

SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Vale Garage Services	Site Address:	Vale Garage Services, 87 Fontygary Road, Rhoose, Vale of Glamorgan, CF62 3DT
National Grid Reference:	305663, 166266		
Site Ref Number:	CTIL 207739, VF 95446	Site Type: ¹	Macro

2. The Proposal

Brief summary of the proposal:

As part of its continued network improvement program, there is a specific technical requirement to provide new 5G coverage for Vodafone to this area of Rhoose. An existing base station has been identified in the area that would be suitable for upgrading to accommodate Vodafone's latest requirements. The development would also provide enhanced coverage for Telefonica (trading as O2). In order to accommodate this upgrade, a replacement slimline tower is required to replace the existing monopole. The existing site is shown below:




¹ Macro or Micro

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The proposal involves the replacement of the existing 15 metre high monopole and its replacement with a new 20 metre high monopole. The new monopole would support six antennas. An equipment cabinet would be removed, and two new cabinets would be installed at ground level. All of the development would take place within the existing secure fenced compound.

3. Pre-Application Check List

Site selection:

Vodafone take a hierarchal approach to the roll out of 5G coverage by first replicating and upgrading their existing network. The 5G network rollout is therefore predominantly focussed on upgrading existing mast sites.

The site location is an existing Vodafone and Telefónica installation. It has previously been selected by a qualified network radio planner as the most appropriate site to provide network coverage and meet local demand. This position has recently been reconfirmed through technical assessment during a physical search of the area.

In planning terms, planning permission has previously been granted to allow a telecommunications mast and associated equipment in this location.

This location therefore benefits from being able to meet the technical requirements needed to provide improved coverage as well as planning policy and guidance with regards to siting. For these reasons, the site is considered to be the most appropriate location to propose a new upgraded mast and equipment to provide enhanced coverage for both Vodafone and Telefónica, and new 5G coverage for Vodafone.


The site is located to the rear of the Vale Garage Services site, on the southern side of Fontygary Road. The area is predominantly residential in character, however, other than the garage there are also a number of retail premises in the area, including a Tesco Express site across Fontygary Road from the site. The site is visible from the road, however impact is mitigated as it is set back behind the garage buildings, and there are also a number of trees to the west of the site which assist in mitigating impact to an acceptable level.

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Was the industry site database checked for suitable sites by the operator?	Yes	No
If no explain why: N/A		

Annual area wide information to planning authority

Can the annual area wide information be provided on request?	Yes	No
If no explain why: N/A		

Pre-application consultation with planning authority

Was there pre-application contact:	No
Date of pre-application contact:	N/A
Name of contact:	N/A
Summary of outcome/Main issues raised: Pre-application correspondence was forwarded to the Vale of Glamorgan Council by email on 10 August 2021. To date no response has been received.	

Stakeholder Consultation


Outline consultation carried out: Pre-application correspondence was forwarded by email on 10 August 2021 to the Rhose Ward Councillors – Cllrs. Andrew Davies and Gordon Kemp. Correspondence was also sent to the Member of Parliament for Vale of Glamorgan, Alun Cairns MP, and to Jane Hutt MS, the Welsh Assembly Member for the Vale of Glamorgan.
Summary of outcome and main issues raised: To date no comments have been received.

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Schools/Colleges

Location of site in relation to school/college (include name of school/college): There are no schools close to the site. The closest is Rhws Primary School on Fontygary Road which is approximately 350 metres from the site.
Outline of consultation carried out with school/college (include evidence of consultation): Due to the distance involved no consultation has been undertaken.
Summary of outcome/main issues raised (include copies of main correspondence): N/A

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 Defence/Aerodrome Operator been notified?	Yes	No
Details of response: N/A - Full planning application		


Developer's Notice (only required for an application for prior approval)

Copy of Developer's Notice enclosed?	Yes	No
Date served:	N/A - Full planning application	

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4. Pre-Application Check List

Type of Structure (e.g. tower, mast, etc):		Monopole
Description: The removal of the existing 15m monopole and its replacement with a 20m monopole supporting 6 no. antennas, the removal of an equipment cabinet and its replacement with 2 no. new cabinets and ancillary equipment thereto.		
Overall Height:		20 metres
Height of existing building (where applicable):	N/A	
New Equipment Housings:		
Length:	0.8m/ 0.62m	
Width:	0.66m/ 0.62m	
Height:	1.77m/ 1.77m	
Materials (as applicable):		
Tower/mast etc – type of material and external colour:	Steel with a galvanised finish.	
Equipment housing – type of material and external colour:	Steel with a grey finish	

Application Background:

Consent for the existing structure was granted by application 2017/00032/PNT.

