

SUPPLEMENTARY INFORMATION

1601274 PN

1. Site Details

Site Name:	Bull Cliff	Site Address:	Land at Bull Cliff, off Marine Drive, Barry, Vale of Glamorgan, CF62 6PQ
National Grid Reference:	E: 309113 N: 166845		
Site Ref Number:	CTIL_208013_VF_96049_TF_50775	Site Type: ¹	

2. Pre Application Check List

Site Selection

Was an LPA mast register used to check for suitable sites by the operator or the LPA?	Yes	
If no explain why:		
Was the industry site database checked for suitable sites by the operator:	Yes	
If no explain why:		

Annual roll out consultation with LPA

Date of last annual rollout information/submission:	14 October 2015
Name of Contact:	JM Croft, I Robinson and VL Robinson
Summary of outcome/main issues raised:	No issues raised following details of annual roll out meeting. The operator has contacted Peter Williams (Technical Relationships Manager ((ICT Infrastructure)) for Welsh Government and who was the lead officer for MIP Wales. He is very clear that Welsh Ministers and Government are very keen and supportive for improved service and infrastructure. He has put the operator in contact with each 'Digital Champion' within each local authority in Wales with a view that they will attend the strategic pre-roll-out meetings to be held with each of the LPA Development Managers in Wales. Mr Williams will also attend these meetings whenever possible to reinforce and fully support the necessity for improved service to each local authority.

Pre-application consultation with LPA

Date of written offer of pre-application consultation:	7 September 2016
Was there pre-application contact:	RECEIVED No
Date of pre-application contact:	n/a

¹ Macro or Micro



Name of contact:	n/a
Summary of outcome/main issues raised:	
No specific response has been received to date in relation to the proposals.	

Ten Commitments Consultation

Rating of Site under Traffic Light Model:	Green	Amber	Red
Outline of consultation carried out:			
Consultation with local Ward Councillors' for Baruc (Cllrs Steffan William and Nic Hodges), clerk to Barry Town Council and the local MP Alun Cairns. Pre-application consultation letters and drawings of the proposals were sent to these parties on the 7.9.2016.			
Summary of outcome/main issues raised:			
No specific responses have been received to date.			

School/College

Location of site in relation to school/college:
No schools located nearby.
Outline of consultation carried out with school/college:
N/A
Summary of outcome/main issues raised:
N/A

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

Will the structure be within 3km of an aerodrome or airfield?	Yes	
Has the Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator been notified?	Yes	
Details of response:		
Acknowledgement of proposals received, no specific comments received to date.		

Developer's Notice

Copy of Developer's Notice enclosed?	Yes	
Date served:	17.10.2016	

3. Proposed Development

The proposed site:

Background

As part of Vodafone's network improvement programme, Vodafone is in the process of progressing a number of suitable sites for radio base stations, which will provide 4G coverage to current 'not spot' areas. This is fully in line with the Government's aim to ensure that everyone is connected to the superhighway.

In addition, Vodafone Ltd has entered into an agreement with Telefónica UK Ltd pursuant to which the two companies plan to jointly operate and manage a single network grid across the UK. These arrangements will be overseen by Cornerstone Telecommunications Infrastructure Ltd (CTIL) which is a joint venture company owned by Vodafone Ltd and Telefónica UK Ltd ("the operators").

The agreement allows both organisations to pool their basic network infrastructure, while running two, independent, nationwide networks allowing consumer choice.

Proposed Development

CTIL and Vodafone Limited are looking to progress works which will entail the installation of a new 12.5m mock telegraph pole supporting 6 no. antennas within a shroud at the top of the column and 2 ground level cabinets. The proposal is required to provide improved indoor voice calls (2G coverage) and 3G coverage and new 4G service where currently there is no indoor coverage within the cell area. This requirement is being proposed by the operator to ensure that more 'not spot' areas benefit high speed internet connections in line with the Welsh Government aspirations for improved service and infrastructure.

The new site will also enable a single network grid supporting modern MORAN technology for Vodafone Limited. The site will be operated by CTIL and Vodafone Limited but will enable both Vodafone and Telefónica to provide MORAN services to the surrounding area.

The site is located in a break from the residential nature of the area, outside the built up area of Barry. Within the operators search area are two conservation areas Barry marine Conservation Area and Barry Gardens Suburbs Conservation Area. The site has been carefully outside both these conservation areas, as well as the built up area in order to minimise the impact on the surrounding area. Further to this, the site has been nestled between a number of semi-mature/mature trees rising to some 6-7m. This offers the site natural screening within the wider area. There is some 45m separation distance between the nearest residential property and the proposed installation.

Enclose map showing the cell centre and adjoining cells:

Coverage is needed for West Barry and railway coverage uplift.

There is a large hole in 3G and 4G coverage, with the best service being in car. Therefore the residents, businesses and visitors to Barry and the surrounding local area are unable to use their 3G and 4G handsets indoors.

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A new installation in this location would provide indoor 2G/3G and 4G coverage to West Barry and the immediate surrounding area, including the railway line. This is in line with local and national planning policy guidance.

Type of Structure: Jupiter – slim-line column

Description:

The proposed development relates to the installation of a 12.5m slim-line mock telegraph pole supporting 6 no. antennas in a shroud at the top of the column, 2 transmission dishes, 2 no. equipment cabinets at ground level and ancillary development thereto.

Details of the proposed equipment are detailed below.

