 5;

"Phase 2 Location" means a Location specified as such in Schedule 5;

"Quality Impairment" shall occur where the Customer Signal is either not consistently decoded, or when decoded exhibits video blocking or intermittent loss of sound and/or video to a perceptible and disturbing extent when, after transmission by Arqiva, it is received by a fully operational set-top box, at a level within the set-top box's input range, and free from significant interference, always provided that it has been delivered to the MTS Insertion Point with sufficient bit rate for the Transmission Service, in a state such that it is consistently decoded by a fully operational set-top box such that it is free of video blocking or intermittent or total loss of sound and/or video;

"Rectification Process" means that, when measured over the one (1) month period specified in the Super Credit Notice, and when calculated by reference to all the Stations within the Customer's network, Arqiva is able to achieve a network availability level equal to or better than the relevant Total Time of Service Availability. The steps to measure this will be as follows:

- (a) For each Station, the number of actual minutes of weighted accountable non-availability (as per the Agreement) over the one (1) month period will be divided by the number of permitted minutes of non-availability at the Station (the latter being calculated by reference to the relevant Total Time of Service Availability).
- (b) Each of the Stations within the Customer's network will be given a Station weighting, reflecting the relative importance to the Customer of the Stations. The sum of the weightings for all Stations will equal 1. The Station weightings will be calculated by reference to the respective percentage weightings set out in Schedule 12, Table 2. Each percentage weighting will be converted into a decimal figure such that the sum of the decimal figures totals 1 (for example, for Emley Moor the percentage weighting of 7.63 per cent will be converted into a decimal figure of 0.0763). The decimal figure will be the Station weighting for each Station.
- (c) For each Station, the availability ratio derived as set out in paragraph (a) above will be multiplied by the relevant Station weighting as described above. The scores for each Station will be aggregated. If the aggregate

score is greater than 1, Arqiva will be liable to pay the Super Credit. If the aggregate score is 1 or less, Arqiva will have rectified its poor performance.

(d) Where any network failure is caused by a service failure outside Arqiva's control, a distribution or multiplexing (where applicable) failure or a failure of electricity supply at a Station for which there is no permanent back-up generator on site, any resulting non-availability shall not form part of the calculation set out above;

"Reference Offer" means the Arqiva reference offer entitled "Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services";

"**Regular Hours**" means 24 hours a day, 365 days a Year or, in the case of a Year which is a leap year, 366 days a Year (unless otherwise agreed by the Customer and Arqiva in writing);

"**Request Date**" for a Phase 2 Location is the last day of the month in which the Customer requested Arqiva to provide services under this Agreement for that Phase 2 Location;

"RPI" means the Retail Prices Index (All Items) published by the Office for National Statistics (or equivalent index published by any successor organisation);

"Satisfaction Date" has the meaning given to it in Clause 2.4;

"Service Start Date" means the date on which the Customer commences operational broadcasting use from the relevant Location;

"Site" means the site of any Station as listed in Schedule 5;

"SMC" means Arqiva's national service management centre at Emley Moor or such other customer service centre as Arqiva shall notify to the Customer in writing from time to time;

"Standard Risk" means any risk so identified in Schedule 17;

"Station" means any station listed in Schedule 5;

"Super Credit" means an amount equal to twenty-five per cent (25%) of the Transmission Annual Fee payable by the Customer (excluding, for the avoidance of doubt, (i) any amounts payable for electricity and (ii) any amounts payable by the Customer pursuant to Clause 9.9 for WTA licence fees) for all Stations in the Customer's network in the twelve (12) months preceding the date of expiry of the one (1) month period following the Super Credit Notice. For the purpose of calculating the Super Credit any reductions in the Transmission Annual Fees which have occurred to reflect any service credits or Liquidated Damages shall be disregarded;

"Super Credit Claim" means a written notice from the Customer to Arqiva which notifies Arqiva that:

- (a) Arqiva has failed to rectify its performance as measured under the Rectification Process;
- (b) the Customer is claiming a Super Credit; and
- (c) on receipt of the Super Credit, the Customer waives its right to terminate in respect of the relevant Persistent Failure;

"Super Credit Notice" means a written notice from the Customer to Arqiva which notifies Arqiva that:

- (i) a Persistent Failure has occurred;
- (ii) the Customer requests Argiva to submit a service improvement plan; and
- the Customer intends to claim a Super Credit if Arqiva does not rectify its poor performance to the Total Time of Service Availability within one (1) month as assessed under the Rectification Process;

"System" means the system, more particularly described in the System Specification, to be used by Arqiva in its provision of the Transmission Service;

"System Specification" means the Baseline Specification, as the same may amended by the parties via the Change Control Procedure from time to time;

"System Test Date" means any date so specified in Schedule 3 (Location Dates);

"Target Response Time" shall have the meaning set out in Schedule 10;

"Target Service Start Date" means in relation to any Location, the target in-service date on which Arqiva is due to commence provision of the Transmission Service pursuant to Clause 5.2, as set out in Schedule 3;

"Term" means the duration of this Agreement, as determined in accordance with Clause 16;

"Total Time of Service Availability" means the time for which Arqiva is contracted to transmit the Customer Signals to and from the Stations, free from Breakdowns, calculated as specified in Schedule 11;

"Transmission Annual Fee" means the Managed Transmission Annual Fee and the Network Access Annual Fee payable by the Customer to Arqiva for the provision of the Transmission Service under Clause 9;

"Transmission Service" means a fully managed and monitored transmission service using the Transmission System and comprising the transmission of the multiplexed Customer Signals during the Regular Hours;

"Transmitter System" means the transmitter used by Arqiva to transmit the Customer Signals from the Stations;

"Transmitter System Specification Date" means any date so specified in Schedule 3 (Location Dates);

"Undertakings" means the undertakings accepted by the Competition Commission on 1 September 2008 from Macquarie UK Broadcast Holdings Limited, Macquarie MCG International Limited, Macquarie European Infrastructure Fund II, Macquarie European Infrastructure Fund III and Macquarie Capital Funds (Europe) Limited in respect of the completed acquisition by Macquarie UK Broadcast Ventures Limited, a subsidiary of Macquarie UK Broadcast Holdings Limited, of National Grid Telecoms Investment Limited, Lattice Telecommunications Asset Development Company Limited and National Grid Wireless No. 2 Limited. A copy of the Undertakings is available at http://www.competition-commission.org.uk;

"VRP" means vertical radiation pattern;

"WTA" means the Wireless Telegraphy Acts 1949 and 1967, 1998 and 2006;

"WTA Licence" means such licence(s) as are from time to time issued to the Customer under the WTA as are relevant to this Agreement; and

"Year" means the period of 12 months from the Execution Date and any subsequent period of 12 months or, where the context requires, part thereof while this Agreement remains in force.

SCHEDULE 2

Scope of System and Transmission Service

1. Introduction

Arqiva will provide the Transmission Service at all of the Stations in respect of Phase 1 Locations (and Phase 2 Locations requested in accordance with Schedule 3) as listed in Schedule 5. The provision of the Transmission Service will include access to the following (subject to the terms of this Agreement):

Network Access

- a. Masts;
- b. Antenna Systems including feeders
- c. Accommodation;
- d. Power systems (back-up generators may be provided at some stations where available but Arqiva shall not be obliged to provide such systems under the terms of this Reference Offer);
- e. Telecom facilities within Arqiva provided accommodation.

Managed Transmission Elements

- a. Transmitter System architecture;
- b. Signal processing equipment;
- c. Remultiplexing equipment;
- d. Fault management/telemetry.

The scope set out in this Schedule 2 is based on a desktop study and Site visits have not been undertaken. Therefore, changes to this scope may be required in order to allow for implementation. Any such changes will be subject to the Change Control Procedure.

It should be noted that the provision of the distribution of content signals to the Stations (and any other facilities which are not listed specifically herein) shall be outside the scope of this Agreement.

In respect of the distribution of Customer Signals by the Customer, it has been assumed that BT lines would be used (in which interconnecting cross-site cabling would be required which is not included herein).

This schedule provides details of the scope of the Transmission Service offered by Arqiva under this Agreement. This Agreement relates to the transmission of a DVB-T multiplex as defined by the sites parameters stated in Schedule 6.

The provision of distribution (and any other facilities which are not listed specifically herein) shall be outside the scope of this Agreement.

2. The Baseline Specification

The Baseline Specification is based upon Ofcom's requirement for the deployment of a digital multiplex from a minimum of 21 Locations (Phase 1) and up to a further 28 additional Locations (Phase 2).

The provision of the Transmission Service will include access to Network Access facilities at the Stations, the provision of Managed Transmission Elements and ongoing operational, control and maintenance services.

The Transmitter Systems have been sized to provide the Nominal Operational ERPs (+/-1dB) described on a Site by Site basis in Schedule 6 (subject to confirmation of antenna system designs and system gains).

This Agreement is based upon the assumption that all Stations shall be line fed and, as a result, relay stations, fed from off-air RBL paths have not been provided.

3. Spectrum Planning Issues

3.1 Future Development of the Plan

The Baseline Specification is based on the Ofcom Specification. Arqiva shall provide a Transmission System compliant with the Baseline Specification which shall allow the ERPs (+/-1dB) and Arqiva Antenna HRPs shown in Schedule 6 to be provided in the absence of equipment faults.

In the event that the frequency plan requires alteration, the Baseline Specification and the terms of this Agreement will require amendments.

Consequential modifications to characteristics of the Stations such as ERP and Antenna HRPs that will have a direct effect on the Antennas and Transmitter Systems could also potentially impact the requirements for other works.

3.2 International Co-ordination

The frequency plan may need to be changed as a result of any international co-ordination process. Argiva cannot fully determine the outcome of any such process and the following issues may need to be considered:

- coverage may be required to be reduced in some areas;
- the Antenna HRPs (and thus the Antenna design) may be required to be altered;
- other additional restrictions in the Antenna HRPs may be required; and
- other characteristics such as ERP and UHF channel may be required to be altered as part of the terms of an agreement.

The resolution of any international co-ordination issues may lead to modification of the frequency plan which may require modification to the Baseline Specification. Any such modifications as may be required shall be managed under the Change Control Procedure.

3.3 Reception Problems

Ofcom has published estimates of households which should be able to receive L-DTPS based upon assumptions related to the height and performance of antenna systems. It should be noted that, in two known instances, Arqiva has been unable to provide aperture at the heights assumed by Ofcom and, as a result, the predicted coverage provided should be reviewed.

It should be noted that successful reception depends upon local conditions and the limitations of domestic equipment. Reception issues will be beyond the scope of Arqiva's responsibilities.

4. Antenna Systems

Schedule 6 details the Antenna configurations and available apertures at each Station. Arqiva shall provide a single Antenna to support the L-DTPS. The ERP to be provided under normal conditions is set out in Schedule 6.

Arqiva has endeavoured to ensure that new Antenna Systems will, where feasible, be designed to match as closely as possible the Arqiva Antenna HRPs provided in Schedule 6.

Arqiva shall provide single antennas to support the L-DTPS. An independent reserve facility will not be provided. Antennas shall be capable of supporting the ERP detailed in Schedule 6 under normal operational conditions.

Where Antenna System modifications are required (relative to the Baseline Specification) this shall be subject to the Change Control Procedure. Any such modifications shall be chargeable to the Customer and Arqiva will confirm any changes to the Location Dates as provided in Schedule 3. All Antenna designs are subject to securing Ofcom and Customer approval prior to finalisation procurement and implementation. Further details of this approval process are provided in Schedule 19.

During periods of an Antenna System fault or planned Antenna maintenance, there will be a requirement to shut the whole Antenna down to allow safe access and allow maintenance work to proceed. Any interruption in provision of Network Access due to an Antenna System fault will not count as Minutes Lost.

During the Antenna construction period, existing services to other customers may be disrupted whilst the Antennas are being installed. Argiva will aim to keep any such disruption to a minimum.

4.1 Antenna Selection Process

Assumptions have been made in respect of performance and system gain in order to meet the requirements of the Arqiva Antenna HRPs as shown in Schedule 6. As part of the design process, Arqiva shall liaise with potential suppliers and provide the Customer with a technical proposal related to the performance of a proposed new Antenna.

Arqiva shall use all reasonable endeavours to ensure that the Antenna patterns are compliant with those Arqiva Antenna HRPs as specified in Schedule 6. The Antenna System performance (ie. system gain information) used to determine the transmitter powers in Schedule 6 will be subject to variation. Any refined Antenna patterns and associated gain information shall be provided for acceptance by the Customer to allow Arqiva to produce a detailed Antenna Design Specification which the Customer must approve in writing by the Antenna ADS Approval Date. Finalisation of the Antenna design and patterns may lead to variations in system gain which in turn may lead to changes in transmitter requirements to achieve the Nominal Operational ERP and lead to variations in transmitter size. Any changes from the Antenna System performance and the transmitters shown in Schedule 6 shall be managed under the Change Control Procedure and lead to changes in charges and Target Service Start Dates.

Where the Antenna System at a Station can be used operationally but it is agreed that the Antenna pattern requires modification, the Transmission Service shall commence and Arqiva shall use reasonable endeavours to rectify the situation as soon as possible and shall not be liable to pay Liquidated Damages if it is not able to do so by the Target Service Start Date.

The Antenna selection process shall allow the Customer the opportunity to influence the final specification of an Antenna. It shall be the responsibility of the Customer to act in good faith to agree an Antenna solution at each Site by the required Antenna ADS Approval Date. Failure to agree the ADS by the required Antenna ADS Approval Date may lead to a delay in the provision of Network Access facilities and the Transmission Service.

Since there is a link between coverage and system gain the Customer should be aware that the transmitters required to achieve the nominal ERP may be subject to change. Any implications for other facilities (as a result of the selection of an Antenna) shall be managed under the Change Control Procedure.

4.2 Attenuation (or Filtering)

Arqiva will install filters which achieve the level of pass band filtering for out-of-band emissions as specified in Arqiva Combiner Specification BOS014 (extract below).

This level of RF Filtering (together with the Transmitter Performance) is necessary to meet OFCOM Specification IR2022. (UK Interface Requirement 2022). Broadcast transmitters operating in frequency bands administered by Ofcom).

4.3 Stopband Attenuation (BOS014 Extract)

The required minimum attenuation (as specified in BOS014) is in accordance with a mask indicated by the ERP.

Stopband Code 2A

Applies to Stations having ERP 1000W or more.

Frequency relative to channel centre frequency (MHz)	Attenuation (dB)
-12	-42.2
-6	-17.2
-4.2	0
-3.81	0
+3.81	0
+4.2	0
+6	-17.2
+12	-42.2

The mask is formed by drawing a straight line between the points in the table above.

Stopband Code B

Applies to Stations having an ERP of less than 1000W but equal to or more than 100W.

Also applies to band edge channels with an ERP of less than 100W.

relative to channel centre frequency	Channels	@	Upper Band Edge Channels @ 100W (dB)	Channels @	Channels @	Non band Edge Channels @ 1,000W (dB)
-12	-42.2	-42.2	-32.2*	-42.2*	-32.2*	-42.2*
-6	-17.2	-17.2	-7.2*	-17.2*	-7.2*	-17.2*
-4.2	0	0	0	0	0	0
-3.81	0	0	0	0	0	0
+3.81	0	0	0	0	0	0
+4.2	0	0	0	0	0	0
+6	-7.2*	-17.2*	-17.2	-17.2	-7.2*	-17.2*
+12	-32.2*	-42.2*	-42.2	-42.2	-32.2*	-42.2*

 * These figures are scaled proportionately to obtain attenuation figures for ERP between 1000W and 100W.

The mask is formed by drawing a straight line between the points in the table above.

Attenuation and group delay data will be provided to the Customer when the equipment is available.

5. Transmitter Systems

This Transmission Service is based upon the provision of resilient Transmitter Systems which shall be provided in 1+1 or parallel configuration (dependant on the antenna system gain and capacity of the individual transmitter units).

Arqiva reserves the right to modify the power breaks and configurations as shown above dependent subject to review of available transmitter powers/configurations. Transmitter Systems provided under this Reference Offer shall be configured so as to avoid single points of failure.

Redundant modulators, re-multiplexers and SI Managers shall be provided at all Stations.

The architecture provided above under fault conditions will permit either:

- 1 Operation at reduced power; or
- 2 At full power but with loss of resilience.

