SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Land adjacent to allotments	Site Address:	Golcar, Huddersfield, West Yorkshire, HD7 4QH
National Grid Reference:	E: 410012 N: 416176		
Site Ref Number:	CTIL_30665400	Site Type:[1]	Macro

2. Pre Application Check List

Site Selection (for New Sites only)

(Would not generally apply to upgrades/alterations to existing site including redevelopment or replacement of an existing site to facilitate an upgrade or sharing with another operator)

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

Site Specific Pre-application consultation with local planning authority

Was there pre-application contact:	No
Date of pre-application contact:	N/A
Name of contact:	N/A

[1] Macro or Micro

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Summary of outcome/Main issues raised:
Pre-application consultation letter, consultation plan and copy of site plans were sent to the Chief Planning Officer on 18/04/2023. No specific comments received to date.

Annual area wide information to planning authority

Has annual area wide information been provided?	Yes
If no explain why:	
Summary issues raised: Cornerstones commercial relationship with Virgin Media O2 (VMO2) has changed, effectively increasing our independence to work with other companies in the deployment of mobile infrastructure. It means we no longer have visibility of VMO2 full update plan. However, Cornerstone is fully committed to working closely with Local Planning Authorities and following best practice guidance. We aim to engage and work with the planning department at the earliest opportunity from when we are instructed to deliver new infrastructure within your Local Authority area and often conduct strategic pre-rollout engagement meetings to discuss our wider rollout. If your Local Authority would like a meeting to discuss wider Cornerstone rollout plans then please advise. We recognise the importance of developing long term partnerships and will always work with you to deliver improved mobile connectivity.	

Community Consultation

Rating of Site under Traffic Light Model:	~~Red~~	Amber	~~Green~~
Outline of consultation carried out: A copy pre-application consultation letter and copy of site plans were sent to the local councillors for Golcar ward (A Marchington, E Reynolds and G Turner) and Colne Valley MP Jason McCartney via email on 18/04/2023.			
Summary of outcome/main issues raised (include copies of relevant correspondence): No comments received to date.			

School/College

Location of site in relation to school/college (include name of school/college):
St John's Ce (Va) J & I School, Leymoor Road, Golcar, Huddersfield, HD7 4QQ

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Outline of consultation carried out with school/college (include evidence of consultation): A copy pre-application consultation letter and copy of site plans were sent to the Headtecher and Chair of Governors via email on 18/04/2023.
Summary of outcome/main issues raised (include copies of main correspondence): No comments received to date.

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: A copy pre-application consultation letter and copy of site plans were sent to Crosland Moor Airfield via email on 18/04/2023.		

Developer's Notice

Copy of Developer's Notice enclosed?	Yes	
Date served:	Developer's notice, covering letter and site plans have been sent to the Local Planning Authority Estates department via email on 17/07/2023. Notice and proof of delivery are attached as part of this application.	

3. Proposed Development

The proposed site:
Background: Cornerstone is the UK's leading mobile infrastructure services company. They acquire, manage and own over 20,000 sites and are committed to enabling best in class mobile connectivity for over half of all the country's mobile customers. They oversee works on behalf of telecommunications providers and wherever possible aim to: • promote shared infrastructure; • maximise opportunities to consolidate the number of base stations; • significantly reduce the environmental impact of network development

As part of Cornerstone's network improvement programme, VMO2 is in the process of progressing several suitable sites for radio base stations, which will provide improved 2G, 3G and 4G coverage and new 5G service provision. This is fully in line with the Government's aim to ensure that everyone is connected to the superhighway.

The proposal relates to the installation of new 20m lattice tower with an open headframe, supporting 6 no. antennas, 3 no. equipment cabinets, 1 no. electric meter cabinet, 2 no. transmission dishes and ancillary development thereto including Ericsson Radio Systems (ERS's) and 1.8m fence.

The proposed replacement radio base station is located to the west of the allotments located in north Golcar. To the south of the site is Golcar Scout and Community Centre which provides a screen for any potential views to the south of the proposed location. East of the site is a large playing field with semi-mature trees lining part of field further east of the site. North of the site is a band of semi-mature trees which provide a screen for potential views to the residential properties further north. These properties will be angled away from the site at an acute angle with semi-mature trees providing a partial screen for the mast. To the west of the proposed site are allotments with mixed use buildings further west of the site.

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

The operator is seeking to improve coverage speed and capacity in this area due to increased traffic experienced by the operator's existing sites in the Huddersfield area. This radio base station is therefore required to enable enhanced 4G coverage and capacity to the north Golcar area, as well as new 5G services for VMO2 and Vodafone to ensure high quality customer experience is obtained as demands on the network increase and technologies change.

Type of Structure *(e.g. tower, mast, etc): High Swann CS5S Lattice Tower*

Description:

The proposal relates to the installation of new 20m lattice tower with an open headframe, supporting 6 no. antennas, 3 no. equipment cabinets, 1 no. electric meter cabinet, 2 no. transmission dishes and ancillary development thereto including Ericsson Radio Systems (ERS's) and 1.8m fence.

Overall Height: 20m	
Height of existing building *(where applicable):*	N/A
Equipment Housing:	GFMC
Length:	0.264 Metres
Width:	0.655 Metres
Height:	1.215 Metres
Equipment Housing:	EFF1
Length:	0.655 Metres
Width:	0.725 Metres

In the first instance, all correspondence should be directed to the agent.

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Height:	2.100 Metres
Equipment Housing:	EFF2e
Length:	0.600 Metres
Width:	0.650 Metres
Height:	2 Metres
Materials *(as applicable):*	
Tower/mast etc – type of material and external colour:	Steel – Galvanised
Equipment housing – type of material and external colour:	Steel – Grey – RAL 7035

Reasons for choice of design, making reference to pre-application responses:
This proposal, as demonstrated in the Alternative Sites section, has been very difficult to find a suitable location for. This is due to the lack of available space due to the densely packed residential nature of the surrounding area, the presence of underground services and footway space, structural characteristics of surrounding build environment with undulating topography and technological requirements. The operator has carefully considered the design of the new proposed mast. The operator is proposing the most sensitive design currently available to provide the necessary coverage and capacity to the surrounding area. Due to all the technologies that will be available at this location, 2G, 3G, 4G and 5G for VMO2 and Vodafone, 6 antennas need to be installed at the top of the mast. The mast therefore requires a headframe with support poles to host the required telecommunications equipment of both operators. It is for this reason that the existing telecommunications equipment on Thorpe Green Bowling and Social Club cannot be upgraded, as the rooftop is structurally unstable to host the new, heavier and bigger 5G antennas. This is especially as both operators are required to meet the necessary capacity and coverage requirements in north Golcar. The proposed height at 20m is essential in order to provide sufficient coverage and capacity to the target coverage area. The latest 4G and 5G radio technologies operate in higher frequency bands than older technologies. Since they operate at higher frequencies where attenuation of the radio signal is naturally higher and the effects of clutter are greater it will normally require a higher structure to achieve the same coverage footprint. To increase capacity and data speeds to the user, the antenna will normally need to be mounted higher than conventional antennae. These factors drive a requirement for an increase in antenna height for the latest 4G and 5G service provision. The proposed structure is a lattice style structure, which will allow light to pass through it rather than creating an oblique mass in the streetscene. This will aid in minimising the visual impact of the proposed tower, particularly in long views. The headframe enables all 6 no. antennas to be located at the top of the mast, instead of a dual stack formation. This means that the overall height of the mast can be kept to a minimum, as all technologies will clear the surrounding urban clutter. The site also proposes

the installation of 2 no. transmission dishes. Transmission dishes need a clear line of sight to other dishes in the network to allow them to work effectively. As such, without the headframe, the proposed mast would have to be higher to clear the surrounding clutter.

The antennas are all unshrouded for technical reasons. The higher the radio frequency the more signal attenuation there is. The higher frequency of 4G and 5G antennas are unable to operate effectively through the Glass Reinforced Plastic that the shroud is made up of and as such if these antennas were to be shielded then they would not be able to provide the necessary coverage to the target coverage area.

This is the slimmest design possible which will enable all technologies to be supported from this site. If the column width were to be any slimmer, the technology would not fit in the one column and another radio base station would be required, which would lead to the proliferation of masts contrary to national Government guidance set out in the NPPF and The Code of Best Practice. As explained further in the Alternative Sites section, to fulfil the capacity requirements of the operators.

The proposed equipment will be coloured grey and will be located within a proposed fenced compound for health and safety reasons. The lattice style structure of the tower will allow views through it and colouring the steelwork (Galvanised) will allow it to assimilate with the typically grey British skyline. The fence will be 1.8 metres high and is designed to blend in with the 2m palisade fencing to the east of the site. The equipment cabinets constitute permitted development in their own right but are included in the application description and on the drawings for clarity. Similarly the fence constitutes permitted development under A.5 of Part 16 of the GPDO.

The proposed ERS units are very small (approximately the size of a shoe box). These will be located behind the antennas on the proposed tower. Given their small size and the height of the proposed tower, it is not considered that they will be overly prominent when viewed from public vantage points at ground level. This element of the proposal constitutes permitted development and does not require permission in its own right, but is noted in the proposal description and on the drawings for clarity.

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 operator's technical requirements for the site. Taking all matters into account it is considered that this proposal, to provide the latest 2G, 3G, 4G and 5G service provision for the operator, ensuring high quality dense coverage and capacity, would not appear out of place within the streetscene.

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Health and Safety - including ICNIRP compliance
International Commission on Non-Ionizing Radiation Protection Declaration attached (see below) 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, VMO2 operates its network in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision. As part of VMO2'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

Enclose predictive coverage plots if appropriate, e.g. to show coverage improvement. Proposals to improve capacity will not generally require coverage plots.

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

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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 VMO2 and Vodafone to provide improved 2G, 3G and 4G coverage and capacity in and around north Golcar to cope with increased service demand, whilst also providing the latest 5G service provision to the local area. This ensures high quality indoor service provision is optimized.

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 infrastructure within the built environment has had to be reviewed and adapted as appropriate.

In this case, the existing site is incapable of keeping up with the increased demand for mobile coverage, which is currently limited to 4G. Therefore, this new radio base station is required to enable both operators to provide the necessary coverage and capacity to enable sufficient mobile broadband data capacity.

