

SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Henley Road	Site Address:	Telecommunications site Henley Road Caversham Reading RG4 5DT
National Grid Reference:	472222, 175132		
Site Ref Number:	VF047117	Site Type: ¹	Macro

2. Pre-Application Check List

Site Selection

Was a local planning authority mast register available to check for suitable sites by the operator or the local planning authority?	Yes	No
If no explain why:		
Were industry site databases checked for suitable sites by the operator:	Yes	No
If no explain why:		

Site Specific Pre-application consultation with local planning authority

Was there pre-application contact:	Yes
Date of pre-application contact:	14/04/2020
Name of contact:	Administrator
Summary of outcome/Main issues raised:	
A site-specific pre-application consultation was issued to the LPA on the date given above. The submission included a written description of the preliminary proposal, a consultation plan and draft planning drawings identifying the site and designs in question. The LPA acknowledged this by response on 17/04/2020 and advised that a pre-application fee of £174 would be payable for comments to be provided. However, in light of the established nature of the site and the design limitations faced by the operator, no fee was paid. The planning merits of the proposal have now been re-evaluated and it has been considered appropriate to progress to a formal application stage without more detailed discussions taking place.	

Community Consultation

Rating of Site under Traffic Light Model:	Red	Amber	Green
Outline of consultation carried out:			
The following have been written to: - Caversham Ward Councillors - Matt Rodda MP, Reading East - The following neighbours: 91, 93, 95, 97 & 99 Henley Road			

¹ Macro or Micro

Summary of outcome/main issues raised:

1No. Councillor has acknowledged the consultation but has not provided detailed comments

School/College

Location of site in relation to school/college (include name of school/college):

Queen Anne's School is located west of the site

Outline of consultation carried out with school/college (include evidence of consultation):

The school was included in the above consultation exercise

Summary of outcome/main issues raised (include copies of main correspondence):

No response has been forthcoming

Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator consultation

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

Developer's Notice

Copy of Developer's / Owner Notice enclosed?	Yes	No
Date served:	30/04/2020	

3. Proposed Development

The proposed site:

The site is located in south east Caversham in northern Reading. The land use in the immediate area is split between predominantly residential on the south of Henley Road and recreational grounds to the north. The subject site is located upon a section of pavement on the northern side of Henley Road, approximately 65m west of the Grosvenor Road junction. There are also a significant number of mature trees present. The topography of the locale is relatively flat.

Enclose map showing the cell centre and adjoining cells if appropriate:

This can be supplied upon request.

The intention is for the proposed base station site to provide improved 3G and 4G coverage whilst supplying a solution for new 5G network services to those living, working and travelling in the local area. The operational context of the development has been explained in further detail below.

Type of Structure (e.g. tower, mast, etc):	
Description:	
The proposal incorporates the following:	
- Removal of 12.5m high Hutchison L Range tower (white) incorporating 3No. shrouded antennas with luminaire and all ancillary development - Installation of 17.5m high tower (RAL7035 Grey) with 6No. antennas (3No. shrouded; 3No. unshrouded); luminaire; 2No. cabinets (1898x798x1648mm; 650x264x215mm) (RAL6009 Green); and, all ancillary development	
Please refer to the attached planning drawings. We would be happy to supply any further information that may be of benefit to you.	
Overall Height:	
Height of existing building:	As per plans
Equipment Housing:	
Length:	As per plans
Width:	As per plans
Height:	As per plans
Materials:	
Tower/mast etc – type of material and external colour:	As per plans
Equipment housing – type of material and external colour:	As per plans

Reasons for choice of design, making reference to pre-application responses:
The design of any communications infrastructure is dictated primarily by operational requirements and secondly by the development's setting. From an operational perspective, the operators must ensure the following when devising a final design solution for any site: - Antennas are specifically orientated to transmit effectively and efficiently without signal being impeded; - Dish links (if required) achieve a direct line of site connection with other base station sites within the network; and - GPS modules achieve a direct satellite link. To achieve this the operator undertakes panoramic assessment to determine what is the minimum height for transmission equipment to be located in a context of local topography and clutter, such as manmade or natural features, and in all cases the operator is committed to limiting the size and amount of apparatus to an operational minimum. In terms of setting, given that the subject site is located at a roadside location a street furniture style development has been deemed to be most suitable type of base station as this is the most accepted design for urban, suburban and rural roadside locations throughout the UK. The fact that this proposal relates to the upgrade of an established base station is testament to this. An exact replication of the existing shared mast's aesthetic is simply not possible due to the multigenerational nature of the subject proposal. 5G antennas cannot be shrouded as this severely limits their operational viability. Further to this, 5G technologies operate in higher frequency bands than older technologies and therefore attenuation of the radio signal is naturally higher and more prone to the effects of clutter. This means that operators will normally require a higher structure to achieve the same coverage footprint. Furthermore, unlike traditional technologies 5G uses adaptive beamforming technologies to increase capacity and data speeds to the user. For effective beamforming with 5G antennas, 20m structures will be widely required to achieve necessary antenna heights. One must also appreciate that the multigenerational requirements outlined above has significantly restricted the available options within the operator's current design portfolio. In this regard, there is a single street furniture style mast solution available for use, i.e. that which is being proposed in this instance and which incorporates the unshrouded 5G antennas below the shrouded 3G and 4G antennas. However, the operator is committed to ensuring that apparatus be limited to a minimum

