

**SCANNED**  
- 9 JAN 2006

**G. C. H. Q.**

**BIRDLIP RADIO STATION**

**SHAB HILL, BIRDLIP,  
GLOUCESTERSHIRE**

**STATEMENT IN SUPPORT OF  
CIRCULAR 18 / 84 CONSULTATION : CROWN DEVELOPMENT**

**November 2005**

COTSWOLD DISTRICT COUNCIL  
DEVELOPMENT SERVICE  
03 JAN 2006  
Off Ref:  
Ack:

**ALAN DICK UK LTD  
ACQUISITION & PLANNING SERVICES**



## 1. INTRODUCTION

- 1.1 This statement is submitted on behalf of **GCHQ** in support of the Circular 18/84 consultation being made to the Cotswold District Council for development by a government department. We trust that the information will be sufficient for the Council to assess the proposed development but we would be pleased to provide additional material, if requested.
- 1.2 The consultation is in respect of the **Birdlip Radio Station, Shab Hill, Birdlip, Gloucestershire**. This site is owned by Mr A Dick personally and is intended to be leased to GCHQ.
- 1.3 The development proposed is shown in detail in the drawings submitted. Its principal elements are as follows : -
- ***The installation of 2No. 21.6m high square lattice towers, situated approximately 273.8m apart.***
  - ***The installation on the Eastern tower of a 4.3m Radome and the provision of a new vehicular access.***
  - ***The installation of 3No. underground ducts running between the two towers.***
  - ***The installation of 9m x 2.37m radio equipment containers; gantries, cabling & associated development at each tower site, contained within new compounds formed by 2.5m high palisade security fencing, coloured to the LPA's preference.***
  - ***The provision of indigenous landscaping around the new compounds, the extent and composition of which are to be agreed with the LPA.***
- 1.4 In this statement we will provide some general background information about GCHQ; explain the particular need in this case and comment upon planning policy. We also provide information on health and safety and related issues.

## 2. G.C.H.Q. BACKGROUND INFORMATION

2.1 Government Communications Headquarters (GCHQ) is an intelligence and security organisation. A Civil Service Department, they report to the Foreign Secretary and work closely with the UK's other intelligence agencies [ commonly known as MI5 and MI6 ]. Their primary customers are the Ministry of Defence, the Foreign and Commonwealth Office and law enforcement authorities, but they also serve a wide range of other Government Departments.

2.2 GCHQ has two missions: signals intelligence (Sigint) and Information Assurance.

**Sigint** work protects the vital interests of the nation: we provide information to support Government decision making in the fields of national security, military operations and law enforcement. The intelligence we provide is at the heart of the struggle against terrorism and also contributes to the prevention of serious crime.

**Information Assurance** helps keep Government communication and information systems safe from hackers and other threats. We also help those responsible for the UK's critical national infrastructure (power, water, communications etc.) keep their networks safe from interference and disruption.

2.3 The work done by GCHQ, MI5 and MI6 benefits everyone who is interested in ensuring that democracy and the rule of law should prevail. Our intelligence directly supports UK Government policies but also extends our role within NATO and Europe, working for common defence purposes.

*"Secret intelligence gives the Government a vital edge in tackling some of the most difficult problems we face ... intelligence forewarns us of threats to our national security; helps the Government promote international stability; provides support and protection to our forces; contributes to our economic health and strengthens our efforts against terrorism and serious crime."*

- **Tony Blair, Prime Minister.**

*"Information systems are at the heart of modern society - and trust in them is essential. CESG's work is key to ensuring that online government is safe and reliable."*

- **Andrew Pinder, e-Envoy, Cabinet Office**

- 2.4 GCHQ is a forward looking and truly diverse organisation. Most of their people have specialist skills - in mathematics, languages, analysis, IT and communications engineering - and they operate at the cutting edge of their professions. GCHQ help them develop and work flexibly - in ways that suit them - so that they can give of their best. But while diversity is important to them, they also take pride in sharing a solid commitment to serving the nation.
- 2.5 People sometimes think that GCHQ cannot be accountable because they do not disclose much about GCHQ's operations and methods. Nothing could be further from the truth. In fact, GCHQ is subject to very rigorous oversight both by Parliament and senior members of the judiciary, and works entirely within a legal framework which complies with the European Convention on Human Rights.
- 2.6 Activities at GCHQ are underpinned by the Intelligence Services Act 1994 [ amended most recently by the Anti-Terrorism, Crime and Security Act 2001 ] and the Regulation of Investigatory Powers Act 2000. The purposes for which interception may be permitted are set out explicitly in these Acts: national security, safeguarding economic wellbeing, and the prevention and detection of serious crime. Interception for other purposes is not lawful, and GCHQ do not do it.