6. Re-multiplexing System

Equipment will be provided to allow the National Services to be re-multiplexed with the service provided by a local digital television services provider at every Station. The Customer shall be responsible for the provision of dual ASI feeds for both the National and local content at each Station.

7. Service Information Processing

Service Information related to the Customer's multiplex and other multiplexes is required to be transmitted from Stations as stated in the D-Book. Argiva shall provide Service Information Processing equipment to allow SI_Other to be generated from a Central Service Information ("CSI") feed.

The Customer will be required to provide or obtain access to a CSI feed to the Sites to allow Arqiva to produce the appropriate Service Information at each Site.

Where Single Frequency Networks (SFNs) are required, Service Information Processing shall not be provided for all Stations within the SFN (see Schedule 6). Special considerations apply to SFN Sites as more fully described in Schedule 20.

8. **Telecom facilities**

It has been assumed that the Customer would choose at their own cost to provide signals to the Stations by terrestrial line feed. The provision of telecom facilities/distribution links to the Stations is outside the scope of this Agreement.

Distribution solutions are outside the scope of this Agreement and, in the event that the Customer requires a distribution solution, any such request shall be subject to the Change Control Procedure.

9. Exclusions

For the avoidance of doubt the following facilities are <u>not</u> within the scope of this Agreement.

- Playout facilities;
- Programme distribution;
- Compression systems;
- Service Information processing (not all SFN Sites);
- Spectrum Planning Study; and
- Customer Responsibilities.

SCHEDULE 3

Location Dates

Table 1 below shows the key milestone dates and activities related to the deployment of twenty-one (21) Phase 1 Locations which are the minimum obligation requirement.

The twenty-eight (28) Phase 2 Locations are optional Locations. The Customer may request from Arqiva the addition of Phase 2 Locations. In respect of such requests, the Customer shall provide Arqiva with twelve (12) months written notice prior to the target service start date for the Phase 2 Location(s) requested. To ensure a cost efficient rollout, no more than seventeen (17) of the Phase 2 Locations can be requested by the Customer in any one (1) calendar year.

The Antenna ADS Approval Dates, Transmitter System Specification Dates, System Test Dates and Target Service Start Dates for any Phase 2 Locations requested shall be agreed by the parties. The Target Service Start Date for all Locations shall be no later than September 2014.

To meet these rollout plans, transmitter system and Antenna designs shall have to commence in October 2012 and any delay in the start of the design programme will lead to a similar delay of the Target Service Start Date at Sites. Any delay in the start of design works for new Antenna Systems may lead to a disproportionate delay in the Target Service Start Date due to the preference to conduct Antenna System implementation during the months of March to October (to minimise the impact of inclement weather).

The Customer shall be required to agree Antenna designs and transmitter configurations by the Antenna ADS Approval Dates and Transmitter System Specification Dates respectively specified below to allow Transmission Service to be provided by the Target Service Start Date.

Table 1- Location Dates

For the purpose of this Agreement the dates below refer to the last day in the month and are subject to change within the month stated.

Location	Antenna ADS Approval Date	Transmitter System Specification Date	System Test Date	Target Service Start Date
London	Oct-12	Nov-12	Jun-13	Jul-13
Edinburgh	Oct-12	Nov-12	Jun-13	Jul-13
Cardiff	Oct-12	Nov-12	Jun-13	Jul-13
Belfast	Oct-12	Nov-12	Jun-13	Jul-13
Birmingham	Nov-12	Dec-12	Jul-13	Aug-13
Swansea	Nov-12	Dec-12	Jul-13	Aug-13
Glasgow	Nov-12	Dec-12	Jul-13	Aug-13
Manchester	Dec-12	Jan-13	Aug-13	Sep-13
Preston	Dec-12	Jan-13	Aug-13	Sep-13
Liverpool	Dec-12	Jan-13	Aug-13	Sep-13
Leeds	Dec-12	Jan-13	Aug-13	Sep-13
Newcastle	Oct-13	Nov-13	Jun-14	Jul-14
Bristol	Oct-13	Nov-13	Jun-14	Jul-14
Nottingham	Oct-13	Nov-13	Jun-14	Jul-14

Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services – version 3; published 1 June 2012

Location	Antenna ADS Approval Date	Transmitter System Specification Date	System Test Date	Target Service Start Date	
Grimsby	Nov-13	Dec-13	Jul-14	Aug-14	
Southampton	Nov-13	Dec-13	Jul-14	Aug-14	
Norwich	Nov-13	Dec-13	Jul-14	Aug-14	
Oxford	Dec-13	Jan-14	Aug-14	Sep-14	
Plymouth	Dec-13	Jan-14	Aug-14	Sep-14	
Brighton & Hove	Dec-13	Jan-14	Aug-14	Sep-14	
Sheffield	Dec-13	Jan-14	Aug-14	Sep-14	

Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services – version 3; published 1 June 2012

SCHEDULE 4

Charges

1. Introduction

The following pricing principles govern the calculation of the Charges and Arqiva undertakes that it shall not depart from the application of these pricing principles in the calculation or recovery of the Charges.

2. Charges And Pass-Through Costs

2.1 Charges

Table 1 - Charges - Phase 1 Locations

Location	Network Access Initial Fee (£)	MTS Initial Fee (£)	Network Access Annual Fee (£)	Managed Transmission Annual Fee (£)	Indicative Pass-Through Costs (£)
Belfast	376,337	113,470	36,033	19,228	403
Birmingham	542,256	156,499	40,571	23,922	1,388
Brighton & Hove	93,754	68,277	10,898	8,174	665
Bristol	534,209	358,472	47,098	26,238	2,852
Cardiff	295,267	74,242	35,701	21,926	962
Edinburgh	370,098	76,119	31,239	17,087	624
Glasgow	261,238	105,548	30,890	20,810	1,384
Grimsby	253,243	76,119	25,833	19,525	1,064
Leeds	555,811	502,189	49,024	15,922	1,710
Liverpool	282,018	167,892	28,113	20,681	1,205
London	361,937	66,807	32,292	19,228	1,022
Manchester	179,143	99,615	17,735	13,165	681
Newcastle	374,386	89,260	31,793	18,544	537
Norwich	276,641	108,402	27,719	20,795	242
Nottingham	426,208	204,356	44,735	30,913	2,333
Oxford	293,963	70,060	29,110	16,791	298
Plymouth	472,301	198,823	35,967	21,526	1,608
Preston	179,143	102,868	17,741	13,165	681
Sheffield	83,314	64,083	9,294	7,879	327
Southampton	258,492	70,060	22,304	15,646	938
Swansea	112,621	68,277	11,788	8,008	675

Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services – version 3; published 1 June 2012

Location	Network Access Initial Fee (£)	MTS Initial Fee (£)	Network Access Annual Fee ((£)	Managed Transmission Annual Fee (£)	Indicative Pass-Through Costs (£)
Aberdeen	217,737	68,038	28,057	19,228	647
Ayr	308,875	61,979	25,138	13,138	583
Bangor	121,944	82,092	12,653	8,477	476
Barnstaple	403,867	163,507	29,698	19,146	1,509
Basingstoke	228,677	65,866	17,418	11,851	798
Bedford	212,003	100,305	19,022	11,866	520
Bromsgrove	82,772	68,345	10,316	7,613	348
Cambridge	115,642	101,312	12,192	10,096	676
Carlisle	316,608	69,413	32,981	20,795	611
Derry/Londonderry	125,026	99,136	13,819	9,484	348
Dundee	400,783	163,132	34,186	20,670	1,839
Guildford	74,519	60,196	9,595	8,174	194
Hereford	228,129	65,866	18,605	11,700	385
Inverness	304,910	65,866	28,861	16,937	428
Kidderminster	102,697	99,136	10,423	7,393	259
Limavady	142,254	114,740	23,462	16,301	230
Luton	84,904	97,267	9,357	8,039	1,573
Maidstone	190,417	65,866	17,631	12,987	957
Malvern	82,772	85,924	10,184	7,710	1,003
Middlesbrough	192,432	83,445	21,439	13,434	907
Mold	219,174	114,098	27,969	16,609	857
Reading	218,309	65,866	17,217	14,449	1,849
Salisbury	104,113	64,083	11,370	8,024	504
Scarborough	137,513	68,345	13,642	8,648	490
Stoke on Trent Stratford Upon	70,393	64,083	9,551	7,857	286
Avon	72,629	99,136	7,440	8,050	152
Tunbridge Wells	102,487	100,114	11,936	9,760	408
York	271,997	61,979	23,632	14,298	522

Table 2 - Charges - Phase 2 Locations

2.1.1 "Pass-Through Costs" has the meaning given to it in paragraph 2.2 below.

- 2.1.2 The Network Access Initial Fee includes for an uplift for contingencies which is 5% of the capital expenditure.
- 2.1.3 The Network Access Initial Fee and MTS Initial Fee set out in the table above are one-off charges per Location.
- 2.1.4 The Network Access Annual Fee and the Managed Transmission Annual Fee and the indicative Pass-Through Costs set out in the table above at paragraph 2.1 are stated on a

per annum basis for Transmission Services based on the specifications set out in Schedule 6 and subject to the terms of this Agreement.

- 2.1.5 The Charges and indicative Pass-Through Costs set out in the table above are stated:
 - (i) in real terms at February 2012 prices and are subject to indexation (see paragraph 2.3.6 below); and
 - (ii) exclusive of VAT.
- 2.1.6 The Table above includes an indicative estimate of Pass-Through Costs. Paragraph 2.2 below sets out the terms applicable to Pass-Through Costs.

2.2 Pass-Through Costs

Categories of Cost included in Pass-Through Costs

- 2.2.1 In addition to the Charges, the Customer shall pay a share (as further detailed below) of the following categories of costs on a pass-through basis:
 - (i) rent and similar recurring and non-recurring licence fees or other ancillary payments made to site and site access providers;
 - (ii) rates, assessments and outgoings and any taxes or environmental levies whether similar or of a wholly new or novel nature;
 - (iii) electricity for Customer Equipment;
 - (iv) charges payable under any Arqiva Licence for spectrum required to be held by Arqiva in order to provide any Common Equipment for Transmission Services and where the relevant spectrum is not otherwise licensed to the Customer;
 - (v) any other costs, charges and fees (including fees for legal, planning, surveyor, engineering and other professional services) which may be required to be paid to a Landlord or other third party under the terms of the relevant lease/licence or otherwise as a result of or in connection with the provision of Transmission Services to the Customer at a particular Station;
 - (vi) any Ofcom fees incurred by Arqiva in relation to regulated activity; and
 - (vii) reasonable administration costs incurred by Arqiva in arranging for the provision of any Pass-Through Cost item,

(together, the "**Pass-Through Costs**"). The Customer's share shall be calculated on a Location-by-Location basis, using the methodology set out in Clause 9.14.

- 2.2.2 Table 1 at paragraph 2.1.1 above sets out an indicative estimate of Pass-Through Costs. These indicative estimates of Pass-Through Costs:
 - (i) include indicative estimates of rent and rates; and
 - exclude electricity for Customer Equipment as this cost is not yet known and will be determined by the specifications and characteristics including the dimensions of the Customer Equipment.

Where any leased Station as at the date of this Agreement changes to freehold, the Pass-Through Costs will for the duration of this Agreement include the last full year rental on this Site increased annually by RPI. Where a freehold Station as at the date of this Agreement

becomes a leasehold site no rent from this Station will be included in the Pass-Through Costs.

2.3 **Explanation Of Charges And Pass-Through Costs**

- 2.3.1 This paragraph 2.3 details the key parameters that underpin the calculation of the Charges. Changes in the assumptions or parameters set out in this paragraph 2.3 may also have an impact on the level of Pass-Through Costs, but any changes in such level shall be governed by paragraph 2.2 of this Schedule.
- 2.3.2 The Charges and Pass-Through Costs are based on the specifications set out in Schedule 6 and Schedule 2 and are subject to the terms of this Agreement.
- 2.3.3 The Baseline Specification is based on the assumption that Transmission Services will be provided to one Local Television Multiplex Service only. The level of Pass-Through Costs may also vary if the number of other users of Station facilities at a Station should change.
- 2.3.4 The Charges and Pass-Through Costs are based on Transmission Services being provided in accordance with this Agreement.
- 2.3.5 The Charges and Pass-Through Costs are based upon the provision of Transmission Services through to [1 October 2026].
- 2.3.6 The Charges are subject to indexation as further detailed in Clause 9.2.
- 2.3.7 The Charges reflect costing and calculation methodologies that have been agreed between Arqiva and Ofcom as part of Ofcom's guidance process.
- 2.3.8 The Charges assume any Customer exclusive programme distribution and connectivity equipment will be located inside the accommodation location areas designated and set aside at each Station by Arqiva to house Customer Equipment for television broadcasting purposes. Additional Charges will be due for any Customer Equipment located at any Station.
- 2.4 For the avoidance of doubt the Transmission Annual Fee does not include: (i) Pass-Through Costs; or (ii) electricity required for the Transmission Service, which shall be payable in addition by the Customer.

3. Network Access Initial Fee Gainshare Mechanism

The Network Access Initial Fee shall be subject to the gainshare mechanism set out below. The Network Access Initial Fee shall be based on the actual levels of capital costs incurred by Arqiva in connection with this Agreement.

Within twelve (12) months of the completion of the L-DTPS Transmission Programme, Arqiva shall carry out a review to establish the actual level of capital expenditure incurred for Network Access which will then, subject to the remainder of this Paragraph 3 of Schedule 4 be used to adjust the Network Access Initial Fee. For the avoidance of doubt, nothing in this Schedule is intended to, or shall operate so as to, limit or cap in any way Arqiva's expenditure in relation to the L-DTPS Transmission Programme.

- 3.1 Arqiva shall undertake a review of the capital expenditure and uplift for contingencies elements of the Network Access Initial Fee in accordance with the provisions of this paragraph 3 of Schedule 4 in order to compare:
 - 3.1.1 the level of actual capital expenditure employed for Network Access in carrying out the L-DTPS Transmission Programme up to the date of completion of the same in respect of the Customer plus forecast decommissioning costs ("Actual Capex"); with

- 3.1.2 the sum of:
 - the initial estimated capital expenditure plus forecast decommissioning costs each as adjusted for RPI indexation used to establish the Network Access Initial Fee for all Locations ("Revised Base Capex"); plus
 - the uplift for contingencies as adjusted for RPI indexation used to establish the Network Access Initial Fee for all Locations ("Revised Uplift for Contingencies"),

such sum known as the "Revised Forecast Capex" for the purposes of this Schedule.

- 3.2 In the event that there have been any changes made pursuant to the Change Control Procedure prior to the review referred to above ("**Review**") which have either increased or decreased the Actual Capex, the net sum of any such increases or decreases shall be added onto both the Revised Base Capex and the Revised Forecast Capex figure prior to Arqiva conducting the comparative calculation set out in this paragraph 3.2.
- 3.3 If Actual Capex is more than the Revised Forecast Capex, the Network Access Initial Fee shall be adjusted such that it is based on a level of capital expenditure which is equal to:
 - 3.3.1 Actual Capex; less
 - 3.3.2 Fifty per cent. (50%) of the differential between Actual Capex and Revised Forecast Capex.
- 3.4 If Actual Capex is less than the Revised Forecast Capex, the Network Access Initial Fee shall be adjusted such that it is based on a level of capital expenditure which is equal to:
 - 3.4.1 Revised Forecast Capex; less
 - 3.4.2 Fifty per cent. (50%) of the differential between Revised Forecast Capex and Actual Capex.
- 3.5 Any adjustment to the Network Access Initial Fee under this Schedule 4 shall be effected by way of a credit against the invoice for the Transmission Annual Fee payable in respect of the second Charging Year after the Actual Service Start Date of the last Location.
- 3.6 Any amendments to the Charges effected under this paragraph 3 of Schedule 4 shall reflect changes in L-DTPS Network Access Programme capital expenditure only. No other factors shall be taken into consideration when Arqiva undertakes the calculations set out in paragraph 3.1 above, other than any differences between forecast and actual timing of cash flow.