Overall Height: 12.5m

Height of existing building:	N/A
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Equipment Housing: BTS 3900AL (x1)

Length:	0.750 Metres
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Width:	0.770 Metres
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Height:	1.925 Metres
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Equipment Housing:ISC (x1)

Length:	0.500 Metres
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Width:	0.600 Metres
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Height:	1.645 Metres
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Materials:

Tower/mast etc – type of material and external colour:	Monopole – Dark Brown
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Equipment housing – type of material and external colour:	Cabinets – Grey
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Reasons for choice of design:

The site is needed to provide coverage to the west of Barry and coverage on the railway line. The search area has had to focus centrally and to the west of the search area due to the proximity of legacy live sites to the east. Therefore if a new installation were to be located in the eastern part of the search area then existing coverage and proposed new coverage would be detrimentally affected. This is because the new installation would interfere with the effective operation of the live sites to the east.

The search area is predominately residential in nature, within 2 conservation areas: the west being Barry Gardens Suburb Conservation Area and the East being within Barry Marine conservation area. This further limits the opportunities of appropriately siting a telecommunications installation within this cell area.

The proposed T Range slim-line column is one of the most sensitively designed ground based installations which is currently available to the operators. It is designed to resemble a telegraph pole. The site has been chosen as it is located within a break from the residential nature of the area, set back some distance from the highway, nestled between a number of semi-mature/mature trees. This will help the installation to be shielded from the surrounding area.

The proposed mock telegraph pole is suggested to be finished in a dark brown colour to help it

blend in with the surrounding natural trees and bushes. The monopole has a main column width of 324mm. The top of the column supports 6 no. antennas which are positioned in a stacked formation. It is not possible to maintain the column width of 324mm and support all the operators multi technology antennas within the same installation. Indeed, these antennas will provide MORAN technologies including 2G, 3G and 4G services. The shroud needs to be slightly wider with a diameter of just 350mm. This slight increase in shroud width will not be perceptible to the naked eye once in situ due to its careful design. The shroud gently tapers and therefore will not appear as a 'bolt on' at the top of the column. This is the slimmest design possible which will enable all MORAN technologies to be supported from this site.

If the shroud were to be any slimmer, at the same height, then there would not be sufficient space to house all the MORAN services within the same installation and another radio base station would be required within this cell area, contrary to Welsh Government guidance and the Code of Best Practice.

The equipment cabinets at ground level are designed to resemble, as closely as possible, other utility operators equipment. This ensures that the cabinets will not appear out of character in the landscape. The equipment cabinets are ancillary to the functionality of the antennas. They are proposed to be coloured grey, although can be coloured any colour that the Council considers to be appropriate. Given the natural screening afforded by the surrounding trees and bushes, these cabinets will not be prominent in the landscape. Thus they will not appear out of place in this environment.

A 12.5m column height is required in order for the antennas to clear the trees (which rise to 7m), nearby urban clutter and provide coverage to the target coverage area. The antennas are stacked on top of each other, with the lower set of antennas having an underside height of 8.575m. A column at this height would provide a clear line of sight enabling the antennas to work effectively, and negating the need for an additional installation elsewhere within this cell area. A panoramic survey has been produced at this site demonstrating that the antennas at a centre line height of 11.5m (top height 12.5m) would just clear the surrounding tree canopies and reach the target coverage area. If the column were to be any lower, then the antennas would be blocked by the surrounding tree canopies and another installation would be required elsewhere within this cell area.

Furthermore, if the column height were to be any lower, then the transmission dishes would also not be able to obtain a clear line of site. Therefore the site would not be able to link in to the network and as such would not be operational. As a result, an additional installation would be required in this location contrary to local and Government policy.

It is therefore considered that the proposal before you strikes a good balance between environmental impact and operational considerations. The proposed height and design represents the best compromise between the visual impact of the proposal on the surrounding area and meeting the MORAN technical requirements for the site. Taking all matters into account it is considered that this proposal, to fill a large hole in high quality indoor coverage, delivering the capability for a MORAN service from a single network installation, would not appear out of place within this landscape.

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4. Technical Information

ICNIRP Declaration attached	Yes	No
<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>		

Frequency:	2G 900MHz, 3G 900Mhz and 4G 800Mhz
Modulation characteristics ²	2G (900) –GMSK 3G (900) – QPSK 4G (800) - QAM
Power output (expressed in EIRP in dBW per carrier)	800 MHz 31dBW 900 MHz 32 dBW
<p>In order to minimise interference within its own network and with other radio networks, Vodafone Ltd operates its network in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision</p> <p>As part of Vodafone Ltd's network, the radio base station that is the subject of this application will be configured to operate in this way.</p> <p>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.</p> <p>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.</p>	

² The modulation method employed in 2G (GSM) is GMSK (Gaussian Minimum Shift Keying) which is a form of Phase modulation

The modulation method employed in 3G (UMTS) is QPSK (Quad Phase Shift Keying) which is another form of Phase Modulation

The modulation method employed in 4G (LTE) is 64 QAM (Quadrature Amplitude Modulation) which is another form of Phase Modulation

Height of antenna (m above ground level)	12.5 and 9.275 Metres

5. Technical Justification

Enclose predictive coverage plots.

Reason(s) why site required e.g. coverage, upgrade, capacity (map attached if required):

A mobile phone transmitter is designed to cover a specific area and links its coverage to the next site in the network, creating a patchwork of overlapping coverage 'cells' across the county. So, if a person is on the move, the network will transfer their calls from one site to the next. However, in certain areas there will be gaps between these cells, resulting in a loss of coverage. This can be for a variety of reasons, the most common being topography or buildings which block the path of the signal. The operators' network rollout programme is designed to identify and address these gaps within their coverage and ensure that people can use their phones whenever and wherever they are.