### **Computer architecture**

- 2.7 It's hard for an outsider to imagine the immense size and sheer power of GCHQ's supercomputing architecture. Their systems range from simple PC networks to the latest supercomputer complexes. Technologists at GCHQ will encounter the latest state of the art Cray systems, Tandem based storage and high-end Sun workstations. D-RAID (Distributed Redundant Array of Inexpensive Disks) architectures are used for the storage of very large amounts of data. Indeed, GCHQ has one of the largest long-term bulk near line storage systems in the world.

The systems used by GCHQ are among the most secure in the world. All traffic, whether voice, fax or Local Area and Wide Area Networks (LANs and WANs) used for data communications are secured by state of the art cryptographic products - designed and manufactured internally.



### **Telecommunications**

2.8 GCHQ is involved in all aspects of modern telecommunications. They use a wide variety of systems designed to operate on all frequencies over which data can be transmitted. GCHQ is an acknowledged world leader in antenna design and systems analysis. GCHQ's work throws up a number of obstacles not normally encountered in the commercial world. The challenge is to cope with these obstacles and produce intelligence that's highly accurate, timely and reliable.

### **Networking**

2.9 All GCHQ systems are linked together on the largest local area network in Europe - which is connected to other sites around the world via one of the largest wide area networks on earth. Their local area network is based on a number of media, including Ethernet and Fibre Distributed Data Interface (FDDI), and its main networking protocol is Internet Protocol (IP). The wide area network uses very high-speed dial up and leased lines, protected by cryptographic equipment designed, manufactured and tested internally.

### **Software development**

2.10 When possible, GCHQ use the most appropriate off-the-shelf software and operating systems. But certain applications unique to GCHQ mean their engineers sometimes have to develop bespoke software. Technically challenging, these often require highly advanced mathematical and software techniques rarely found in the commercial world. Applications may involve Signals Analysis, Complex Data Manipulation, Translation and Transcription.

### **Electronic engineering**

2.11 Very High Speed Integrated Circuit (VHSIC) Hardware Description Language (VHDL) is used in system development stages. Circuits are implemented in discrete components, Integrated Circuits (ICs), Field Programmable Gate Arrays (FPGAs) and Application Specific Integrated Circuits (ASICs). Most systems are PC based or rack mounted, although some have more demanding requirements. GCHQ is moving towards CE safety accreditation for all new systems, although all field systems are already fully Tempest tested.

**NB :** This information was obtained wholly from the GCHQ website, [www.gchq.gov.uk](http://www.gchq.gov.uk)

**3. THE GCHQ REQUIREMENT**

- 3.1 GCHQ have a requirement at this location to establish a testing station for the Research and Development and trialling of new communications equipment.
- 3.2 Whilst we are advised that the proposals are part of a major GCHQ project, we are unable to obtain any additional detailed or specific information or justification regarding the operational requirements for this installation, as this would be contrary to interests of national security.
- 3.3 What is known is that the innovation and testing of new telecommunications equipment benefits significantly from reduced levels of ambient radio signals which are found in and around our urban centres. Hence the relative remoteness of the Birdlip Radio Station is considered ideal, with only the nearby National Grid wireless and CAA towers to contend with and little or no other extraneous interference.
- 3.4 For like reasons of cross interference, GCHQ are unable to share existing telecommunications structures which support other radio equipment. Of course, for perhaps more obvious reasons, sharing would not be feasible on the grounds of national security.
- 3.5 Testing also requires the deployment of two towers with considerable horizontal separation yet with physical ducting connectivity. Consequently, whilst finding a suitable site to locate an isolated tower is not unduly difficult, a single site which can accommodate two towers and the separation distance with no intervening clutter or obstruction, is a rarity.
- 3.6 Birdlip Radio Station is, as it's name suggests, a long standing site used for telecommunications purposes, principally during the last war, although it has to be conceded that the plethora of towers and masts have long gone, leaving the remnants of their guy anchor points scattered across the site. That said, National Grid Wireless retain a 66.7m high lattice tower supporting all manner of mobile and other telephony equipment. Additionally, the Civil Aviation Authority also have a tower adjacent to the current site, accommodating a timber 35m [ approx.] tower, alongside which is a slightly shorter and newer tower operated by Ofcom.
- 3.7 The use of this locality for telecommunications purposes does therefore appear to be accepted by the Council, notwithstanding the sensitivity of the surrounding landscape.