4. MTS Initial Fee Gainshare Mechanism

- 4.1 Arqiva's capital expenditure for building the Managed Transmission Elements in accordance with the Baseline Specification is capped and will not exceed £4.471 million. For the avoidance of doubt, this figure is based on all twenty-one (21) Phase 1 Locations and all twenty-eight (28) Phase 2 Locations.
- 4.2 In the event that Arqiva's aggregate capital expenditure (including forecast decommissioning costs) as adjusted for RPI indexation is less than £4.471 million then the saving thus achieved shall be shared between Arqiva and the Customer in the following proportions:

(Customer's	Capital Costs s proportion) tated in £,000	Customer	Arqiva
Equal to or more	Less than		
than			
4471		0%	100%
4382	4471	75%	25%
4294	4382	65%	35%
4208	4294	55%	45%
	4207	50%	50%

Table 3 - MTS capex gain share

- 4.3 The above bands shall be applied sequentially. So, for example, if Arqiva's aggregate capital expenditure for building the Managed Transmission Elements is £4.25 million then: (a) £0.089 million will be shared between the Customer and Arqiva in the proportions of 75% and 25% (respectively); (b) £0.088 million will be shared between the Customer and Arqiva in the proportions of 65% and 35% (respectively); and (c) £0.044 million will be shared between the Customer and Arqiva in the proportions of 55% and 45% (respectively).
- 4.4 Upon completion of the L-DTPS Transmission Programme, the parties shall carry out a reconciliation between Arqiva's actual and forecasted capital expenditure in building the Managed Transmission Elements. In the event that Arqiva's actual capital expenditure is less than the capital expenditure cap as detailed in paragraph 4.1 above (adjusted for RPI indexation and through any Change Control), the saving thus achieved shall be shared between Arqiva and the Customer as set out above. Any adjustment to the MTS Initial Fee under this Schedule 4 shall be effected by way of a credit against the invoice for the MTS Annual Fee payable in respect of the second Charging Year after the Actual Service Start Date of the last Location.
- 4.5 The parties acknowledge that the provisions in this paragraph 4 are without prejudice to the fact that Arqiva's capital expenditure levels may be varied to reflect Changes to the L-DTPS Transmission Programme through the Change Control Procedure and that the Change Control Procedure is the exclusive means of implementing Changes which would result in the cap referred to in paragraph 4.1 being increased. Any Changes agreed under the Change Control Procedure will protect gain shares and pain-shares on a like-for-like (quantum, not percentage) basis and caps may be reset accordingly if additional capex or labour is required to deliver the Change.

5. Electricity

Electricity (for the Transmission Service) is chargeable to the Customer at cost plus a reasonable allocation of Arqiva's costs for management and administration.

An example illustrating how electricity charges are calculated is set out at Schedule 16. Arqiva will use its reasonable endeavours to seek to obtain the best value possible from its electricity supply providers and will seek to establish further fixed price arrangements as regards the energy charge element of electricity costs for a set duration following the end of the initial fixed price period referred to above so as to give financial stability for the longest practical period, taking into account all relevant factors including the requirements of Arqiva's other customers and Arqiva itself as a consumer of electricity. Arqiva will keep the Customer informed as regards its electricity purchasing strategy.

SCHEDULE 5

Locations

Phase 1 Locations

Phase	Location	Station Name	Station Category	Site Number
1	Leeds	Beecroft Hill	Large Relay	10415
		Emley Moor	Main Station	10400
1	Grimsby	Belmont	Main Station	12000
1	Glasgow	Black Hill (Glasgow petal)	Main Station	10500
1	Birmingham	Brierley Hill	Large Relay	10203
		Sutton Coldfield	Main Station	10200
1	Bristol	Bristol IIchester Crescent	Large Relay	11008
		Bristol King's Weston Hill	Large Relay	11007
		Mendip	Main Station	11000
1	Plymouth	Caradon Hill (Plymouth petal)	Main Station	13100
		Plympton	Large Relay	13105
1	Edinburgh	Craigkelly	Main Station	14700
1	London	Crystal Palace	Main Station	10100
1	Belfast	Divis	Main Station	10700
1	Swansea	Kilvey Hill	Large Relay	10601
1	Nottingham	Nottingham	Large Relay	11101
		Waltham	Main Station	11100
1	Oxford	Oxford	Main Station	11700
1	Newcastle	Pontop Pike	Main Station	10900
1	Southampton	Rowridge	Main Station	10800
1	Sheffield	Sheffield	Large Relay	10403
1	Liverpool	Winter Hill (Liverpool petal)	Main Station	10300
		Storeton	Large Relay	10307
1	Norwich	Tacolneston	Main Station	11400
1	Cardiff	Wenvoe	Main Station	10600
1	Brighton +Hove	Whitehawk Hill	Large Relay	10805
1	Preston	Winter Hill (Blackpool petal)	Main Station	10300
1	Manchester	Winter Hill (Manchester petal)	Main Station	10300

Phase 2 Locations

Phase	Location	Station Name	Station Category	Site Number	
2	Aberdeen	Durris	Main Station	11200	
2	Ayr	Darvel	Main Station	15200	
2	Bangor	Llanddona	Main Station	11800	
2	Barnstable	Huntshaw Cross	Main Station	13800	
		Barnstaple	Large Relay	13815	
2	Basingstoke	Hannington (Basingstoke petal)	Main Station	12600	
2	Bedford	Sandy Heath	Main Station	12400	
2	Cambridge	Madingley	Large Relay	18241	
2	Carlisle	Caldbeck	Main Station	13700	
2	Derry/Londonderr y	Londonderry	Large Relay	13001	
2	Dundee	Angus	Main Station	12300	
		Tay Bridge	Large Relay	12308	

Phase	Location	Station Name	Station Category	Site Number	
2	Guildford	Guildford	Large Relay	10101	
2	Hereford	Ridge Hill (Hereford petal)	Main Station	14900	
2	Inverness	Rosemarkie	Main Station	15600	
2	Kidderminster	Kidderminster	Large Relay	10202	
2	Limavady	Limavady	Main Station	13000	
2	Maidstone	Bluebell Hill	Main Station	15800	
2	Malvern	Malvern	Large Relay	10207	
2	Mold	Moel y Parc	Main Station	14500	
2	Salisbury	ry Salisbury		10801	
2	Stoke on Trent	Stoke on Trent Fenton		10211	
2	Stratford Upon Avon	Larkstoke	Large Relay	10208	
2	York	Bilsdale (York petal)	Main Station	11600	
2	Luton	_uton Luton		12402	
2	Bromsgrove	Bromsgrove Bromsgrove		10206	
2	Middlesbrough	Bilsdale (Teesside Petal)	Main Station	11600	
2	Reading	Hannington (Reading Petal)	Main Station	12600	
2	Scarborough	Olivers Mount	Large Relay	12002	
2	Tunbridge Wells	Tunbridge Wells	Large Relay	10104	

SCHEDULE 6

Baseline Specification

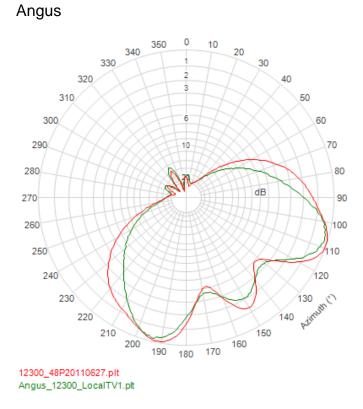
See attached.

Reference Offer for the provision of Transmission Services in respect of Ofcom's award of a licence for Local Digital Television Programme Services – version 3; published 1 June 2012

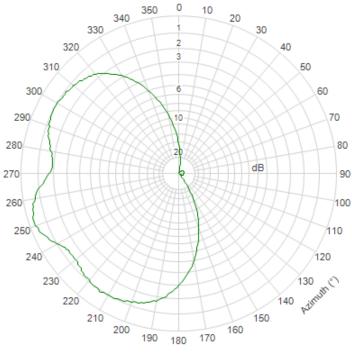
LOCAL TV

LOCAL TV	OFCOM Requirement					Arqiva Antenna System details					
Chatlan		ERP	Ant Ht								Available Aperture (based on initial assessment of
Station	Ch 48	(kW)	(m)	Bearing 150	Pol	Feeder	Tx Power 288	Antenna Description	Location	PLT filename 12300 48P20110627	space/aperture)
Angus Barnstaple	48	0.001	117 25	260	HP VP	1 5/8" 7/8"	0.26	Two panels @ 90 degrees - 2 tiers Crossed Logs @ 90 degrees - 2 tiers	Dundee Barnstaple	12300_48P20110627 13815 49C20110627	115.5m-18.5m 27.2m
Beecroft Hill	49 56	0.001	43	30	VP	7/8"	6.79	Crossed Logs @ 90 degrees - 2 tiers	Leeds	10415 56P20110622	38m
Belmont	27	10	222	30	HP	1 5/8"	1085	Single Log - 6 tiers	Grimsby	12000 27P20110622	221m-223m
Bilsdale (Teesside petal)	27	5	200	20	HP	1 5/8"	291	Single Log - 4 tiers	Middlesbrough	11600 24P20110621	199m-201m
Bilsdale (York petal)	24	2	148	180	HP	1 5/8"	608	Single Log - 4 tiers	York	21600 24P20110021	147m-149m
Black Hill (Glasgow petal)	51	5	148	85 & 265	HP	1 5/8"	1695	Two Logs @ 85° & 265° - 4 tiers	Glasgow	10500 51P20110310	153m-155m
Bluebell Hill	27	1	44	30 & 190	HP	1 5/8"	148	Two Logs @ 30° & 190° - 4 tiers	Maidstone	15800 27P20110707	38.5m
Brierley Hill	29	0.2	44	70	VP	7/8"	78	Crossed Logs @ 120 degrees - 2 tiers	Birmingham	10203 29P20110624	44m
Bristol Ilchester Crescent	30	0.02	43	140	VP	7/8"	6.84	Crossed Logs @ 90 degrees - 2 tiers	Bristol	11008 30P20110624	28m-34m
Bristol Kings Weston	30	0.02	43	145	VP	7/8"	6.89	Crossed Logs @ 90 degrees - 2 tiers	Bristol	11007 30P20110624	38m-41m
Bromsgrove	29	0.04	43	205	VP	7/8″	16	Crossed Logs @ 90 degrees - 2 tiers	Bromsgrove	10206 29E20120404	43m
Caldbeck	56	5	165	45	HP	1 5/8"	2322	Two panels @ 90 degrees - 2 tiers	Carlisle	13700 56C20110620	163.3-166.8m
Caradon Hill (Plymouth petal)	30	1	182	120	HP	1 5/8"	140	Single Log - 4 tiers	Plymouth	23100_30P20110708	180.7m-182.7
Craigkelly	52	5	65	175	HP	1 5/8"	1037	Two panels @ 90 degrees - 2 tiers	Edinburgh	14700_52P20110310	64m-66.5m
Crystal Palace	29	2	107	350	HP	1 5/8"	590	Two panels @ 90 degrees - 2 tiers	London	10100_29P20110310	125m-129m
Darvel	30	1	80	90, 215 & 320	HP	1 5/8"	282	3 panels - 2 tiers	Ayr	15200_30P20110622	82m-85m
								Single Panel @ 15 degrees - 2 tiers			
Divis	30	5	93	15 & 155	HP	1 5/8"	1344	Single Log @ 155 degrees - 4 tiers	Belfast	10700_30P20110305	92m-94m
Durris	30	10	157	50	HP	1 5/8"	876	Single Log - 6 tiers	Aberdeen	11200 30P20110616	155.5m-158.5m
Emley Moor	56	5	161	340	HP	1 5/8"	1653	Two panels @ 90 degrees - 4 tiers	Leeds	10400 56P20110310	247m
Fenton	29	0.05	45	270	VP	7/8"	24	Crossed Logs @ 100 degrees - 2 tiers	Stoke on Trent	10211_29P20110615	40m mean
Guildford	51	0.1	45	45	VP	7/8"	46	Crossed Logs @ 90 degrees - 2 tiers	Guildford	10101_51P20110701	32m-34m
Hannington (Basingstoke petal)	51	2	71	120	HP	1 5/8"	207	Single Log - 4 tiers	Basingstoke	22600_29P20110621	64m-68m
Hannington (Reading Petal)	29	10	71	50	HP	1 5/8"	550	Single Log - 6 tiers	Reading	12600_29E20120412	45m
Huntshaw Cross	51	2	80	15	HP	1 5/8"	240	Single panel - 2 tiers	Barnstaple	13800_51C20010628	78.3-81.8m
Kidderminster	51	0.04	45	65	VP	7/8"	8	Single Log - 2 tiers	Kidderminster	10202_51C20110616	45m
Kilvey Hill	30	0.1	45	270	VP	7/8"	20	Crossed Logs @ 60 degrees - 2 tiers	Swansea	10601_30P20110624	36.5m
Lark Stoke	48	0.1	10	20	VP	7/8"	16	Single Log - 2 tiers	Stratford Upon Avon	10208_48P20110704	10m
Limavady	48	2	35	90 & 235	HP	1 5/8"	297	Two Logs @ 90° & 235° - 4 tiers	Limavady	13000_48C20120117	sub 22.4m
Llanddona	51	1	56	180	HP	1 5/8"	100	Single Log - 4 tiers	Bangor	11800_51C20110629	56m
Londonderry	51	1	59	115	VP	1 5/8"	101	Single Log - 4 tiers	Derry/Londonderry	13001_51P20110630	88m-91m
Luton	45	0.05	42	65	VP	7/8"	15	Crossed Logs @ 90 degrees - 2 tiers	Luton	12402_45C20110704	41-42m
Madingley	40	1	45	95	HP	1 5/8"	66	Single Log - 4 tiers	Cambridge	18241_40P20110613	45m-47m
Malvern	51	0.04	38	90	VP	7/8"	16	Crossed Logs @ 120 degrees - 2 tiers	Malvern	10207_51C20110624	38m
Mendip	51	10	144	10	HP	1 5/8"	1001	Single Log - 6 tiers	Bristol	11000_51P20110722	146m-148m
Moel y Parc	56	2	118	180	HP	1 5/8"	1082	Crossed Logs - 4 tiers	Mold	14500_56P20110708	111m-112.5m
Nottingham	50	0.1	41	100	VP	7/8"	51	Crossed Logs @ 120 degrees - 2 tiers	Nottingham	11101_50P20110624	39m-40m
Olivers Mount	56	0.2	33	340	VP	7/8"	77	Crossed Logs @ 90 degrees - 2 tiers	Scarborough	12002_56E_20120405_23bBW	33m
Oxford	51	10	80	230	HP	1 5/8"	769	Single Log - 6 tiers	Oxford	11700_51P20110616	99m-102m
Plympton	39	0.1	45	305	VP	7/8"	43	Crossed Logs @ 90 degrees - 2 tiers	Plymouth	13105_39P20110620	41m -42m
Pontop Pike	56	5	73	90	HP	1 5/8"	1108	Two panels @ 90 degrees - 2 tiers	Newcastle	10900_56P20110310	77m-78m
Ridge Hill (Hereford petal)	51	1	79	310	HP	1 5/8"	101	Single Log - 4 tiers	Hereford	24900_51C20110613	81.5m-84m
Rosemarkie	52	1	61	170	HP	1 5/8"	219	Two panels @ 90 degrees - 2 tiers	Inverness	15600_52C20110629	61m
Rowridge	29	10	89	25	VP	1 5/8"	597	Two Logs (side by side) - 6 tiers	Southampton	10860_29P20110616	72m-75m
Salisbury	51	0.2	45	40	VP	7/8"	75	Crossed Logs @ 90 degrees - 2 tiers	Salisbury	10801_51C20110705	38m-39m
Sandy Heath	42	2	119	270	HP	1 5/8"	273	Single Log - 4 tiers	Bedford	12400_42C20110603	121m-123.5
Sheffield	55	0.1	43	110	VP	7/8"	27	Single Log - 2 tiers	Sheffield	10403_55P20110621	43m
Storeton	30	0.06	43	30	VP	7/8"	9.78	Single Log - 2 tiers	Liverpool	10307_30P20110622	41m-44m
Sutton Coldfield	51	10	132	230	HP	1 5/8"	1046	Single Panel - 4 tiers	Birmingham	10200_51P20110305	129m-131m
Tacolneston	57	10	100	30	HP	1 5/8"	1452	Single Log - 4 tiers	Norwich	11400_57P20110621	97m-98.5m
Tay Bridge	51	0.01	43	0	VP	7/8"	3.07	Crossed Logs @ 90 degrees - 2 tiers	Dundee	12308_51P20110630	40m-41m
Tunbridge Wells	51	0.4	45	245	VP	7/8"	154	Crossed Logs @ 90 degrees - 2 tiers	Tunbridge Wells	10104_51E_20120404_26dBW	42m
Waltham	26	5	151	40	HP	1 5/8"	1872	Crossed Logs @ 100 degrees - 4 tiers	Nottingham	11100_26P20110310	157m
Wenvoe	51	10	129	5	HP	1 5/8"	1371	Crossed Logs @ 70 degrees - 8 tiers	Cardiff	10600_51P20110613	115m-118m
	54	0.4	39	290	VP	7/8"	45	Two Logs (side by side) - 2 tiers	Brighton & Hove	10805 54P20110624	42.5m
Whitehawk Hill Winter Hill (Blackpool petal) Winter Hill (Liverpool petal)	56	1 2	144 144	300 230	HP HP	1 5/8" 1 5/8"	175 351	Single Log - 4 tiers Single Log - 4 tiers	Preston Liverpool	20301_56P20110722 20300_56P20110722	144m-145.5 144m-145.6