There is a specific requirement for a new radio base station at this location to allow Vodafone to provide new 4G services to the surrounding area and significantly improve the 2G and 3G services. This ensures high quality indoor coverage is provided.

There is currently a large hole in indoor coverage to West Barry and the surrounding area. This means that Vodafone customers are unable to utilise their 3G and 4G enabled handsets for the purposes in which they were purchased. This is contrary to the operator's 4G license obligation, as well as the national Government's aim to provide a high quality communications network throughout the country.

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6. Site Selection Process – alternative sites considered and not chosen

Site ³	Site Name and address	NGR	Reason for not choosing ⁴
GF	St Francis Millennium Centre, Park Road, Barry, Vale of Glamorgan, CF62 6NX	E: 310005 N: 167181	This site has had to be discounted as the Site Provider has confirmed that they are not willing to accommodate a telecommunications installation on their property. Therefore, this option is not available as the operator does not have the owner's permission to use their land or building.
SW	Streetworks Park Road/Porth-Y-Castell, Barry, Vale of Glamorgan, CF62 6QA	E: 310047 N: 167174	The space is limited on this adopted highway due to the existing street furniture already in situ. Moving the equipment forward would detrimentally affect visibility splays causing highway safety issues.
GF	Romilly Park, Romilly Park Road, Barry, Vale of Glamorgan, CF62 6RR	E: 310006 N: 166907	This site is located within a conservation area. In order to obtain the required radio coverage the mast would need to be in excess of 20m. This would have a detrimental effect on visual amenity and would harm the character and appearance of the conservation area.
RT/ ES	Rooftop/Existing Site, Barry West Club, St Nicholas Road, Barry, Vale of Glamorgan, CF62 6QY	E: 310443 N: 167006	This site is outside the operators search area and as such will not provide the necessary coverage to the target coverage area. Therefore it has been discounted on technical grounds.
SW	Min-Y-Mor Streetworks, Barry, Vale of Glamorgan, CF62 6QG	E: 309692 N: 166875	The pavement is too narrow in this location to accommodate a telecommunications installation. The site has therefore been discounted due to insufficient space.
GFs	Greenfield – Network Rail Lakeside, Lakeside, Barry, Vale of Glamorgan, CF62 6SS	E: 310238 N: 166705	In order to clear the trees, to enable the antennas to work effectively, a column at least 17.5m in height would be required. This site is within a conservation area, close to residential properties with little natural screening. Therefore, it is considered that on balance, a 17.5m mast in this location would have a detrimental effect on the character and appearance of the area, especially as there is an alternative site which achieves a better balance between the operator's requirements and the need to minimise the environmental impact.
GF	Greenfield – Bron-Y-Mor Car Park, Barry, Vale of Glamorgan, CF62 6SW	E: 310120 N: 166716	The site provider is the Council, who have confirmed that they are not interested in accommodating a telecommunications installation at this location. Therefore, this option has to be discounted as the operator does not have the owner's permission to use their land.
SW	Streetworks – Bron-Y-Mor,	E: 310160	There is insufficient space on the adopted footpath to support a telecommunications installation at this location. As such, the

³ ETS – Existing Telecomm site, ES – Existing Structure, RT – Roof Top, GF – Greenfield

⁴ SP – Site Provider, RD – Redevelopment Not Possible, T – Technical Difficulties, P – Planning, O – Other

	Barry, Vale of Glamorgan, CF62 6SW	N: 166667	highways department is likely to object on highway safety grounds.
RT	Rooftop – Waters Edge, The Waters Edge, Beechway, Barry, Vale of Glamorgan, CF62 6UD	E: 309964 N: 166484	The design and shape of the roof would not support a telecommunications installation. Therefore this site is discounted for build reasons.
GF	Knap Car Terrace, Barry, Vale of Glamorgan, CF62 6TA	E: 309823 N: 166528	The ground level at this location is considerably lower than the surrounding area. As such, this site would not meet the operator's coverage requirements to the target coverage area.
SW	Porth-Y-Castell/Westward Rise Streetworks, Porth-Y-Castell/Westward Rise Junction, Barry, Vale of Glamorgan, CF62 6NX	E: 309992 N: 167145	This site is located within a conservation area and is surrounded by residential properties. It would therefore have a much greater impact on the visual amenity of the area and the character and appearance of the conservation area, than the proposed siting on Bull Cliff, set back from the conservation area and residential properties.
SW	Streetworks on Marine Drive, Barry, Vale of Glamorgan, CF62 6QP	E: 309386 N: 166852	The pavement is too narrow at this location to accommodate a telecommunications installation.
GF	Westward Rise Welsh Water, Barry, Vale of Glamorgan, CF62 6NR	E: 309399 N: 167088	There is a decline in height between the road and the Welsh Water compound. As such, a mast at least 20m in height would be required in this location in order to provide the operator with the necessary coverage to the target coverage area. On balance, it is considered that such an installation in this location would have a detrimental effect on the visual amenity of the area and character and appearance of the streetscene, especially as the conservation area is located less than 10m away. Furthermore, the site is surrounded by residential properties. The proposed site on land at Bull Cliff achieves a better balance between the operators' requirements and the need to minimise the environmental impact.

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

N/A

Land use planning designations:

None – see below for further details.

Additional relevant information (planning policy and material considerations):

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National Planning Guidance

Planning policy is provided at the national level by Planning Policy Wales Edition 8. It is a material consideration in planning decisions.