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- 3.8 The proposed tower heights have been minimised as far as operational parameters will permit. Whilst significantly shorter than the adjoining structures, the towers are required to project above any local clutter, such as hedgerows and trees. Crucially, the advantageous site elevation, combined with the tower heights are sufficient to permit 'connectivity' back to the GCHQ complex on the outskirts of Cheltenham.
- 3.9 Consequently, this unique combination of attributes [ remoteness, previous/existing site use, ground elevation, site area ] makes the Birdlip site the only available and suitable option that will work for GCHQ's project. Notwithstanding the acknowledged sensitivity of the setting, there was no other alternative solution within or outside the AONB and thus, there was no alternative but to bring this scheme forward.

**4. COMPLIANCE WITH PLANNING POLICY**

4.1 Whilst not mobile telephony, the principles of deployment are perhaps common factors and thus, the relevant planning policy framework that is generally taken into account for mobile deployment has also been considered, in particular, the Development Plan, PPG 8 – Telecommunications & The Code of Best Practice.

4.1 From these documents can be discerned the general policy background that exists for telecommunications development, site specific policies and the key considerations relevant to the siting and design of appropriate telecommunications development.

**Site Specific Policies**

4.3 The Proposals Map that forms part of the Development Plan shows that the site is included within the Cotswold Area of Outstanding Natural Beauty. Having regard to the particular advice set out within PPG8, paragraph 64 of the Supporting Guidance also recognises that even in these areas of high sensitivity telecommunications development will still be required and is still permissible. PPG8 does emphasise, however, that proposals must be sensitively sited and designed, and that there are no suitable alternative locations. The comments within this statement on siting and design should demonstrate compliance with this policy – in particular that there are no obviously better sites that are suitable or available within or outside the AONB and that proper care has been shown in the detailed design of the proposals.

4.4 We understand that the extant policy document is the **Cotswold District Local Plan 2001 – 2011 : Revised Deposit September 2003** and within this we note especially **Policy 7 Cotswold AONB & Policy 46 – Telecommunications**. It is prudent to examine these policies and we would therefore discuss the elements of each as they impact on the development, as follows : -

**POLICY 7 : COTSWOLDS AONB**

- 1. Within the Cotswolds AONB, shown on the Proposals Map and Insets, the conservation and enhancement of its natural beauty will be given priority over other considerations.***

- We acknowledge and support the aims of this policy and the protection of the wider



AONB. However, as stated, this requirement by GCHQ has unique and specific locational and operational requirements which cannot be fulfilled by any other site, within or outside of the AONB. Moreover, the development is required in the interests of national security.

**2. *Regard will be had to the economic and social well-being of the AONB.***

- We believe it is fair to say that the development will not, directly, have any beneficial affect upon the economic and/or social well being of the AONB.

**3. *Provision should not be made for major development within the AONB unless it is in the public interest and the lack of alternative sites justifies an exception being made.***

- Whilst we would not necessarily consider this to be a major development, the operation by and for GCHQ are clearly in the wider public interest and, for the reasons expounded in Section 3 above, Birdlip is the only site identified which boasts all the relevant requirements for their purposes.
- Accordingly, we suggest that the development would merit an exception being made, were the proposal subject to the full scrutiny of the planning legislation and prevailing policies.

**POLICY 46 : TELECOMMUNICATIONS**

**1. *Proposals for the provision of telecommunications equipment will be permitted, where the following criteria have been met : -***

- i. the siting, design and appearance of the apparatus or structure have been selected / sympathetically designed to minimise the environmental impact on designated landscapes..... or the amenity of any adjoining or nearby residents;***

- For the reasons outlined in Section 3 above, we sincerely believe that within operational and locational parameters, the proposed development has been

designed so as to minimize the environmental impact. The remoteness, whilst limiting the potential for interference, also removes the issue of visual impact upon residential neighbours who, in this case, are some considerable distance removed from the site.

**ii. that there are no alternative suitable sites, particular for proposals within or affecting the Cotswolds AONB;**

- Again, Section 3 commentary provides the reasons for the choice of the Birdlip site.

**iii. it has been demonstrated that there is not a reasonable possibility of sharing existing facilities or, in the case of radio masts, using existing buildings or other structures;**

- For the maintenance of absolute security and prevention of potential cross interference with other systems, the GCHQ equipment cannot share an existing telecommunications structure though, as here, they will be sharing an existing telecoms site.

