SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Mid City Place	Site Address:	Rooftop of Mid City Place, 71 High Holborn, London, WC1V 6EA.
National Grid Reference:	E 530820 N 181605		
Site Ref Number:	30700300	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 up to date 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
Summary of outcome/Main issues raised: Consultation letter, consultation plan and site plans were sent to the LPA on 07/12/2023. No specific comments received to date.	

Annual area wide information to planning authority

[1] Macro or Micro

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1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

Has annual area wide information been provided?	No
If no explain why:	
Summary issues raised: Cornerstone's commercial relationship with the operator has changed, effectively increasing their independence to work with other companies in the deployment of mobile infrastructure. It means they no longer have visibility of the operator's full update plan. However, Cornerstone is fully committed to working closely with Local Planning Authorities and following best practice guidance. Cornerstone aim to engage and work with the planning department at the earliest opportunity from when they 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. Cornerstone 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: Pre-application consultation letter and site plans were sent to the local councillors for Holborn and Covent Garden (Cllr Olad, Cllr Fulbrook and Cllr Vincent) and Local MP Kier Starmer on 07/12/2023.			
Summary of outcome/main issues raised (include copies of relevant correspondence): Response received from Cllr Vincent acknowledging receipt of the consultation.			

School/College

Location of site in relation to school/college (include name of school/college): City Junior School
Outline of consultation carried out with school/college (include evidence of consultation): Pre-application consultation letter and site plans were sent to the Chair of Governors and Headteacher of City Junior School on 07/12/2023.

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Summary of outcome/main issues raised (include copies of main correspondence): No response received to date.

Civil Aviation Authority/Secretary of State for Defence or the operator of the civil safeguarding area or defence safeguarding area notification (only required for an application for prior approval)

Will the proposed development be on a civil safeguarding area or a defence safeguarding area?		No
Has the Civil Aviation Authority/Secretary of State for Defence/operator of the civil safeguarding area or defence safeguarding area been notified?		No
Details of response: N/A		

Developer's Notice

Copy of Developer's Notice enclosed?	Yes	
Date served:	This is a full planning application – notice was served on the landowner on 29/01/2024 and proof of delivery is enclosed as part of this application.	

3. Proposed Development

The proposed site:
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 continued network improvement program, there is a specific requirement to install a new radio base station at the rooftop of Mid City Place to provide improved 2G, 3G, 4G and new 5G coverage and capacity, ensuring that this area of Holborn has access to the latest technologies. The proposed works comprise the installation of 11 no. antennas mounted on support poles fixed to existing steelwork, installation of 20 no. RRUs, 9 no. ERS units and ancillary development

thereto including but not limited to installation of 2 no. GPS modules and 4 no. equipment cabinets.

The site is located on the rooftop of Mid City Place which is located on the north side of High Holborn running east and west through the densely developed area of Holborn. The surrounding area is mixed use in nature, with commercial/office buildings lining the majority of High Holborn, many of which have bars, restaurants, cafés and other leisure use at the ground floor. Almost all of the buildings both east and west of the site along High Holborn extend to the same height as Mid City Place. To the north of the site, similar land use is found with some residential flats and apartments situated above the street shops. To the south of the site, there is a mixture of food and drink outlets, university buildings and Lincoln's Inn Private Gardens and Lincoln's Inn Fields – an open green space with tennis and netball courts to the south-west. This green public space is extremely well screened from the surrounding highways and buildings due to large mature trees which line the perimeter.

Image 1: Mid City Place and High Holborn (A40), facing west.