operational height and amount. In order to determine the minimum operational height for the 5G antennas, a panoramic assessment has been undertaken with a 20m structure being deemed necessary for optimum coverage to be achieved.

The mast will be coloured RAL7035 Grey which has been well established as the best colour for minimising impact upon urban streetscapes and the predominantly grey British skyline. The cabinetry will be coloured RAL6009 Green in line with standard manufacturing specifications.

The proposed solution will ensure mobile telecommunications service within this locale meet the expectation of residents, businesses and visitors, while minimising the visual impact of the infrastructure on the surrounding environment and meeting all ICNIRP certification requirements.

Technical Information

International Commission on Non-Ionizing Radiation Protection Declaration attached	Yes	No
International Commission on Non-Ionizing Radiation Protection 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.		
When determining compliance, the emissions from all mobile phone network operators on or near to the site are taken into account.		
In order to minimise interference within its own network and with other radio networks, Telefónica UK Limited and Vodafone Limited operate networks in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision		
As part of Telefónica UK Limited and Vodafone Limited's network, the radio base station that is the subject of this application will be configured to operate in this way.		
All operators of radio transmitters are under a legal obligation to operate those transmitters in accordance with the conditions of their licence. Operation of the transmitter in accordance with the conditions of the licence fulfils the legal obligations in respect of interference to other radio systems, other electrical equipment, instrumentation or air traffic systems. The conditions of the licence are mandated by Ofcom, an agency of national government, who are responsible for the regulation of the civilian radio spectrum. The remit of Ofcom also includes investigation and remedy of any reported significant interference.		
The telecommunications infrastructure the subject of this application accords with all relevant legislation and as such will not cause significant and irremediable interference with other electrical equipment, air traffic services or instrumentation operated in the national interest.		

4. Technical Justification

Both Cornerstone operators, i.e. Vodafone Limited and their partner operator, Telefónica UK Limited, are Electronic Communications Code Systems Operators licensed under the terms of the 2003 Communications Act to provide mobile personal communications networks in the UK.

The dynamic nature of technological advances in the telecommunications industry coupled with ever increasing demand from subscribers dictates a continual reinvestment programme on the part of the Cornerstone operators. As a result, and in line with their licence requirements, mobile operators are constantly developing their networks as well as refining and modernising their infrastructure.

Cellular networks are made up of several individual cell areas, each of which has a base station within it. A good analogy for describing a cellular network is that of a patchwork quilt with each cell area being one of the many patches that are sewn together making up the network 'quilt'.

The base stations themselves will require a supporting structure, such as a mast or high building, to support antennas and dish whilst elevating these transmission elements above clutter, such as tall trees, buildings, or topography that could otherwise impede signal. Associated cabinets for housing radio equipment and power connections are also deployed to service the antennas.

These base stations then receive and transmit to mobile devices using radio waves. The antennas operate like an aerosol spray with signal transmitted along a central orientation and dissipating with distance. The dishes operate on a direct line of sight basis, linking with dishes on other base station sites elsewhere within the wider network. The dish links also link the base station to a master control centre that manages the call handover process that occurs when a mobile user moves from one cell area to another. They also provide telemetric monitoring to ensure the site is working properly and offer remote maintenance.

In the early days of mobile communications, peripheral locations, high-level topographies and large-scale masts were often identified in order that transmission from a new base station could cover an expansive geographical area. However, whilst this approach was viable for early network generations, the number of mobile handset users has dramatically increased with time, as have the advancements in mobile technology itself. As a result, the cellular network construction and operational criteria have changed too. Because modern networks use higher frequencies with faster data rates whilst serving significantly increased numbers of mobile device users, typical network cell areas (i.e. the geographical area targeted for coverage for which a base station development provides a solution), are now smaller in their geographical expanse and tend to be directly proportionate to the number of users within it. They are also therefore greater in their number with base stations operating at a lower power output than their predecessors.