Proposed Arqiva Antenna HRPs (Green) Overlaid with OFCOM HRPs/Templates (Red)

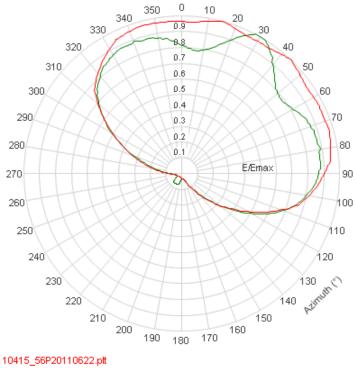


Barnstaple (Template does not show on scale 1W ERP)



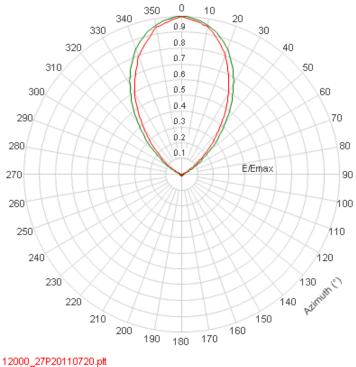
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Beecroft Hill



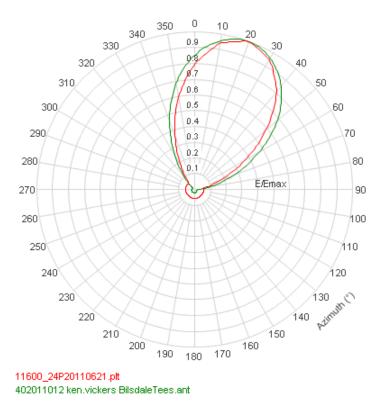
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Belmont



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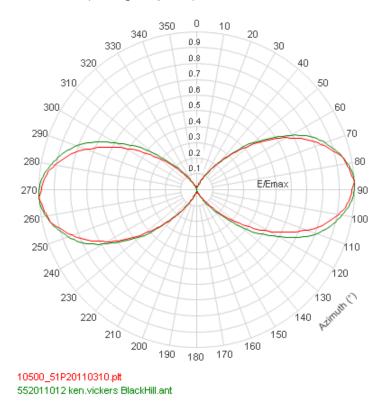


Bilsdale (York petal)

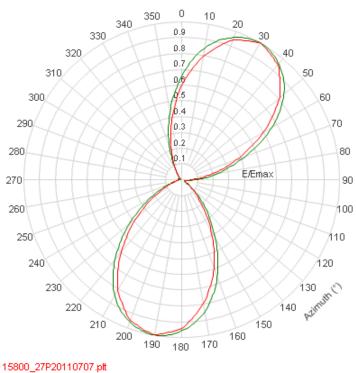
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Black Hill (Glasgow petal)

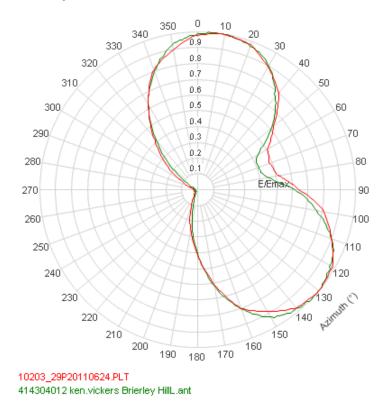


Bluebell Hill

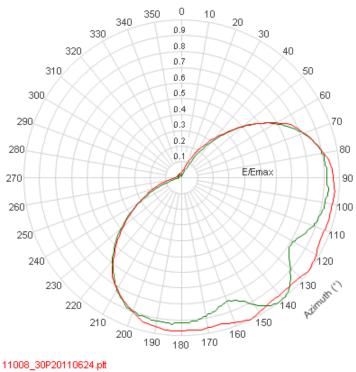


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Brierley Hill

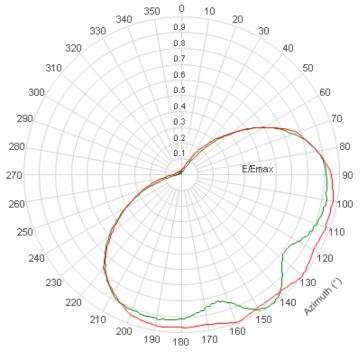


Bristol IIchester Crescent



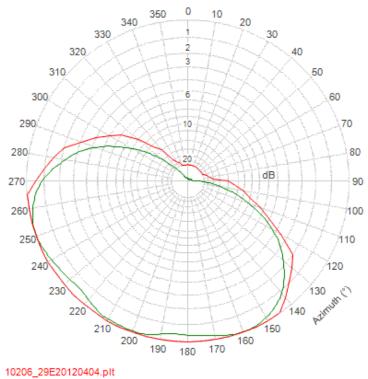
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Bristol Kings Weston

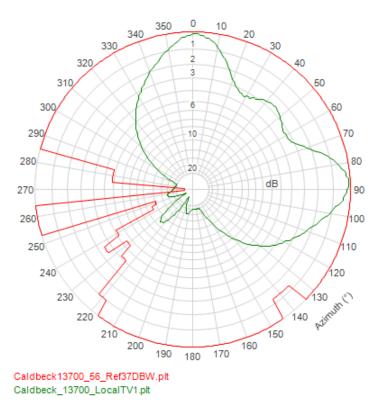


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Bromsgrove

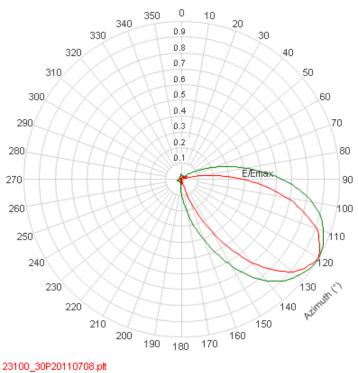


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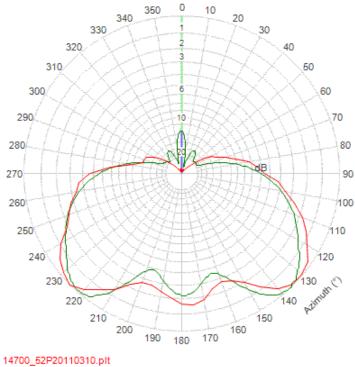
Caldbeck (Template reference 5kW ERP)

Caradon Hill (Plymouth petal)



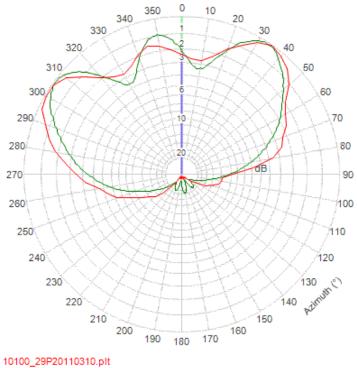
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Craigkelly



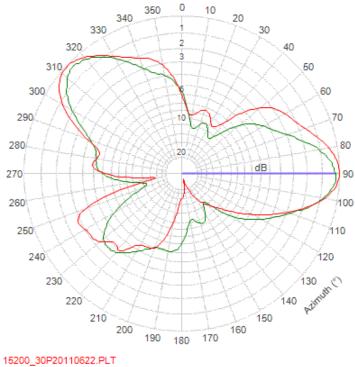
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Crystal Palace



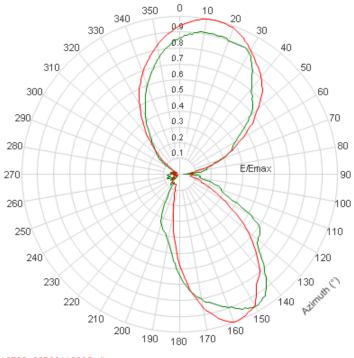
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Darvel



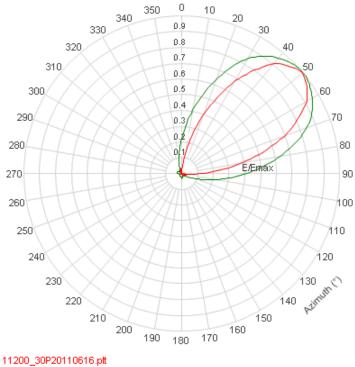
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Divis



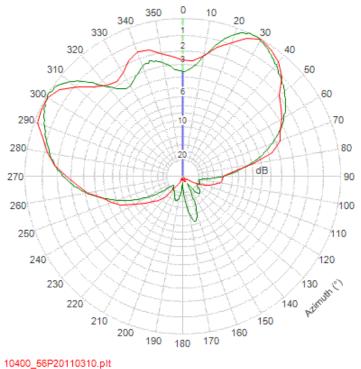
10700_30P20110305.ptt 542511012 ken.vickers Divis.ant

Durris



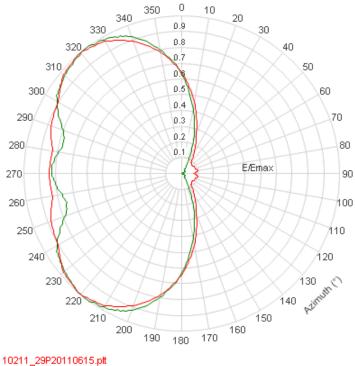
488711012 ken.vickers Durris.ant

Emley Moor



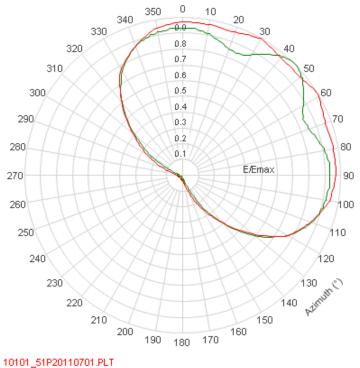
Emley Moor_2T_Local TV.ant

Fenton



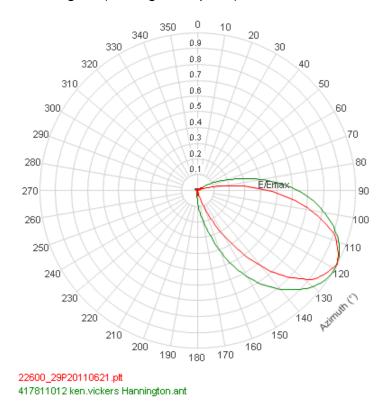
⁴⁰⁸³⁰⁴⁰¹² ken.vickers FentonL.ant

Guildford

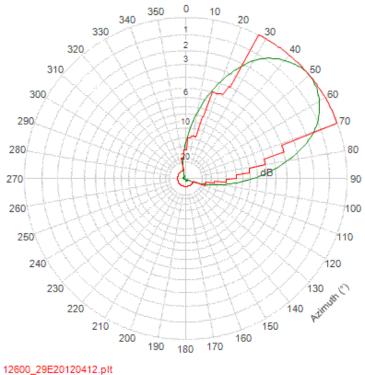


596704012 ken.vickers Guildford_L.ant

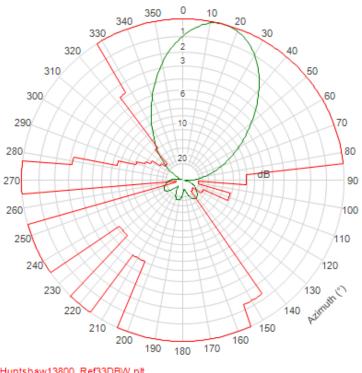
Hannington (Basingstoke petal)



Hannington (Reading Petal)



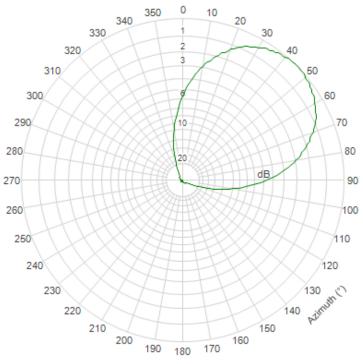
Hannington_(Reading_Petal)_12600_LocalTV1.plt



Huntshaw Cross (Template reference 2kW ERP)

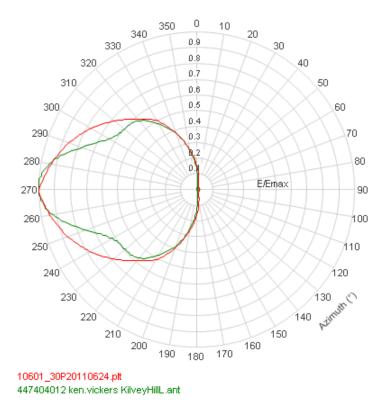
Huntshaw13800_Ref33DBW.plt HuntshawCross_13800_LocalTV1.plt

Kidderminster (Template does not show on scale 40W ERP)

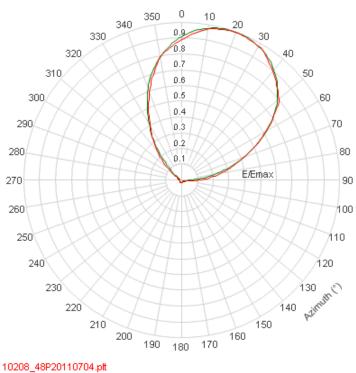


Kidderminster_10202_LocalTV1.plt

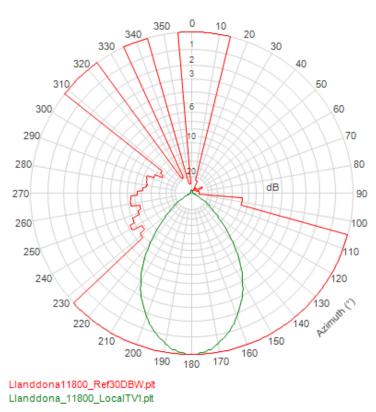
Kilvey Hill



Lark Stoke

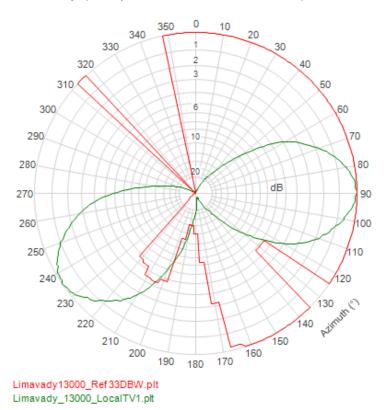


638204012 ken.vickers Lark_Stoke_L.ant

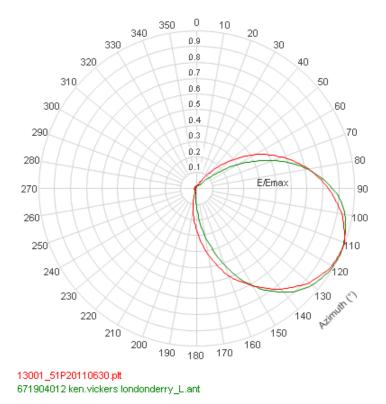


Llanddona (Template reference 1kW ERP)

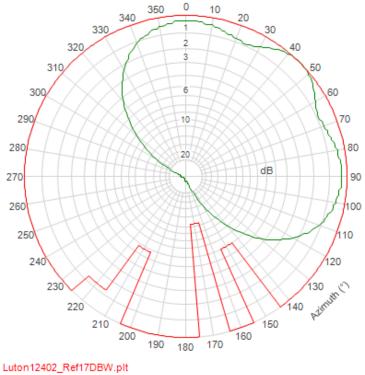
Limavady (Template reference 2kW ERP)