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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 Holborn area. This radio base station is therefore required to enable enhanced 2G, 3G and 4G coverage and capacity to the Holborn area, as well as 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): N/A*	
Description: The installation of 11 no. antennas mounted on support poles fixed to existing steelwork, installation of 20 no. RRUs, 9 no. ERS units and ancillary development thereto including but not limited to installation of 2 no. GPS modules and 4 no. equipment cabinets.	
Overall Height: 46.5m	
Height of existing building *(where applicable):*	41 Metres
Equipment Housing: EFF2n	
Length:	0.6 Metres
Width:	0.75 Metres
Height:	2.0 Metres
Equipment Housing: EFF1	
Length:	0.85 Metres
Width:	0.725 Metres
Height:	2.1 Metres
Equipment Housing: CSC	
Length:	0.66 Metres
Width:	0.8 Metres
Height:	1.77 Metres
Equipment Housing: ERS Rack	
Length:	0.75 Metres
Width:	0.68 Metres
Height:	2.2 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

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Reasons for choice of design, making reference to pre-application responses:

Technology advances (including 5G service provision) and increased demands on the operator's mobile network system in the area have meant that new antennas need to be installed in the Holborn area to facilitate all the data that is required to be carried for mobile superfast broadband. This enables customers to continue to be able to use their handheld devices for the purposes in which they have become accustomed, and now rely on in the modern world we live in, a similar scenario to the reliance on gas and electricity. However, these new technologies for the latest 4G and 5G service provision and the design of the antennas required for them means that the proposed antennas must be installed within the cell area. The proposed installation will directly replace the existing apparatus on the rooftop of Penderel House to the south-east of the site, which cannot be upgraded due the obtainment of planning permission for the redevelopment of the building.

The operator has carefully considered the siting and design of the upgraded equipment. It is proposed to utilise an existing building and will appear very similar to the existing telecommunications apparatus to be replaced. The upgraded antennas will be of the same colour and finish, albeit slightly larger than the existing, and will be mounted to support poles as the existing antennas are. This is in full accordance with NPPF and Code of Practice guidance in that a sequential approach should be taken and existing sites should be upgraded first, wherever possible. As it is not possible to upgrade the existing site at the existing location, a new installation is proposed as close as possible to the existing.

The operator is conscious of the Bloomsbury Conservation Area (designated 2011). As such, the proposed installation is as minimal and sensitive as possible, whilst providing the necessary coverage and capacity to the target coverage area. To this end, the new installation will be located on a rooftop at a similar height as the existing installation to be replaced, alongside many other telecommunications rooftop installations which are commonplace in this central area of London. The proposed antennas and RRUs are to be mounted to support poles fixed to existing steelwork, as opposed to a new stub tower structure which would need to be taller than the support poles and far bulkier in order to support all of the telecommunications apparatus on one structure. Instead, the equipment is split across three different support poles (different sectors/orientations). Hence, the character and appearance of the conservation area will be preserved.

Due to all the technologies that will be available at this location (enhanced 2G, 3G and 4G, and new 5G coverage), replacement antennas and RRUs are required. RRUs are small, each about the size of a shoe box, and will allow the antennas to operate all of the different technologies. The replacement antennas will be coloured to match the existing equipment. The RRUs will also be located on the rooftop, mounted off the same support poles as the antennas and therefore will not be visible from public vantage points. The replacement antennas and RRUs will allow the site to provide the necessary high-quality communications coverage which is required for everyday access to high-speed data in this area of Holborn, which users of their handheld devices have come to expect in this 21st Century technological age.

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For the avoidance of doubt the existing antennas on the rooftop of Penderel House to the south-east need to be upgraded/replaced as they are not designed to carry all the superfast data that is now available and meet the capacity demands in the area. Further to this, the existing host building is to be redeveloped with an additional storey, therefore the new rooftop height will not be suitable to provide coverage to the target area due to the reduced attenuation rate of the latest technologies. Slightly wider antennas are now required. This is in order to accommodate all the superfast data that the antennas have to deal with in light of the latest superfast 4G technologies with such technologies being heavily utilised by the operator's customers on a daily basis. To ensure that the operators customers continue to receive a good customer experience when accessing their hand-held devices, these slightly wider and deeper antennas are essential, to prevent dropped calls and buffering from being a constant issue.

The proposed GPS modules are very small, approximately the size of a tennis ball. They are designed to minimise signal loss, maximising the coverage to the surrounding area with the minimalist of additions to the rooftop. The modules are proposed to be attached to the corner of the equipment cabinets on the rooftop.