5. Site Selection Process

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	Site name and address	National Grid Reference	Reason for not choosing site
Greenfield	Land off Parkwood Road, Parkwood Road, Huddersfield, HD3 4TS	E: 410020 N: 416600	An installation at this location is considered to be too exposed with limited screening/backdrop and is too prominent in the streetscene and other alternatives exist which are more appropriate in order to deliver the required coverage to the target area. This site has therefore been discounted for this reason.
Greenfield	Land Behind Meadow View, Meadow View, Huddersfield, HD7 4QP	E: 409899 N: 416548	A site in this location would be more exposed with little screening to the residential properties south and west of the area.

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Streetworks	Leymoor Road, Huddersfield, HD7 4QP	E: 410128 N: 416458	The footway at this location is too narrow to accommodate the operator's equipment. As such, it would lead to highway safety issues. Therefore, a site in this location has been discounted for this reason.
Streetworks	Intake, Huddersfield, HD7 4RF	E: 410154 N: 416353	The footway at this location is too narrow to accommodate the operator's equipment. As such, it would lead to highway safety issues. A site in this location has therefore been discounted for this reason.
Streetworks	Pastures Way, Huddersfield, HD7 4QH	E: 409877 N: 416290	The footway at this location is too narrow to accommodate the operator's equipment. As such, it would lead to highway safety issues. A site in this location has therefore been discounted for this reason.
Greenfield	St John's School, Leymoor Road, Huddersfield, HD7 4QQ	E: 409883 N: 416096	An installation at this location is considered to be too exposed with limited screening/backdrop and is too prominent in the streetscene and other alternatives exist which are more appropriate in order to deliver the required coverage to the target area. More recently, a streetworks pole was refused by the LPA (2022/N/93610/W) for being in a prominent location, in which a site in location would be similar in nature. This site has therefore been discounted for these reason.
Existing Telecommunications Site	Thorpe Green Bowling and Social Club, Leymoor Road, Leymoor, Golcar, Kirklees, HD7 4QP	E: 410090 N: 416442	There is an issue with the strength of the rooftop as it has a corrugated iron sheet rooftop, therefore it is not structurally capable of accommodating the telecommunications equipment. would not be possible for wooden batons to support the telecoms kit as each antenna

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			weighs approximately 50kg, and also heavy feeder cables. The building is not designed to take such weight. As for ICNIRP compliance on a pitched roof the only acceptable design would be pole mounts on the side of the building. The rooftop is only two stories high and in order to reach the target coverage area, the pole mounts would need to be very tall to reach the target coverage area and avoid clipping and ICNIRP sterilisation of the roof. The pole mounts would need to be secured to the side of the building by large bolts which would have to go through the entire wall and be secured with back plates.

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

N/A

Land use planning designations:

Additional relevant information (include planning policy and material considerations):

National Planning Guidance

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

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

National Planning Policy Framework (July 2021)

The Government's National Planning Policy Framework (NPPF) was published on 24 July 2018 and updates the 2012 version. In February 2019 the NPPF was revised again, with minor alterations to wording relating to housing supply and not any parts relating to telecommunications. The NPPF was updated in July 2021, in order to strengthen sections including requirements on improved design quality, a new requirement for Councils to

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produce local design codes or guides, an emphasis on using trees in new developments, revised policies on plan-making, removing statues and opting out of PD rights relating to residential conversions.

The Government's latest thinking continues to strongly support communications infrastructure. The NPPF remains very supportive of high quality communications. Indeed, a whole chapter is dedicated to high quality communications, emphasising the importance that the Government attaches to digital connectivity. Paragraph 114 states that advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. This wording echoes guidance set out in paragraph 42 of the 2012 version of NPPF. However, it also includes the importance of *reliable* communications infrastructure for both economic growth *and social well-being*.

The NPPF continues to support the expansion of electronic communications networks at paragraph 114. It notes that policies should set out how high quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time. The economic and social benefits of providing high quality and reliable communications infrastructure are well documented and can be found later in this Supporting Information Statement.

The NPPF makes reference to 5G:

'*Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G)…*'

With the above in mind, the Government is already forward thinking the evolution of data networks and seeks planning decisions to take account of this. 5G technology provides increased speed of data and more capacity in the network, to ensure that handheld devices can continue to be used for the purposes in which they were purchased. This will bring even greater economic and social benefits to the area.

Paragraph 115 of the NPPF retains the requirement to minimise the number of installations consistent with the efficient operation of the network but also includes being consistent with the needs of consumers and providing reasonable capacity for future expansion.

Paragraph 118 of the NPPF retains the guidance set out in paragraph 46 of the 2012 NPPF version which relates to determining applications on planning grounds only. They should not seek to prevent competition between different operators, question the need for an electronic communications system, or set health safeguards different from the International Commission guidelines for public exposure.

At the heart of the NPPF is the retained presumption in favour of sustainable development (para 11). For decision-taking this means approving development proposals that accord with an up-to-date development plan without delay or where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless the application of policies within the revised

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Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed or any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the revised Framework taken as a whole.

The NPPF continues to provide guidance on decision-making. At paragraph 38 it states that:

*'Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available, including…*permission in principle*, and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible'.*

The NPPF builds on the aspiration to build a strong, competitive economy. Paragraph 81 states:

> *'Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking in to account both local business needs and wider opportunities for development. The approach taken, should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation[42]'…*

Footnote 42 of the NPPF states:

'The Government's Industrial Strategy sets out a vision to drive productivity improvements across the UK, identifies a number of Grand Challenges facing all nations, and sets out a delivery programme to make the UK a leader in four of these: artificial intelligence and big data; clean growth; future mobility and catering for an ageing society. HM Government (2017) Industrial Strategy: Building a Britain fit for the future'.

Code of Practice for Wireless Network Development in England (March 2022)

The Code of Practice provides guidance to Code Operators (referred to as 'operators' throughout the Code of Practice), including the Mobile Network Operators and wireless infrastructure providers, their agents and contractors, local planning authorities, and all other relevant stakeholders in England on how to carry out their roles and responsibilities when installing wireless network infrastructure. It is also a useful tool for other interested stakeholders such as community groups, amenity bodies and individuals with an interest in mobile connectivity.

The aim of the Code of Practice is to support the government's objective of delivering high quality wireless infrastructure whilst balancing these needs with environmental considerations.

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It also has an important role in making sure that appropriate engagement takes place with local communities and other interested parties.

The Code of Practice covers all forms of wireless infrastructure development, including mobile masts and cabinets. It is recommended that other wireless communications operators follow the principles of this Code of Practice, where appropriate.

Unlike previous iterations this Code of Practice has been led by the Department for Digital, Culture, Media and Sport (DCMS) and developed in collaboration with representatives of the mobile network industry, other government departments and public bodies, local planning authorities, and protected landscapes. This document replaces the previous Code of Best Practice on Mobile Network Development, which was published in 2016 and is now published by DCMS.

The Code of Practice sets out the legal and policy framework for the delivery of wireless infrastructure development.

Paragraphs 8 – 12 of the Code of Practice set out the importance of connectivity:

> *'8.Digital connectivity is vital to enable people to stay connected and businesses to grow. Fast, reliable digital connectivity can deliver economic, social and well-being benefits for the whole of the UK.*
>
> *9.As the demand for mobile data in the United Kingdom is increasing rapidly, it is important that everyone has access to dependable and consistent mobile coverage where they live, work and travel.*
>
> *10.The Future Telecoms Infrastructure Review (FTIR) and the National Infrastructure Strategy set out the government's long-term strategy for meeting its digital connectivity targets and delivering high quality, reliable digital infrastructure that works across the UK[2].*
>
> *11.The government has committed to extending mobile coverage across the UK. The government has committed to extending mobile coverage across the UK. The government's Levelling Up White Paper has set a mission that the UK will have nationwide 4G coverage, with 5G coverage for the majority of the population by 2030. In support of this, the government and the UK's mobile network operators agreed a £1 billion Shared Rural Network deal to extend 4G mobile geographical coverage to 95% of the UK by the end of the programme.*
>
> *12.Next Generation Mobile Technologies: A 5G Strategy for the UK, and the update to this, set out the government's ambition for the UK to be a global leader in 5G to take early advantage of its potential and help to*

[2] *The* Statement of Strategic Priorities for Telecommunications, The Management of the Radio Spectrum, and Postal Services followed the publication of the FTIR and reflects its conclusions

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create a world-leading digital economy that works for everyone. The government also wants businesses and communities to benefit from investments in 5G as soon as possible. Through the government's 5G Testbeds and Trials programme we have seen its value to manufacturing, farming, transport networks and healthcare.

The Government recognises the key role that the Planning System plays in delivering the digital infrastructure that we need, in a sustainable and well-designed way, especially as households and businesses become increasingly reliant on mobile connectivity.

The Code of Practice sets outs 'How wireless networks function.

Para. 16 states "*Cellular wireless networks use base stations to provide an area of radio coverage. Wireless technology uses the radio spectrum to broadcast radio waves between base stations and devices. Different radio frequencies have different characteristics which, along with the density of cell site locations, affect the extent of coverage and how much data can be carried over the network. Depending on the radio frequencies used, base stations can deliver coverage over a wide area or provide extra network capacity in areas where there is a high demand for network bandwidth*".

Para. 17 sets out that "*Wireless technology continues to evolve rapidly, and mobile devices are now capable of much more. Second generation (2G) technology gave us voice calls and text messages, 3G led to the launch of smartphones, and 4G, which enabled faster browsing, allowed us to do things like watching videos on the move. 5G, the latest generation of wireless technology, is much faster than previous generations of wireless technology and can offer greater capacity and lower latency, allowing thousands of devices in a small area to be connected at the same time. 5G networks, and future mobile generations, will be vital for a range of Internet of Things uses (IoT) and Smart City applications*".

The Code of Practice establishes 'Principles and commitments' by which operators should develop their networks and that Local Planning Authorities should demonstrate their support by.

Paragraph 18 of the Code of Practice sets out the principles and commitments that operators should follow when developing their networks inter alia:

- Site sharing and use of existing structures: make use of existing structures, sites and masts wherever possible to reduce the need for new development.
- Consultation with local planning authorities, local communities and other stakeholders.
- Standardised and high-quality approach to planning applications, and the notification procedure: provide standardised supporting documentation for planning applications (where appropriate) within the context of national and local requirements.

- Compliance with guidance laid out in the International Commission on Non-Ionizing Radiation (ICNIRP) public exposure levels guidance.