**iv. certification has been provided that the proposed development meets the ICNIRP guidelines on the limitation of exposure of the general public to electro-magnetic fields;**

- We are advised that all GCHQ equipment operates well within the guidelines specified by ICNIRP. Whilst no formal certification is provided with the consultation, this can and will be provided if required by the Council.

**v. suitable protection is given to adjoining trees that are used to help screen a mast; and**

- The western tower is set adjacent to and thus benefits from the limited screening provided by the existing site periphery hedgerows and trees. During the preliminary consultation with the Council, the eastern tower was requested to be moved to the west such that it is positioned directly opposite a mature tree.

The Council will note from the drawings that this suggestion has been incorporated into the proposals.

- Again as discussed during the site meeting with Mr Herbert, landscaping can be undertaken using indigenous species around the periphery of the two new compounds to screen off the ground installations.
- We do not believe that either tower would threaten the health of nearby trees / hedgerows. Likewise, any new planting ought not to be a longer term threat to the structural integrity of the foundations/bases.

***vi. an undertaking is given or condition applied that the mast and all associated apparatus and structures will be removed once becoming redundant for telecommunication purposes, and the site restored to its former use and condition.***

- GCHQ are aware of this general telecommunications requirement, usually by operator licence and we are advised that they are willing to comply with this stipulation.

## **A Consultative Approach**

- 4.5 PPG8 and the Code clearly require a consultative approach and a process to reflect the sensitivities of any given site. Following our site meeting with Mr Herbert on 29<sup>th</sup> September 2005, as suggested, we limited our community consultation to a letter dated 17<sup>th</sup> October 2005, directed towards the Council only. With this, we understand that the Council consulted with the local Ward Members for this locality.
- 4.6 From the Council's emailed response of 27<sup>th</sup> October, we note that said Members failed to respond to your consultations and that, "***.....it can be assumed that the Ward Members do not have serious reservations concerning the scheme.***"
- 4.7 In summary, the development proposed is in accordance with all relevant national and development plan policies, including those that apply specifically and generally, in so far as the operational and locational parameters will allow and of course, considering the nature of the business of GCHQ. In addition, the development has been properly brought forward in a consultative fashion as advised as a matter of policy and best practice.

**5. HEALTH AND SAFETY AND RELATED CONCERNS**

- 5.1 In view of the high level of public interest on health and safety associated with all telecommunications and with mobile phones in particular, the Department of Health set up the Independent Expert Group on Mobile Phones (IEGMP) under Sir William Stewart. The IEGMP undertook a full review of all research on the subject relating to both thermal and non-thermal effects and received oral and written evidence from a large number of interested persons. This included evidence from scientists who have been at the forefront of bringing to public attention potential concerns associated with alleged non-thermal effects, such as headaches, sleep disorders, epilepsy and leukemia.
- 5.2 The IEGMP's report was made public on 11 May 2000 and the government published its response on the same day. The main finding of the IEGMP was that the balance of evidence to date suggests exposure to radio frequency radiation within current guidelines issued by the National Radiological Protection Board (NRPB) does not cause adverse health effects to the general population; but more research should be undertaken.
- 5.3 In the light of this finding, a precautionary approach was recommended, as encapsulated in the recommendations of the IEGMP. In its response, the government has accepted that a precautionary approach should be adopted as recommended by the IEGMP.
- 5.4 A key element of the recommended precautionary approach was the adoption of the guidelines issued by the International Commission for Non-Ionizing Radiation Protection (ICNIRP). Accordingly paragraph 98 of the Supporting Guidance to PPG8 clearly indicates that it should not be necessary for a local planning authority, in processing an application, to consider the health aspects and concerns about them further.
- 5.5 Indeed, existing health and safety legislation falls under the responsibility of the Health and Safety Executive (the HSE). Paragraph 94 of the Supporting Guidance to PPG8 clearly indicates it is not for local planning authorities to seek to replicate those controls through the planning system. This applies therefore the usual principle of non-duplication between controls and so it is the health and safety regime that operates to protect public health and not the planning system.



- 5.6 PPG8 goes on to clarify in paragraph 101 of the Supporting Guidance that local authorities should not introduce a ban or moratorium on the construction of mobile phone masts or insist on minimum distances between new telecommunications development and existing development.