Design Statement

In designing the proposed installation, the applicant has sought to achieve a balance between technical requirements and minimising environmental impact as far as was practicable. It, however, must be acknowledged that technical constraints heavily influenced the design and limited the scope to alter the appearance of the site to a significant degree.

There are three main elements to a radio base station; the cabin or cabinets which contain the equipment used to generate the radio signals, the supporting structure that holds the antennas in the air or fixes them to a building or structure and the antennas themselves, which emit the radio signals (along with any necessary amplifier or receiver units). Other elements necessary for the base station to function are the

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power source (meter cabinet or generator where a REC supply cannot be utilised), feeder cables that link the equipment housing to the antennas and the various support structures, grillages and fixings, often referred to in general terms as “development ancillary to” the base station.

In all aspects of the design now put forward the smallest practical components have been utilised to ensure that the visual impact of the development is kept to the absolute minimum. The proposed development has two main elements, the monopole which would support the antennas, and the radio equipment cabinets located at ground level adjacent to the pole.

There is a requirement to upgrade this existing greenfield base station installation to allow Vodafone and Telefónica to enhance its existing 3G and 4G network capacity, and to allow Vodafone to provide new 5G capability to the surrounding area.

The design and type of equipment to be deployed in this case has been chosen specifically to take account of, and minimise, the impact of the installation. Care has been taken to ensure that the proposed replacement mast would not have an unacceptable impact on residential and visual amenity. The existing monopole is to be removed and replaced with a new tower, because the existing structure is not capable of supporting the new antennas needed to provide enhanced coverage.

Whilst the development would be more visible than the existing structure, it is considered additional impact would be minimal and the additional impact would be outweighed by the substantial benefits of the proposal.

Reason(s) why site required e.g. coverage, upgrade, capacity

As part of Vodafone's continued network improvement program, there is a specific requirement to upgrade this existing installation to maintain and enhance the coverage in the area for Vodafone, and to also provide new 5G capability for both operators to the surrounding area. The development would also enhance coverage to the area for Telefónica.

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

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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.

The very high level of mobile phone use and ownership within the UK population is a very clear indication of the public's overwhelming acceptance of the benefits of mobile communications, which requires the installation and maintenance of base stations to provide the necessary connection between the mobile phones and the UK telecommunications network.

Base stations use radio signals to connect mobile devices and phones to the network, enabling people to send and receive calls, texts, emails, pictures, web, TV and downloads. Without base stations, mobiles will not work. They are made up of three main elements. The cabinets which contain the equipment used to generate the radio signal. The supporting structure such as a mast, which holds the antennas in the air and the antennas themselves. Only the antennas emit radio signals.

Many other everyday items also use radio signals to send and receive information, such as television and radio broadcasting equipment and two-way radio communications. Base stations are connected to each other and telephone exchanges by cables or wireless technology such as microwave dishes, to create a network. The area each base station covers is called a cell. Each cell overlaps with its neighbouring cells to create a continuous network. The size and shape of each cell is determined by the features of the surrounding area, such as buildings, trees and hills, which can block signals. When people travel between cells, the signal is transferred between base stations without a break in service.

Each base station covers a certain area only and can only handle a limited number of calls at once. As mobile phones and devices become more popular more base stations are needed to ensure continuous coverage.


Further detail regarding the general operation of the network can be found in the accompanying document entitled 'General Background Information for Telecommunications Development' which accompanies this application. This information is provided to assist the local planning authority in understanding any technical constraints on the location of the proposed development.

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Reason site chosen:

As noted previously in this statement, the upgrade of the Vodafone network, in particular to provide new 5G coverage, is based around the upgrade of existing installations where possible, as they sit within a mature network of sites. This is seen as a preferable solution to proposing an additional site in the area for new 5G coverage.

Planning Policy Framework/Development Plan Policy

National Planning Policy Guidance

The relevant national planning guidance is contained within Future Wales – the National Plan 2040 (February 2021), Planning Policy Wales 11 (February 2021) (PPW), Code of Best Practice on Mobile Phone Network Development for Wales (2021) and Technical Advice note 19: Telecommunications (2002). The first three of these are new documents which provide support for improved connectivity.