It is not necessary to quote extensively from this document but the following points are highlighted.

Planning Policy Wales Edition 8 (January 2016)

The Government's Planning Policy Wales was published January 2016. *Planning Policy Wales* (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in circulars and policy clarification letters. It translates the Government's commitment to sustainable development into the planning system so that it can play an appropriate role in moving towards sustainability.

PPW sets out Welsh Government Duty. The Well-being of Future Generations (Wales) Act 2015 places a duty on public bodies (including Welsh Ministers) that they must carry out sustainable development.

The Act sets out 7 well-being goals to help ensure that public bodies are all working towards the same vision of a sustainable Wales. Two of these goals are relevant to telecommunications development: A Prosperous Wales and A Wales of Cohesive Communities.

PPW sets out its 'Vision For a Prosperous Wales' being an innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities.

PPW envisages 'A Wales of Cohesive Communities' to be attractive, viable, safe and have well-connected communities.

PPW defines sustainable development in Wales as meaning the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.

This approach is consistent with ensuring 'a strong, healthy and just society' – focusing on how a sustainable approach will improve the quality of life and well-being of the people of Wales and especially those in less well off communities.

A Prosperous Wales – In order to achieve this, PPW states there is an important role in securing the provision of infrastructure to form the physical basis for sustainable communities (including telecommunications).

Chapter 12 of PPW sets out the Government's aims for infrastructure and services, which includes telecommunications. The Government's latest thinking continues to strongly support Communications Infrastructure. Paragraphs 12.11, 12.12 and 12.13 refer specifically to telecommunications however the importance of supporting sustainable communications infrastructure runs throughout the document.

PPW sets out a number of objectives relating to infrastructure and services. The Government acknowledges at paragraph 12.1.1 that adequate and efficient infrastructure including telecommunications is crucial for the economic, social and environmental sustainability of all parts of Wales. It underpins economic competitiveness and opportunities for households and businesses to achieve more socially and environmentally desirable ways of living and working.

The Welsh Government aims to secure the environmental and telecommunications infrastructure necessary to achieve sustainable development objectives, whilst minimising adverse impacts on the environment, health and communities. New approaches to infrastructure will be needed in light of the consequences of climate change. The objectives are inter alia: (para 12.1.4)

- To facilitate the development of an advanced broadband telecommunications infrastructure throughout Wales.
- To promote an integrated approach to the provision and renewal of environmental and telecommunications infrastructure.
- To ensure that environmental and telecommunications infrastructure is provided in such a way as to enable sustainable development objectives to be met, avoiding adverse impacts on the environment, local communities and health.
- To ensure that in considering environmental and telecommunications infrastructure account is taken of the impacts of climate change in the location, design, build, operation and where appropriate, the decommissioning of new infrastructure

The Welsh Government recognises that widespread access to affordable, secure telecommunications infrastructure is important to citizens and businesses across Wales. It is important that the telecommunications infrastructure in Wales is able to meet this challenge, helping to build a thriving and prosperous Welsh economy...Local Planning Authorities are encouraged to respond positively to telecommunications development proposals whilst taking account of the advice on the protection of urban and rural areas (paragraph 12.11.1).

Paragraph 12.13.2 advises that where approval of details of planning permission is required for telecommunications development the following should be taken into account:

- The extent to which radio and telecommunications masts can be shared; and
- The need for dishes and other installations to blend with their backgrounds.

Paragraph 12.13.3 states that the Welsh Government attaches considerable importance to keeping the number of masts, and the number of sites for such installations, to the minimum consistent with the efficient operation of the network. The sharing of masts and sites is strongly encouraged where that represents the optimum environmental solution in a particular case. Use should also be made of existing buildings and other structures to site new antennas. Siting should, so far as is practicable, minimise the impact on amenity and the external appearance of the building.

PPW states that planning permission or approval of details should not be refused on the basis of policies that take insufficient account of the growth and characteristics of modern telecommunications (paragraph 12.13.5).

PPW states that authorities should not question the need for the telecommunications system that the proposed development is to support, nor seek to prevent competition between different operators. The aim should be for the authorities and operators to work together to find

optimum solutions to development requirements. The Welsh Government strongly encourages telecommunications operators and local planning authorities to carry out annual discussions about rollout plans for each authority's area. Pre-application discussions should be carried out between operators and local planning authorities on a specific development proposal (paragraph 12.13.6)

With regard to the health implications of proposed development, it is the Welsh Government's view that, if the development meets the International Commission on Non-Ionising Radiation Protection (ICNIRP) guidelines as expressed in the EU Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (as recommended by the report of the Independent Expert Group on Mobile Phones (the Stewart Report) on a precautionary basis), it should not be necessary for a local planning authority in processing an application for planning permission or prior approval, to consider further the health aspects and concerns about them. All new base stations are expected to meet the ICNIRP guidelines (paragraph 12.13.9).

The Stewart Report suggested a number of specific precautionary actions that have been accepted by the Welsh Government. The report does not provide any basis for precautionary actions beyond those already proposed. In the Welsh Government's view, local planning authorities should not implement their own precautionary policies, such as imposing a ban or moratorium on new telecommunications development or insisting on minimum distances between new telecommunications development and existing development (paragraph 12.13.10).

Technical Advice Note 19 Telecommunications (August 2002)

TAN 19 is somewhat dated, published in August 2002, it makes reference to the Stewart Report which is now dated and makes no mention of the 4G network. Therefore PPW Edition 8 has greater material weight in the determination of telecommunications applications.