Londonderry

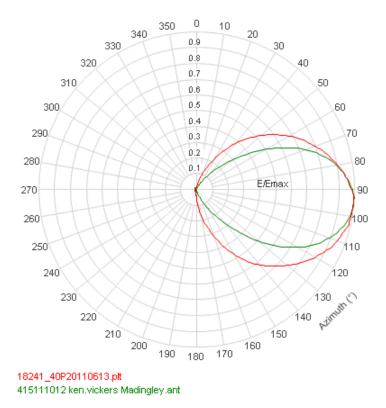


Luton (Template reference 50W ERP)

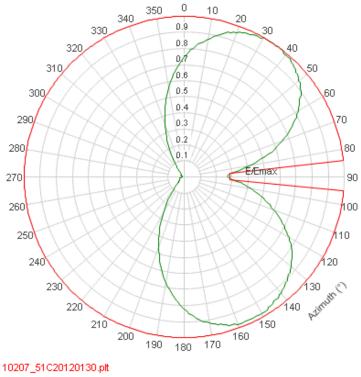


Luton_12402_LocalTV1.plt

Madingley

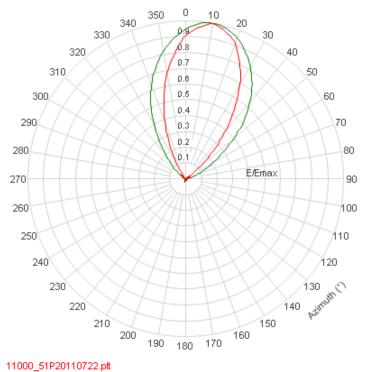


Malvern (Template reference 40W ERP)



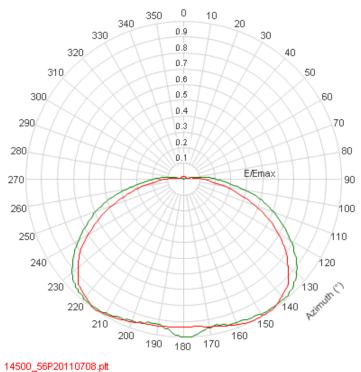
Malvern_Local_TV.ant

Mendip



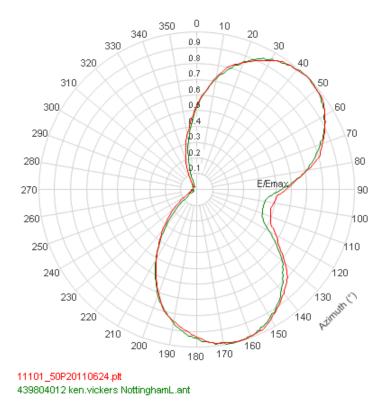
491711012 ken.vickers Mendip.ant

Moel y Parc

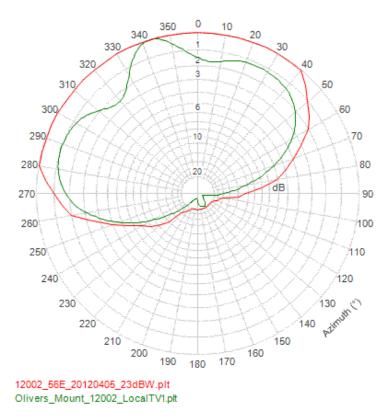


574511012 ken.vickers MoelYParc.ant

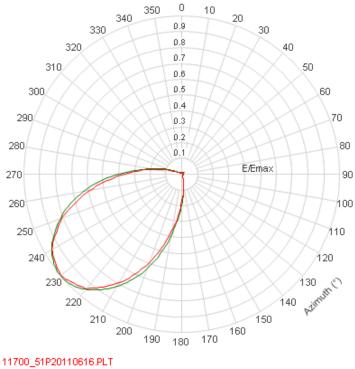
Nottingham



Olivers Mount (Template reference 200W ERP)

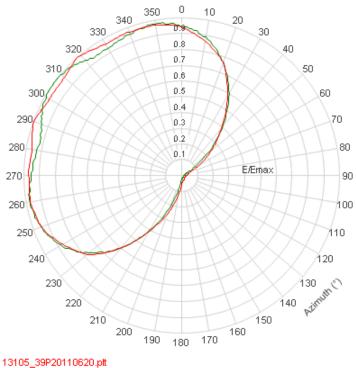


Oxford



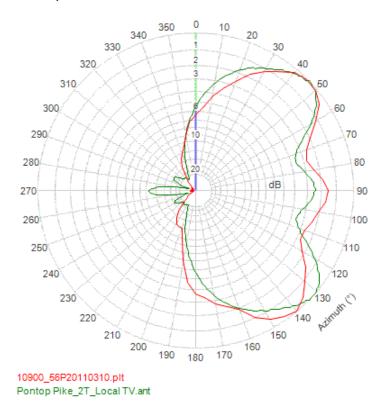
494811012 ken.vickers Oxford.ant

Plympton

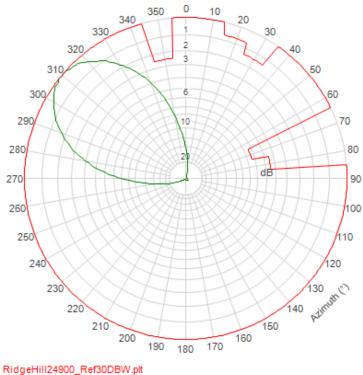


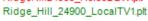
611904012 ken.vickers Plympton_L.ant

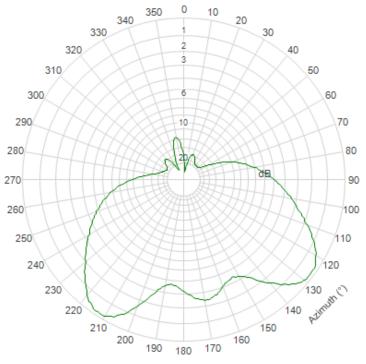
Pontop Pike



Ridge Hill (Template reference 1kW ERP)



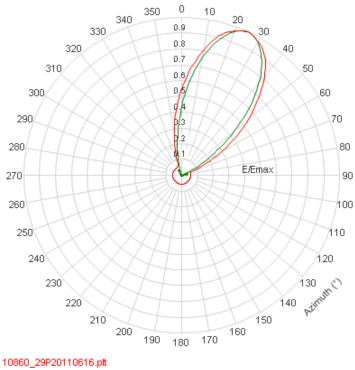




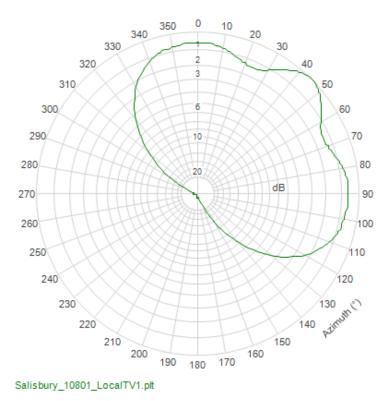
Rosemarkie (Template does not show on scale 1kW ERP)

Rosemarkie_15600_LocalTV1.plt

Rowridge

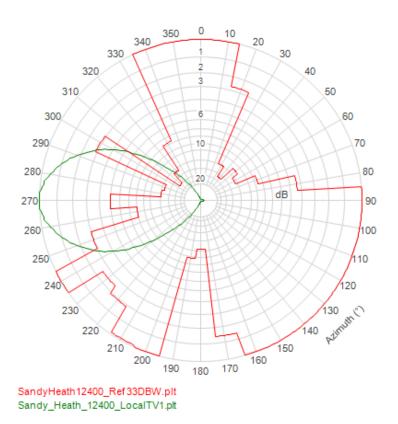


678604012 ken.vickers Rowridge_L.ant

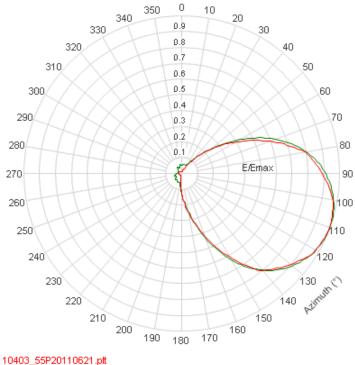


Salisbury (Template does not show on scale 200W ERP)

Sandy Heath (Template reference 2kW ERP)

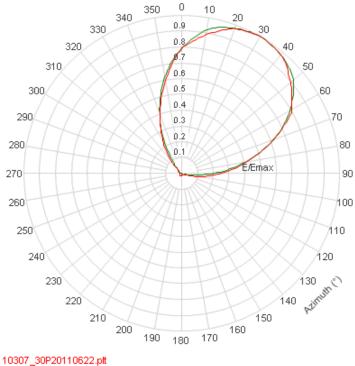


Sheffield



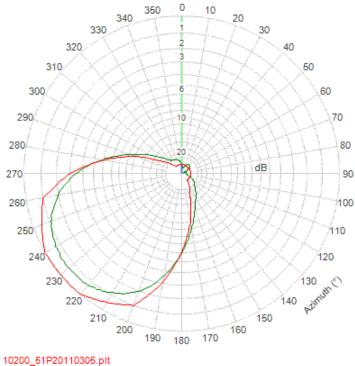
⁶⁴³⁰⁰⁴⁰¹² ken.vickers Sheffield_L.ant

Storeton



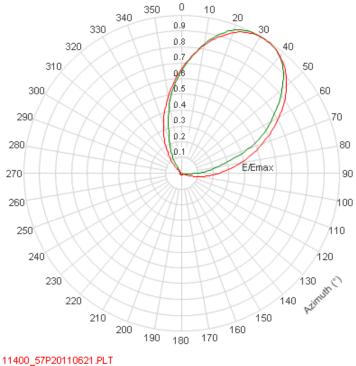
649104012 ken.vickers Storeton_L.ant

Sutton Coldfield



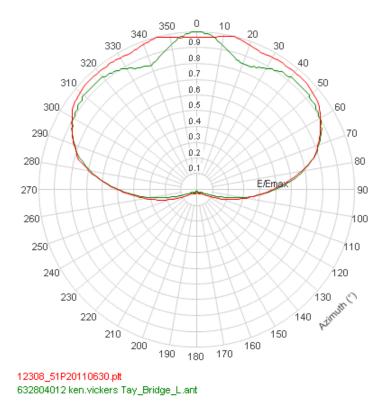
Sutton Coldfield_4T_Local TV.ant

Tacolneston

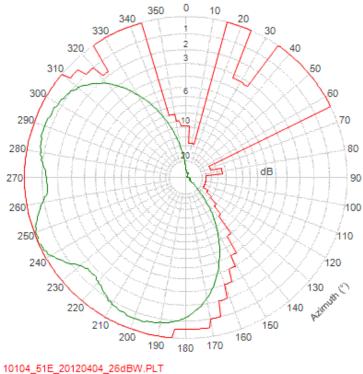


443711012 ken.vickers Tacolneston.ant

Tay Bridge

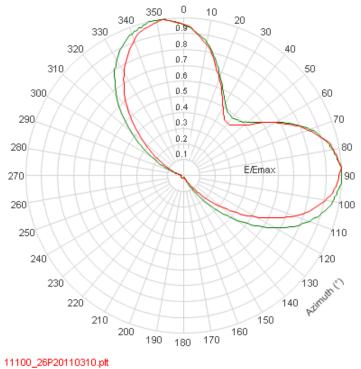


Tunbridge Wells (Template reference 400W ERP)



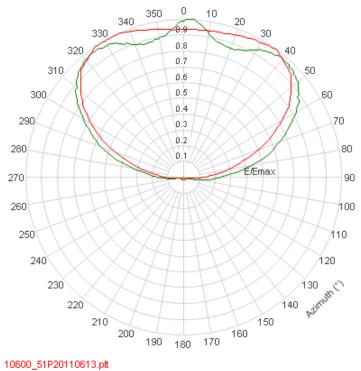
Tunbridge Wells_10104_LocalTV1.plt

Waltham



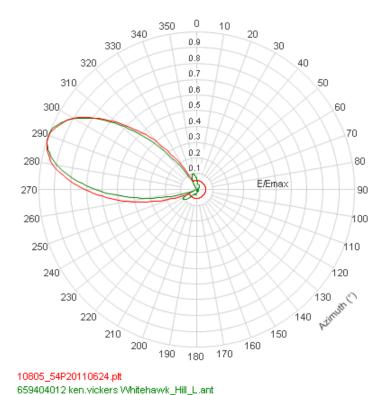
⁵⁷⁰³¹¹⁰¹² ken.vickers Waltham.ant

Wenvoe

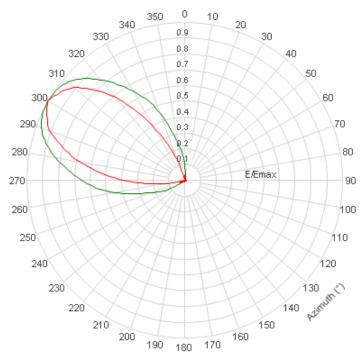


584011012 ken.vickers Wenvoe.ant

Whitehawk Hill

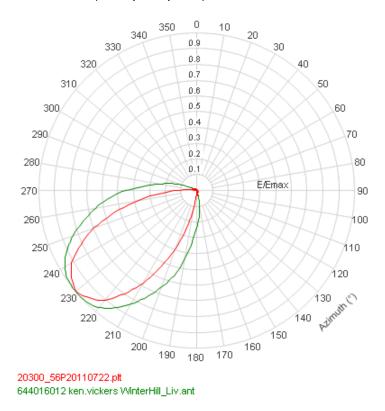


Winter Hill (Blackpool petal)



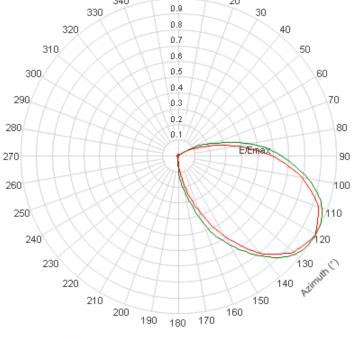


Winter Hill (Liverpool petal)



340 0 10 20 330 0.9

Winter Hill (Manchester petal)



10300_56P20110726.ptt 646916012 ken.vickers WinterHill_Man.ant

SCHEDULE 7

Interfaces to the Transmission System

Introduction

This document describes the interface between the Customer's Distribution System and the Transmission System. The Transmission System has been designed to accept a single feed of the service provided by a local digital television provider, and a single feed of the National Services plus Central SI streams. It shall be the responsibility of the Customer to provide the Customer's Distribution System. The performance of the Customer's Distribution System shall be sufficient as to make it transparent to the devices connected either end.

Customer Signal Attributes

- 1) A single physical Customer Signal presentation shall be made available by the Customer at the MTS Insertion Point on each designated transmitter Site. The Customer shall present two physical Customer Signals at the MTS Insertion Point. The arrangements for feeding these two Interface Points shall ensure that the two feeds are synchronous, to permit seamless transport stream switching by the redundant PIE systems.
- 2) The Customer shall procure that feeds are provided by an Arqiva approved Distribution Service Provider at the MTS Insertion Points. The MTS Insertion Point shall be the PIE equipment located in the immediate vicinity of the Transmitter Systems.

The Stations shall be provided by the Customer with a single (or dual) feed of each of:

- the service provided by a local digital television provider; and
- the National Services plus Central SI stream.
- 3) Physical Interface Copper Co-axial cable.
 - a) Physical Connector: Distribution Service Provider will present 75Ω BNC, fixed female.
 - b) ASI transport stream attributes shall conform to CENELEC EN50083-9:2002 (Electrical Interface).
- 4) Data formats:

The transport stream carried shall pertain to any agreed format permissible in DVB, MPEG-2 as per ISO 13818-1: 2007, or agreed future evolutions encapsulated in ASI transport stream and which is approved in the version of the DTG D-book published as at 9 March 2012.

5) Transport Rate:

The data transport rate presented at the destination shall be unchanged from the input transport rate. The actual bit rate shall be any constant rate set to the rates shown below depending on the broadcast modulation required (Constellation and FEC Rate). The standards and modes supported by the Transmission System are those currently allowed to be licensed by Ofcom, indicated in Table 9.3 and 9.3a of the DTG D-Book v7 Part A. For the avoidance of doubt, for L-DTPS, Ofcom will licence the parameters defined by Option 7 in Table 9.3a of the DTG D-Book v7 Part A which are reproduced below. If requested by the Customer, Arqiva shall investigate the feasibility of supporting alternative modes on

request. For the avoidance of d	doubt, Arqiva shall	not be under an	obligation to support
alternative modes.			

