

SUPPLEMENTARY INFORMATION

1. Site details

Site Name	Otterburn Training Camp	Site Address	Land at Otterburn Training Camp, Townhead, Otterburn, Northumberland, NE19 1HG
NGR	E: 389633 N: 555664		
Site Ref Number	NHU028	Site Type ¹	Macro

2. Pre Application Check list

Site selection (for New Sites)

(would not generally apply to upgrades/alterations to existing sites)

Was an LPA mast register used to check for suitable sites by the operator or the LPA?	Yes	No
if no explain why This is an upgrade of the existing Airwave equipment		
Was the industry site database checked for suitable sites by the operator?	Yes	No
if no explain why This is an upgrade of the existing Airwave equipment		

Annual roll out consultation with LPA

Date of last annual rollout information/submission	n/a
Name of contact	
Summary of outcome/Main issues raised It is not anticipated the proposed development has been included in any annual rollout information due to the minor nature of the proposed works.	

Pre-application consultation with LPA

Date of written offer of pre-application consultation	n/a	
Was there pre-application contact	Yes	No
Date of pre-application contact		
Name of contact		
Summary of outcome/Main issues raised N/a		

¹ Macro or micro

Ten Commitments Consultation

Rating of Site under Traffic Light Model	Green	Amber	Red
Outline Consultation carried out In accordance with the Code of Best Practice the site has been given a rating of Green due to the minimal visual impact on the existing mast. No consultation has been carried out.			
Summary of outcome/Main issues raised N/a			

School/College

Location of site in relation to school/college (include name of school/college) No schools within 500m of the site	
Outline of consultation carried out with school/college (include evidence of consultation) N/A – no consultation carried out	
Summary of outcome/Main issues raised N/A – no consultation carried out	

Civil Aviation Authority/Secretary of State for the Defence/Aerodrome Operator consultation (Only required for an application for prior approval)

Will the structure be within 3km of an aerodrome or airfield?	Yes	No
Has the Civil Aviation Authority/Secretary of State for the Defence/Aerodrome Operator been notified	Yes	No
Details of response N/A		

Developer's Notice or Article 12 Notice

Copy of Developer's Notice / Article 12 Notice enclosed	Yes	No
Date served	01/03/16	

3. Proposed Development

The proposed site
<p>Description of the site</p> <p>The site comprises an existing Airwave Solutions Limited (“Airwave”) telecommunications radio base station located at an existing telecommunications site at Otterburn Training Camp.</p> <p>This is an established telecommunications site location. The existing Airwave apparatus comprises of tetra antennas and microwave dishes antennas on a lattice tower. Airwave’s radio equipment is located within an external cabin.</p> <p>Proposed development</p> <p>The proposed development comprises the installation of:</p> <ul style="list-style-type: none"> • 1no 300mm diameter microwave dish at a height of 9m AGL and fixed to the monopole via a new stand-off bracket; • Non-visible equipment works within the existing Airwave cabin; • Ancillary development thereto including all necessary cabling and fixings. <p>The proposed installation is required to provide replacement/improved transmission links to safeguard the operational integrity of the Airwave emergency services network. The technical reasons and justification for the proposed development and choice of design are set out in further detail in subsequent sections of this document. This development is small in scale and would normally be considered for permitted development.</p>

Enclose map showing the cell centre and adjoining cells
N/A
The proposed development is not providing radio coverage to a specified area, nor is it part of a mobile/cellular network. The requirement is to enable continued transmission links connecting existing radio base station sites in the Airwave emergency services network.

Type of Structure (e.g. tower, mast, etc): Greenfield radio base station	
Proposal: 1no 300mm diameter microwave dish antenna on new stand off bracket	
Overall Height	
Height of existing building (where applicable)	10m
Equipment Housing (New)	Within Airwave Cabin(non-visible)
Length	As above
Width	As above
Height	As above
Materials (as applicable)	
Tower/mast etc – type of material and external colour	Guyed Lattice Tower
Equipment housing – type of material and external colour	Internal (as above)

Reasons for choice of design

Background

The requirement is to provide replacement/improved transmission capability to connect existing sites in the Airwave network, using Airwave's chosen delivery medium of microwave dish technology. This is part of a national programme instigated by Airwave to replace old copper cable links that are due to be decommissioned.

The proposed development is would normally be considered permitted development. This application is required due to the existing sites location within the national park.

See Technical Justification at paragraph 5 for further information.

Design Principles

Microwave dish transmission links are "line of sight" dependent. Each link has an "A" end and a "B" end and the dishes at either end must have an unobstructed view of each other. Links will range in end to end distance, but are generally several kilometres end to end.

The choice of dish size for any link is dependent on various technical factors including (but not limited to) the transmission capacity of the dish, Airwave's expected traffic volumes and the end to end distance of the link.

There is little choice in the design aesthetics of microwave dish equipment, which are generally manufactured in standard diameter sizes (eg. 300mm, 600mm, 1200mm etc) and all of which have a similar appearance and finish.