Paragraph 32 of TAN 19 states that development plans should cater for telecommunication development by taking account of the strategic requirements of telecommunications networks. Development Plan policies should take account of:

- The Assembly Government's overall policy approach to planning for telecommunications development set out in Chapter 12 of Planning Policy Wales.
- The requirements of the Telecommunications Act 1984.
- The need to minimise the impact of development and in particular the need to protect the best and most sensitive environments.
- The limitations imposed by the nature of the telecommunications network and the technology

With regard to technical constraints, Paragraph 46 states that *"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."*

In terms of environmental considerations, paragraph 56 identifies that an important consideration in determining applications will be the protection from visual intrusion and the implications for subsequent network development. It acknowledges that 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 this may conflict with policies for the protection of high quality landscapes and quality in urban areas. High priority should be given to protecting such areas and the need to safeguard areas of particular environmental importance.

Additionally paragraph 57 considers mast and site sharing, stating that Local Planning Authorities may expect applications to identify that the possibility of erecting antennas on an existing structure has been explored. An authority should, however, bear in mind the technical constraints upon network development in reaching any decision on an application before it (paragraph 58).

Furthermore a paragraph 65 identifies the consideration of siting and design in addition to the height, ancillary development and the scope for landscaping and screening. It also states that, *"many antennas have special siting needs because they have a limited range or require line-of-site. Authorities should take full account of these needs."*

Paragraph 66 goes on to state that 'Local planning authorities should ensure that they understand the constraints the operator faces, whether due to the nature of the technology or the legal requirement to provide a service'.

Paragraph 67 encourages the use of sympathetic design and camouflage to minimise the impact of the development on the environment.

Paragraph 68 relates to design solutions for minimising the visual impact on the area. It states that 'the telecommunications industry is encouraged to continue to develop innovative design solutions, in terms not only of the structure of the masts and antennas but also the materials and colouring. A number of different design solutions are currently available. These include masts designed to look like street furniture'.

Code of Best Practice on Mobile Phone Network Development in Wales (July 2003)

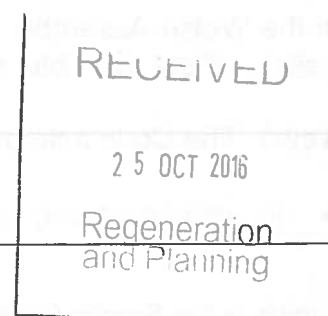
This code provides clear and practical advice to ensure the delivery of significantly better and more effective communication and consultation between operators, local authorities and local people. Standardised practice will promote greater consistency of approach and aid the transparency of the process for all concerned.

Modern telecommunications systems have a vital part to play in our national life and bring about significant and economic and social benefits. It's essential that the infrastructure needed to underpin these systems is delivered sensitively, keeping the impact on the environment to a minimum.

The Code is non-statutory and does not purport to given a definitive interpretation of the legal planning requirements, which is ultimately a matter for the courts.

The Code acknowledges in paragraph 10 that a real requirement for a telecommunications service may be:

- To provide coverage
- To provide capacity
- To improve quality of service
- To replace an existing site



Paragraph 31 of the Code sets out the Criteria other than the planning and environmental reasons which affect a location's suitability or use as a base station, the main factors are:

- Access – For ground based installations access for vehicles is required from a public highway.
- Electricity Supply – Sites need a reliable power supply
- Technical suitability – Each site is developed to meet a certain task in the network e.g. providing coverage to an unconventional area, extra capacity to a busy area or bolstering current inadequate coverage. A site needs to be located such that it performs its required task. Less than optimum locations can result in additional sites being required.
- Health and Safety – The apparatus of all sites has to be maintained regularly and it's the operators' responsibility to ensure a safe working environment in line with national safety standards is provided for maintenance personnel. All sites must be designed to comply with national health and safety legislation and compliance with the International Commission on Non-Ionising Radiation Protection (ICNIRP) public exposure guidelines as expressed in the EU Council Recommendation 12 July 1999.
- Network Link – All sites must be linked in to the network, usually with the use of radio transmission dish antenna. These require a clear line of sight and therefore may impact on the height required in order to achieve this. Where this is not possible, a land line may be used.
- Agreement with the property owner.

Paragraph 121 of The Code acknowledges that the Welsh Assembly Government's general policy on telecommunications development is to facilitate the growth of efficient and effective telecommunications systems whilst keeping the environmental impact of such development to a minimum. Good siting and design should not only be respected in environmentally sensitive areas but also be applied to all telecommunications development.

The Code identifies design principles in paragraph 123 which should be regarded as important considerations with regards to telecommunication developments. Such principles include; a thorough assessment of the character of the area, holistic design, analysis and respect of the surrounding views, preserving the skyline and offering a choice of designs in keeping with the surroundings.

Options for design are acknowledged in paragraph 124 of The Code which states that design will be affected by site conditions, technical constraints, landscape features and capacity requirements. The main options would include:

- Mast and/or site sharing;
- Installation on existing buildings and structures;
- Camouflaging or disguising equipment
- Using small scale equipment
- Erecting new ground based masts

Both the Welsh Assembly Government Policy and The Code encourage the sharing of masts and sites, where possible, as a means of reducing overall mast numbers (see paragraph 125).

However, The Code acknowledges the limitations on mast sharing in paragraph 128:

- Visual impact may be detrimentally impacted upon

- Coverage problems – existing site may be poorly located or not have sufficient height to give the required coverage.
- Radio interference – vertical separation distances required can lead to increased visual impact
- Structural loading – existing mast may not be able to safely hold additional equipment leading to existing masts being strengthened or replaced with bigger structures which leads to increased visual impact.