### **Compliance with the ICNIRP Guidelines**

- 5.7 Under the ICNIRP guidelines there is a requirement for a safety exclusion zone (the ICNIRP Exclusion Zone) to prevent unauthorized or inadvertent access into the area where radio frequency emissions might be in excess of the guideline thresholds. This is because it is only **inside** the ICNIRP Exclusion Zone that scientific research (that has taken place over many years into both thermal and non-thermal effects) confirms that exposure (usually long term) could bring about biological effects that might be harmful to health.
- 5.8 The extent of the ICNIRP Exclusion Zone can vary dependent on the antenna type, frequency, modulation characteristics and power output, which differ between operators and different types of installations. In all areas accessible to the public, we are advised that the proposed equipment to be installed will comply with the applicable guidelines.

### **Public Perception of Risk**

- 5.9 The Court of Appeal has recently clarified the advice given in paragraph 98 of the Supporting Guidance of PPG8 in relation to a case brought against the grant of planning permission of a mobile base station in Harrogate. In particular, the Court of Appeal clearly stated that it was only in exceptional circumstances that the planning system should consider perceived health concerns. By implication, the circumstances of the shared site in Harrogate, close to existing schools and the subject of considerable opposition based on a perceived risk did not amount to such exceptional circumstances.
- 5.10 In summary there is no national policy basis for refusing an application through the perception of risk or potential or alleged effects on well – being. Moreover, to refuse planning permission on such a basis would be tantamount to an ad hoc moratorium or ban, contrary to specific policy against such action.

## The Maastricht Treaty

5.11 The precautionary principle as found in the Maastricht Treaty does not impose any additional action by central or local government over and above the action already taken, which now includes adopting the precautionary approach as recommended by the IEGMP and accepted by government. This is made clear in a Written Answer to a question given in the House of Commons on 28 February 2000 (Hansard Column:8W) : -

*Dr. Stoate: To ask the Secretary of State for the Environment, Transport and Regions what plans he has to empower local authorities to have recourse to the precautionary principle in Article 174 of the EC treaty when assessing planning applications from telecommunications companies to erect mobile phone masts within highly populated areas.[111425]*

*Ms Beverley Hughes: Article 174 of the EC treaty applies only in respect of policy-making at the EU level, and not to policy-making by individual member states.*

## Human Rights

5.12 To date, the UK Government and the Courts have decided that the normal operation of the planning system that includes the right to challenge decisions by way of judicial review provides the right of individuals to a fair hearing. Thus any decision to grant planning permission would be consistent with Article 6 (1) of the European Convention on Human Rights.

5.13 A separate regulatory system exists to protect public safety. This can become more stringent in the future, requiring compliance regardless of any planning permission. The grant of planning permission cannot take away that protection. For this reason alone, the right to respect private and family life, home and possessions as set out in Article 8(1) of the Convention is not contravened. In addition to infringing human rights in this respect any risk must be both real and imminent.

5.14 Article 8 (2) states that there shall be no unnecessary interference by a public authority with the right conferred under Article 8 (1). Even if the grant of planning permission did constitute such interference, it is necessary in a democratic society for such grants to be made in terms of the economic well-being of the country and other matters also specified under Article 8 (2).

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Moreover, any such grant of planning permission in this case would not place a disproportionate burden on the public such that it would result in a violation of the right under Article 8 (1).

- 5.15 Our observations on this issue are reinforced by the fact that no judicial review in the UK against the grant of permission of telecommunications development has succeeded on the grounds of any infringement of human rights. This is in spite of assertions made by certain action groups and their advisers.

## 6. SUMMARY AND CONCLUSIONS

- 6.1 In summary, the consultation is in respect of communications apparatus required by GCHQ, a government department with Crown immunity insofar as town planning legislation is concerned.
- 6.2 This requirement for GCHQ is a matter of national security and is therefore considered to be in the wider public interest.
- 6.3 GCHQ has followed national and local planning policy and best practice guidance in the siting and design of this apparatus and, in consideration of their very special circumstances and the dearth of potential alternative sites for this purpose, we contend that the Birdlip site does fulfill the criteria for allowing development of this nature within the AONB.
- 6.4 We are advised that the proposed equipment will comply with all relevant health and safety requirements and will be compliant with the ICNIRP guidelines. There is therefore no need to consider health effects and related concerns such as the perception of risk further. To do so would, as previously acknowledged by the Secretary of State in the context of a judicial review, be contrary to current policy.
- 6.5 In conclusion, we consider that the proposed development merits support and there are no material considerations that indicate otherwise. We would therefore invite the council to concur with this view and respond accordingly.