The height and siting of the dish is determined by the "line of sight" requirements, and the physical characteristics of the host structure/building. The dish must face the opposite end of the link and be at sufficient height to clear intervening obstructions, but siting needs to ensure the host structure itself does not cause a link obstruction. Additionally, siting must give adequate access for Airwave personnel to enable safe maintenance of the installation.

Site Specific Design

With regard to the proposed development specifically:

- The 300mm diameter dish is the smallest dish size available that will satisfactorily meet Airwave's technical requirements in this location.
- The dish's position on the existing mast has a height and bearing determined by the "line of sight" technical requirement. The dish also needs to have a 0.5m area of separation from the existing tetra equipment.
- The proposed ground based equipment is nominal and will be housed within the existing Airwave Cabin. It will not be visible but has been included in the application for transparency and completeness.

The proposed solution shows the applicants' efforts to help mitigate the proposals impact. It is considered the design chosen is the optimum solution that strikes a good balance between environmental impact and operational considerations and fully accords with NPPF and the principles set out in the Code of Best Practice.

4. Technical information

<p>ICNIRP Declaration attached</p> <p>ICNIRP public compliance is determined by mathematical calculation and implemented by careful location of antennas, access restrictions and/or barriers and signage as necessary. Members of the public cannot unknowingly enter areas close to the antennas where exposure may exceed the relevant guidelines.</p> <p>When determining compliance the emissions from all mobile phone network operators on the site are taken into account.</p>	<p>Yes. The proposed transmission link has no impact on the ICNIRP compliance of the site</p>
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Frequency	18 MHz
Modulation characteristics ²	
<p>Power output (Expressed in EIRP in dBw per carrier)</p> <p>In order to minimise interference within its own network and with other radio networks Airwave operates its network in such a way that radio frequency power outputs are kept to the lowest levels commensurate with effective service provision.</p> <p>As part of the Airwave network, the radio base station that is the subject of this application will be configured to operate in this way.</p>	
Height of proposed dish antenna (metres above ground level (AGL))	9 metres

5. Technical Justification

Reason(s) why site required e.g. coverage, upgrade, capacity (map attached if required)
<p>Airwave has operated a secure telecommunications digital radio network on behalf of the UK Government since 2005. The network covers England, Wales and Scotland and is a dedicated communications network for the exclusive use of the UK's emergency and public safety organisations including the Police, Fire and Rescue and Ambulance Service. The network is designed to ensure that during major incidents, when conventional networks may overload or fail, the emergency services are still able to communicate with one another.</p> <p>The Airwave service meets stringent reliability criteria, but the network currently uses a BT copper cable transmission service that is due for decommission. As such, the Government requires enhancement to ensure network integrity. The project is known as Airwave Kilostream Replacement Project ("AKRP"), This involves Airwave delivering a network of "line of sight" radio links between existing base stations using microwave dish antenna technology to replace the existing ground based copper cable kilostream links.</p>

² The modulation method employed in GSM is GMSK (Gaussian Minimum Shift Keying) which is a form of Phase Modulation.
The modulation method employed in UMTS is QPSK (Quad Phase Shift Keying) which is another form of Phase Modulation.

6. Site selection process – alternative sites considered and not chosen (not generally required for upgrades/alterations to existing sites)

Site selection

In accordance with advice in the NPPF, local planning policies and the Code of Best Practice the applicant investigated the following siting and design options using this sequential approach to site selection:

- Upgrading their own existing radio base stations;
- Using existing telecommunications structures belonging to another communications operator. i.e. mast and/ or site sharing, co-location;
- Installations on existing high buildings or structures including pylons;
- Using small scale equipment;
- Erecting a new ground based mast site – (1st) Camouflaging or disguising equipment. (2nd) A conventional installation e.g. a lattice mast and compound.

The applicants' site selection strategy is to keep the overall environmental impact to a minimum. In line with the sequential principles above, utilising/upgrading the applicants' own existing radio base stations with appropriate and sympathetic design is always progressed where it is technically and legally possible, and where it is the local planning authority's preferred environmental solution. As such, no alternative sites have been considered.

Siting

The proposed dish antenna will be installed via a new stand off bracket to be mounted on to the existing monopole. The new antenna's location on the mast is adjacent the existing equipment and is determined by a technical requirement. The new dish requires a "line of sight" towards another Airwave Solutions telecommunications site in Bossiney. Cabling between the proposed dish and the internal equipment will follow the applicant's existing established cable routes through the building.

The siting of the applicants' radio base station installation has already been considered to be acceptable by the local planning authority and is one of a number of operator installations located on the building. As such it has become an established part of the built environment.

The proposal will maintain existing access arrangements. Once the upgrade is completed, the site will be visited infrequently for maintenance purposes only, as is currently the case.

Visual Appearance

It is acknowledged that an additional dish antenna is to be installed; however the proposed equipment is small in nature and essential to the future operational integrity of the site. The changes proposed are considered to be minimal in the context of the overall use of the site, and will not have any detrimental visual impact from any public vantage points.