Paragraph 131 of The Code supports the use of existing buildings and structures to reduce environmental impact on their networks.

The Code provides guidance on siting and design and continues to acknowledge that camouflaging or disguising equipment is considered materially appropriate with more modern masts frequently able to blend into their surroundings far more effectively than some of the older masts (paragraph 138). Innovative and appropriate use of shapes and colourings can also help disguise proposed equipment. The use of street furniture may also help to disguise small antennas. Larger antennas are also acknowledged as being effectively concealed by similar methods such as flag poles, street lamps, signs and church towers.

Paragraph 146 of The Code acknowledges that there are many ways in which the environmental and visual impact of a ground based mast can be greatly reduced such as:

- Placing a mast near to similar structures e.g. industrial and commercial premises, road signs, lamp posts;
- Using similar and unfussy designs. Masts which have complex designs are more likely to dominate and be in discord with the landscape and have adverse visual impacts;
- Appropriate colouring – masts seen against the sky, for example, are best left in the galvanised state or painted pale grey. Against a wooded backdrop a matt green or brown colour scheme would be more applicable.

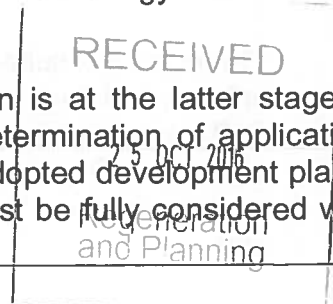
Local Policy

Section 70 (2) of the 1990 Town and Country Planning Act and Section 38 (6) of the Planning and Compulsory Purchase Act 2004 states that *"If regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise"*

The development plan as defined by the Planning and Compulsory Purchase Act 2004 for the Vale Glamorgan Council comprises the Vale of Glamorgan Unitary Development Plan 1996-2011.

Following the Planning and Compulsory Purchase Act 2004, each Unitary Authority in Wales is required to prepare a Local Development Plan (LDP) for its area. These will replace the previous Unitary Development Plan and will become the sole development plan for each Council and National Park. It will be a single document, setting out strategy as well as site specific and development control policies.

Vale of Glamorgan's preparation of the Local Development Plan is at the latter stages of production and therefore carries some material weight in the determination of applications. Although time expired, the Vale of Glamorgan UDP remains the adopted development plan for the county. However, PPW has greater weight and therefore must be fully considered when determining telecommunications applications.



The adopted Unitary Development Plan was formally adopted in April 2005. It is supportive of telecommunication development. Policy 14 relates to community and utility services. The strategic objective of this policy is to ensure that an adequate supply and range of community and utility services exist to meet the needs of the residents of the Vale of Glamorgan. Utility services provide the basic services for the functioning of the community in terms of inter alia telecommunications. Furthermore, because utility services are normally large land users, both in terms of supply and distribution, they may have to be sited in areas where development would not normally be permitted (paragraph 2.9.1).

Paragraph 2.9.2 goes on to state that the Council will seek to balance the requirements of community and utility services and environmental objectives to ensure that the environmental effects of such developments are minimised.

Policy ENV1 recognises that there may be a number of appropriate uses which may be permitted in the countryside, subject to no unacceptable effects. Examples include infrastructure schemes proposed by the Statutory Undertakers, and the development of telecommunication systems.

Section 11 relates to community and utility services. Paragraph 11.1.1 states that there are a range of basic facilities essential for the well being of any community. This includes telecommunication facilities.

Paragraph 11.1.2 goes on to state that the strategic objectives of the Plan attempt to ensure close liaison with the major utilities companies in order to ensure that service provision throughout the Vale of Glamorgan is of the highest possible standard.

Paragraph 11.2.3 states that guidance contained within PPW recognises the importance of the growth of the communications services and the implications that network expansion will have on the development of land. The planning system should not be seen to hinder development in this field. This supportive stance is carried through in the latest edition of the PPW published in January 2016.

Sub section 11.3 relates to the objectives of the UDP relating to recreation and sets out 3 objectives. Two of which relate directly to telecommunication development:

- To ensure that community and utility services are provided at the highest possible standards to serve the needs of the present and future populations of the Vale of Glamorgan; and
- To ensure that utility provision is based upon sensitive locational choices and that proposals have minimum impact on the environment.

Policy comm 6 relates directly to telecommunications. It is a supportive policy which states that the development of telecommunication systems by telecommunication operators will be permitted if:

- i) There are no suitable existing facilities such as existing radio masts and towers or existing buildings that can be utilised;
- ii) Sufficient measures are taken to minimise the visual impact of the development such as siting to take advantage of tree screening, incorporation of appropriate landscaping and appropriate colouring of apparatus including masts and antennas; and

- iii) The development does not have an unacceptable effect on the interests of agriculture, conservation, areas of ecological interest, archaeological sites, wildlife and landscape importance, or on features of geological or geomorphological importance.

In the justification to the policy the UDP states at paragraph 11.4.41 that the Council recognises the importance of modern telecommunication installations in both a social and commercial context. It goes on to note that it is important that the demands of telecommunication companies are balanced with the needs of the surrounding environment.

Modern communications are an essential and beneficial element in the life of the local and national community (paragraph 11.4.39). The following paragraph goes on to acknowledge that the Government policy seeks to facilitate the growth of telecommunications. It states that PPW recognises the need for access to modern, high speed telecommunications services throughout Wales and the provision of sites for such installations, whilst taking full account of the effect on environmental amenity of neighbouring areas. It also states that LPAs should take account of the limitations imposed by the nature of the network and the technology.

