



NYM 2014 / 08587FL



AIRWAVE SOLUTIONS LTD PLANNING JUSTIFICATION FOR PROPOSED AIRWAVE SOLUTIONS LTD SUPERFAST RURAL BROADBAND SITES IN EGTON:

Galloway Estates Ltd act on behalf of Airwave Solutions Ltd, whom were the successful bidders to BDUK (a department within the Department for Culture Media & Sport 'DCMS') to trial a number of wireless technologies in the North Yorkshire area. See URL: (<https://www.gov.uk/government/organisations/department-for-culture-media-sport>)

BDUK have made funds available to trial a number of alternate technologies to assess their viability and cost as an alternative to fibre installed by BT Openreach. The funding and project are centred on the need to provide high speed internet access for rural communities to prevent a further widening of the 'Digital Divide' which is a term that refers to the gap between demographics and regions that have access to modern information and communications technology, and those that either don't or have only restricted access. Central Government now has a department called the Government Digital Service (GDS) which has been created to transform the way people access government information by using digital technology to deliver services that put the user first and provide the smartest and most cost-effective service possible. This service will rely on people from all walks of life *actually* having access to high speed internet for the purpose of using not only statutory services online but in obtaining other important services and information enjoyed already by the majority of the UK population.

Airwave is responsible for delivering a pilot wireless broadband service to the Esk Valley and has partnered with The Technology Partnership (TTP) who provide the radio planning expertise to deliver the trial.

This pilot area has been narrowed down with the assistance of Nynet whom are a public and private sector commercial venture set up by North Yorkshire County Council in order to provide a communications network that is capable of delivering multiple high quality services to citizens, business and public sector bodies.

The trial area is in the Esk Valley, consisting of Egton, Egton Bridge and Glaisdale (dale). The system needs to be installed and operating by March 2015.

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Airwave Services Limited - Background to the Proposal

Airwave Solutions Limited already operates a state of the art communications service that is being utilised by organisations including the Yorkshire Police Force, Fire & Ambulance services.

- Airwave provides 'Mission Critical Communications' nationwide to the UK's Emergency Service and Public safety organisations.
- Airwaves Emergency Services Network covers over 99% of the UK landmass, including remote areas.
- The Network consisting of nearly 4000 base sites was complete by 2005, delivered on time and to budget.
- Airwave also has a nationwide engineer presence.
- Airwave's ambition is to use the existing network assets and their experience of building networks in difficult and remote area's to deliver Super fast broadband to the last 5% of the UK population currently without access. This equates to approximately 1,300,000 households nationwide

Esk Valley trial area project delivery method to Egton

Airwave will need to construct a number of small repeater and concentrator sites to deliver service into the villages within the Esk Valley. This will consist of rooftop installations as well as the construction of new mast or columns to support the necessary antenna and dishes required to provide the wireless technologies to the pilot area.

The installation of the repeater sites are 'Line of Site' (LOS) critical both from the Airwave Hub locations and from the repeater sites to the rooftops of the residential or business dwellings within the trial area where each customer will have a small receiving directed towards their nearest repeater site.

Airwave is partnering with a National ISP to deliver service for the trial.

The objective is to have the network live with the first consumers connected by March 2015 and with the trial running until March 2016.

Superfast Wireless Broadband Technology

Airwave's tender approved by BDUK provided for four different fixed wireless access technologies to be tested in the field, these are:

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- Microwave PMP (point-to-multipoint) and PTP (point-to-point)
 - the main "workhorse" technology that we expect to use with most subscribers
- TVWS (TV White Space) PMP
 - emerging technology using favourable low-frequency spectrum
 - Good performance in heavily wooded area's such as Egton
- Wi-Fi at 2.4GHz
 - at 1-2 community hotspots and for in-home networks
- LTE (Long Term Evolution) small cell (4G)
 - located at 2 of the hub/spur sites to illustrate how this could also work



The application proposals for Egton:

Site number EVO03a:

LAYBY NORTH OF HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1TZ

A 15 metre slim line column upon which will be attached three antennae and two 600mm in diameter link transmission dishes / panel dish and 1 No. 500mm dish together with an associated ground based equipment cabin measuring 1000 mm by 450mm by 1000 mm in height. The development will contain ancillary apparatus including cables all as show on the attached drawings ('the development')

Site number EVO04b:

RED HOUSE FARM, HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1TY

An 11 metre slimline column upon which will be one antenna and one 500mm in diameter link transmission dishes together with an associated ground based equipment cabin measuring 1000 mm by 450mm by 1000 mm in height. The development will contain ancillary apparatus including cables and a stock proof post and rail fence enclosure all as show on the attached drawings ('the development')

Site number EVO04a :

KIRKDALE BARN, HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1UT

A gable end mounted pole supporting one omni antenna, one panel AC and one 500mm in diameter link transmission dishes together with an associated ground based equipment cabin measuring 1000 mm by 450mm by 1000 mm in height. The development will contain ancillary apparatus including cables all as show on the attached drawings ('the development')

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**North York Moors National Park Local Development Framework
Adopted 13th November 2008
Telecommunications Development Policy 25
Chapter 10 – Promoting Accessibility & Inclusion**

The provision of infrastructure for telecommunications and information technology will be supported where it is of a scale and design appropriate to the National Park and helps meet the needs of local communities. Proposals for the erection of telecommunications masts and equipment and any associated development will be permitted where:

- 1 There are no suitable alternative means of provision.
- 2 There is no unacceptable adverse visual impact upon the character of the locality and the wider landscape.
- 3 The siting of the installation makes use of the least environmentally intrusive option available
- 4 The proposal is part of a co-ordinated, long term strategy for the provision of telecommunications technology.
- 5 Provision is made for the removal of the equipment when it is redundant.

10.21 to 10.24

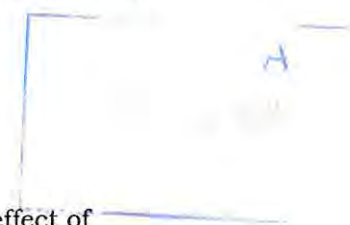
Good telecommunications are an increasingly important part of modern life. Government guidance clearly advocates that local authorities, including National Parks, should respond positively to telecommunications development proposals, whilst taking account of the need to protect the best and most sensitive environments. On this basis, the Authority seeks to help local communities to access communications technology but to also ensure that this is not at the expense of the environment of the Park. The development of the internet and broadband technologies provide opportunities to offset the physical transport challenges of the Park through the potential for working from home and internet shopping. However, the installations required can cause visual harm to the landscape and built environment if insensitively located. Operators will therefore be expected to show what consideration has been given to reducing such impacts through mechanisms such as mast sharing, the erection of antennae on existing structures (including electricity pylons) and the use of existing features, such as buildings or trees, for screening. The aim for all operators should be for the apparatus to blend into the landscape. All opportunities to pursue innovative solutions and apply the latest technology should also be examined. The additional cost of these measures may not seem commercially justifiable in terms of usage levels, but is justified in terms of the purposes of the National Park.

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The minimisation of any other impact on the environment, such as the effect of access roads, security fencing and power supply will also need to be considered. Where the impact of development would be considerable, sites or mast arrangements which are of lower efficiency or higher cost may be appropriate. Because of topography and the need to protect the landscape of the Park 100% coverage is unlikely to be possible as there will be occasions when the impact of a proposal is such that refusal will be justified. Because of the rapid pace of change in technology, permissions will normally be temporary so that masts can be removed when they are no longer necessary to meet the requirements of the operator.

Under the provisions of the Environment Act telecommunication providers are specifically required to have regard to National Park purposes.

Taking the above into account, the proposed sites are the subject of a full planning application due to the Article 1(5) status of the National Park. Careful consideration has been given to the proposed location of these installations and Points 1 to 5 are addressed in more detail below in relation to each of the proposed sites in Egton, which, after extensive searches for suitable site locations along with TTP it was established that a minimum of three would be required in order to provide sufficient coverage. This is also illustrated by the coverage plots provided within Appendix 2.