The proposed height of the antennas and support poles above the roof height is required as the site proposes the installation of 3 no. transmission dishes, one of which has a centre-line height of 41.5m and the other two with a centre-line height of 45m. Transmission dishes need a clear line of sight to other dishes in the network to allow them to work effectively. Therefore, the height cannot be reduced or the dishes would not be able to achieve a clear line of sight to other dishes in the network over the surrounding urban clutter.

The dish antennas used by mobile phone networks are relatively small, in this case they are all proposed to be 300mm in diameter. They are used to link individual radio base stations to each other and, through a series of links, into the wider mobile phone and fixed line networks. In order to communicate with each other, dish antennas must have a clear line of sight, sometimes known as point-to-point communications. They must be in clear view of each other without any physical obstructions such as trees or buildings which would reduce or disrupt the low-powered signal. For this reason, dish antennas are always mounted high on rooftops or tall structures.

It is therefore considered that the proposal before you strikes a good balance between environmental impact and operational considerations. The proposed design represents the best compromise between the visual impact of the proposal on the surrounding area and meeting the multi technical requirements for the site. Taking all matters into account, it is considered that the replacement of the existing telecommunications installation at Penderel House to the south-east, with a new installation at the rooftop of Mid City Place, to enable the enhancement of 2G, 3G and 4G service provision and new 5G coverage to the surrounding area, would not appear out of place within its surroundings and would provide enhanced high quality, reliable and secure coverage and capacity, delivering the capability for a multi hi-tech service and utilising an existing building.

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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

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coverage. This can be for a variety of reasons, the most common being topography or buildings which block the path of the signal. The operators' network rollout programme is designed to identify and address these gaps within their coverage and ensure that people can use their phones whenever and wherever they are.

There is a specific requirement to upgrade and replace the existing radio base station at Penderel House to enable enhanced 2G, 3G and 4G coverage and capacity and new 5G coverage for VMO2 and Vodafone to the area of Holborn. This ensures customers are able to continue to use their handheld devices for the purposes in which they have become accustomed, whilst on the move, as demands on the system for greater capacity augment as more customers access the data on the operator's network.

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.

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
Rooftop	268-270 High Holborn, London, WC1V 7EE	E530764 N181538	The rooftop at this location is too low. The proposed telecommunications apparatus would not be capable of clearing the surrounding urban clutter at this location and therefore would not achieve the required level of coverage across the target coverage area. This site has therefore been discounted.
Rooftop	Hanover House, London, WC1V 6LS	E530752 N181584	The rooftop at this location is too low. The proposed telecommunications apparatus would not be capable of clearing the surrounding urban clutter at this location and therefore would not achieve the required level of coverage across the target coverage

			area. This site has therefore been discounted.
Streetworks	Footway of High Holborn, London, WC1v 6EA.	E530814 N181593	A mast at this location would not provide the required level of coverage to the target area due the substantial buildings that would inhibit the signal and the site would therefore not deliver the required coverage to the target area. There is already excessive street clutter on the footway at this location. This site has therefore been discounted.
Rooftop	103-105 New Oxford Street, London, WC1A 1DB	E529869 N181360	An installation at this location is located too far to the West to deliver the required level of coverage to the target area. This site has therefore been discounted.
Rooftop	6 New Street Square, London, EC4A 3AT	E5631340 N181367	An installation at this location is located too far to the East to deliver the required level of coverage to the target area. This site has therefore been discounted.

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

N/A

Land use planning designations:

Bloomsbury Conservation Area

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 2023)

The governments 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

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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 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 most recent revision of the NPPF was published December 2023, which included amendments to onshore wind developments.

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 118 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 up to paragraph 122. 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 119 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 122 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.

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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 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 innovation42'…

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 Best Practice on Mobile Network Development in England (March 2022)

Now, more than ever, reliable digital connectivity is essential for people and businesses. Government have committed to extending mobile geographical coverage across the UK. In order to realise these ambitions, it is essential that the planning system can effectively support the deployment of new mobile infrastructure, as well as network upgrades.