The Code of Practice also sets out the requirements of the LPA in relation to the deployment of digital infrastructure:

- Incentivising connectivity: support the expansion of telecommunications networks, and take a 'joined-up' approach to the wireless infrastructure planning process, including ensuring that Local Plans effectively support the deployment of digital infrastructure.
- Facilitating sites: engage with operators when new sites have been proposed and discuss site requirements.
- Engagement with operators: respond positively to requests for engagement and make decisions in line with national policy and Local Plans. For planning applications, find solutions to issues and ensure timely decisions are made.

The added emphasis on support from Local Planning Authorities in the deployment in digital infrastructure is even more evident in the revised Code of Practice. The Code of Practice recognises the importance of collaboration and partnership to help drive network coverage across the country. It goes on to state that *'In all instances, it is important for all parties involved in the process to take a positive approach to consultation and engagement'*.

Siting and Design Principles

The government's objective is to deliver high quality, reliable wireless infrastructure whilst ensuring the impact of new network development is kept to a minimum. The siting and design of wireless network infrastructure is central to achieving this. The Code of Practice acknowledges that *'good siting and design principles should apply to all wireless network development and take into account any site specific considerations and context. Both can create better places in which to live and work and help make development acceptable to communities'*.

The Code provides guidance on siting and appearance principles. It sets out several design principles in respect of telecommunications development and acknowledges that the options for design used by an operator will be affected by site conditions including requirements to link the site to the network, landscape features and coverage and capacity requirements. The guidance includes at Para. 22 *'the choice over the site selection and design of equipment is primarily dependent upon the coverage and capacity requirements and technical constraints of a specific location, although operators should make efforts to reduce visual impacts where possible'*.

Para. 23 confirms that there should be a ***'presumption in favour of facilitating sustainable network development'*** and, as such, operators and local planning authorities, as well as all other bodies involved in the deployment process, should work together to ensure connectivity needs are met and find viable solutions to deployment issues (emphasis added).

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Paragraphs 24 - 27 sets out general siting and site selection principles which Operators should consider. The Code of Practice acknowledges at Para. 24 that '*Operators use a range of sophisticated, computer-based planning tools to predict levels of signal strength and coverage from sites for 2G, 3G, 4G and now 5G. Once an operator has identified a requirement for a new cell site, a suitable site needs to be found. Elements that make a site favourable include: having existing or ready access to a power supply, access to fibre optic cables, vehicular access, and, other buildings and development which may provide a level of existing screening. Operators will typically look to upgrade existing infrastructure prior to considering a new deployment, in particular for initial 5G deployment*'.

Para 25 notes that '*When selecting sites for mobile infrastructure, operators should examine local plans and designations for the area, as well as carrying out an in-person site search to identify potential options which meet their requirements. Operators should follow these general siting and site selection principles:*

- *Installation on existing buildings and structures;*
- *Erecting new ground based masts;*
- *Camouflaging or disguising equipment where appropriate;*
- *Using small scale equipment (although small cells themselves are generally used to address capacity issues as opposed to providing coverage); and*
- *Mast and/or site sharing (including redevelopment of a site to enable upgrade or sharing with another operator)*'.

Para. 26 highlights that the installation of all wireless infrastructure requires a balanced approach between the technical needs and constraints of the proposed site and the potential impact of the development. The three key technical and operational considerations for installation sites are:

- **Coverage**: wireless infrastructure needs to provide an appropriate level of coverage over the intended geographical area. This involves ensuring that antennas are elevated sufficiently (often via masts) to provide clear lines of sight for signals.
- **Capacity:** where existing network infrastructure can no longer meet the demand for network capacity in a particular area, additional sites may be required within that coverage area to meet the demand. This is more likely to be required in densely populated areas or areas of high footfall.
- **Backhaul**: the radio access network requires a connection to the core network. Backhaul is sometimes provided by a microwave link, which requires a clear line of sight between the two ends of the link.

Para 27 requires that Local Planning Authorities consider these issues and consider the need for a site within a limited search area alongside the public benefit of improved connectivity. Para. 27 further considers that in general, it should not, therefore, be appropriate for planning authorities to seek wider evidence of alternative sites (beyond that required by the NPPF),

unless they consider the proposed development is unacceptable having regard to the relevant material planning considerations

In respect of 'Design', the Code of Practice at Para 28 acknowledges that the siting of wireless infrastructure will influence which design options are most appropriate for reducing the visual impact including

- **Protecting visual amenity**
- **Mitigating visual impacts**

Para. 29 acknowledges that these factors along with location and the coverage and capacity requirements can influence the type of infrastructure structure that is deployed and requires that '*planning authorities should be aware of these constraints when considering proposals. In particular:*

- *In urban areas, where there is a high level of demand for mobile data, mobile base stations are likely to need to be deployed more densely. In these settings you can expect to see more use of streetwork monopoles and rooftop installations and, in future, we are likely to see a larger number of smaller units (so-called "small cells") deployed on buildings and on street furniture.*

The Code of Practice establishes radio equipment housing (cabinets) principles. It states at Para. 30 states that "*cabinets protect radio transmitters and receivers, provide the power source for mobile equipment, and are connected to antennas via cables. Equipment cabinets are likely to be needed at most sites. The cabinets must be of sufficient size to facilitate hosting various operating equipment whilst also allowing air circulation to reduce the potential for overheating*". The Code of Practice establishes the planning and visual considerations for siting radio housing. These include:

- Colouring
- Siting on highways and footways:
- Highway safety:
- Listed buildings/ scheduled monuments and Conservation Areas:
- Access
- Trees

The Code of Practice notes that new ground-based masts will sometimes be required to accommodate the ever-increasing coverage and capacity needs of the country. 4G and 5G are likely to require further network densification in order to meet growing customer demand for data. Where higher frequencies are used, with lower signal propagation characteristics, apparatus will need to be located in closer proximity to user devices. The type of mast deployed will depend upon the location and setting, as well as the coverage requirements of the site. The Code acknowledges that there are many ways by which the potential for environmental and visual impact of a ground-based mast can be reduced.

Paragraph 39 advises that all new masts should be sited, so far as practicable, so as to minimise their impact on their setting, including the landscape and any buildings. This includes siting next to similar structures – e.g. streetworks masts should ideally be sited in line, and in harmony, with existing vertical structures such as lighting columns, to minimise their visual impact. Placing a mast within or adjacent to an existing group of trees, vegetation and other natural features can reduce visual impact. Antennas will however, need to be sufficiently elevated to clear the tree-line.

Paragraph 40 relates to colouring and camouflage and states that where appropriate masts should be coloured to match their backdrop to minimise contrast in an urban setting. Streetworks monopoles can utilise design features such as shrouding or banding to protect visual amenity, though, for some 5G infrastructure, camouflage design solutions may not be practicable. Simple designs should be encouraged. Masts which have a complex design are more likely to dominate and be in discord with the landscape and have adverse visual impacts.

The Code of Practice states again in paragraph 64 that there are three primary technical and operational considerations for installation of radio base stations which are: ensuring that wireless infrastructure provides an appropriate level of coverage over the intended geographical area; ensuring that sites have sufficient capacity to meet user demand; and, requiring a connection to the wider network 'backhaul'. Paragraph 65 notes that planning authorities should take account of these constraints on network deployment and siting and design, when considering proposals.

Paragraphs 66 and 67 of the Code of Practice set out the 5G network deployment considerations:

> *'66. With the introduction of 5G, more equipment will be required to provide coverage and capacity. 5G, as well as 4G, are data-driven technologies, and high volumes of data will be transmitted between base stations and wireless devices. 5G will require a denser network of base stations than previous generations, including more fixed line fibre optic cable for reliable and high capacity backhaul. The siting of 5G installations will be more constrained and guided by these special technical and operational considerations.*
>
> *67. Due to the scale and technological constraints of 5G equipment, in some cases previous camouflage design solutions, such as tree mast designs and concealing antennas in flagpoles, may not be practicable or suitable. In these cases, simple designs with particular attention to colouration and finishes may help reduce visual impacts on a site-specific basis.*

Local Policy

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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 Local Plan for the Kirklees area comprises:

- Kirklees Local Plan Strategy and Policies (2019)
- Kirklees Local Plan Allocations and Designations (2019)

Kirklees Local Plan Strategy and Policies (February 2019)

'The Kirklees Local Plan Strategy and Policies was adopted by Full Council on 27 February 2019. It now forms the council's development plan and sets the planning policies under which development control decisions will be taken.

The Kirklees Local Plan sets out the policies necessary to achieve the strategy and how much new development there should be in the district, and where it should go. The site is identified as being located on white land. There are no specific policies within the Local Plan which relate solely to telecommunications development, but there are numerous policies relating to the provision of well-designed communications networks, drawing the link between digital infrastructure and sustainable economic development.'

Policy LP1

'Presumption in favour of sustainable development - when considering development proposals, the council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. The council will always work pro-actively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.'

Policy LP4

'Providing Infrastructure - states that the council will work with partners to bring forward the necessary and proportionate essential and desirable infrastructure that is required in order to deliver the spatial strategy as set out in the Local Plan.'

Policy LP24

'Relates to design and outlines that proposals should promote good design. This can be achieved by, amongst other things, ensuring that the form, scale, layout and details of all development respects and enhances the character of the townscape.

Supporting paragraph 11.8 of Policy LP24 discusses telecommunications infrastructure directly and outlines that this should be capable of accommodating changes in technological requirements without having a negative impact on the streetscene.'

Kirklees Economic Strategy 2019-2025

Vision for the region:

'This strategy builds on the strength of Kirklees' many distinctive places – from the large towns of Huddersfield and Dewsbury to a wealth of smaller towns, villages and valleys. This combination of assets, and our excellent location at the centre of the Leeds, Manchester and Sheffield city regions, add up to leading businesses, many skilled people, an excellent university, a strong leisure and tourism offer, a high quality of life and a diverse housing offer upon which to build.

The strategy focuses on creating sustained economic growth and providing good employment for and with communities and businesses. It aligns to the Kirklees Local Plan and is supported by other strategies that have a fundamental impact on our economy, including the Digital Plan and Housing Strategy, and the forthcoming Inward Investment Plan. It is also instrumental to the shared outcome of supporting people in Kirklees to have aspiration to achieve their ambitions through education, training employment and lifelong learning and it sets the context for the Learning and Post-16 Employment and Skills Plans.'