More generally it should be noted that the installations need to have clear line of site to not only the Airwave Hub site (at Limber Hill) but as many of the rooftops within the village of Egton as possible, thus the antenna and dish mounting heights are critical to the performance of the installations.

Site No. EV003a: LAYBY NORTH OF HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1TZ

1 The 'lay by' location was chosen as it is outside of the Egton conservation area and near to commercial land use. It is a self selecting site given that it provides sufficient elevation to provide good LOS to numerous rooftops to the north of the village that cannot be achieved elsewhere. (See Appendix 2)

2 Whilst being at the roadside, the location is outside of the conservation area and is not an alien feature for this type of setting.

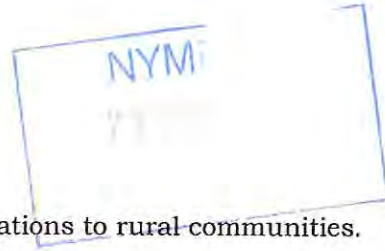
3 The proposed slim line column is the least intrusive structure capable of supporting the equipment required to provide the requisite service. The height of the column is necessary to see the maximum number of rooftops to the south where the topography creates shadowing over some premises by those on the higher ground.

4 The site and technology proposed is intended to become the solution for rural broadband telecommunications technology and once the trial has been proven successful will be a model

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used more widely to achieve the delivery of high speed communications to rural communities.
(See 'Background to Proposal' above)

5 Redundant equipment will be removed in the event that there is no further purpose for its use – post the trial period.

Site No. EV004b: RED HOUSE FARM, HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1TY

1 Red House Farm was chosen following the rejection of a similar scheme on the grass verge car park on the High Street adjacent to the entrance of Red House Farm. Following pre-consultation it was recommended that a location set outside the conservation area and away from Listed Buildings would be preferable. The site location benefits from the backdrop of farm buildings and rising ground heights to the north.

2 The location away from the centre of the village and views of the proposed 11m column structure are largely screened by buildings, trees and vegetation from most aspects.

3 The proposed slim line column is the least intrusive structure capable of supporting the equipment required to provide the requisite service. The height requirement is the minimum that can be tolerated by the radio planner to achieve sufficient clear LOS to the rooftops in the locality.

4 The site and technology proposed is intended to become the solution for rural broadband telecommunications technology and once the trial has been proven successful will be a model used more widely to achieve the delivery of high speed communications to rural communities.
(See 'Background to Proposal' above)

5 Redundant equipment will be removed in the event that there is no further purpose for its use – post the trial period.

Site No EV004a: KIRKDALE, HIGH STREET, EGTON, WHITBY, N. YORKSHIRE YO21 1UT

1 Kirkdale was chosen due to its position on the west of the High Street, outside of the conservation area and away from the mature trees to the south which line the main road and restrict LOS to many premises. Kirkdale is in a key location to fill in the LOS shortfall that exists to the south of Egton as a result of the trees and severe topography which prevents coverage being achieved from Red House Farm alone.

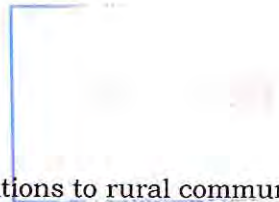
2 The location is outside of the conservation area and utilises an existing structure for the antenna mounting, in the form of the gable end of the barn. The equipment positioning and size is such that it will barely be visible from the street scene or surrounding countryside.

3 The use of an existing building in this instance is ideal from an environmental perspective, as is non-intrusive.

4 The site and technology proposed is intended to become the solution for rural broadband telecommunications technology and once the trial has been proven successful will be a model

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used more widely to achieve the delivery of high speed communications to rural communities. (See 'Background to Proposal' above)

5 Redundant equipment will be removed in the event that there is no further purpose for its use – post the trial period.

APPENDIX 1

Alternative sites

A number of alternative sites were investigated as part of the initial search for site locations in the village of Egton.