Whilst it is the case that Cornerstone remains a jointly owned company, established by the two mobile network operators, Vodafone Limited and Telefonica (UK) Limited, to establish and operate a shared single grid network to provide 2G, 3G and 4G coverage, this can no longer be the case with all sites for the provision of 5G service.

Mobile connectivity and service is required where customers live, work and play. 5G coverage and superfast mobile broadband data capacity demand will continue to increase exponentially with the introduction of IoT (Internet of Things), machine to machine connectivity, automated transport/industry and other 'smart' applications. To this end the existing shared infrastructure within the built environment has had to be reviewed and adapted as appropriate.

In those instances where greenfield structures and rooftop installations are currently in place, in the vast majority of cases, these will remain shared base stations. These shared base stations allow for separate antennas on supporting structures that are capable of accommodating the weight, wind loading and technological requirements associated with providing four technologies (2G, 3G, 4G and 5G) for two separate operators from a single shared location, albeit sometimes via redevelopment of the existing base station.

It is, however, critical to understand that the UK's four Mobile Network Operators (MNOs), including Vodafone and Telefonica (O2), all utilise different technology spectrums to provide their mobile service. The spectrums the Operators utilise are allocated by Ofcom, as industry regulators on behalf of UK Government, through licence agreements with each of the individual MNOs. As such, each MNO must utilise the spectrum licenced to them. Each part of the RF spectrum has variations in terms of RF propagation. Therefore, the four individual MNO networks, and their sharing arrangements, cannot be compared directly and there will be variations in how all four networks are deployed and developed. For this reason, all MNOs, including Vodafone and Telefonica (O2), whom continue to be competitors but share base stations where possible, have a completely different network configuration they need to fit within and build 5G service around. Therefore, the network has to be built differently, with different antennas and equipment, to take account of those spectrum and licence variations and this will lead to necessary infrastructure variations cell to cell, depending on site specific demand, local constraints and requirement. As such, the various networks will have variations in how their infrastructure is deployed and developed.

In this instance, Vodafone Limited provides 3G and 4G network coverage to the area via the established base station on site. However, as was highlighted at pre-application stage and above, a new design solution is required to replicate their existing coverage and provide new 5G network services.

Given the maturity of the two independent networks, and the single grid consolidation over the last few years, the new base station needs to be located in close proximity to the existing site; thereby retaining customer coverage and experience within a previously shared 'cell'.

It is undeniable that mobile communication is now a key part of sustainable development and a vital tool in our personal lives and in all business and government operations. Modern society now expects to be able to make use of mobile devices where people live, work and travel and there is currently a drive by the Government to ensure that all communities, both urban and rural, have access to the most up to date mobile technology as there are clear social and economic benefits for doing so. Good connectivity allows people to access a wide range of essential services including, but not limited to emailing; downloading apps; the use of social media; helping with homework; researching local events, businesses or transport timetables; managing personal finances; smart meter reads for utilities such as gas or electric; shopping; contacting local authorities; arranging and carrying out medical appointments; pollution detection; resident warning notifications; general business functions; enabling remote working; contacting the emergency services and much, much more.

One must also consider the operational context of modern communications in our current Covid-19 pandemic lockdown situation; a situation that although completely new to modern UK society, will have long-term implications on the way we do business, socialise and function. Very recently, the Department for Digital, Culture, Media and Sport published Guidance² on telecommunications infrastructure deployment in England during this pandemic, stating that:

"Government recognises the ongoing importance of the telecommunications industry at this critical time."

Now, more than ever, the country is reliant on fixed line and mobile communications networks. Telecommunications has therefore been included as one of the critical sectors in new government regulations and legislation in response to dealing with the COVID-19 outbreak.

5. Site Selection Process

Site	Address	NGR	Reason
	N/A		

If no alternative site options have been investigated, please explain why:

This proposal relates to the upgrade of an established base station site

Environmental Information:

There are no built or natural heritage assets in close proximity of the site.

Land use planning designations:

The land in question is not designated for any specific use in the Local Plan

Additional relevant information:

The development would be required to comply with both National and local plan policies.

National Planning Policy Framework (NPPF) 2019

The NPPF outlines the Government's strategies for economic, environmental and social planning policy in England providing a set of objectives that have been designed to foster the delivery of sustainable development, not to hinder or prevent development. Local planning authorities are directed to approach planning decisions positively and to attach significant weight to the benefits of economic growth. The NPPF also states that where a development plan is absent, silent or out of date then permission should be granted unless the adverse impact of doing so would significantly outweigh the benefits when assessed against the NPPF.