Kirklees Economic Strategy consist of multiple priorities set for the region. Priority 4 discuss the importance of the digital connectivity:

'Advanced Connectivity and Infrastructure - securing and maximising benefits from the Transpennine rail upgrade, a Huddersfield-North Kirklees-Leeds Inclusive Growth Corridor, 10,000 new homes and excellent digital and green infrastructure.'

'The Long Term Outcome:

High-speed, reliable internet access and above average uptake; faster rail travel; more journeys by public transport and active travel; increased housing numbers and affordability. To deliver an inclusive and productive economy we need to ensure all of Kirklees has the highest standards of connectivity and infrastructure. This includes not just road investment but public transport, active travel and modal shift to support the quality of our places, health, inclusion and air quality, safe, joined up cycling/walking routes and facilities and digital connectivity. We want to improve the speed and capacity of services on key corridors, especially those connecting Huddersfield and North Kirklees to each other and to Leeds and Manchester, and faster, more frequent services to Sheffield and directly to London.'

ACTION PROGRAMME 9: SECURE TOP CLASS DIGITAL INFRASTRUCTURE AND ITS APPLICATION:

'We will deliver the Kirklees Digital Plan and associated activity to support digital infrastructure and the digital economy more broadly in both our busiest towns and our most rural communities.

This will include:

- Maximising gigabit, Superfast, Ultrafast, Mobile and WiFi access across all geographical areas, including establishing free WiFi in Huddersfield, Dewsbury and Holmfirth
- Removing barriers to digital infrastructure investment and planning for infrastructure growth by determining sites for data centres, masts and aerial infrastructure in advance of demand
- Ensuring digital infrastructure expansion and provision is at the heart of planning applications and transport schemes
- Action to promote the use of digital as part of modern business practice; building digital skills and inclusion; and facilitating digital sector growth

ACTION PROGRAMME 12: SOUTH KIRKLEES AND RURAL AREAS:

'We will facilitate action that allows small towns, villages and rural areas to fulfil their potential, to promote themselves positively and to maximise connections between their success and that of Huddersfield and North Kirklees.

This will include:

- Improving digital connectivity and exploiting opportunities in the sector.

West Yorkshire Combined Authority – Leeds City Region Digital Framework

'The West Yorkshire Combined Authority's membership is made up of democratically elected councillors from the West Yorkshire councils of Bradford, Calderdale, Kirklees, Leeds and Wakefield, plus York and the Chair of the LEP.

The Leeds City Region Digital Framework sets out four key challenges facing the City Region which are currently holding back the economy and constraining growth. It identifies that to tackle these challenges, digital technologies can aid businesses to become more productive and give them the opportunity to exploit new digital technologies to drive product and process innovation. It also acknowledges that closing the 'digital gap' will help to ensure that everyone can access the same opportunities in employment, lifestyle and learning through the use of digital technologies, and will reduce the current divide between the 'haves' and 'have nots'.

The Digital Framework identifies 5G as an aspect of world class digital infrastructure, and the City Region wishes to action a regional response to the opportunities that 5G will bring, particularly around demonstrable health use cases.'

West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036 (May 2016)

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The Vision of Leeds City Region SEP is:

'TO BE A GLOBALLY RECOGNISED ECONOMY WHERE GOOD GROWTH DELIVERS HIGH LEVELS OF PROSPERITY, JOBS AND QUALITY OF LIFE FOR EVERYONE'

The Leeds City Region SEP recognises the benefits of the new digital technologies, as well as the need to improve infrastructure required by them:

'High quality digital infrastructure supports all priorities of this strategy. Schemes such as Super Connected Cities and Superfast West Yorkshire and York, as well as North Yorkshire projects, continue to deliver major digital infrastructure improvements. But we want to go further still to ensure no business – in urban or rural areas – faces digital disadvantage that holds back growth and perpetuates exclusion.

Currently, superfast broadband coverage sits at around 96%, with an ambition and infrastructure programmes in place to reach 99% by 2018/19. However, this is about more than infrastructure. We want to go further and faster to ensure that Leeds City Region fully capitalises upon the capacity of rapid digital technology advances and open data, aligned to the capacity of businesses to deliver investment and productivity improvements, and opportunities to transform outcomes for residents – such as on health, transport and education.

We will work with industry to explore the opportunities to use alternative technologies that improve digital infrastructure across the City Region, and alongside this, work through the LEP Growth Service to support business awareness and take-up of the opportunities that are presented by enhanced digital connectivity (see Priority 1 for detail).'

Connected Nations 2021 Report (June 2021)

The importance of the internet and access to smartphones is acknowledged within the latest Online Nation 2021 Report (June 2021). The report notes that the pandemic has highlighted the importance of being online and driven changes in the take-up and use of internet services, as many people have had a critical reliance on the internet for communications, information, entertainment and commerce. Increases in internet use in 2020 were most pronounced in spring and November 2020 lockdowns, as people turned to the internet and were more dependent than ever on online services for video calling for socialising or home-based working, home schooling, keeping in touch, films and gaming, shopping and information about the pandemic.

In September 2020, UK Internet users spent nearly 4 times as much time on smartphones than they did on computers. 68% of the time spent online was via smartphones up 4% from September 2019, this was compared to 18% of time spent on line via computers and 13% via tablets.

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By the end of 2020 approximately 94% of UK homes had internet access, up from 89% in 2019. Video calling became an important way for people to keep in touch during the pandemic. Zoom went from a few hundred thousand users in the first few months of 2020 to more than 13 million in April and May 2020. This has dropped to 10.4 million users in March 2021, while platforms used mainly for work and education, notably Microsoft Teams have shown a sustained increase in use (13.7 million users in March 2021m up by 5.3 million year on year).

The report found that most of the time people spend on the internet is via apps on mobile devices. Online services were a crucial way for people to find out information about the pandemic, and for governments to try and track and control the spread of the virus.

The report acknowledged that the internet helped most children continue their education throughout lockdown. Virtually all households with school-aged children had access to the internet at home. 7% did not have fixed broadband and 4% had access only to a mobile phone. 1 in 5 did not have access to an appropriate device for their schoolwork all the time. The Report found that 2020 saw the rapid adoption of digital remote education by teachers, parents and children such as video conferencing, and platforms for setting and collecting work. In the first few weeks of lockdown in spring 2020, two thirds of children in England were not receiving any live or recorded lessons. By January 2021, this was down to just one in ten. The Report suggests that the use of these platforms may continue such as for those who can't attend school due to illness, or to provide additional revision materials.

Nine in ten 8 – 15 year olds who use social-media said it helped them to feel closer to their friends in 2020. The report stated that social video services offer huge benefits for users and the economy. They provide a platform for self-expression through enabling user-generated content (31% of adults and 40% of 13-17 year olds post video content).

Lockdown influenced the types of social video that were most popular such as the first episode of Joe Wickes' PE which was the most viewed YouTube video of 2020, and videos relating to home baking such as sourdough bread increased by 458%.

Social media serves as a means of entertainment and education for many (used by 97% of adult internet users), and as an important method of marketing for businesses (online video advertising grew by 23% in the UK in 2020).

On line retail spend in the UK increased by 48% in 2020 (compared to an average annual increase of 13% in the previous 4 years). Online's share of retail spend increased from approximately 20% in 2019 to 35% in the spring lockdown and 30% in December 2020. By December 2020 11% of the UK grocery market sales were online, up from 5% at the beginning of the year. Online food delivery services also increased in demand. Just Eat being the most popular with its UK orders up 58% higher in the last quarter of 202 compared to the same period in 2019.

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People have relied on the internet for news and information throughout the pandemic. During the spring 2020 lockdown 52% of people said that news and current affairs was one of their main reasons to go online.

Adults are as likely to use social media to find information about the COVID-19 pandemic as they are to use news sites and apps (approximately 1 in 3). Whilst one in eight 16 – 24 year olds considered social media to be their most important source of information about the coronavirus pandemic, compared to 5% of all UK online adults.

The report found that 91% of households used smartphones to access the internet in 2021, compared to 65% who used tablets and 47% who accessed the internet using computers. The report also noted that 61% of UK adults who access the internet did so using both computers and smart devices.

The Report notes that the smartphone is the most-used device for accessing the internet for all age groups apart from those aged 65 +. It found that in 2020, 85% of internet users aged 16 + used a smartphone to go online, compared to nearly 75% accessing the internet via a computer and just over 50% using a tablet to access the internet. One in ten adults also stated that they only use a smartphone to go online and three in ten used their phone to complete an online form or app on a weekly basis.

Levelling Up the United Kingdom (February 2022)

Digital Connectivity is a focus area and the mission is 'By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population'.

Chapter 3 - The Policy Programme:

Para 3.2.4 - By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population

This mission is focused on improving digital connectivity.

Digital connectivity: The case for action

The COVID-19 pandemic demonstrated the importance of digital infrastructure right across society, from ensuring business continuity to reducing isolation. Improved digital connectivity has the potential to drive growth and productivity across the UK and widen job opportunities through remote working. However, there are significant spatial disparities in the quality of broadband and mobile networks, with rural areas likely to experience worse digital connectivity than urban areas. Infrastructure is only part of the picture: economic benefits will only materialise if businesses and workers have the skills to take advantage of improved infrastructure.