The alternative options are as follows and are shown on the attached 'options plan':-

SITE NAME		REASON FOR DISCOUNTING
ALTERNATIVES FOR LAY BY SITE, NORTH OF EGTON		
D1. The Wheatsheaf, High Street, Egton	480845, 506481	Building too low to provide adequate coverage, and also within the Egton conservation area
D2. M&M motors & Ind Units, Egton	480888, 506564	Buildings too low to provide adequate coverage, and also within the Egton conservation area
D3. Land by memorial	480879, 506658	No suitable location could be found and also within the Egton conservation area
D4. Land at Playing Fields	480922, 506719	No suitable location could be identified and too much tree cover to allow visibility of target
ALTERNATIVES CONSIDERED FOR RED HOUSE FARM		
D5. Lay by / car park to east of High Street near entrance to Red House Farm	480896, 506213	Rejected due to intrusive nature of the siting and its position within Egton conservation area

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D6. Egton Surgery car park	480896, 506220	Rejected due to intrusive nature of the siting and its position within Egton conservation area and very limited space for an installation
D7. Egton Village Hall	480901, 505845	No suitable location to rear, close to residential, building too low and within Egton conservation area.
D8. Land to rear of Plough Farm	480724, 506427	Build difficulties prevent use of site.
D9. Lay by adj. to entrance of Plough Farm	480808, 506417	Rejected due to intrusive nature of the siting and its position within Egton conservation area.
D10. Land to east of Egton High Street	481003, 506374	The plot of land in question has a planning application pending for residential development
D11. Wardles Farm	480807, 506241	No longer a farm. Residential property currently on the market for sale.
ALTERNATIVES CONSIDERED FOR KIRKDALE		
D12. Egton Primary School	480963, 505889	Not a suitable location to achieve target coverage
D13. Egton Church (St. Hilda's)	480945, 505809	Not a suitable location to achieve target coverage
D14. Girl Guide House	480840, 505616	Not a suitable location to achieve target coverage

APPENDIX 2

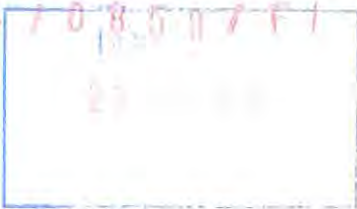
Coverage Maps (Separate attachment)

Planning Guidance - National Planning Policy Framework (previously Policy Guidance Note 8) – Telecommunications