² <https://www.gov.uk/guidance/covid-19-guidance-for-telecommunications-infrastructure-deployment-in-england>

The NPPF supersedes all Planning Policy Statements and Planning Policy Guidance Notes, including the telecoms specific PPG 8.

Section 10 of the NPPF is entitled “Supporting High Quality Communications” and continues the vein of the preceding NPPF’s Section 5, reiterating in paragraph 112 that:

- Advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being
- Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology
- Upgrades will be necessary in time

Paragraph 113 advocates that:

- Site/mast sharing potential should be investigated
- Sites should be carefully designed using a minimum size and scale of apparatus and disguises where necessary

Paragraphs 114 and 115 go on to confirm that developers must provide evidence in relation to their site selection process that confirms that every effort has been made to identify the best available site option.

Paragraph 116 also places an emphasis on the fact that LPAs must determine applications for communications infrastructure on planning grounds alone.

Other relevant points from the NPPF

- Section 2, Paragraph 8 continues to promote sustainable development via the support for economic, social and environmental objectives
- Section 6, Paragraph 80 outlines the need to support economic growth
- Section 6, Paragraph 82 highlights the need to appreciate specific locational requirements which is very relevant to communications development which is based upon very specific geographical necessities. With modern technologies, coverage requirements must be addressed from within or extremely close to the target area.
- Section 16, Paragraph 193 confirms the need for potential impact of a proposed development on the significance of a designated heritage asset and advocates that great and proportional weight should be given to the asset’s conservation (i.e. the more important the asset, the greater the weight should be). However, importantly Paragraph 196 goes on to confirm that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal.

Code of Best Practice on Mobile Network Development in England

The key principles of the Code of Best Practice 2016 are based upon the preceding NPPF with the primary aim of the Code itself stated as being:

“...to ensure that the Government’s objective of supporting high quality communications infrastructure, which is vital to continued economic prosperity and social inclusion for all, is met.”

Paragraph 1.3

This document also makes it very clear that mobile communications are key to social and economic wellbeing in today’s society, stating that:

“...digital communications are now a crucial component of everyday life, with improvements in connectivity being key to a vibrant economy.”

Paragraph 2.1

And continuing that:

“Consumers, businesses and public bodies increasingly rely on mobile communications and expect to receive a signal wherever they are. Coverage in rural areas is recognised as a vital component for maintaining economic activity and social inclusion.”

Paragraph 2.2

Local Plan

The Reading Borough Council Local Plan 2019³ will be used to guide development in the region up to 2030. In line with the NPPF's requirements, the Plan also has a presumption in favour of sustainable development. The Plan contains specific telecommunications policy in the form of 'Policy OU3: Telecommunications' which states that:

“Proposals for telecommunications development will be permitted provided that:

- They do not have an adverse impact on the visual amenity of the surrounding area or on the significance of a heritage asset;*
- The apparatus will be sited and designed so as to minimise its visual impact by the use of innovative design solutions such as lamp column 'swap-outs' or concealment/ camouflage options; and*
- Alternative sites and site-sharing options have been fully investigated and it has been demonstrated that no preferable alternative sites are potentially available which would result in a development that would be less visually intrusive.”*

When considering the appropriateness of telecommunications development proposals, it is imperative that Decision Makers give precedence to telecommunications specific policy where it exists at a local level, and to read this in a context of the NPPF. One must also appreciate that it is extremely unreasonable to expect niche infrastructural development to strictly adhere to more general policy criteria.

Other

It is also important to consider this proposal in a wider context of Government guidance and ambition which clearly recognises the benefits that modern communications networks bring. As one may be aware, a number of reforms have already taken place to support the provision of improved and of up to date network services for all, including:

- The Town and Country Planning (General Permitted Development) (England) (Amendment) (No. 2) Order 2016⁴
A brief indication as to the main amendments to Part 16 included within this revised legislation area as follows:
 - An extension of emergency use of land from 6 months to 18 months;
 - A reduction in full planning requirements to allow new masts up to 25m (reduced to 20m on highways and other protected areas) to be covered by Prior Approval procedures;
 - Increased Permitted Development Rights for extension and replacement of existing mast; and
 - Decrease in the limitations on building based apparatus
- The Electronic Communications Code (the Code) 2017⁵
The 2017 amendments make it easier for network operators to install and maintain apparatus such as mobile phone base stations, exchanges and cabinets on public and private land with Part 4, Paragraph 20 providing a mechanism for the courts to impose terms of occupation on a landowner and the Operator.
- NPPF 2019⁶
One may also be aware that in 2018, the Department for Digital, Culture, Media and Sport published the Future Telecoms Infrastructure Review (FTR)⁷, outlining the Government's intent on being the best place to start and grow digital business with the aim of providing the majority of the population with 5G coverage by 2027. The FTR is clearly advocating the benefits associated with modern communications networks such as delivering faster and better mobile broadband services to consumers and businesses, and enabling innovative new services for industry sectors, including manufacturing, transport, immersive technologies and healthcare. Further to this, in August 2019 the