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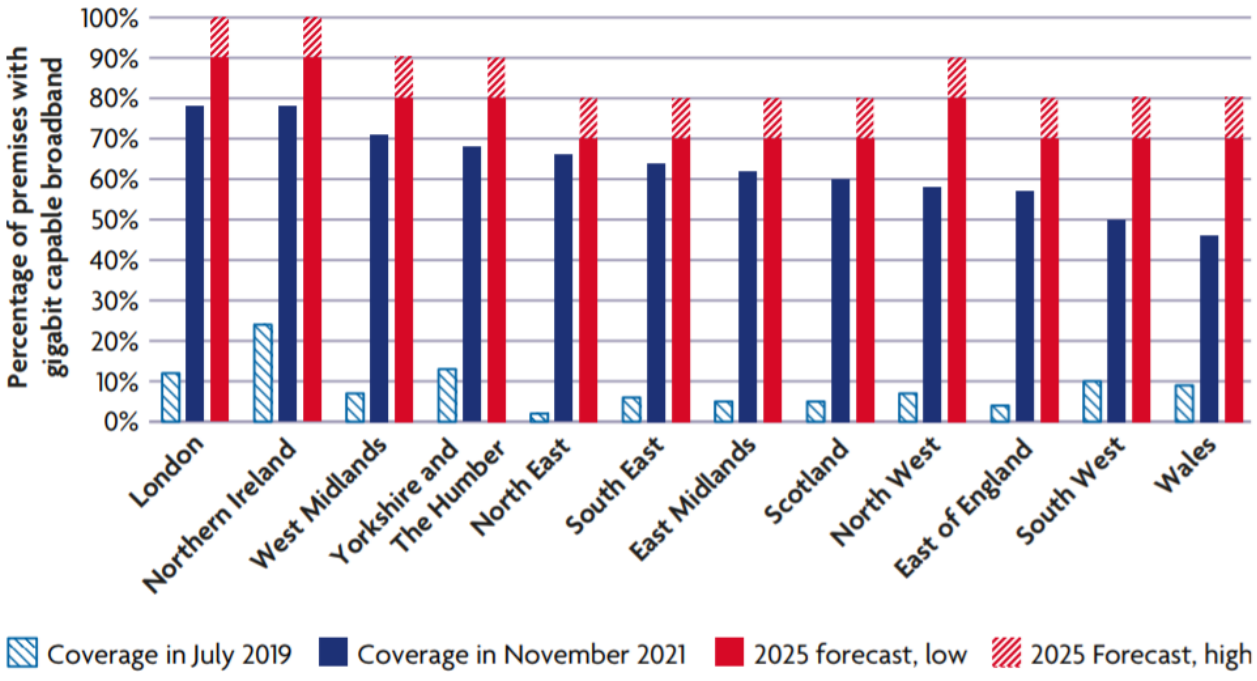
More broadly, high quality digital infrastructure can deepen local labour markets through remote working, making it more attractive for both workers and companies to locate regionally. It also allows for the development of high-value sectoral clusters, which can drive growth and jobs in new areas. Existing specialisms in the UK regions have the potential to generate strong tech clusters, such as fntech in Scotland and Wales, e-Commerce in the North West and Northern Ireland, and Agri-Tech in Yorkshire and the Humber. The sector also provides opportunities for raising living standards – median earnings for the sector are 50% higher than the UK average.

The policy programme In 2020, the UK Government published the National Infrastructure Strategy, committing to providing £5bn in public funding to roll out gigabit broadband to at least 85% of the country by 2025, and subsequently to as close to 100% as possible, working with the private sector.

Public investment will target premises that are hardest to reach and which would otherwise not be provided for by the private sector, ensuring no areas are left behind. Gigabit coverage has increased from 10% to over 60% in less than two years. Since 2019, coverage has improved across the UK, and the UK Government anticipates the following additional improvements to be delivered as a minimum by 2025, as set out below.

Figure 3.1 Gigabit coverage improvements, UK countries and regions, 2019, 2021 and 2025 (forecast)



Source: Levelling Up the United Kingdom.

5G has the potential to radically change the way people live and make businesses more productive and competitive. The UK Government's ambition is for the majority of the population to have access to a 5G signal by 2027. Since 2017, the UK Government has

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provided £200m in funding for 5G Testbeds and Trials, supporting over 200 startups and SMEs across a range of sectors – including healthcare, manufacturing, Agri-Tech and creative industries – to better understand how to use the technology to develop new solutions and services.

In 2022, the UK Government will publish the Wireless Infrastructure Strategy. This will review how far the private sector will go to deliver wireless infrastructure – including 5G – across the country, and determine whether there are any market failures in places that need to be addressed, and how the UK Government could tackle these.

Box 3.9 - West Midlands 5G The West Midlands 5G (WM5G) Testbed started in 2018 with the mission of testing and proving the benefits of 5G to public and private sector productivity, creating jobs and boosting growth. The UK Government has invested £21m over three years, alongside investment from local government and the private sector. By working with local authorities and Mobile Network Operators (MNOs), WM5G has accelerated 5G deployment by over six months, resulting in the West Midlands being amongst the best connected places for 5G in the UK. In addition, WM5G has delivered a number of UK firsts, including a 5G road sensor network, 5G connected ambulance and capsule endoscopy trials, and a 5G application accelerator programme called 5prinG, which has already upskilled over 400 organisations on the benefits of 5G and allowed over 60 start-ups to develop new 5G products and services.

We must ensure that people have sufficient digital skills to reap the benefits and prosperity arising from the digital economy. In 2020, the UK Government introduced a new digital skills entitlement, giving adults with low or no digital skills in England free access to new digital skills qualifications based on employer-supported national standards. The UK Government continues to work with local leaders to develop Local Digital Skills Partnerships. These collaborative partnerships are now operating in seven regions across England, with an eighth formally launching in Hull and East Yorkshire in early March. The UK Government will work with devolved administrations to consider how best to share the insights and evaluation of the programme to help build digital skills capability across the UK.

Planning Assessment

The main issues arising from this prior approval notification are whether the proposed lattice tower and cabinets, due to their scale and siting, would be a visually obtrusive feature which would be detrimental to the character and appearance of the area, and whether any perceived harm would outweigh the significant social and economic benefits associated with the increased service provision attributed to the proposal and other valid material considerations as outlined in the NPPF, which fully supports the roll out of 5G and the next generation connectivity to accelerate business opportunities and growth to ensure the economy is resilient and competitive, and also the relevant objectives and policies within the Kirklees Local Plan Strategy and Policies, Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036.

The lattice tower and associated antennas fully comply with the NPPF, Kirklees Local Plan Strategy and Policies as it will increase overall connectivity for the area of north Golcar. Access to a high quality, reliable superfast mobile network is not just 'a nice to have' but an essential part of everyday life. Indeed many, including the former Minister for Digital Infrastructure Matt Warman, consider it to be the fourth utility service as important as gas, water and electricity, a life line for many especially during the COVID-19 pandemic where people were able to see their loved ones, speak to friends and family and arrange virtual meetings allowing some form of normality in a very abnormal situation.

The principle of development has been established by the Government when the new permitted development rights came into force in April 2022, which enabled sites such as this one to be built under the operators permitted development rights, (as the column height does not exceed 25m), with prior approval for siting and appearance being the only matters that the local planning authority can take into consideration.

Planning Practice Guidance explains how a prior approval application differs from a planning application at paragraph 28. It states that:

> *'The statutory requirements relating to prior approval are much less prescriptive than those relating to planning applications. This is deliberate, as prior approval is a light-touch process which applies where the principle of the development has already been established* (emphasis added). *Where no specific procedure is provided in the General Permitted Development Order, local planning authorities have discretion on what processes they put in place. It is important that a local planning authority does not impose unnecessarily onerous requirements on developers and does not seek to replicate the planning application system*' (emphasis added).

The Planning Portal also provides Application Type Guidance. This guidance states that:

> *'Certain forms of telecommunication development, for example, mobile telephone masts, are known as 'permitted development' and subject to prior approval from the local planning authority. The prior approval procedure means that the principle of development is not an issue. The LPA can only consider the siting and appearance of the proposal'.*

Siting

The siting of the proposed radio base station has been carefully considered. To this end, it is located on council land, located as far away as possible from the residential nature of the area, where demand for service provision is high for users. The site set within the context of the allotments adjacent to the site, with surrounding semi-mature trees in the area shielding part of the installation from certain vantage points. The sites location will ensure that this installation will not appear prominent nor out of place in the area. This is in accordance with the policy L24 of the Kirklees Local Plan Strategy and Policies.

Technical requirements have dictated the siting of the proposed equipment. The operator has spent a considerable amount of time identifying a potential site and the proposed

location is considered to present the best balance between operational/technical requirements and environmental impact. As explained throughout this document, the proposed site needs to be close to the existing equipment on Thorpe Green Bowling and Social Club, in order to cover the same target coverage area.

The operator's lattice tower and equipment cabinets will be positioned within the fenced compound thus will reduce their prominence. Consequently, the context of the site is consistent with its location adjacent to the palisade fencing to the associated allotments.

In line with the requirements of NPPF, there are no existing suitable telecommunications installations for the operator to share, that would provide the necessary coverage to the target coverage area. Similarly, there are no buildings which are suitable and available that the operator could utilise to operate their equipment. Therefore, a new ground based installation is required. The discounted options are set out above and their reasons for being discounted are fully explained.

3G and 4G signals by their very nature (as they carry high data rates) do not penetrate over long distances, (5G even less so), just a few hundred metres, depending on the topography of the land, building clutter and vegetation including trees in the area which can reduce their effectiveness. Therefore 3G, 4G and 5G radio base stations need to be close to their customer demand. In addition to this, the operator is unable to provide the latest 4G and new 5G technology from the existing site at Thorpe Green Bowling and Social Club. Therefore, they require a new site to provide new 5G service provision as well as retain and enhance their 2G, 3G and 4G coverage to this cell area. As this is a replacement site for the operator, whose network configuration is well established in the area, the operator's search area is naturally smaller, than would otherwise be the case if the operator wasn't already providing service provision from this location. This severely limits the options for siting a new installation in the area.

As Section 5 above demonstrates there are no more suitable sites that are located within less sensitive locations than the current proposed site, and, as this is a replacement site the operator is even more restricted in locating a more suitable site in which to provide replacement and new coverage to the target coverage area in this part of Thorpe Green Bowling and Social Club. As previously explained in Section 3 and the discounted options in Section 5, the existing mast at Thorpe Green Bowling and Social Club cannot upgraded due to its structural incapability to host the latest required telecommunications equipment of two operators.

The proposed installation is an item of essential infrastructure and therefore will not cause any loss of privacy nor will any occupants of nearby properties be overlooked. The mast and antennas do not emit any noise, odour, vibration, artificial light or disturbance from air. The only noise emitted is from a cooling fan within the equipment cabinets, which only operate during hot weather conditions and are located within the equipment cabins. However, within a few metres the noise is inaudible, particularly when taking into account the ambient noise levels of the area. The proposed installation will not cause any traffic generation as it is not a

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visitor destination. Maintenance of the equipment cabinets is usually once a year, where the engineer can walk to site with handheld tools.

The transmission dishes are essential to provide a link into the operator's network. They require a clear line of sight and therefore needs to have a centre line of height of 17m.

The ERSs are small for telecommunications apparatus. They are designed to make the antennas more efficient and reduce the need for additional equipment cabinets at ground level. This minimises the impact on the visual amenity of the area. In order to maximise signal efficiency the ERSs need to be as close as possible to the antennas, hence they need to be located behind the antennas towards the top of the column. Given their height above ground level and their small size approximately that of a shoe box, they will not appear prominent in the streetscene as they will be out of the general eye line of casual passers-by. This is in full accordance with the policy L24 of the Kirklees Local Plan Strategy and Policies.