Emerging Vale of Glamorgan Deposit Local Development Plan 2011-2026

The preparation of the Local Development Plan reached the draft Deposit stage in 2013. It sets out the vision, objectives, strategy and policies for managing development in the Vale of Glamorgan. The LDP was submitted to Welsh Government and the Planning Inspectorate for examination in July 2015. The Council is currently consulting on a number of proposed changes that have emerged as a result of matters arising during the hearing sessions of the examination. Consultations run until the end of October 2016. Therefore the UDP is still in force. The emerging LDP has no specific telecommunications policy. However, it does refer to infrastructure in several areas of the emerging document.

Objective 3 of the emerging LDP relates to the reduction in the need for Vale of Glamorgan residents to travel to meet their daily needs and enabling them greater access to sustainable forms of transport. The emerging LDP will seek to ensure that appropriate local infrastructure is provided as part of development proposals to enhance the opportunities for the adoption of sustainable travel patterns.

Policy MD4 relates to Community Infrastructure and Planning Obligations and states that the Council will seek to secure new and improved community infrastructure, facilities and services. Community infrastructure may include the provision or improvement of service and utilities infrastructure.

The emerging LDP sets out specific area objectives for the key settlement of Barry. These objectives provide a platform for Managing Development and Growth in each of the settlements listed.

Within Barry there is an aim to support existing businesses and encourage appropriate economic development and inward investment to further the regeneration of Barry.

The emerging LDP also seeks to provide new opportunities for enhanced community services, facilities, public realm and infrastructure to support the important role of Barry, both locally and regionally, as a key settlement and its designation as a Regeneration Area.

The LDP supports the Welsh Government's aim of tackling poverty through communities first'

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leading to the long term sustainability of communities.

Emerging Policy SP1 relates to delivering the strategy and seeks to improve the living and working environment of delivering key infrastructure linked to the impacts of development.

Emerging Policy MG7 relates to the provision of community facilities and sets out a number of settlements where new/enhanced community facilities will be sought including the settlement of Barry.

The following paragraphs set out how the proposed scheme fully complies with Planning Policy Wales, TAN 19, Policies 14 and Policy COMM 6 of the Vale of Glamorgan UDP and The Code of Best Practice.

The proposed slim-line telecommunications column and equipment cabinets fully comply with the objectives of Planning Policy Wales. Welsh Government guidance attributes considerable importance to keeping the quantity of masts and number of sites for such installations to a minimum, consistent with the efficient operation of the network. Furthermore *"the sharing of masts and sites is strongly encouraged (PPW paragraph 12.13.3)*. Similarly, paragraph 57 of TAN19 also supports site sharing.

In line with the national guidance set out in PPW, TAN19 and the essence of Policy COMM 6 of the Council's UDP, the proposed installation will allow both Vodafone and Telefonica to operate from a single telecommunications network grid. This offers the best environmental solution, limiting the amount of new sites required whilst allowing two operators to utilise the same site, limiting the visual intrusion in the area and providing high quality communications infrastructure.

There are no existing suitable and available telecommunications installations for the operator to share, as highlighted in Section 6 above. Similarly there are no buildings which are suitable and available that the operators could utilise to operate their equipment. Indeed, a radio base station is required in this area in order to provide coverage to the residential area of West Barry and the nearby railway line.

West Barry, identified as a key settlement within the emerging LDP, is a 'not spot' area and therefore does not have high quality indoor 2G/3G and 4G coverage and capacity. Thus users of their handsets are unable to utilise their devices for the purposes in which they were purchased. In line with the operators 'Grow the Grid' requirements, which is also aligned to the latest Government thinking for a prosperous economy and well-connected Wales, there is an urgent need to fill this hole in coverage. This also fully accords with the emerging specific area objective for the key settlement of Barry to support existing businesses and encourage appropriate economic development and inward investment to further the regeneration of Barry. It will also provide new opportunities for enhanced community services and infrastructure to support the acknowledged important role of Barry, both locally and regionally, as a key settlement and its designation as a Regeneration Area.

The search area is small and predominately residential in nature, with few breaks to accommodate a telecommunications installation. Furthermore, the majority of the search area is located within two conservation areas. The eastern part of the search area is also not technically viable due to the presence of existing telecommunication installations which provide coverage to the surrounding area, but cannot provide coverage to the target coverage area. Locating an installation too close to the existing sites would cause unacceptable interference to the existing surrounding coverage. Consequently, there are limited options for

siting an installation in this cell area.

The operators have carefully considered the siting of the radio base station. To this end, the preferred siting of the installation is to be located in the settlement boundary of Barry, outside the built up area and conservation areas, in a break from the residential environment, nestled between a number of semi-mature/mature trees and bushes to the south west of Marine Drive.

In line with the guidance set out in PPW, TAN19, The Code of Best Practice, Policy 14 of the UDP, the objective of the UDP to minimise the impact on the environment and Policy COMM 6 of the Vale of Glamorgan UDP, the visual impact on the surrounding locality has been minimised. The design of the column is such that it resembles as closely as possible a telegraph pole, nestled between a number of trees and bushes. Furthermore, the column is proposed to be finished in a dark brown colour to further imitate the appearance of a telegraph pole which are common features within settlements. The installation will also be set against the backdrop of a number of trees and bushes, together with its proposed dark brown colouring will ensure that the visual impact on the surrounding area is minimised.