Future Wales – the National Plan 2040

The Overview section of the document set out the increasing importance of connectivity, stating “We are an increasingly connected nation. In September 2019, 93% of homes and businesses had access to superfast broadband speed and 31% to ultrafast” (page 40).

This section also reflects on the Covid-19 pandemic noting “..There was a collective appreciation of the value of parks and green spaces, walking and cycling routes, local shops and amenities, and the cleaner air that emerged during the lockdown. The essential nature of good broadband and telecommunications connections to enable people to work from home, access services, and to stay in touch with one another has also been highlighted during this period. Good digital communications can have a positive effect on well-being” (page 48).

Policy 13 is the most relevant specific policy to the proposed development:


‘The Welsh Government supports the provision of digital communications infrastructure and services across Wales. Planning authorities must engage

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with digital infrastructure providers to identify the future needs of their area and set out policies in Strategic and Local Development Plans to help deliver this. New developments should include the provision of Gigabit capable broadband infrastructure from the outset.'

The supporting text from the policy notes: "The Welsh Government supports the roll-out of digital communications infrastructure across Wales. Modern, reliable mobile telecommunications and fast broadband services are essential to our everyday lives, as highlighted by the number of people working and learning from home during the COVID-19 pandemic. Digital communications infrastructure is crucial to the future success and economic competitiveness of Wales' businesses and supports community and individual needs, including access to key services and facilities." The proposed development would assist in providing modern and reliable services to the surrounding area.

Planning Policy Wales 11 (February 2021)

Section 5.2 of the guidance deals specifically with Electronic Communications. The proposed development is supported by the guidance at paragraph 5.2.1 which states:

"Affordable, secure electronic communications infrastructure is essential to people and businesses. The availability and exchange of information afforded by telecommunications ensures people are connected to important services, their communities and the wider world and essential for long term prosperity. Fast reliable connections are essential to meet the needs of businesses and other organisations, and to those at home whether accessing new digital services or working. Greater numbers of individuals working from home are a growing trend and planning authorities should take this into account when preparing their development plans".

Paragraph 5.2.2 confirms the importance of the provision of quick and reliable networks: "Modern society demands reliable fast and high-capacity communication networks to ensure large amounts of data can be easily accessed or exchanged." The development would enhance the H3G network in the area providing additional 4G and new 5G coverage to the localised area.

5G is specifically mentioned at paragraph 5.2.10 noting: "New technologies such as 5G will result in the densification of mobile infrastructure particularly in urban areas which could require more small cell sites in street settings. The planning system will

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need to respond positively to this evolution in technology whilst being mindful of the impacts on amenity and the historic environment.” The application deals with such a site, with an upgraded site proposed to provide new 5G coverage to the surrounding area.

Code of Best Practice on Mobile Phone Network Development for Wales (2021)

This advice document provides up to date information on network rollout. Within the Siting and Design section the document confirms the need for additional equipment for 5G development: *“The introduction of 5G will create a need for more apparatus. 5G will operate across multiple radio spectrums and the antenna systems will continue to provide 2G, 3G and 4G services that demand lower speeds. Consequently, there will be a requirement for greater numbers of antennas than before, as well as new radio equipment cabinets and taller structures. Furthermore, they will often be larger and so greater in appearance.”*

The Siting and Design section also confirms that there will be a requirement for additional installations in densely populated urban areas due to demand and because 5G signals do not travel as far as for other technologies: *“in densely populated and urban areas, where you have a high demand on the network, a greater number of base stations are required to meet the data traffic demand.”*

Technical constraints are noted resulting in a situation where: *“the MNO may need to put a base station within a commercial or industrial area and directly within the surrounding residential areas.”* In the case, the upgrade of an existing installation is proposed to provide 5G coverage. A taller and bulkier structure is required to accommodate the required antennas, however the additional impact would be minimal.