The Department for Digital, Culture, Media and Sport, and the Department for Levelling Up, Housing and Communities have issued an updated Code of Best Practice which includes

changes to further support the deployment of 5G coverage nationally. This Code provides guidance to mobile network operators, their agents and contractors and equally to all local planning authorities in England. It supersedes the Code of Best Practice on Mobile Phone Network Development (2016).

In line with the previous revision of the Code, digital connectivity is identified as being vital to enable people to stay connected and for businesses to grow. The principal aim of this Code is to continue to ensure Government's objective of supporting high quality communications infrastructure, which is key to continued economic prosperity and social inclusion for all.

Principles and Commitment

Paragraph 8 of the revised Code reiterates that fast, reliable digital connectivity can deliver economic, social and well-being benefits for the whole of the UK. The Code continues to acknowledge that as the demand for mobile data in the United Kingdom is increasing rapidly, it is important that everyone can have access to dependable and consistent mobile coverage where they live, work and travel.

The Government recognises the role of Planning 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. Paragraph 13 of the Code continues to echo the NPPF guidance in strongly supporting high quality communications infrastructure, which is seen as essential for sustainable economic growth. More specifically that planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technologies (such as 5G) in order to support economic growth across the country.

Given the economic importance of mobile connectivity, the revised Code further emphasises the need for Local Planning Authorities to support the deployment of digital infrastructure. Paragraph 18 states that Local Planning Authorities should demonstrate their support by:

- 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.

- Information and communication: ensure that members of the public can access information about any development proposals within their local area. Send communications promptly to an appropriate operator contact (or their representatives).

The added emphasis on support from Local Planning Authorities in the deployment in digital infrastructure is even more evident in the revised code. The Code 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

In line with this, is the recognition to continue to ensure that the impact of new network development is kept to a minimum. The Code states that good siting and design principles should continue to apply to all wireless network development and take into account any site-specific considerations and context, both of which 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.

Paragraphs 25 - 27 sets out siting and site selection principles which Operators should consider including:

- 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).

Key Technical and Operational Considerations

Taking the above into consideration the Code acknowledges the need to balance technical needs and constraints of a proposed site and the potential developmental impacts (Paragraph 26). These constraints are set out in detail in the section 'Technical and Operational Considerations' of the Code. 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

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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.

The Code emphasis the need for Local Planning Authorities to take account of these constraints, on 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.

Paragraph 66 states that 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.

Paragraph 67 goes on to note that because of the scale and technological constraints of 5G equipment, 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.

The revised Code illustrates that mobile connectivity helps in the delivery of public services e.g. to access Central and Local Government via online services, acknowledging that lives are more likely to be saved when a 999 call is made from a mobile than from a landline, Telehealth is becoming increasingly important and text message reminders also improve compliance with medication and keeping NHS appointments.

Good mobile connectivity also promotes sustainability e.g. it reduces the need to travel and thus carbon emissions. The Code continues to support mobile telecommunications network as it is seen as a crucial piece of national infrastructure in economic, community and social terms.

The Code reiterates that the digital infrastructure must be achieved in a timely and efficient manner, and in a way which balances connectivity imperatives and the economic, community and social benefits that this brings with the environmental considerations that can be associated with such development. Great emphasis is placed on the need to work collaboratively between stakeholders to ensure key digital network deployment and therefore supporting economic growth.

UK Wireless Infrastructure Strategy (April 2023)

The UK Wireless Infrastructure Strategy, published in April 2023 aims to achieve the objectives that have been set out by the UK Government. The next decade will see seismic changes both in terms of what wireless connectivity can deliver and how we can use it. The economic

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and social benefits from these changes promise to be vast, from supercharging growth to accelerating our transition to net zero. But these benefits can only be achieved with concerted action from government, industry, and others. This strategy sets out the Government plan to do that.