Possible Electrical Interference

The proposed installation should not cause any undue electrical interference for nearby residents. All links operate at licenced frequencies and this is regulated in the UK by the Office of Communications (Ofcom).

Noise

There will be no noise issues related to this site as a result of the proposed upgrade.

Planning Policy Framework

Planning policy is provided at national level by the National Planning Policy Framework (NPPF). It is a material consideration in planning decisions.

National Planning Policy Framework

The National Planning Policy Framework ("NPPF") supports high quality communications infrastructure and recognises it as a strategic priority.

Paragraph 43 states that "*Local Planning Authorities should support the expansion of electronic communications networks, including telecommunications and high speed broadband.*" It goes on to acknowledge that the numbers of radio and telecommunications masts and the sites for such installations should be kept to the minimum consistent with the efficient operation of the network. The NPPF supports the use of existing masts, buildings and other structures, unless the need for a new site has been justified. It goes on to state that where new sites are required, the equipment should be sympathetically designed.

NPPF paragraph 46 sets out a clear message to local planning authorities on health issues and the need for telecommunications systems. It states that "*local planning authorities must determine applications on planning grounds. They should not seek to prevent competition between different operators, question the need for the telecommunications system, or determine health safeguards if the proposal meets International Commission guidelines for public exposure.*"

Section 7 of the NPPF sets out the requirement for good design and paragraph 56 states that '*the Government attaches great importance to the design of the built environment. Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people*'. Paragraph 65 states that '*local planning authorities should not refuse planning permission for buildings or infrastructure which promote high levels of sustainability because of concerns about incompatibility with an existing townscape, if those concerns have been mitigated by good design.*'.

Local Policy –

Where the proposal relates to telecommunications development:

- the need for the development should be demonstrated in terms of the operator's network;
- if proposing a new mast, applicants should demonstrate that they have explored the sites outside the National Park, and if this is not possible, they have looked at the possibility of erecting apparatus on existing buildings, masts or other structures; and
- where new apparatus are required it must be sensitively designed in order to minimise the impact of the development on the special qualities of the National Park

Northumberland National Park Authority Local Plan 2009

The current local plan for the area was adopted in March 2009. Policy 28 is the relevant existing policy relating to Telecommunications Infrastructure. Policy 28 states:

“The development of utilities and infrastructure projects which serve local community and business needs will be supported provided that:

- a. The proposal does not have an unacceptable impact upon the landscape quality or character, either individually or in combination with other proposals;*
- b. The siting and appearance of the proposed development seeks to minimise impact on the special qualities of the National Park;*
- c. Where electricity distribution lines are required they are undergrounded or, where the Authority is satisfied that this is not feasible, they follow a route of least impact;*
- d. Where the proposal relates to telecommunications development:*
 - the need for the development should be demonstrated in terms of the operator's network;*
 - if proposing a new mast, applicants should demonstrate that they have explored the sites outside the National Park, and if this is not possible, they have looked at the possibility of erecting apparatus on existing buildings, masts or other structures; and*
 - where new apparatus are required it must be sensitively designed in order to minimise the impact of the development on the special qualities of the National Park.”*

Evaluation in light of National and Local Policy

NPPF clearly sets out the government's positive stance regarding telecommunications and notes the environmental and social benefits telecommunications can provide. The proposed upgrade fully complies with the objectives of NPPF.

In terms of environmental and social benefits, the proposed development is critical to the continued operation of Airwave's emergency services network.

The principle of a telecommunications radio base station installation at this location has

already been accepted by the LPA and has become part of the established built environment. The proposed upgrade to the existing site is sequentially the most preferable option. By using an established telecommunications site this keeps the number of telecommunication masts to a minimum consistent with the efficient operation of the network.

The proposed development also complies with local policy 28.

In accordance with policy 28, the siting of the dish amongst existing telecommunications apparatus and its small size appearance ensures the development minimises the impact on visual amenity, character and appearance of the surrounding national park.

This is not an application for the erection of a new mast, but a minor upgrade to an existing established installation. However, by careful choice of design and by keeping the proposed installation to the smallest apparatus possible, the applicant has ensured that the design is sympathetic and keeps any potential harm to the asset to a minimum.

Conclusion

Taking into consideration all the relevant factors set out in this document, it is considered that this telecommunications base station upgrade at Otterburn Camp is the optimum solution in terms of providing the technical requirements, while at the same time minimising any adverse impacts on local amenity and the built environment. The proposal is fully compliant with the NPPF and the Local Plan.

For these reasons it is considered that this planning application should be approved.

Additional relevant information

N/a - full details have been provided in this submission.

Contact Details

Name	Chris Duddy	Telephone	+44 (0) 7587 553 106
Operator	Airwave Solutions Ltd	Fax no	
Address	Charter Court 50 Windsor Road Slough Berkshire SL1 3EJ	Email address	Chris.duddy@clarke-telecom.com
Signed		Date	01/03/16
Position	Acquisition Surveyor	Company (on behalf of the above operator)	Clarke Telecom Limited