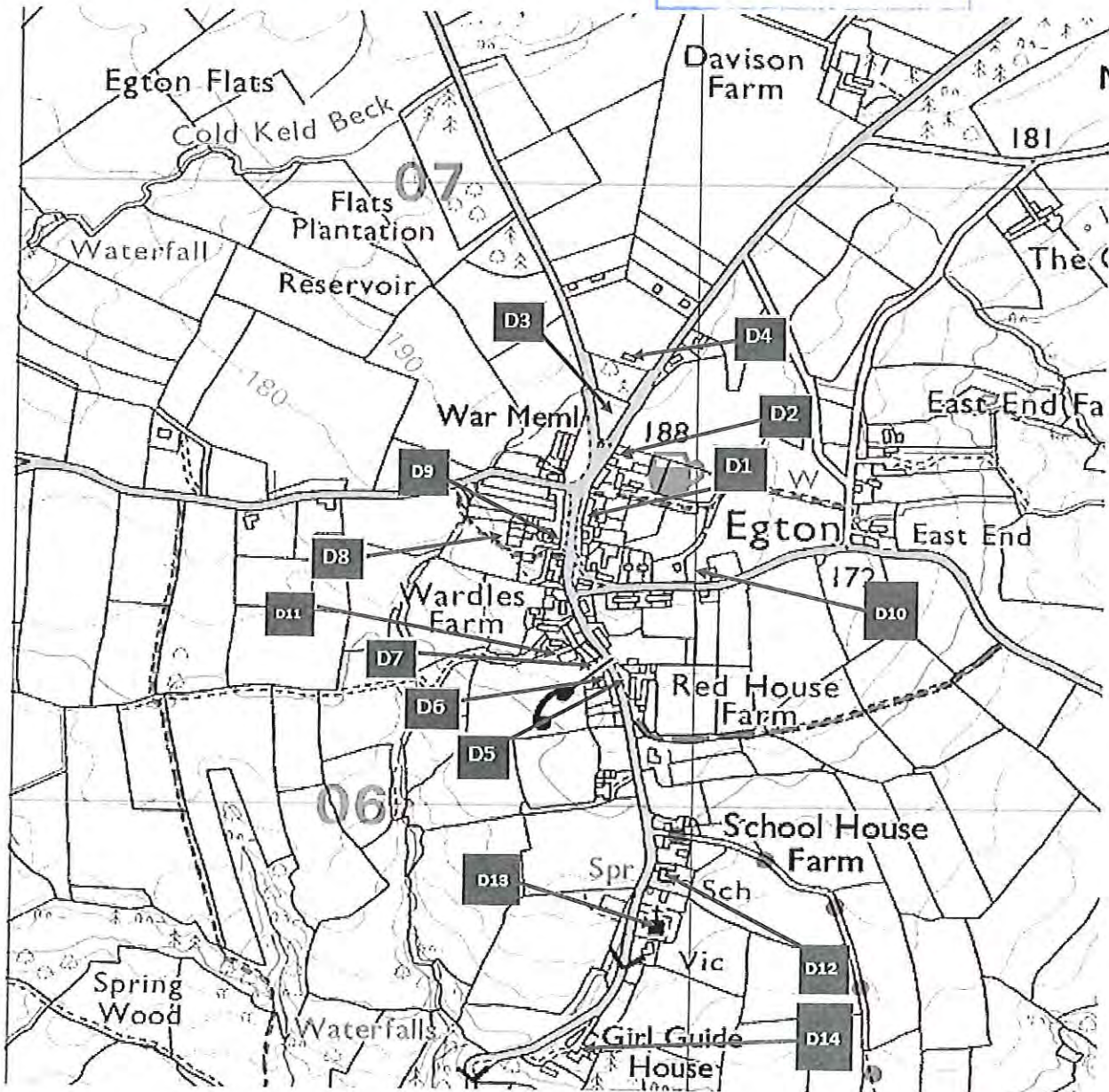
We would confirm that we have read and are familiar with the national planning policies as relating to telecommunications installations contained within paragraph 5 (42-46) of the National Planning Policy Framework (effective from 27/03/2012 and replacing Planning Policy Guidance Note 8) and would like to ensure that our client's requirements meet with the policies and guidance therein. Many aspects of this guidance are relevant to this proposal. In particular policies are supportive of modern telecommunications and acknowledge that they are an essential and beneficial