Appearance

In line with the guidance set out policy L24 of the Kirklees Local Plan Strategy and Policies the visual impact on the area has been minimised. The radio base station is proposed to be a lattice tower which is required to provide the latest technologies. Given the makeup of the area that includes semi-mature trees near the proposal and thus will not appear out of place within the area which will be well shielded from certain vantage points in this location.

The top of the lattice tower requires 6 no. antennas on a lattice tower to support the number of antennas. This ensures that the operators can provide 2G coverage, 3G and 4G services and new 5G coverage and capacity to this area of north Golcar. The installation of this lattice tower in this location on private land, of a car park will not appear prominent when viewed in its wider context.

It is essential that the 5G antennas are unshrouded. As the radio frequencies get higher, required for data carrying, the antennas are less able to propagate through immediate blockages including Glass Reinforced Plastic, which is what the shroud is made from. This affects the 5G antennas more so than any other technology. The result being they cannot operate effectively close to Glass Reinforced Plastic or any other blocking material. Therefore there is a technical reason why the 5G antennas need to be unshrouded. The latest 4G technology are also affected more so than older technologies by propagation, and are therefore less efficient if they are shrouded. As such, the other antennas also need to be unshrouded to ensure that the latest technologies are provided to the surrounding area, helping the area of north Golcar achieve optimum coverage levels and provision of new 5G coverage in line with the NPPF.

The proposed tower will allow the antennas and dishes to be orientated in a way which maximises 2G, 3G and 4G capacity and the 5G provision to the area. A thinner monopole design would not be able to host all of the required antennas and would restrict the orientation of the antennas it could hold, which would not adequately serve the operator's target coverage area and would therefore fail the design brief.

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In addition, if the tower were to be any lower, the antennas would not be able to clear the nearby urban clutter/trees and as such would not be able to operate effectively, and the dishes would not be able to transmit with an effective line of sight. A lower height would lead to a poor user experience for a large part of the target coverage area. As such, this would fail the operators design brief and an additional installation would have to be found leading to the proliferation of masts contrary to national planning guidance contained in the NPPF and policy L24 of the Kirklees Local Plan Strategy and Policies.

It is accepted that the height of the proposed installation is taller than other pieces of surrounding linear items of street furniture. This in itself is not a valid reason to conclude that it is not appropriate at a specific location. Indeed, Inspectors at appeal have noted that by their very nature to be effective masts are required to be taller than surrounding structures.

Telecommunications apparatus by their very nature must be taller than surrounding built and natural form to ensure its efficient operation. The Code of Practice explains this requirement fully in paragraph 39, '*Placing a mast within or adjacent to an existing group of trees, vegetation and other natural features can reduce visual impact… antennas will need to be sufficiently elevated to clear the tree-line…*' It is an essential piece of infrastructure, like pylons and telegraph poles. The proposal should not be considered negatively due to it being taller per se than nearby trees and other vertical structures including lighting columns in the surrounding area. Reasonable consideration of the proposal in the context of these trees and lighting columns can only conclude that the presence of these seeks to provide a setting wherein a base station may appear more congruous from which to provide an important service.

NPPF states at paragraph 115 the number of radio and electronic communications masts, and the sites for such installations, should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. In order to provide the latest 4G technology and 5G service in this locality and to increase capacity to match demand, a new site is required in order to provide the latest technologies to the surrounding area.

The design of the radio base station is one of the most sensitive designs available to the operator that will allow adequate replacement and new 5G coverage to be provided to the area. This is in line with the requirements of NPPF which supports equipment which is sympathetically designed and camouflaged where appropriate [paragraph 115], The Code of Practice as well as the aspirations of policy L24 of the Kirklees Local Plan Strategy and Policies.

The proposed new site accords with NPPF, because the equipment will expand the network, ensuring high quality communications infrastructure is maintained whilst minimising the number of radio base stations in the area. Placing masts near similar structures such as lighting columns, utilising simple and unfussy designs is acknowledged in the Code of Practice on Mobile Network Development in England to be less likely to dominate and be in discord with the streetscene and as a result less likely to have a detrimental impact on the visual amenity of the surrounding area.

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Lack of Coverage – Material Consideration

The current proposals will facilitate the development of an advanced broadband telecommunications infrastructure in line with National Government guidance contained within the NPPF which supports infrastructure especially where growth takes place. By providing the latest 4G technology and new 5G service provision the proposals will support the aspirations of Central Government for everyone to have access to the superfast highway network wherever they are and that the majority of the population have access to a 5G service by 2027.

Mobiles can only work with a network of base stations in place where people want to use their mobile phones or other wireless devices. Without base stations, the mobile phones and other devices we rely on simply won't work. The proposed new mast has been sited and designed in order to provide new 3G, 4G and the latest 5G coverage and to improve the existing mobile network whereby the current location cannot be upgraded. Without this new site, both network users would not be able to access the latest technologies.

The way 5G works, it is closely connected with the Smart City agenda and will enable centralized control of lots of different street infrastructure owned or managed by councils, such as street lights, water meters and bus stops. This is in line with Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036 which highlights their digital priorities relate to skills and business will be delivered, to secure digital infrastructure and to improve digital connectivity. It is acknowledged that almost every aspect of the economy is being transformed by digital technology. The ambition for digital is that Leeds City Region will be recognised as one of the best-connected regions in the country where coverage, choice, and speed of communication stays ahead of demand and where there is an abundance of multi-skilled, digitally mature individuals to cater for every industry's business needs. Enhanced digital connectivity and skills enable people to use digital applications and solutions to improve their lives and to sustain, economic grow, and create new businesses.

Trials have already begun across the UK to demonstrate the potential of 5G and how it can improve and drive productivity and efficiency. In June 2019, West Midlands 5G partnered with BT and University Hospitals Birmingham to trial the UK's first 5G Connected Ambulance. Real-Time communications between the paramedics and the hospital doctors enabled the effective diagnosis of the patient at an early stage of care. The trial showed how a paramedic performed a remote-controlled ultra-sound scan on a patient in an ambulance over a public 5G network. These trials show how digital connectivity and technology can reduce patient waiting times and save lives (Source: WM5G).

In line with the NPPF and Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036, the proposals will provide world-class connections and access to opportunity for all in this cell area, as well as providing world-class

digital infrastructure which provides the platform for the north Golcar area to embrace emerging technologies and societal changes. 5G infrastructure is fundamental to enable digital technologies to function. The proposals will ensure that any Three customer in this cell area will be able to access resilient, seamless connectivity at a speed they need anywhere at any time. Without the more basic technology solutions such as 5G, smart-region solutions and value-added outcomes will struggle to be brought to fruition.

Without this new site, the operator's customers would continue to experience an increase in numbers of dropped calls and buffering unable to access the internet on their handheld devices. They would also not be able to access the 5G network, a demand which is increasing rapidly as customers update their handheld devices to ones that are 5G compatible. If the 5G network is not available then the customers' would not be able to utilise these handheld devices for the purposes in which they were purchased. This would be contrary to the aspirations of Central Government which aspires to everyone having access to the superfast highway network wherever they are, and that the majority of the population have access to a 5G service by 2027.

In accordance with the NPPF the proposed installation will help improve the area's economic prosperity, strengthen the urban economy's by supporting local businesses to start, grow, adapt and diversify. It will support a better environment for today and tomorrow by reducing the need to travel and in turn minimise carbon emissions. This is in accordance with Policy LP1 and LP4 of the Kirklees Local Plan Strategy and Policies. The radio base station will support the delivery of healthcare provision and accessibility by enabling people greater access to online services, NHS appointment reminders, reminders to take medicines, make appointments etc. As well as assisting hospital outpatient appointments and emergency consultations carried out remotely via video link, connected ambulances, live streaming of CCTV footage etc. This is also highlighted within the Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036 which expands on the significant economic gains which are possible if the region can deploy the best infrastructure for digital connectivity.

By enhancing the 3G and 4G service provision to the surrounding area and providing new 5G coverage into the operator's network, this would fully support the NPPF and the Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036 which has the ambition for digital in Leeds City Region to be recognised as one of the best connected regions in the country where coverage, choice, and speed of communication stays ahead of demand and where there is an abundance of multi-skilled, digitally mature individuals to cater for every industry's business needs. Enhanced digital connectivity and skills enable people to use digital applications and solutions to improve their lives and to sustain economic grow and create new businesses. Almost every aspect of the economy is being transformed by digital technology.

The Councilor's Guide to Digital Connectivity notes that a survey conducted by the Confederation of British Industry found that 81% of firms said that they see more reliable mobile

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connectivity as essential. Studies have also shown that mobile broadband is associated with positive impacts nationally, such as higher GDP and increased employment.

Therefore, the Government fully supports high quality communications infrastructure, even more so with the advent of 5G. The NPPF continues to strongly support telecommunications connectivity and states at paragraph 114 that local planning authorities should support the expansion of electronic communications networks. It acknowledges that advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being.

The demand for mobile data in the UK is increasing rapidly, and as households and businesses become increasingly reliant on mobile connectivity, the infrastructure must be in place to ensure supply does not become a constraint on future demand.

The proposed installation in this location will fill the current gap in the latest high quality service provision and enable the operator and MVNOs who buy network space off this operator to maintain access to their handheld devices wherever they are for the purposes in which they were purchased. This is fully in line with the Government's aspirations that everyone has access to the superfast communications network, contained within the NPPF.

Access to the internet in whatever medium now impacts every facet of our lives but only benefits those who can access and use it. The benefits of internet connectivity are key for both residents and businesses alike and a radio base station in this location providing the latest 3G, 4G and 5G technologies will support the NPPF.

In line with guidance contained within the NPPF a radio base station in this location will enable fast, reliable, secure internet accessibility wherever the user is located. This would fully meet the latest operators' coverage and capacity requirements for 3G, 4G and new 5G provision. This would be wholly in line with the Government's latest aspirations to strongly support advanced, high quality and reliable communications infrastructure, essential for economic growth and social well-being. Where the NPPF notes that decisions should support the expansion of electronic communications networks. An installation outside this search area, regardless of whether there are existing sites, would not allow the operator to provide their desired level of coverage and therefore would not adequately maintain and provide new coverage and capacity.