³ http://www.reading.gov.uk/media/10410/Reading-Borough-Council-Local-Plan/pdf/Local_Plan_Adopted_November_2019.pdf

⁴ <http://www.legislation.gov.uk/ukxi/2016/1040/made>

⁵ <https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/policy/electronic-comm-code>

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

⁷ <https://www.gov.uk/government/publications/future-telecoms-infrastructure-review>

Ministry of Housing, Communities and Local Government and the Department for Digital, Culture, Media and Sport issued a consultation on the principle of further amending permitted development rights for operators with rights under the Electronic Communications Code (Code Operators) to support deployment of 5G and extend mobile coverage⁸, and the circumstances in which it would be appropriate to do so. The introduction to the consultation states:

“The Government recognises that widespread coverage of mobile connectivity is essential for people and businesses. People expect to be connected where they live, work, visit and travel. That is why the Government is committed to extending mobile geographical coverage further across the UK, with continuous mobile connectivity provided to all major roads and to being a world leader in 5G”

Paragraph 1

The abovementioned reforms make it very clear that the provision of up to date mobile network coverage is central to achieving the Government’s objective to deliver prosperity, enabling all places to share in the proceeds of growth. These documents demonstrate the government’s encouragement of and recognition of the increasing importance of reliable connectivity now and in the future and set the scene in which the LPA should assess this application.

Policy Summary

A summary as to why the subject proposal adheres to all relevant policy criteria is outlined below:

- There is a clear operational need for the development
- The subject proposal relates to the upgrade of an established site and will result in improved 3G/4G network services and new 5G services, allowing local residents, businesses and visitors to access the many social and economic benefits associated with modern communications network services.
- The principle of telecommunications development has been established in this locale.
- The site is not located in any restrictive planning policy context.
- The development will not impact upon built or natural heritage assets.
- Details of the siting and design of the proposed apparatus are provided in the attached drawings clarifying the positioning of the new apparatus within a context of the existing street scene and wider locale. As indicated above, a minimum height and girth has been used for the proposed mast which also incorporates a simplistic and slimline design. Although the mast structure will be taller than nearby features this is a direct requirement for effective transmission to be achieved and all new apparatus has been coloured appropriately to allow best absorption within a context of existing streetscape features and the surrounding development. However, the operator would be happy to incorporate any alternative colour scheme that may be preferred by the LPA.
- The site is an established telecommunications base station. Clear views of the development will be limited to a very localised area and road users; the latter of which will be transient and temporary. Although there are residential properties to the south, the site has been offset from the frontal facades of as many residences as possible. Only the very top sections of the structure being visible from wider vistas, upon which impact will be lessened with distance and mitigated by the development’s context of mature trees and existing development. Impact upon amenity is considered to be acceptable and outweighed by the many benefits of modern communications systems, as have been outlined in the section entitled ‘Technical Justification’ above.
- The operator would be happy to commission photomontages from viewpoints agreed with the LPA to assist in considering the planning merit of this application. Please do not hesitate to contact us if this additional is required.
- Although there is an established base station site in the wider area, this is located a significant distance away to the east and cumulative impact is not currently an issue, nor is it expected.
- The operator would be happy to remove any redundant apparatus and reinstate the land.

⁸https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/827162/Proposed_reforms_to_permitted_development_rights_to_support_the_deployment_of_5G_consultation.pdf

- The proposed apparatus has been positioned to avoid any conflict with the root system of existing vegetation and no additional landscaping is proposed nor indeed considered necessary due to the roadside location.
- An ICNIRP Certificate has been supplied.

We trust that the above and enclosed information is to your satisfaction and would be happy to expand upon any aspect of this proposal if required.

Confirmation that submitted drawings have been checked for accuracy

Name: (Agent)	<u>Galliford Try</u>	Telephone:	<u>07920110583</u>
Operator:	<u>Vodafone Limited</u>		
Address:	<u>c/o Agent</u>	Email Address:	<u>jodie.kane@gallifordtry.co.uk</u>
	Galliford Try Telecoms PO Box 17452 2 Lochside View Edinburgh EH12 1LB		
Signed:		Date:	<u>30/04/2020</u>
Position:	<u>Consultant Planner</u>	Company:	<u>Galliford Try</u>
		(on behalf of Cornerstone and above operator)	