OFDM Parameters	Values (Option 7)
Number of carriers	6817 (8K)
Modulation	QPSK
Inner coding Rc	2/3
Guard interval (∆/Tu)	1/32
TS data rate (Mbit/s)	6.0320856

DVB-T Parameters from DTG D-Book Table 9.3a pertaining to L-DTPS

It is assumed that a minimum of changes to modulation parameters may be required, but until the exact mode is defined, it will not be possible to fully confirm that the Transmission System will support the mode.

Where SFNs are required, additional distribution feeds will be required between the MIP insertion point and the transmitters making up the SFN. These links shall form part of the Customer's Distribution System and are not provided for within this Reference Offer.

6) Transport Delay:

Distribution delay shall be stated and constant throughout the life of the Transmission Service.

- a) The received Customer Signal at the destination Sites shall be compliant with the required protocol.
- b) For the correct operation of single frequency networks ("SFNs"), the Transport stream shall be compliant to the appropriate data protocol and time stamped. See Schedule 20 in respect of SFN Issues.
- 7) Transport Stream signal quality

The Distribution System provided by the Customer should not degrade, distort or otherwise affect (including but not limited to packet re-ordering of) the transport stream signal which causes it to fail to meet the overall quality and performance requirements, specified for the UK DTT network in the DTG D-Book, published as at 9 March 2012.

SCHEDULE 8

Customer Signals

1. Introduction

This Schedule 8 describes the required format of Customer Signals which will be presented to Arqiva by the Customer at the MTS Insertion Points from the Customer's Distribution System.

The Customer will provide 2 x ASI signals at each transmitter Site as follows:

- service provided by a local digital television services provider (nominal 3Mbps); and
- National Services (nominal 6Mbps for the aggregated services) and Central SI feed (nominal 8Mbps).

Notes:

The allocated services bitrates are subject to Ofcom confirmation of the DVB-T mode to be licensed and quality parameters applicable to services.

The Central SI feed bitrate is subject to agreement with DMOL for the provision of an additional feed from the CSI Generator for use by the Customer.

Arqiva shall provide a remultiplex system to combine the content signals into a single 9MBps output stream and process the CSI to produce the appropriate local SI feed which shall be included within the transmitted multiplex.

2. Transport Streams, as per ISO 13818-1:2007

- 2.1 Content presented as transport stream must conform to CENELEC EN50083-9:2002.
 - 2.1.1 Argiva requires ASI Electrical interface presentation.
- 2.2 ASI streams presented must be in 'byte' mode.
 - 2.2.1 The transport stream must include all components necessary to enable downstream Equipment and receiving devices to function correctly.
 - 2.2.2 The content stream presented to Arqiva shall be required to pass all applicable TR 101 290 tests. Where the Customer requests, or other multiplex configuration parameters cause, a variation of table repetition rates from the figures specified within TR 101 290, this shall be communicated to Arqiva for discussion. Arqiva reserves the right to require full compliance with TR 101 290 for all radiated signals.
 - 2.2.3 Customer Signals must be stable and free of any intermittent effects or errors which cause system instability.
- 2.3 The ASI Customer Signal must be a constant data rate and must not be of a bursty nature (i.e. data packets must be evenly distributed in time at the point of delivery to Arqiva). Customer Signals shall not require the provision of any buffering or policing equipment to prevent interruption to other services or malfunction of other downstream devices including domestic STBs.
- 2.4 In order to ensure correct operation, Argiva requires that:
 - 2.4.1 The data rate including all carriage overheads shall be stated.

- 2.4.2 Any additional metadata capacity required must be declared.
- 2.4.3 The presentation data rate shall not vary by more than 1 kbit/s.
- 2.4.4 Nomenclature or identifiers used in the Customer Signals shall not clash or overlap with those used by existing services.
- 2.5 The addition of the Customer Signals shall not require any equipment configuration in excess of bandwidth allocation.
- 2.6 Data irregularities
 - 2.6.1 The jitter of the content stream at any layer shall be \leq 1mSec.
 - 2.6.2 The data stream shall not contain any errors at presentation.
 - 2.6.3 Encryption of components or services shall not cause the content to deviate from full DVB/MPEG compliance.

3. Content

All Customer Signals must comply with relevant Ofcom regulations.

4. Implementation

Reconfiguration and testing of systems to cater for a change in the Customer Signals will be handled under the Change Control Procedure and managed under a planned work notice.

Where relevant industry technical standards are introduced or existing standards are revised, any changes to the Transmission System will be handled under the Change Control Procedure and managed under a planned work notice.

SCHEDULE 9

Monitoring and Control

1. SYSTEM OVERVIEW

Arqiva shall deploy telemetry systems at each Site to provide equipment status monitoring and control.

2. TRANSPORT STREAM MONITORING

The Customer will be responsible for monitoring the relevant transport streams at the point of compression and multiplexing.

3. SERVICE MANAGEMENT CENTRE

Arqiva shall provide the facility of the SMC. At the SMC, operational staff shall monitor the status of equipment used to provide the Transmission Service and initiate controls as required to optimise the availability and performance of the Transmission Service. Equipment alarms and other abnormal status information will be brought to the attention of Arqiva operators as appropriate.

4. TRANSMITTER SITE ALARM AND STATUS INFORMATION

At each Station, an on-site system will monitor the status of the transmission Equipment, including any reserve or standby Equipment and site infrastructure alarms. Status information collated by the control system will be polled periodically and fed back to the SMC.

SCHEDULE 10

Maintenance Objectives

1. TRANS MITTER SYSTEM

Preventive maintenance will be undertaken at all Sites and will include a programme of transmitter performance checks and general condition checks designed to optimise System availability. Such checks will be non-intrusive and/or non-service affecting so far as practicable.

2. TARGET RESPONSE TIMES

- 2.1 For the purposes of this Agreement, a "Target Response Time" shall mean the time between Arqiva first becoming aware of a Breakdown at a Station either through its own monitoring or by a confirmed report from the Customer or an audience contact and the arrival at the Station of suitably trained and skilled personnel to investigate and seek to remedy such Breakdown.
- 2.2 On becoming aware of a Breakdown, Arqiva shall attempt, as soon as possible, to resolve the Breakdown by such remote control facilities as are available.
- 2.3 In the event that Arqiva is able to establish and confirm with the relevant regional electricity company that a Breakdown is due to a loss of the incoming public mains electricity supply at the relevant Station and that Station does not have stand-by power facilities, then paragraph 2.2 of this Schedule 10 shall not apply in respect of such Station until the relevant regional electricity company has confirmed with Arqiva that the public mains electricity supply has been restored.
- 2.4 In the event that any Breakdown is not resolved by remote control, the Target Response Time during which Arqiva shall endeavour to respond in relation to such Breakdown shall be as shown in the table in paragraph 2.5 of this Schedule 10 provided that, in respect of a Breakdown due to the Distribution System or Multiplex Service, Arqiva shall only be required to respond at a particular Station where Arqiva's monitoring of the Distribution System or Multiplex Service indicates that such Breakdown is occurring in such of the Distribution System or Multiplex equipment as is located at such Station.
- 2.5 Target Response Times according to the time of commencement of Breakdowns shall be as shown in the table below:

Target	Response	Time	Target	Resp	onse	Time
(hours)	for Breal	kdowns	(hours)	for	Break	downs
commencing between 0800		commencing at other times				
and 1700, excluding						
weekends and bank holidays						
3			4			

- 2.6 Notwithstanding anything to the contrary contained in this Schedule 10, Arqiva shall in any event:
 - 2.6.1 attend to all Breakdowns as soon as reasonably practicable;
 - 2.6.2 preserve any data indicating the cause of any Breakdown;
 - 2.6.3 take all reasonable steps so as to remedy any Breakdown as soon as reasonably practicable and until such time as such Breakdown is remedied, so as to minimise the impact of such Breakdown on the provision of the Transmission Service; and

2.6.4 take all reasonable, appropriate and necessary steps so as to prevent such Breakdown from recurring anywhere on the network.

SCHEDULE 11

Total Time of Service Availability

1. The Total Time of Service Availability ("**TTSA**") calculated as a moving average over the preceding twelve calendar months (if there are less than 12 months since the Actual Service Start Date, the TTSA for the balance of the 12-month measurement period prior to the Actual Service Start Date shall be taken to be 100%) shall be no less than the percentages of Regular Hours shown in Table 1 below for each Station.

Table 1 - TTSA Targets

First 12 months after Transmission	Thereafter
Service commences	
99.60	99.70

- 2. For the purpose of calculating whether the Total Time of Service Availability has been achieved at any Station, failures, interruptions or defects in transmission shall not count as a Breakdown to the extent that they result from any of the following:
 - a failure or interruption resulting from the Customer's refusal to permit work proposed by Arqiva under Clause 7 or the carrying out of any work contemplated by and provided for in Clause 7;
 - where resulting from Arqiva's due compliance with safe working practices stipulated by the National Radiological Protection Board or any other health safety environmental or other law or generally recognised protocol or standard (whether or not having the force of law);
 - (iii) impairment of the quality of the Customer Signal due to abnormal propagation conditions;
 - (iv) any loss of transmission or impairment in the quality of the transmitted Customer Signal resulting directly from any of the matters for which the Customer has responsibility;
 - (v) where transmission is restored to a level greater than nominally -1dB with respect to normal ERP;
 - (vi) any fault requiring attendance at a Site during any period where such attendance is not permitted or is otherwise prevented as a consequence of a security alert or any other Force Majeure Event;
 - (vii) any failure or deficient provision of any element of the Transmission Service for which Arqiva has ceased to be responsible following termination in accordance with Clause 16;
 - (viii) a failure of the programme feed where such failure of the programme feed results from a non-accountable fault at the Station or that Station's parent Station;
 - (ix) unplanned interruptions to public mains supply at any Station which are beyond Arqiva's reasonable control and where there is no back-up generator or diverse supply included in the Transmission Service;
 - (x) exceptional and unforeseeable weather including without limitation lightning, icing and high winds;

- (xi) a specific direction to Arqiva by Ofcom or the Customer;
- (xii) the failure or continued unavailability of the Global Positioning System (GPS) to the extent relied upon for the Transmission Service in respect of any Breakdown which does not commence until more than eight (8) hours after the GPS failure commences;
- (xiii) any impairment of the Transmission Service due to the unsatisfactory performance of any Rebroadcast Links (RBLs) which may be required as the result of a Change via the Change Control Procedure;
- (xiv) reductions in power of less than 3dB as a result of a Transmitter System fault;
- (xv) reductions in power of less than that shown in Schedule 2 when operating in half Antenna condition;
- (xvi) any fault requiring mast ascent during the hours of darkness or severe inclement weather where, in the reasonable judgement of Arqiva, a potential safety hazard exists;
- (xvii) any breach of this Agreement by the Customer;
- (xviii) any interruption as a result of Arqiva complying with directions under Clause 11.1 or Clause 11.2;
- (xix) any interruption as a result of an engineering test transmission made at the request of the Customer;
- (xx) any failure of the Customer, its agents, contractors or their subcontractors (not including Arqiva) to deliver the Customer Signals to Arqiva at the relevant MTS Insertion Points (including, for the avoidance of doubt, any failure of the Distribution Service Provider) in accordance with the requirements of this Agreement;
- (xxi) any interruption resulting from defects or failures in the equipment or services provided or operated by or on behalf of the Customer (other than Equipment which Arqiva is required to operate and maintain) PROVIDED that any such interruption resulting from loss of mains electricity supply for any reason shall count for the purposes of calculating Total Time of Service Availability unless the Customer has failed to discharge its responsibilities under this Agreement (including, without limitation, its obligations under Schedule 19);
- (xxii) any breakdown or other fault in the Customer Signal caused by the Multiplex Service;
- (xxiii) planned interruptions to the public mains supply at any Station where notification has been made by Argiva to the Customer and approval has been obtained from the Customer in accordance with Clause 7;
- (xxiv) planned interruptions, where notification has been made to the Customer representative and approval given by the Customer pursuant to Clause 7;
- (xxv) a Force Majeure event to the extent not already covered by paragraphs (i) to (xxiv) above;
- (xxvi) any interruption due to causes listed in this Schedule 11 at paragraph 3 as "Planned Works", provided that the time and duration of such works has

been notified to and agreed by the Customer in advance in accordance with the procedures notified by Arqiva to the Customer from time to time;

- (xxvii) a delay of no more than 30 seconds in re-establishing Network Access when switching to alternative power supplies or equipment;
- (xxviii) any other occurrence that the parties mutually agree not to treat as minutes lost;
- (xxix) additional time spent waiting for or travelling via ferries or flights required for access to island Stations; and/or
- (xxx) failure of transmission equipment to an extent that exceeds the capability of existing Arqiva stocks of suitable spare modules, devices, and/or reserve equipment to mitigate.

3. PLANNED WORKS

- 3.1 For the purpose of calculating Total Time of Service Availability, the period of any interruption in provision of Transmission Services due to causes including any of the following events shall be counted as planned works and accordingly shall not count as a Breakdown pursuant to paragraph 2(xxvi) above:
 - 3.1.1 maintenance or replacement of Antenna Systems and/or Transmitter System;
 - 3.1.2 maintenance or replacement of aircraft warning lights;
 - 3.1.3 painting of the Antenna support structure;
 - 3.1.4 replacement, strengthening or maintenance of the Antenna support structure, including greasing of stays;
 - 3.1.5 periodic inspections of the Antenna support structure, statutory or otherwise;
 - 3.1.6 periodic inspections of Antenna Systems carrying the transmitted service signal and/or Transmitter System;
 - 3.1.7 maintenance or replacement of Common Equipment;
 - 3.1.8 periodic inspections of equipment related to the permanent electricity supply, statutory or otherwise;
 - 3.1.9 electricity meter changes; and
 - 3.1.10 installation of infrastructure for third parties.

SCHEDULE 12

Service Credits

- 1. At the end of each calendar month commencing from the Actual Service Start Date, the parties shall calculate the Total Time of Service Availability at each Station in accordance with Schedule 11, over the preceding 12 calendar months, inclusive of the month just ended (or if less than 12 months from the Actual Service Start Date, the Total Time of Service Availability shall be assumed to be 100% for the months required to make up the 12-month measurement period).
- 2. If the Total Time of Service Availability over the relevant period is below the applicable Total Time of Service Availability target set out in Table 1 of Schedule 11 with respect to any individual Station, Arqiva shall incur a liability to pay service credits to the Customer in respect of each such Station in accordance with Paragraph 3 below. If the said 12-month period straddles two Total Time of Service Availability targets set out in Table 1 of Schedule 11 for the Station in question, the Total Time of Service Availability target for the purposes of the calculation shall be averaged over the period of the calculation e.g. where one Total Time of Service Availability target applies for 5 months and another for 7 months, the average Total Time of Service Availability target will be calculated as follows: ((5 x TTSA1) + (7 x TTSA2))/12.
- 3. The method for calculating service credits with respect to each Station on a monthly basis, is as follows:
- 3.1 If no Breakdown has occurred in the month no service credits are due.
- 3.2 If a Breakdown has occurred in the month then:-

For the relevant Station calculate the actual total period of Breakdowns over the previous 12-month period, including the current month of calculation.

- 3.2.1 If the actual total period of Breakdowns over the last 12 months is less than or equal to the permitted period of Breakdown for 12 months, then no service credits are due.
- 3.2.2 If the actual total period of Breakdowns over the last 12 months is greater than the permitted period of Breakdowns for 12 months, then service credits shall be due and calculated in accordance with Paragraph 4 below.
- 3.2.3 For these purposes, the permitted period of Breakdown is the difference between the applicable Total Time of Service Availability target set out in Table 1 of Schedule 11 and 100%.
- 4. For any Breakdown that occurs during the month which causes the actual total period of Breakdowns over the last 12 months to exceed the permitted period of Breakdowns the following formula shall be applied to calculate the relevant service credits:

Service credits = $M \times D \times W \times C \times 10$

where:-

M = the period of Breakdown in the relevant month in which a Breakdown has occurred expressed in minutes and increments of 10 seconds minus any balance of permitted Breakdowns over the preceding 12 calendar months;

D = the relevant degradation weighting factor to be determined by reference to the nature of the Breakdown as set forth in Table 1 (if there is loss of more than one Material Degradation the aggregate value of which exceeds 1, the value to be attributed shall be 1);

⁶²

W = the relevant Station weighting as set forth in Table 2, expressed as a percentage;

C = the Transmission Annual Charge (excluding Pass-Through Costs), divided by 524,520 (= $364.25 \times 24 \times 60$), i.e. the charge per minute for all Stations excluding Pass-Through Costs.