In the last 5 years, UK government policies have driven impressive progress in the deployment of world class fixed and wireless networks across the whole of the UK, removing regulatory and practical barriers to deliver stronger growth, more jobs, and better public services in every corner of the country.

- through our £1 billion deal with the mobile network operators, we are supporting rural communities by ensuring that 95% of the UK landmass have 4G coverage by 2025. This currently stands at 92%
- we have made substantial progress with 5G, too. Last year, we met our ambition for the majority of the population to have access to a 5G signal by 2027 5 years early through the deployment of basic, non-standalone 5G using existing 4G networks to deliver increased network capacity.

By building world-class, secure digital infrastructure networks, the Government can meet its vision they set out in their Digital Strategy for a competitive and innovative digital economy. This will play an important role in:

- underpinning other new technologies - the next decade will see the development and maturation of transformative technologies from AI and self-driving vehicles to digital twins, which will drive demand for advanced wireless connectivity.
- transforming public services - there are also significant benefits for improving our public services, supporting smart cities which are cleaner and less congested and delivering connectivity to our schools and hospitals that will provide better, more interactive lessons and personalised healthcare.

By transforming our economy, widespread adoption of 5G can bring a cumulative productivity benefit of £159 billion by 2035, driving growth and inward investment, and improving lives for communities in every corner of the country.

However, there are challenges we need to address to ensure the UK can realise these benefits, as the economics of investing in wireless networks are changing:

- There is still a need to overcome uncertain demand for 5G-enabled services and continuing practical barriers to network deployment need to be overcome.
- Many of the economic benefits we have identified require significantly higher quality connectivity than is likely to be deployed in national public networks.
- 5G roll-out in the near term is likely to focus on urban areas, where the commercial returns are more certain.
- Research we commissioned shows significant variation in the quality of mobile coverage in different parts of the country over the next decade - economically important areas like Freeports and industrial parks could be underserved.

Market dynamics are also changing:

- Demand is uncertain as connectivity moves beyond smartphones to enable an array of new, innovative use cases, businesses and the public sector will need to navigate an increasingly complex ecosystem to get the connectivity they require. As many businesses and local authorities do not yet clearly understand the benefits 5G offers or how they can effectively deploy 5G-enabled services to realise these benefits, there is no clear articulation of the demand for higher quality services. In turn, this makes it more challenging for providers to make the business case for investment.

Through this strategy, the UK government set out a new policy framework with 6 key steps to do just that, and ensuring that the UK maximises the potential of advanced wireless networks over the next decade, securing our international competitiveness for the future and driving economic growth across the UK.

1. Ensuring good connectivity for all

As networks are upgraded with 5G technologies over the next decade, 4G will continue to play an important, albeit diminishing, role in providing mobile connectivity across the UK. Coverage reporting also needs to improve so that it more accurately reflects consumers' actual experience, equipping them with the information they need to choose the right contract. In turn, we expect this to drive further commercial investment to address previously unidentified gaps - ensuring that people and businesses get the connectivity they need, whether to start and grow a business or to have a remote healthcare appointment.

2. Setting a bold 2030 ambition

Given the substantial potential that 5G offers for businesses and public service delivery, we are setting out a bold vision for the next generation of our national networks to galvanise investment across our economy. We want to move beyond the basic 5G that is being deployed now over 4G networks to build higher quality, standalone 5G networks that do not rely on older infrastructure. We also want to extend 5G coverage well beyond cities and towns to all populated areas of the UK, including rural villages and communities.

We are therefore setting a new headline ambition for the UK to have nationwide coverage of standalone 5G to all populated areas by 2030 (emphasis added).

3. Strengthening the investment climate

While the government already has a range of policies in place to drive forward the deployment of digital infrastructure, our 2030 ambition requires significant commercial investment.
This includes:

- Continuing to remove practical barriers to the deployment of 5G infrastructure.