As part of the operators 4G licence obligations, many customers will benefit significantly from a vastly improved service provision in this locality. They will be able to gain access to the very latest technologies and connectivity, including 5G, to high-speed data services. Digital technology has catalysed the interconnection of the global economy, with the internet enabling the free exchange of goods and services, providing consumers with greater choice and businesses with access to skills, resources and customers. The Code of Practice acknowledges that upgrading and improving mobile networks will not be possible without the necessary infrastructure on which we rely. With increasing consumer demand and the Government's aspirations for high quality communications infrastructure it is ever more important to improve connectivity and capacity.

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In the Code of Practice, it emphasises the need for Local Planning Authorities to take account of network deployment and siting and design, when considering proposals. In relation to the introduction of 5G network deployment the Code acknowledges the requirement of additional equipment to provide necessary coverage and capacity. With the increasing consumer demand and the Government's ambitious aspirations it is becoming more important to improve connectivity and capacity. This is due to the ever-increasing demand for data hungry applications to be available to a range of connected devices, such as smartphones and tablet computers. However, the Code notes that upgrading and improving mobile networks will not be possible without the necessary infrastructure on which they rely. Therefore, there is a significant need to locate the equipment in this area.

The operator not only has a license requirement to provide a certain level of 3G/4G coverage to the population the operators are obliged to meet the growing consumer demand for 5G coverage, but especially as more people are also purchasing 5G enabled devices, in line with their license obligations and the operators competitive market driven "requirement" to provide a high-quality service. Customers expect to be able to access their portable hand-held devices wherever they are, whether that be indoors or outside. The current network coverage in this area is struggling to cope with demand and therefore the new site is required to increase capacity on the network in this busy urban area.

The Online Nation 2021 Report highlights the importance of smart phones and thus in turn connectivity. In September 2020, UK Internet users spent nearly 4 times as much time on smartphones than they did on computers. The report found that most of the time people spend on the internet is via apps on mobile devices. Social media serves as a means of entertainment and education for many, and as an important method of marketing for businesses. The report found that 91% of households used smartphones to access the internet in 2021, compared to 65% who used tablets and 47% who accessed the internet using computers. The Report notes that the smartphone is the most-used device for accessing the internet for all age groups apart from those aged 65 +.

It is therefore imperative that the operator continues to invest in ensuring that the latest technologies are available on its network, so that customers are able to continue to use their handheld devices wherever they are, for whatever reason, for the purposes in which they were purchased.

Economic and Social Benefits

The NPPF strongly supports sustainable development, as does LP1 of the Kirklees Local Plan Strategy and Policies, Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036. 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, participate in social

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media, 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. Residents and businesses will enjoy better accessibility, assisting home-base working by improving the electronic means of communication and the roll-out of high-speed broadband helping to promote live-work development. This reduces travel time, carbon emissions and increases the speed in which information is processed/shared. The proposals therefore fully comply with NPPF and Policy LP1 of the Kirklees Local Plan Strategy and Policies, Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036, to minimise the effects of climate change, reducing the need to travel, and therefore the carbon footprint.

In such instances, as described above, the NPPF supports development that improves the economic, social and environmental conditions in the area. By filling the current gap for 3G and 4G coverage and capacity in this area and providing new 5G services will fully meet this national policy objective. Continuing to transform the digital connectivity of the city-region to drive economic growth and innovation, working to meet national targets of full roll-out of 5G technology for most people by 2027 which is in line with Central Government objectives.

Mobile connectivity is essential to the future success of the economy. The combined value of 4G and 5G mobile connectivity is estimated to add £18.5bn to the economy by 2026 (Councils and Connectivity Sept 2018). Mobile connectivity is essential to creating a better society. Digital inclusion can help people gain employment, become more financially secure and improve health and well-being. Mobile connectivity is essential to fulfilling the potential of new technologies. Innovations such as artificial intelligence and connected cars will change how we work, spend our leisure time and run our public services.

Providing the latest digital infrastructure to enable improvements in digital technology empowers and enables residents to have the highest quality of life, supports the creation of high quality jobs and achieves the maximum productivity levels. It also helps the economy to be resilient and competitive. It will help Kirkless be a world-leading digital region and one which its businesses, public service providers and citizens are using digital technology by default and to the fullest to grow their businesses and improve productivity to access skills, training and employment opportunities to address global challenges that have a local impact such as ill health, social isolation, and pollution; to improve living standards and well-being, helping people to lead prosperous and rewarding lives; and to improve the quality and value for money of public services.

The enclosed Cornerstone Local Authority Engagement Brochure September 2020, emphasises further the benefits of high quality mobile connectivity including: promoting economic growth by attracting investment from business, which creates jobs and regional prosperity in line with national and local Economic Strategies; helps local businesses to offer a broader range of services, boosting the local economy; helps local Councils to offer online services such as school admissions and local information for residents supports local companies by facilitating working from home, offers social benefits such as being able to

connect with vulnerable family and friends (a life line during COVID 19 lockdown) or contact the emergency services 24/7, and helps local councils to offer online services such as paying council tax bills which provides a more efficient service to name but a few benefits.

Practical Applications of 5G Connectivity as Example of Material Soci-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 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.

There is a demand for mobile connectivity in areas where geography, logistics or economics – or a combination of all 3, make it difficult. Mobile network capacity needs to grow to meet the demand of mobile users, who are consuming ever increasing amounts of data.

Paragraph 38 of the NPPF states that:

> *'Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available, including…permission in principle, and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible'.*

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Providing improved 3G and 4G coverage and capacity and new 5G service provision in this area will fully meet paragraph 38 of the NPPF, the aspirations of the Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036.

The social and economic benefits are a significant material consideration which should be weighed against the visual impact associated with the upgrade to the existing radio base station in this location. HM Treasury outlined such benefits in its report 'Fixing the Foundations: Creating a More Prosperous Nation' – July 2015. Paragraph 7.1 of the plan stated that reliable and high quality fixed and mobile broadband connections support growth in productivity, efficiency and labour force participation across the whole economy. They enable new and more efficient business processes, access to new markets and support flexible working and working from home.

Paragraph 7.2 goes on to highlight strong support for high quality communications infrastructure. It states

> *'by reducing red tape and barriers to investment, the Government will support the market to deliver the internationally competitive fixed and mobile digital communications infrastructure the UK's businesses need to thrive and grow, and which will enable the UK to remain at the forefront of the digital economy. The Government is working with business so that the market can play the lead role in delivering against the ambitions set out in the Digital Communications Infrastructure Strategy, published March, of near universal 4G and ultrafast broadband coverage.'*

Indeed, MPs have noted in parliament that the UKs Superfast Broadband connectivity was 'relatively poor' and businesses were losing out from patchy coverage.

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.

This will allow everyone in the country to benefit from the economic advantages of widespread mobile coverage. As well as improved mobile signal, 5G networks are also crucial to drive productivity and growth across the sectors that local areas are focusing on through their emerging Local Industrial Strategies. Enabling and planning for 5G implementation is central to achieving the Government's objective to deliver property at the local level and enable all places to share in the proceeds of growth.

The Government is determined to ensure the UK receives the coverage and connectivity it needs. To this end, the Government wants to be a world leader in 5G, the next generation of wireless connectivity, and for communities to benefit from the investments in the new technology. The proposed installation will fully support these national aspirations.

The case for 5G is compelling as it will bring faster, more responsive and reliable connections than ever before. More than any previous generation of mobile networks, 5G has the potential to improve the way people live, work and travel, and to deliver significant benefits to the economy and industry through the ability to connect more devices to the Internet at the same time, creating the so-called "Internet of Things". This will enable communities to manage traffic flow and control energy usage, monitor patient health remotely, and increase productivity for business and farmers, all through the real-time management of data.

The Local Government Association (LGA) has produced a Councillor's Guide to Digital Connectivity and sets out some of the benefits of 5G technology:

- Faster mobile broadband and a more consistent experience in congested areas with a very high number of devices.
- Industrial applications, enabling businesses to improve their productivity, for example through predictive maintenance and real-time analytics.
- Internet of Things (IoT) services, many of which will help council's and businesses deliver services more efficiently including:
    - Transport and logistics: connected parcels and fleet tracking.
    - Health and social care.
    - Environmental monitoring: sensors monitoring air quality and water pollution in real-time.
    - Smart agriculture and smart animal farming, smart retailing.
    - Connected and autonomous cars: allowing cars to communicate with each other, other road users and even the road infrastructure.

Further to the Government's commitment to improve connectivity, on 24th November 2016 the new permitted development rights for telecommunication operators came into force, designed to lift the restrictions on mobile operators such is the significance and weight the Government place upon the benefits attached to modern connectivity.

A National Needs Assessment – A Vision for UK Infrastructure was also published in October 2016 (https://www.ice.org.uk/getattachment/media-and-policy/policy/national-needs-assessment-a-vision-for-uk-infrastr/National-Needs-Assessment-PDF-(1).pdf.aspx). It sets out the infrastructure needs for the UK which includes the importance of digital technology. An extract of this assessment can be found below:

'A lack of digital connectivity has a detrimental effect on business operations, productivity and output and hence competitiveness in the global marketplace. Securing digital connectivity is thus critical to the UK's long-term prosperity. A key challenge for the digital sector is a persistent digital divide between those who have access to the latest technologies and those who do not, with resulting social and economic exclusion, particularly as dependence on e-services and digital communications increases'

The Assessment goes on to note that 'Universal digital connectivity would serve as an equaliser of economic opportunity in that it enables participation in a modern digital

economy'. Therefore, this Needs Assessment further explains the consequences of a lack of coverage and the effects this has on social and economic prosperity. This clearly highlights the importance of maintaining and enhancing high quality 2G, 3G and 4G coverage and capacity in this area as well as providing new 5G in this area, where the social and economic benefits will outweigh the environmental considerations.

The Government's continued strong support for connectivity is further evidenced by the DCMS who launched their UK wide Digital Connectivity Portal on 20 December 2018. The Digital connectivity portal provides guidance for local authorities and network providers on improving connectivity in local areas. The Government wants everyone in the UK to benefit from world-class connectivity no matter where they live, work or travel. The Future Telecommunications Infrastructure Review outlines a package of measures to create the right market and policy conditions to deliver world-class connectivity for citizens and businesses. As a result, the pressure to upgrade the existing network to provide 2G, 3G, 4G and 5G is significant.