- 5. Subject to Paragraph 7, Arqiva's aggregate liability to pay service credits in respect of the relevant calendar month equals the sum of the figures calculated for each Breakdown to which the formula set forth in Paragraph 4 is to be applied.
- 6. Arqiva shall notify the Customer of the period, nature and timing of all Breakdowns at each Station.
- 7. Arqiva shall have no obligation to pay service credits with respect to any Station until the Actual Service Start Date in respect of such Station.

Degradation	Weighting Factor
Total loss of transmission	1
Station ERP degraded by greater than 3dB and up to 6dB relative to that shown in Schedule 6 as a result of a Transmitter System fault	0.5
Station ERP degraded by greater than 6dB relative to that shown in Schedule 6 as a result of a Transmitter System fault	1
Any material impairment not covered by any of the foregoing	0.1

Table 1 - Degradation Weighting Factors

Table 2 - Station Weightings

The weightings shown in this Table 2 are based on a percentage of the total population coverage for all Stations.

Note: This Table 2 assumes that all 58 Stations offered are implemented. If a different number of Stations, or antenna solutions that provide different predicted population coverages, are implemented then this table and the respective Station Weightings shall be recalculated accordingly.

STATION	WEIGHTING
ANGUS	0.98
BARNSTAPLE	0.06
BEECROFT HILL*	0.27
BELMONT	1.95
BILSDALE (TEESSIDE)	1.57
BILSDALE (YORK)	0.52
BLACK HILL (GLÁSGOW)	4.85
BLUEBELL HILL	1.04
BRIERLEY HILL	0.57
BRISTOL ILCHESTER CR	0.20
BRISTOL KINGS WESTON	0.11
BROMSGROVE	0.21
CALDBECK	0.67
CARADON HILL (PLYMOUTH)	0.48
CRAIGKELLY	2.11
CRYSTAL PALACE	22.87
DARVEL	0.79
DIVIS	1.84
DURRIS	0.92
EMLEY MOOR	7.37
FENTON	0.90
GUILDFORD	0.39
HANNINGTON (BASINGSTOKE)	0.47
HANNINGTON (READING)	1.04
HUNTSHAW CROSS	0.17
KIDDERMINSTER	0.16
KILVEY HILL	0.53
LARK STOKE	0.21
LIMAVADY	0.26
LLANDDONA	0.12
LONDONDERRY	0.27
LUTON*	0.17
MADINGLEY	0.61
MALVERN	0.37
MENDIP	2.12
MOEL Y PARC	0.18
NOTTINGHAM	0.63
OLIVERS MOUNT	0.24
OXFORD	0.78
PLYMPTON	0.28
PONTOP PIKE	5.57
RIDGE HILL (HEREFORD)	0.32
ROSEMARKIE	0.36

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STATION	WEIGHTING
ROWRIDGE	1.86
SALISBURY	0.22
SANDY HEATH	0.47
SHEFFIELD	0.90
STORETON	0.43
SUTTON COLDFIELD	8.15
TACOLNESTON	1.09
TAY BRIDGE*	0.12
TUNBRIDGE WELLS	0.33
WALTHAM	1.48
WENVOE	2.57
WHITEHAWK HILL	0.72
WINTER HILL (BLACKPOOL)	2.52
WINTER HILL (LIVERPOOL)	5.91
WINTER HILL (MANCHESTER)	7.70
TOTAL	100.00

Note: in the above table, Stations marked with an asterisk (*) have a single mains supply and no fixed generator.

SCHEDULE 13

Change Control Procedure

- 1. Changes Requested by the Customer
- 1.1 The Customer may request a Change at any time during the Term.
- 1.2 If the Customer wishes to request a Change, it shall serve on Arqiva, via its appointed Arqiva Account Manager, a notice (a "**Change Request**") specifying the nature of the Change it wishes to introduce in accordance with the Change Control Procedure. Until such time as a Change is made in accordance with the Change Control Procedure, both parties shall, unless otherwise agreed in writing, continue to perform their obligations as if the Change Request had not been made.
- 1.3 The Customer Change Request shall set out the Change being proposed in sufficient detail to enable Argiva to evaluate the matters specified in Paragraph 1.4 of this Schedule 13 and, without limitation, shall include:
 - 1.3.1 full details of the Change, including any specifications;
 - 13.2 reason(s) and supporting information for the requested Change (including issues and risks which will arise if the Change is not made);
 - 1.3.3 the requested date with effect from which the Change will be implemented;
 - 1.3.4 full names, titles and contact details of the individual(s) who will be responsible for managing the Change on behalf of the Customer;
 - 1.3.5 provision for signature by both the Customer and Arqiva; and
 - 1.3.6 a requirement for Arqiva to provide the Customer with the information specified in Paragraph 1.4 of this Schedule 13. In submitting the Change Request the Customer agrees to pay any additional charges in respect of investigating the Change Request.
- 1.4 As soon as practicable, Arqiva shall in good faith evaluate the Customer's proposed Change and shall serve on the Customer a notice (a "**Change Proposal**"). Each Change Proposal shall specify the following information:
 - 1.4.1 whether any temporary relief from compliance with any of Arqiva's obligations under this Agreement is necessary in order to enable Arqiva to implement the Change, and confirmation at what point the parties agree that full reinstatement of the Total Time of Service Availability and service credit regime applies (which shall in any event be no later than the date upon which the product of such Change is working satisfactorily);
 - 1.4.2 a detailed risk assessment in respect of the Change;
 - 1.4.3 any regulatory consents, approvals or authorisations which are required in connection with the Change;
 - 1.4.5 an implementation plan for the Change, including, a timetable, test plan and acceptance criteria (as applicable);
 - 1.4.6 any variation required to be made to the Agreement in connection with the Change;
 - 1.4.7 details of any additional resources expected to be required in developing, testing and implementing the Change;

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- 1.4.8 the costs of developing, testing and implementing the Change and the details of any adjustment to be made to the Charges as a result of introducing the Change;
- 1.4.9 whether or not the Change Request is one which will require the agreement of other affected parties because, for example, it relates to shared infrastructure (a "Multi-Party Change").
- 1.5 The Customer may:
 - 1.5.1 request Arqiva to provide any further information reasonably necessary for the evaluation of the Change Proposal; or
 - 1.5.2 request Arqiva to amend any details contained in the Change Proposal, and Arqiva shall respond to such request within a reasonable time.
- 1.6 The parties shall, using all reasonable endeavours and acting in good faith, try to agree the contents of the Change Proposal as soon as reasonably practicable after its receipt by the Customer. Failing agreement, the matter shall, at either party's request, be determined by an expert pursuant to Clause 24.3. Where such contents are so agreed or determined (as appropriate) Arqiva shall jointly prepare a Change Request Order in accordance with the template set out at the end of this Schedule ("**Change Request Order**" or "**CRO**") setting out full details of the Change for approval by the Customer, such approval not to be unreasonably withheld.
- 1.7 As soon as practicable after the contents of a CRO have been agreed or determined under Paragraph 1.6, the Customer shall either:
 - 1.7.1 accept the Change (and arrange for two (2) copies of the approved CRO to be signed by or on behalf of the Customer and Arqiva); or
 - 1.7.2 notify Arqiva of the rejection of the CRO (stating the reason(s) for such rejection and providing Arqiva with any further information as it may reasonably request in respect of the same).
- 1.8 If the Customer does not accept the Change in accordance with Paragraph 1.7.1 within ten (10) Business Days after the contents of the CRO have been agreed or determined, the Change Proposal shall be deemed to have been rejected by the Customer.
- 1.9 If the Customer and Arqiva agree a Change pursuant to Paragraph 1.7, then subject to Paragraph 3:
 - 1.9.1 the signed CRO shall constitute a valid variation of this Agreement under Clause 25.10 and, accordingly, this Agreement shall immediately be deemed amended to incorporate the changes specified in the CRO, including (for the avoidance of doubt) any adjustment to the Charges specified under Paragraph 1.4.7; and
 - 1.9.2 Arqiva shall immediately commence the implementation of the Change in accordance with the programme specified in the CRO as referred to in Paragraph 1.4.

2. Changes Requested by Arqiva

- 2.1 If Arqiva wishes to request a Change, it shall serve on the Customer a Change Request specifying the nature of the required Change. Arqiva's Change Request shall attach a Change Proposal and draft CRO containing the information set out in Paragraph 1.4.
- 2.2 The Customer may:

- 2.2.1 request Arqiva to provide any further information reasonably necessary for the evaluation of the Change Proposal and draft CRO; or
- 2.2.2 request Arqiva to amend any details contained in the Change Proposal and/or draft CRO,

and Arqiva shall respond to any such request within a reasonable time.

- 2.3 If the Customer accepts Arqiva's Change Request (with or without modification), it shall arrange for two (2) copies of the approved CRO to be signed by or on behalf of the Customer and Arqiva, and subject to Paragraph 3:
 - 2.3.1 the signed CRO shall constitute a valid variation of this Agreement under Clause 25.10 and, accordingly, this Agreement shall immediately be deemed amended to incorporate the changes specified in the Change Proposal, including (for the avoidance of doubt) any adjustment to the Charges specified under Paragraph 1.4.7; and
 - 2.3.2 Arqiva shall immediately commence the implementation of the Change in accordance with the programme specified in the Change Proposal as referred to in Paragraph 1.4.

Subject to the remaining provisions of this Schedule 13, if the Customer does not accept the Change within ten (10) Business Days after the contents of the CRO have been agreed or determined, the Change Proposal shall be deemed to have been rejected by the Customer.

3. Multi-Party Changes

In the event of a Multi-Party Change, the parties shall approve the CRO in the same manner as set out in this Schedule, but such CRO shall not be effective until Arqiva notifies the Customer in writing that all relevant parties have approved the Multi-Party Change.

Without prejudice to the above, Arqiva shall notify the Customer of the impact of any such Changes, and consult with the Customer in respect of the implementation of such Changes, through the Change Control Procedure. If the Customer objects to any of the proposed Changes mandated by Ofcom and/or any other competent authority, Arqiva shall provide assistance to the Customer during any consultation process in respect of such proposed Changes. If the Customer does not accept the impact of any such Changes (including as to any adjustment to the Charges), the matter shall be referred to an expert pursuant to Clause 24.3.

4. Changes Required by Arqiva

Any change which Arqiva believes is necessary in order to meet the Target Service Start Date or as a result of any of the events described in Clause 9.6 shall be treated in accordance with the procedure set out in this Schedule 13, except that Arqiva shall be entitled to implement the relevant change even if a Change Request has not been signed by both parties. For the avoidance of doubt, any change so implemented shall constitute a valid amendment to this Agreement. Arqiva shall in any event, provide a Change Request to the Customer in respect of such change in accordance with this Schedule 13. Where the occurrence of any such event means that it is not possible to achieve the Target Service Start Date within the current charges, but it would be possible to achieve the Target Service Start Date with the investment of additional charges, Arqiva shall notify the Customer of this as soon as possible (specifying the amount of such additional charges) and it shall be the Customer's decision in its discretion whether to pay the additional charges or to extend the Target Service Start Date. If the Customer does not accept the impact of any such Change in respect of the Charges, the matter may be referred by either party to an expert pursuant to Clause 24.3.

5. Administration of Change Control Procedure

Arqiva shall, for each Change Request submitted, allocate a sequential number to the Change Request and maintain during the Term a consolidated record of all Changes agreed in accordance with the Change Control Procedure since the Execution Date (the "Change Log"); and

Arqiva shall deliver the Change Log to the Customer on the Customer's reasonable request. Arqiva shall make such amendments to the Change Log (if any) as the parties agree following the Customer's review of the Change Log.

6. Labour Costs

Labour costs involved in a effecting a Change shall be at Arqiva's then current rates.

Template Change Request Order

(1) Change Request Information: (to be completed as soon as the CRO is raised)					
CRO Unique ID:	[Date of submission;]				
Version Number:					
Customer originator and contact details:	Arqiva contact and contact details:	Argiva contact and contact details:			
(2) Change Details: (to be completed prior	to approval)				
Description of Change:					
(including whether or not a Multi-Party Cha					
Reason(s) for Change (please attach any rele	evant supporting information)				
Details of risk assessment					
Implementation plan (including timetable, to	est plan and acceptance criteria)				
Impact assessment					
Details of agreed variations to the Agreement	nt [amendments to the Agreement must be a	agreed prior to acceptance of this CRO]			
Details of additional resources required					
Details of adjustment to Charges					
Details of any regulatory approvals, consent and/or authorisations required (if any); Details of temporary relief from contractual obligations required (if any) and long:			ed (if any) and for	how	
Effective date of Change:	Service(s) affected:	Station(s)/Location(s) affected:			
Approved by Arqiva Limited	Signed for and on behalf of Arqiva Limited	Approved by []	Signed for and on b	behalf of []
		Name	Name		
Name	Name	Date	Date		
Date	Date	Title [Project Manager]	Title		
Title [Project Manager]	Title				

SCHEDULE 14

Acceptance Testing

- 1. Following the date of this Agreement, Arqiva shall prepare and append to this Agreement at this Schedule 14 an Acceptance Testing Plan which will be designed to demonstrate that the System meets the requirements of the Baseline Specification set out in Schedule 6 of this Agreement.
- 2. The Acceptance Testing Plan will set out the test criteria for the following categories:
- 2.1 Network Access:
 - 2.1.1 Gain Calculation; and
 - 2.1.2 Antenna Return Loss.
- 2.2 Exclusive Contracted Equipment:
 - 2.2.1 Station Power Output;
 - 2.2.2 Centre Frequency;
 - 2.2.3 Frequency Response;
 - 2.2.4 Out of Band Intermodulation Products; and
 - 2.2.5 Quality Impairment.
- 2.3 Single Frequency Networks:
 - 2.3.1 That the Static Delay at relevant Stations is in accordance with the SFN Timing Schedule (as provided by the Customer).

SCHEDULE 15

Liquidated Damages

- 1. Subject to Paragraph 2 of this Schedule 15, the Liquidated Damages payable by Arqiva pursuant to Clause 4.3 shall be £260 per completed week of delay after the Target Service Start Date for the relevant Location.
- 2. Arqiva's liability to pay Liquidated Damages shall be subject to the following limits:
 - (i) £5,200 per Location;
 - (ii) £2,600 in aggregate per week; and
 - (iii) £52,000 in aggregate.

SCHEDULE 16

Electricity Calculation (Illustrative Example)

Below is an illustration of how the electricity consumption is estimated on an annual basis.

Electricity cost pa = Transmitter Power in kW × Transmitter Efficiency × 24hrs × 365 days × Pence Per Unit Price (inclusive of Carbon Reduction Charge at 6% of PPU price).

Electricity PPU costs vary Station by Station and are subject to fluctuations. Each supply is metered and the costs are a direct pass through. The table below provides an estimation of the annual electricity charge for each Station.