Technical Advice Note 19: Telecommunications (2002)

This guidance is now rather dated, however the document is still of relevance. Paragraph 46 deals with technical constraints and notes: *“Each telecommunications system has different antennas, siting needs and other characteristics. Planning authorities should have regard to any technical constraints on the location and proposed development. Each application should be determined in accordance with the development plan unless material considerations indicate otherwise. Material considerations include the significance of the proposed development as part of a national network.”*

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Paragraph 56, dealing with environmental considerations states: “Masts and antennas often require a particular operating height, which allows signals to clear trees and urban clutter. Telecommunications development may therefore need particular locations in order to work effectively. But those may be exactly the prominent locations that pose challenges to policies for the protection of high quality landscapes and quality in urban areas... and the developer must demonstrate that there are no suitable alternative locations.” In this case, it is important for 5G coverage to clear surrounding clutter, hence its required height.

The proposal outlined within this document and the supporting enclosures, is in complete accordance with the guidance as set out in national guidance.

Development Plan Policy

The adopted Vale of Glamorgan Local Development Plan 2011 - 2026 (adopted June 2017) is the relevant Development Plan document for the area. There are no specific policies relating to communications within the Plan. Policies of relevance to the development include MD2 (Design of new development) which has the overarching aim of achieving a high quality of design in development proposals. Also relevant is policy MD5 (Development within settlement boundaries), which requires development to ensure there is no unacceptable impact upon the character and appearance of the locality. Although a more substantial structure, it is the upgrade of an existing installation and there would be an additional impact, although this increase would be minimal and not sufficient to harm amenity.


Alternative sites considered and not chosen (not generally required for **upgrades/alterations** to existing sites including redevelopment of an existing site to facilitate an upgrade or sharing with another operator).

Site Type ²	Site Name and Address	National Grid Reference	Reason for not choosing
			N/A

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

No alternative sites have been investigated as this is the upgrade of an existing installation, not a proposal for a new site.

² Site Type: Mast and Site Sharing, Installation on Existing Buildings and Structures, Camouflaging and disguising equipment, using small scale equipment, and Erecting a new Ground Based Mast.

Public Access Statement

The site is an existing telecommunications base station, located on a private site, and the equipment is surrounded by a security fence. The site is not accessible to the general public.

Construction and Maintenance Access

Access to the site for construction and maintenance is indicated on the accompanying drawings.

Health and Safety

The proposal is fully compliant with ICNIRP guidelines and declaration of compliance has been provided.

Additional relevant information

Practical Applications of 5G Connectivity as Example of Material Socio-Economic Benefit:-

Education:


The relationship between 5G and education is evolving at a massive rate with educators exploring the relevance of Virtual Reality (VR) technologies for education

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and training. Crucially, VR can support remote learning, allowing students a presence in the classroom even when working elsewhere.

5G's ability to deliver real-time information (low latency), ultra-fast speeds (critical for high-definition images and video), increased capacity and heightened security will also allow learning on the job, thanks to technologies such as Augmented Reality (AR) goggles, which can give engineers real-time instructions on how to fix a machine on a production line, for example.

Health:

Patients across the country are now becoming accustomed to relying on remote healthcare services such as NHS 111, virtual GP appointments, and ordering online deliveries of essential medical supplies.

5G will prove critical in providing the infrastructure required to deliver remote health services over the next decade. By design, 5G's ability to deliver real-time information (low latency), ultra-fast speeds (critical for high-definition images and video), increased capacity and heightened security are going to be fundamental in scaling the patient benefits of remote healthcare and keeping medical records secure and private. For instance, trials have shown that connecting ambulance crews to expert resources using 5G allows paramedics to work with doctors and conduct specialist procedures in real time whilst on the road.

Summary

This application seeks permission for a replacement mast to accommodate new and improved network coverage for both Vodafone and Telefonica. The upgrade involves the replacement of the existing mast and, although taller and more substantial, would only have a minimal additional impact, one which would be outweighed by the benefits of the proposal.

The proposed development is compliant with the relevant national and local policy guidance, as outlined within this supporting statement.

The proposal is fully compliant with ICNIRP guidelines and declaration of compliance has been provided.


As such, we respectfully ask that this application is approved.

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Confirmation that submitted drawings have been checked for accuracy

Name:	Chris Andrews	Telephone:	[REDACTED]
(Agent)			
Operator:	Vodafone Ltd		
Address:	C/o Agents Sinclair Dalby Ltd, KBF House, 55 Victoria Road, Burgess Hill, RH15 9LH	Email Address:	chris.andrews@sinclairdalby.co.uk
Signed:	[REDACTED]	Date:	27 August 2021
Position:	Planner	Company:	Sinclair Dalby Ltd
		(For and on behalf Telefonica UK Ltd)	

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