The operators have maintained as slim a column as possible at 324mm in width. The shroud at the top of the column will be just 26mm wider. Given its height above ground level and distance from public vantage points, together with its careful tapered design, this minimal change in diameter will not be perceptible to the naked eye once in situ. It is not possible to reduce the width of this column and shroud, as the operator's multi technologies would not be able to fit in the same structure and an additional installation would therefore be required. This would be contrary to PPW, TAN19 and Policy COMM 6 of the Council's UDP. Indeed, PPW and the Code of Best Practice state that regard should be had to the operator's technical constraints.

The proposed transmission dishes will be located at a centre line height of 6.3m. This will ensure that the surrounding trees will assist in screening the dishes from appearing prominent and out of place in this location. If the dishes were to be located any lower then they would not be able to obtain a clear line of sight to link in to the network and another installation would be required in this cell area which would lead to the proliferation of masts contrary to local and Government guidance.

The proposed equipment cabinets are small for telecommunications apparatus at a maximum height of 1.925m and width of 0.770m. They will have a similar appearance, size and design as other utility operators equipment boxes such as BT broadband equipment cabinets. Furthermore, the existing trees and bushes surrounding the site will help the installation blend in with the streetscene. As such, there would be no detrimental impact on the character and appearance of the area by the installation of such equipment.

The Welsh Governments aspirations for providing adequate and efficient telecommunications infrastructure is enshrined within PPW. This document envisages telecommunications development as crucial for the economic, social and environmental sustainability of all parts of Wales. To this end, PPW sets out a number of objectives which include facilitating the development of an advanced broadband telecommunications infrastructure throughout Wales. The proposed installation will meet this criteria. Indeed, the social and economic benefits are a significant material consideration which should be weighed against the minimal visual impact associated with an installation at this location.

In line with PPW, Policy 14 of the UDP and the strategic objectives of the plan associated with the community and utility services to ensure that service provision throughout the Vale of

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Glamorgan is of the highest possible standard, the proposed scheme will support business growth and the local economy. The proposed scheme in this location will provide improved indoor coverage for voice calls (2G services) and 3G service as well as new 4G high quality indoor coverage to the residential area of West Barry and the immediate area.

The new installation will provide high quality 2G/3G and 4G mobile communications in an area where currently there is little to no coverage, supporting the Government's aim of '*facilitating the development of an advanced broadband telecommunications infrastructure throughout Wales*'. This fully meets the aspirations of PPW, TAN19, the Code of Best Practice, and Policy COMM 6 of the Council's UDP. The new site will ensure that the expansion of the electronic communications network is facilitated and that high quality communications infrastructure is provided to the immediate area. This is in full accordance with the operator's 4G license obligations.

The proposed new radio base station will support the Welsh Government objective to facilitate the development of an advanced broadband telecommunications infrastructure throughout Wales. The provision of adequate and efficient infrastructure including telecommunications is seen as crucial for the economic, social and environmental sustainability of all parts of Wales. High quality telecommunications underpins economic competitiveness and opportunities for households and businesses to achieve more socially and environmentally desirable ways of living and working.

PPW acknowledges that widespread access to affordable, secure, telecommunications infrastructure is important for citizens and businesses across Wales, helping to build a thriving and prosperous Welsh economy.

The PPW strongly supports sustainable development as does the Council's UDP and emerging LDP. Mobile communication plays a significant role in sustainable development. Being able to access the internet via a mobile device allows people to access a wide range of central and local government services, buy groceries, manage finances, apply for jobs/university, and carry out school projects, send emails, download applications, send and receive instant messages, streaming and downloading data to name just a few of the benefits of being able to use an internet enabled handheld device. It also allows people to work from home or on the move without needing to return to the office. This reduces travel time, carbon emissions and increases the speed in which information is processed/shared. The proposals therefore fully comply with PPW, and the Vale of Glamorgan UDP and emerging LDP to minimise the effects of climate change reducing the need to travel and therefore the carbon footprint.

Summary

The proposed installation will enable the operator to fill the current 4G coverage gap in and around the residential area of West Barry. This will support the operators 4G license obligations to provide coverage to 98% of the country and their desire to Grow the Grid. Thus providing a high quality service to its customers and access to the latest technologies whenever and wherever they are. An installation located outside this area would not allow the operator to fill the current coverage 'not spot'.

Installing a radio base station in this location, providing 2G/3G and 4G coverage will fully meet the Welsh Government's aim of '*facilitating the development of an advanced broadband telecommunications infrastructure throughout Wales*'...'helping to build a thriving and prosperous Welsh economy' and the guidance set out in PPW which includes a Wales of

Cohesive Communities.


Site selection was progressed in accordance with the applicants licence obligations, advice in PPW and the Code of Best Practice and represents the least environmentally intrusive, technically suitable, available option.

The social and economic benefits of providing reliable and high quality mobile broadband connections support growth in productivity, efficiency and labour force participation across the whole economy. These benefits are strong material considerations which outweigh any minor loss of visual amenity to the surrounding area.

The significance of the proposal which will also allow two competing companies to operate and manage a single network grid using modern MORAN technologies across the UK is also a material consideration.

As such, there are strong material benefits for improving the existing voice calls and 3G services in and around the residential area of West Barry so that customers can utilise their existing handsets indoors as well as providing new 4G coverage in line with the Welsh Government's latest aspirations that citizens and businesses across Wales should have widespread access to affordable, secure telecommunications infrastructure. It will also help meet the Welsh Government's goal of A Wales of Cohesive Communities by ensuring that communities are well-connected.

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