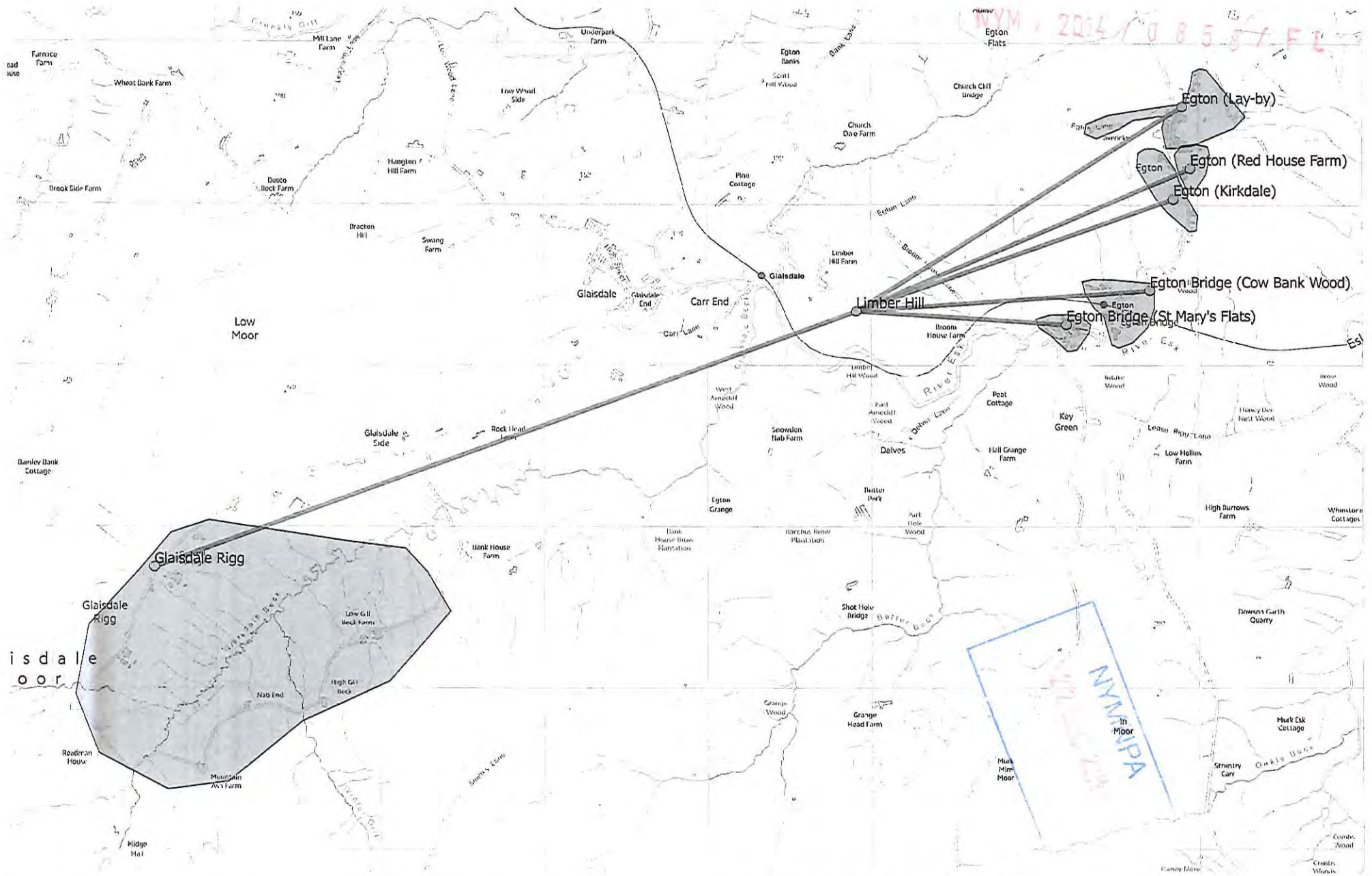
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APPENDIX 1 - DISCOUNTED OPTIONS MAP





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250 0 250 500 750 1000 m



APPENDIX 2 - COVERAGE MAP



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element in the life of the local community and the national economy which is also reflected within the NYMNPA LDF 10.21

The guidance further recognises the technical problems associated with telecommunications development and urges Local Authorities to respond positively to such development, by having regard to such difficulties. The Government's general policy on telecommunications is therefore to facilitate the growth of new and existing systems.

The sites for the installations in Egton have been identified having regard to technical, environmental and site availability considerations. NYMNPA and Government policy was considered in the siting of all the proposed telecommunications equipment

Conclusion

In conclusion, the proposed three sites contained within this application meet the technical criteria of Airwave Solutions Ltd to reach a very high percentage of the dwellings and business premises in Egton, and all are needed if the trial project is to be a success. The application sites also comply to the best degree possible with NYMNPA Telecommunications Development Policy 10. The pilot trial in the Esk Valley is an essential step to ensure that rural communities can finally bridge the Digital Divide and enjoy access to 'Superfast Broadband' (25Mbps+) by 2015 in line with the Secretary of State for Culture Media & Sports demands. There are many existing wireless systems already in existence but the aforementioned 'Superfast' definition of 25Mbps+ is only capable of delivery to the target area with the use of the installations and technology proposed within this application. Provided this application and all the sites herein are approved, then following their successful deployment and testing over a 12 month pilot period through to March 2016, the installation of the same technology will likely be used in other parts of North Yorkshire (and the UK) with assistance in the form of further funding by BDUK, so that Superfast Broadband can be delivered to the wider rural community.

Prepared by Peter Hickson, Galloway Estates Ltd

For and on behalf of Airwave Solutions Ltd - 16th December 2014

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