Location	Station	Forecast Electricity cost
		ра
Belfast	Divis	£18,877.62
Birmingham	Sutton Coldfield	£5,946.09
Birmingham	Brierley Hill	£2,541.56
Brighton & Hove	Whitehawk Hill	£764.35
Bristol	Mendip	£6,406.12
Bristol	Bristol Kings Weston	£745.89
Bristol	Bristol IIchester Crescent	£180.93
Cardiff	Wenvoe	£22,071.64
Edinburgh	Craigkelly	£9,655.12
Glasgow	Black Hill (Glasgow petal)	£16,798.26
Grimsby	Belmont	£13,004.96
Leeds	Emley Moor	£20,596.64
Leeds	Beecroft Hill	£139.63
Liverpool	Winter Hill (Liverpool petal)	£4,987.55
Liverpool	Storeton	£110.94
London	Crystal Palace	£12,433.29
Manchester	Winter Hill (Manchester petal)	£4,987.55
Newcastle	Pontop Pike	£12,897.71
Norwich	Tacolneston	£15,840.86
Nottingham	Waltham	£20,426.75
Nottingham	Nottingham	£1,656.49
Oxford	Oxford	£10,547.46
Plymouth	Caradon Hill (Plymouth petal)	£3,302.39
Plymouth	Plympton	£2,624.41
Preston	Winter Hill (Blackpool petal)	£4,987.55
Southampton	Rowridge	£7,301.41
Swansea	Kilvey Hill	£362.19
Aberdeen	Durris	£16,415.01
Ayr	Darvel	£5,229.93
Bangor	Llanddona	£1,729.86
Barnstaple	Huntshaw Cross	£3,133.72
Barnstaple	Barnstaple	£217.64
Basingstoke	Hannington (Basingstoke petal)	£6,221.11
Bedford	Sandy Heath	£6,304.14
Bromsgrove	Bromsgrove	£294.04
Cambridge	Madingley £2,626	
Carlisle	Caldbeck	£16,739.80

SUBJECT TO CONTRACT

Location	Station	Forecast Electricity cost pa
Derry/Londonderry	Londonderry	£2,069.92
Dundee	Angus	£6,019.34
Dundee	Tay Bridge	£198.03
Guildford	Guildford	£634.50
Hereford	Ridge Hill (Hereford petal)	£6,351.47
Inverness	Rosemarkie	£12,262.29
Kidderminster	Kidderminster	£143.76
Limavady	Limavady	£9,066.23
Luton	Luton	£704.43
Maidstone	Bluebell Hill	£5,029.59
Malvern	Malvern	£1,004.66
Middlesbrough	Bilsdale (Teesside Petal)	£9,500.93
Mold	Moel y Parc	£7,183.26
Reading	Hannington (Reading Petal)	£8,988.46
Salisbury	Salisbury	£742.70
Scarborough	Olivers Mount	£669.18
Sheffield	Sheffield	£282.81
Stoke on Trent	Fenton	£335.94
Stratford Upon Avon	Lark Stoke	£627.46
Tunbridge Wells	Tunbridge Wells	£3,407.20
York	Bilsdale (York petal)	£9,500.93

Risks

Part 1 - Standard Risks

- 1. Any increase in the number of labour hours allocated to the Build Project driven by internal or external risk factors including such risks as the following (but not, for the avoidance of doubt, including any risk factors which are Exceptional Risks):
 - (i) Imperfect information and assumptions relating to site structure, building conditions, hazardous materials or design parameters;
 - (ii) Additional design requirements for contingency items: Re-use of buildings, building structural works, design of new facilities;
 - (iii) Delays, or additional design requirements resulting from planning conditions or environmental impact assessment requirements;
 - (iv) Supplier related issues resulting from complexity/technology, impact of specialist supplier resource constraints or supplier performance; or
 - (v) Industrial action by own workforce or suppliers' workforces.
- 2. Any changes in wages or labour rates that are not covered by RPI.
- 3. Any changes due to commodity price movements for raw materials and demand driven price changes for the following materials:
 - (i) Major electrical equipment, LV and HV switchgear, Diesel generators, HVAC Equipment;
 - (ii) Cable, Antennas and other RF manufactured items;
 - (iii) Civil and structural materials and consumables.
- 4. Any delays and additional costs associated with protracted planning processes, planning conditions and appeals, environmental impact assessments, landscaping and access conditions.
- 5. Any high winds restricting work at height or rain restricting Station access or building works (any inability to access a Site due to weather or natural disasters for a prolonged period shall be treated as a Force Majeure Event).
- 6. Any unanticipated soil stabilisation, slope stabilisation or reclamation works.
- 7. Any unacceptable static and dynamic loading characteristics requiring Antenna re-design, Mast replacement or Mast strengthening works that are not anticipated.
- 8. Any hazardous materials encountered during the project which will require specialist removal and disposal including contaminated soil, in-building asbestos, asbestos in Antenna shrouds, PCBs, oil, beryllium.
- 9. Any permanent or temporary access roads and drainage works that may be required at Stations.
- 10. Any unanticipated additional work to existing buildings or construction of new buildings to ensure suitability for re-use.

SUBJECT TO CONTRACT

- 11. Any additional costs due to a compression of the work schedule resulting from one of the following events:
 - (i) Supplier and contractor performance;
 - (ii) Union and workforce issues;
 - (iii) Specialist resource and equipment constraints;
 - (iv) Incident/accident; or
 - (v) Informal change of existing working practices driven by outside influence or change of attitudes.
- 12. Any changes required to existing infrastructure that no longer meets technical, maintenance or performance requirements.
- 13. Any measured EMF levels at site requiring changes to the work sequence, schedule, execution methodology or exposure periods.
- 14. Any failure of existing infrastructure e.g. Antenna fire, structural collapse that requires changes to the execution sequence, timing or method.
- 15. Foreign exchange fluctuations.
- 16. Any changes other than RPI annually to Arqiva's estimated hourly or daily labour rates used for the L-DTPS Transmission Programme.

Part 2 - Exceptional Risks

- 1. Any Change in Law.
- 2. Any act or omission of any Government Authority which is not a Change in Law.
- 3. Any other Force Majeure Event.
- 4. Any failure to obtain any Consent (Arqiva having used reasonable endeavours to obtain such Consent, but this shall not imply any obligation on Arqiva's part to exercise any code powers under the Telecommunications Act 1984 (as amended by the Communications Act 2003)).
- 5. Any change to the L-DTPS Transmission Programme timetable (but not including changes to the timetable (i) arising as a direct result of a material breach of this Agreement by Arqiva or (ii) requested by Arqiva as a result of its failure to exercise reasonable care and skill).
- 6. Any change to the Ofcom Specification or failure to agree a revised Ofcom Specification in a timely manner.
- 7. Any failure to agree in a timely manner Service Continuity with any affected party or any change to any Service Continuity arrangements (as further described in Schedule 22).
- 8. Any failure to agree any Antenna Design Specification by the relevant Antenna ADS Approval Date.
- 9. Any delay, impediment or other act or omission of Customer (or any contractor employed by Customer), but only if and to the extent that such delay, impediment or other act or omission prevents or impedes the proper performance by Arqiva of its obligations under this Agreement.
- 10. Any cost or schedule change to the L-DTPS Transmission Programme as a result of disruption to existing services (except for disruption arising as a direct result of a material breach of this Agreement by Arqiva or by the failure of Arqiva to exercise reasonable care and skill), including any cost or schedule changes required by third party Station users in order to give their consent to relocation or reduced power working and also including where Service Start Dates do not occur on the Target Service Start Dates.
- 11. Loss or cessation of Station licences or leases.
- 12. Any health and/or safety related issues that restrict or halt works on site (except to the extent caused by Arqiva's negligence or breach of statutory duty).
- 13. Failure by the Customer to enter into an Advance Design Agreement and an Advance Equipment Procurement Agreement by 30 September 2012.
- 14. Any requirement, by the Customer to vary the number of sites, specification or deployment timetable as defined herein.
- 15. Any impact to the L-DTPS Transmission Programme or Total Time of Service Availability resulting from the non-availability of replacement components for the Transmitter System, re-multiplexing system and service information processing system.
- 16. Any other risk which is not a Standard Risk.

Transition Assistance

The transition plan shall be designed to allow the transition of the Transmission Service to a competent service provider appointed by the Customer. The transition plan shall include the following information (subject to any confidentiality obligations or other obligations in any third party agreements):

- 1. A description of the Transmission Service provided to the Customer including:
 - The location and technical characteristics of all interfaces relevant to the provision of the Transmission Service;
 - A system overview relating to the provision of the Transmission Service;
 - Any manufacturer's manuals and operating procedures and any training materials provided by suppliers which are relevant to the Transmission Service;
 - Key support contact details for relevant manufacturer's Exclusive Contracted Equipment used to provide the Transmission Service;
 - A summary of maintenance procedures for the Exclusive Contracted Equipment; and
 - Details of any licences used solely or mainly in the provision of the Transmission Service.
- 2. The specific processes to be implemented for the transfer of Exclusive Contracted Equipment and for the handover of the Transmission Service generally at each Station and any new station.

Customer Responsibilities

Permissions and Licenses

The following are beyond the scope of this Agreement and are the responsibility of the Customer:

- 1. International co-ordination.
- 2. WTA Licences.
- 3. OFCOM consents.
- 4. DMOL consents.
- 5. Freeview consents.
- 6. Public communications.
- 7. Public assistance (re-rescanning of set-top boxes and aerial issues).
- 8. Obtaining the consents and agreements of other multiplex operators related to DTT service issues.
- 9. Agreement of rules related to Service Information where an SFN is required.
- 10. Items specified in Schedules 7 and 8 as beyond the scope of this Agreement and which are the responsibility of the Customer.

The Customer shall be responsible for procuring permission from Ofcom in respect of the transmission of the Customer Signals for test purposes prior to the Target Service Start Date as reasonably required by Arqiva.

Use of New Antennas

Arqiva shall provide to the Customer an Antenna Design Proposal, showing anticipated Antenna performance, for each Station. The Customer shall be required to confirm acceptance of this Antenna design to allow Arqiva to produce a detailed Antenna Design Specification which the Customer must approve in writing by the Antenna ADS Approval Date.

The Antenna selection process shall allow the Customer the opportunity to influence the final specification of an Antenna. Failure to agree the Advance Design Specification by the required Antenna ADS Approval Date may lead to a delay in the provision of the Target Service Start Date.

Since there will be an inter-dependence between coverage and system gain the Customer should be aware that the transmitter required to achieve the nominal ERP may be subject to change.

Specification of Transmitter System Power

Schedule 6 shows the Transmitter System powers to be provided by Arqiva at each Site. The Customer shall confirm by the Transmitter System Specification Date that this meets their requirements.

Provision of DVB Compression System and Distribution

The Customer shall be responsible for the provision of DVB Compression systems and a Distribution System to the Stations. The systems shall be required to be in place at least three months prior to the relevant Target Service Start Date shown in Schedule 3.

Provision of Central Service Information (CSI)

Where required, the Customer shall be responsible for the provision of a CSI Feed to the Stations. The CSI Feed shall be required to be in place at least three months prior to the relevant Target Service Start Date shown in Schedule 3.

Provision of SFN Timing Information

Where required, the Customer shall be responsible for a network timing schedule for each Station in the SFN. For the avoidance of doubt this should include maximum distribution network delays to each Station and any static offsets which may be required. Arqiva shall set up each Station in accordance with the Network Timing Schedule provided by the Customer. Absolute timestamps shall be required. The SFN timing information shall be required to be available at least three months prior to the relevant Target Service Start Date shown in Schedule 3.

Single Frequency Network

Single Frequency Networks (SFNs) use the same basic architecture as Multi Frequency Networks (MFNs) but are required to be time co-incident (within the guard interval) and frequency co-incident (within 1Hz).

- Two Sites which serve the Bristol area Bristol Ilchester Crescent and Bristol Kings Weston combine to form an SFN on channel 30.
- Two Sites which serve the Leeds area Emley Moor and Beecroft Hill combine to form an SFN on channel 56.

As a result, transmission from these Sites will be required to be time and frequency co-incident. For a DVB-T based regional SFN, an SFN adaptor, provided by Arqiva is required to allow synchronisation to occur. For each SFN area, one SFN adaptor (or a pair of units operating in a 1+1 configuration for redundancy purposes) is required. The transport stream would pass through an SFN adaptor which inserts timing information in the form of a Megaframe Initialisation Packet (MIP). The insertion of this information allows all SFN modulators to deterministically generate the signal to be broadcast.

Implementation of such an SFN would be realised by providing an SFN adaptor at one of the two transmitter sites and feeding the second site (e.g. via a BT line or microwave link) with the output from that SFN adaptor. The provision of such feeder to the second site is beyond the scope of this Reference Offer and would be the responsibility of the Customer to procure (although this service could be provided by Arqiva at an additional charge).

In addition, a GPS receiver is required to provide 1 PPS for timing information to the modulator and 10MHz reference for the transmitter local oscillators. On any station in an SFN it is important that GPS lock is remotely signalled and any loss of lock should cause a switchover to any redundant equipment.

During commissioning, the transmitter Sites must be checked to ensure the measured margin (difference between SFN adaptor network delay and distribution system delay) is adequate but not excessive, the frequencies are confirmed to be within 1Hz of nominal and the static time delay is set as per pre-defined calculations. Final measurements of coverage and network timings will then need to be completed in areas of overlapping coverage between sites to ensure destructive interference is not occurring.

Termination Payments

- 1. In the event of this Agreement being terminated by Arqiva pursuant to Clause 16.2 or by either party pursuant to Clause 14.2 Arqiva shall have a duty to take all reasonable steps to mitigate its present and future losses arising from such termination ("Mitigation"), with the result that Arqiva shall be unable to claim or recover from the Customer any part of its losses that could have been avoided by taking such reasonable steps, such Mitigation to include using reasonable endeavours to secure, on the best available commercial terms:
- 1.1 alternative customers and/or contracts for a service the same as or similar to the Transmission Service;
- 1.2 alternative utilisation or exploitation of the System;
- 1.3 alternative utilisation of labour.
- 2. The Customer acknowledges that Network Access infrastructure is shared across a number of customers and, accordingly, Arqiva's ability to mitigate costs in respect of such shared infrastructure will be limited.
- 3. For the avoidance of doubt, nothing in this Agreement shall be construed as reducing or limiting a party's common law duty to mitigate its losses arising from a breach of contract.
- 4. The Customer shall pay to Arqiva any amounts due under Clause 17.4 as follows:
- 4.1 Where this Agreement has been terminated pursuant to Clause 16.2(a), (b) or (c) or pursuant to Clause 14.2(a), Arqiva in consultation with the Customer will promptly calculate the amount payable by the Customer under Clause 17.4 which shall be the Transmission Annual Fee (or 75% thereof where terminated pursuant to Clause 14.2(a)) due for the remainder of the term of the Agreement minus an amount equal to any expenditure avoided by Arqiva and any fees payable to Arqiva for the relevant period by third parties under Mitigation arrangements.
- 4.2 Where this Agreement has been terminated pursuant to Clause 16.2(d), Arqiva in consultation with the Customer, will over a period of three months from the effective date of termination or until Ofcom completes the relicensing of the relevant spectrum, whichever is earlier, calculate the amount payable by the Customer under Clause 17.4 during which time the Customer shall continue to pay the full Transmission Annual Fee due under this Agreement.
- 4.3 Where this Agreement has been terminated pursuant to Clause 14.2(d), Arqiva in consultation with the Customer will promptly calculate the amount payable by the Customer under Clause 17.4 which shall be a sum which, following the subtraction of an amount equal to any expenditure avoided by Arqiva and any fees paid to Arqiva by third parties under Mitigation, is: (i) 75% of the total capital costs incurred by Arqiva in carrying out the Build Project in respect of the relevant Location as at the effective date of termination; and (ii) 75% of any decommissioning costs and redundancy costs incurred by Arqiva relating to the dismissal of employees as a result of, or in connection with, the Agreement being terminated pursuant to Clause 14.2(d).
- 4.4 Once the amount of the termination payment has been calculated by Arqiva pursuant to Paragraph 4.1 4.2, or 4.3 of this Schedule 21, Arqiva will notify the Customer in writing of the applicable amount and provide copies of all supporting information. In the event that there is a dispute regarding the amount of the termination payment, the matter will be determined pursuant to Clause 24 and the Customer will continue to pay to Arqiva the full Transmission Annual Fee due under this Agreement until such time as the dispute is resolved.

SUBJECT TO CONTRACT

- 4.5 Once the amount of the termination payment has been agreed by the parties or determined pursuant to Clause 24, the Customer shall pay the termination payment within 30 days of the date of notification by Arqiva under Paragraph 4.4 above.
- 4.6 If during the twelve months after the effective date of termination after Arqiva has received the termination payment due from the Customer, Arqiva is able to procure any further Mitigation, Arqiva will refund to the Customer such amounts as it is able to mitigate up to the amount of the termination payment.

Service Continuity

The Customer agrees and acknowledges that the provision of the Transmission Services will have an impact on current broadcast services and other services transmitted from the affected Stations. For each Station there are circumstances where there is likely to be a change to the radiation characteristics of the existing services. The Customer acknowledges that during an Antenna construction period, existing services (either for the Customer or other customers of Arqiva) may be disrupted whilst a new Antenna is being installed. The Customer agrees and acknowledges that to allow the Antenna construction it may be necessary for existing services to operate in certain abnormal configurations. Arqiva will need to obtain the agreement of its customers for these existing services to any abnormal configurations. Such customers may restrict the timings of these abnormal restrictions such that Arqiva cannot achieve completion of Antenna construction in accordance with the applicable dates in Schedule 3. Any delay caused by such timing restrictions shall be deemed to be an Exceptional Risk.

[Form of Guarantee or Other Security]