On the 23 September 2020, the former Digital Infrastructure Minister Matt Warman MP spoke about the ongoing work by the Government and telecoms industry to boost the UK's world class digital connectivity in his keynote speech at Connected Britain 2020:

…'I'd like to take this opportunity to thank everyone in the industry for their tireless efforts at keeping us all connected through an unprecedented period of disruption.

…COVID has altered the way we live, work and most importantly, stay connected with our family and friends. The digital infrastructure that keeps us all connected was essential to our daily way of life under lockdown – and is now more important than ever as we head into recovery. Many of these changes – such as increased working from home – will stay with us for the foreseeable future.

People have referred to the internet as "the fourth utility" – and it's true. For countless people across the country, having fast and reliable broadband and a good mobile connection is as essential and vital to our daily lives as gas, water and electricity.

That's why I'm committed to working with you to ensure the entire nation has access to world-class, next generation gigabit connectivity that is secure and resilient enough to deal with all sorts of future challenges.

This Government is ambitious for the UK's digital infrastructure.

And because we know that more citizens are increasingly living their lives online, we will be one of the earliest adopters of 5G coverage, with the majority of the population able to access 5G by 2027.

...We know how important local authorities are to the delivery of digital infrastructure, which is why I have written to them, together with the Local Government Minister, to outline how they can work more effectively with the industry…

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….Turning to 5G, while the commercial rollout of 5G continues at pace, we're pushing ahead with plans to make sure all sorts of industries benefit from this game-changing technology.

….since the start of the 5G Testbeds and trials programme, we've now funded 24 5G testbeds across the UK. Between them, those testbeds have trialled almost 70 different 5G technologies, products and applications. And more importantly than ever, we are investing in a range of sectors to foster, build and grow 5G cross wider industry...

…The world is in the middle of a digital revolution. COVID has accelerated this process, digitising almost every part of our everyday lives and making the infrastructure that connects us more important than ever. That's why it is at the top of the government's agenda…

This Keynote Speech by Matt Warman MP highlights the importance that Government places on 5G and advanced, reliable, high quality 5G technology. To prevent this technology from being brought into the area would be contrary to the Government's key aims.

In a more recent letter published by the former Digital Infrastructure Minister Matt Warman MP on the 24 May 2021 addressed to the local authority chief executives he spoke further about the Government's Commitment to extending mobile coverage:

'Digital connectivity is – now, more than ever – vital to enable people to stay connected and businesses to grow. The demand for mobile data is increasing rapidly, and the COVID-19 pandemic has highlighted how important it is that we all have access to reliable, high quality mobile connectivity…

…The Government is committed to extending mobile network coverage across the UK and providing uninterrupted mobile signal on all major roads, and our ambition is for the majority of the population to have access to a 5G signal by 2027…

…The National Planning Policy Framework ("the Framework") for England states that planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology, such as 5G…

…In relation to electronic communications development, it also states that local planning authorities must determine applications on planning grounds only and they should not seek to prevent competition between different operators, or question the need for an electronic communications system. As set out in planning practice guidance, it is in the public interest for local planning authorities to have effective delegation arrangements in place to ensure that decisions on planning applications that raise no significant planning issues are made quickly and that resources are appropriately concentrated on the applications of greatest significance to the local area'

On the 1 October 2020, as part of the Speed up Britain Campaign, The Centre of Policy Studies Report published 'Upwardly Mobile: How the UK can gain the full benefits of the 5G revolution'. The report identifies what the 5G opportunities are and what the Government

needs to do so we can all benefit from this vital new technology. It states that delays to the rollout of 5G could cost the country tens of billions of pounds in lost economic output. The former Government advisers Alex Jackman and Nick King argue that Government's 'levelling up' agenda and the UK's recovery from the COVID-19 pandemic is at risk without a faster 5G rollout – to the tune of £41 billion.

The report highlights that if delays continue at their current rate, by 2027, over 11 million households and businesses could be missing out on vital digital connectivity. Improving digital infrastructure supports the Government's 'levelling up' agenda, by helping local areas to retain and attract businesses and talent as well as by reducing regional inequalities.

The report states that 'the UK must have a functioning network to now support the recovery from the pandemic, empowering businesses and communities with wider coverage, and preparing the ground for the services that 5G can provide'.

Using analysis by the independent consultancy Policy Points, the report estimates that if 5G coverage reaches a quarter more of the population than the Government's current target of 51%, it will produce GDP gains of £41.7 billion by 2027. It highlights that the difference between the UK being a leader and a laggard in 5G adoption could be as much as £173 billion in incremental GDP over the coming decade, as estimated by the Future Communications Challenge Group.

The manufacturing, construction and agricultural sectors have been hit particularly hard by the pandemic, and these would benefit significantly from improved connectivity. However, onerous planning rules and loopholes in existing legislation are slowing down the infrastructure upgrades needed to make the most of this mobile revolution in these much-needed industries.

Digital networks and services have underpinned our resilience to the COVID-19 pandemic and they will drive our recovery. By expanding them, we deliver not only immediate benefits but also the essential foundation stone for future prosperity.

The report highlights that while 5G promises to create economic benefits through increased capacity, reliability and speed – vastly improving business productivity and removing barriers imposed by poor digital connectivity – the system is plagued by red tape.

The report acknowledges that the gains are not just at national level. A more extensive digital infrastructure helps local areas to attract and retain businesses and talent, thereby playing a vital role in reducing regional inequalities. Providing a supportive environment for digital infrastructure is one of the few things the Government can do that costs little, boosts growth and helps level up the UK….the key is speed. **The faster a network is built, the bigger the regional gains** (emphasis added). The telecommunications industry faces challenges on this front. The COVID-19 pandemic has increased demand on networks but delayed the availability of new spectrum to provide additional capacity.

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The report notes that the reliability and reach of 4G is more important than ever. It is needed both to quench immediate demand, and also to facilitate future 5G rollout, as the underlying passive infrastructure will initially support both technologies. Every failure to provide better coverage not only presents an immediate opportunity loss for local business and consumers but also has a bigger downstream economic impact. It acknowledges that productivity gains to business, equality gains for regions and economic gains for the country are only as achievable as the networks they can access.

The report recommended that the Government should reform the strategic planning framework to compel local authorities to ensure that the needs of future mobile connectivity are adequately addressed in Local Plans and that new developments are assessed on how they might impact, or could support, local connectivity.

In April 2021 the DCMS issued a further round of consultation on the '*proposed changes to permitted development rights for electronic communications infrastructure: technical consultation'. The continuing support for high quality 5G service provision continues to be emphasised:*

> *'Now, more than ever, people need access to dependable and consistent mobile coverage where they live, work and travel. The coronavirus pandemic has highlighted the importance of digital connectivity and ensuring that networks have sufficient capacity and resilience to meet demand. Increased connectivity will also be key to our recovery. As the UK seeks to build back better, our changes to the planning system will help to extend and improve mobile coverage, including in rural areas, to benefit communities and businesses.*
>
> *The government is committed to extending mobile geographical coverage across the UK and providing uninterrupted mobile signal on all major roads, and to be a global leader in 5G… The government is investing £200 million in a programme of 5G testbeds and trials to encourage investment in 5G so that communities and businesses can benefit from this new technology. Our ambition is for the majority of the population to have access to a 5G signal by 2027. The increased connectivity and capacity offered by 5G is opening-up the potential for new, innovative services for individuals and industry…*
>
> *It is also essential that the planning system can effectively support the delivery of the mobile infrastructure that we need'…*
>
> *The government response set out that, subject to a technical consultation on the detail of the proposals, including the appropriate environmental protections and other safeguards, we would take forward changes to:*
>
> - *Enable the deployment of radio equipment housing on land without the need for prior approval, up to specified limits and excluding sites of special scientific interest, to support 5G deployment;*
> - *Strengthen existing masts up to specified limits to enable sites to be upgraded for 5G and for mast sharing without the need for prior approval;*

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- *Enable the deployment of building-based masts nearer to highways to support deployment of 5G and extend mobile coverage, subject to prior approval and specified limits; and,*
- *Enable higher new masts to deliver better mobile coverage and mast sharing, subject to prior approval and specified limits".*

The proposed installation in this location will allow the operator to maintain and provide new and improved high quality 2G, 3G and 4G coverage and capacity and new 5G service provision supporting the Government's aim of 'focusing on ensuring that everyone is connected to the information superhighway' and help to meet its target that the majority of the population will have access to a 5G signal by 2027. This fully meets the aspirations of the NPPF.

An installation in this location 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 5G license obligations and the Council's aims and aspirations to expand and improve digital infrastructure as required and to have the latest high quality 5G infrastructure, promoting and growing the digital sector and increasing digital inclusion.

Summary

It is not possible to upgrade the existing radio base station on Broadway as the building is not structurally capable of hosting the equipment required to provide 5G coverage in addition to the existing 2G, 3G and 4G coverage. Therefore a new installation for VMO2 and Vodafone is needed to provide this operator with the latest 2G, 3G 4G and 5G technologies.

The proposed site has been carefully sited in an industrial area, on private land, and away from nearby residential properties. As demonstrated in the alternative sites section of this statement, the proposed location is the most feasible option in this area. There are numerous other vertical structures in the vicinity of the proposed installation. As this is a prior approval application, the Government confirms that this is permitted development, akin to outline planning permission, with just the finer details of siting and appearance to be considered by the local planning authority. It is considered that the proposed installation will assimilate with the streetscene and not appear alien in the immediate area.

The proposed height at 20m is essential in order for the antennas to clear the surrounding urban clutter, and ensure the antennas are able to reach the target coverage area, to provide replacement high quality 2G, 3G and 4G, and new 5G service provision to north Golcar. This will fully meet the national Government's aim of '*ensuring that everyone is connected to the information superhighway*' and the national policies set out in the NPPF. If the height of the column were to be reduced then the antennas would not be able to operate effectively, leading to a degraded service for the operator's customers, especially for the higher frequency technologies including 4G technology and new 5G service provision.

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Site selection was progressed in accordance with the applicant's licence obligations, advice in the NPPF and the Code of 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 including 5G support growth in productivity, efficiency and labour force participation across the whole economy. This is fully supported by the NPPF and relevant objectives and policies within the Kirklees Local Plan Strategy and Policies, Kirklees Economic Strategy 2019-2025, West Yorkshire Combined Authority – Leeds City Region Digital Framework, and the West Yorkshire Combined Authority – Leeds City Region Strategic Economic Plan 2016-2036.

Confirmation that submitted drawings have been checked for accuracy

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