4. Realising the full benefits of 5G

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Cornerstone Telecommunications, Infrastructure Limited,
Hive 2, 1530 Arlington Business Park, Theale, Berkshire, RG7 4SA.
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VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

We want people, business and public services across the UK to realise the full benefits of 5G and advanced wireless connectivity. However, without concerted action, this will be slow to materialise and limited to larger businesses, in fewer sectors, and in certain geographies.
Supporting places to attract investment: we set out how we will drive greater opportunities for industry and public service providers to be empowered customers for future connectivity solutions – supporting places to attract investment and encouraging adoption of 5G services.

We will do this by:

- Driving local leadership and coordination and encouraging local authorities across the UK to employ digital champions to provide strategic leadership for local authorities' own digital infrastructure strategies.

There are 5 chapters which outline the aims and ambitions, along with the steps the government are going to take in order to achieve their set targets and provide improved 5G connectivity for all.

Chapter 1 - Approach and scope
This strategy sets out a policy framework to help deliver the government's priority of growing the economy and to ensure the UK benefits from advances in wireless connectivity for the next decade.

Chapter 2 – Ensuring good connectivity across rural and urban areas
The government's priority to build a better, more secure, more prosperous future for the UK includes a clear commitment to grow the economy, and create better-paid jobs and opportunity right across the country. To do this, it is vital that people who live and work in all parts of the UK, including in rural areas, have access to good quality mobile and broadband coverage.

Chapter 3: Our 2030 ambition
World-class digital infrastructure underpins the digital economy – it was worth £143 billion in 2021, accounting for 5% of the national workforce. This infrastructure provides the backbone of the UK economy and society with ever more jobs, public services and societal interactions built upon its foundations. As growth in the digital sector is nearly six times faster than across the economy as a whole, its importance will only continue to increase as we deliver the Prime Minister's priority of growing the economy.

4G technology revolutionised the way people use their mobile phones. What today is considered normal, a decade ago was ground-breaking. We have seen the growth of streaming services, like Netflix and Spotify, and gained constant access to high quality, user-produced content for free on platforms like YouTube, transformed the way we shop online, travel around cities through access to apps like Uber and Bolt and use public services, such as booking NHS appointments through apps.

The Evolution of 5G

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Hive 2, 1530 Arlington Business Park, Theale, Berkshire, RG7 4SA.
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VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

While 4G will continue to play an important role in providing widespread geographic connectivity to consumers through public cellular networks across the UK's landmass, 5G can offer significantly better performance and support a far greater range of use cases. 5G enables data transfer speeds of more than 10 times faster than 4G, has the potential to offer lower latency and greater reliability and the ability to connect more devices. The implications of these improvements reach far beyond the potential to develop the capabilities of smartphones, enabling an array of innovative use cases and providing for transformative economic, and social benefits that were perhaps unimaginable a decade ago.

The government's ambition for the majority of the population to have access to a 5G signal by 2027 has been met early through the deployment of basic, or non-stand alone, 5G which is built on a 4G core network. While this has helped MNOs increase the capacity of their networks in more densely populated areas, it does not reflect the full functionality 5G can deliver.

Without clear action, the market for advanced 5G services will remain nascent as many business and public services do not yet fully understand the benefits or how to navigate the supplier ecosystem for 5G enabled digital products, applications and services.

We want high quality coverage to extend well beyond cities and larger towns to all populated areas of the UK, including villages and rural communities. We are therefore setting a stretching new ambition of nationwide coverage of standalone 5G to all populated areas of the UK by 2030 (emphasis added).

Chapter 4: Strengthening the investment environment
Our 2030 ambition requires commercial investment, and this chapter focuses on creating the environment to support it.

The deployment of standalone 5G and ultimately advanced will require operators to deploy additional infrastructure, including:

- 5G core networks in addition to the 5G equipment in the radio access network
- upgrades to the existing grid of approximately 18,000 macro cell sites per MNO
- additional cell sites to provide 'infill' to cover gaps in coverage

Addressing barriers to deployment

Since the publication of the Future Telecoms Infrastructure Review, the government have taken significant strides to make it quicker and easier for operators to roll out new digital infrastructure including making reforms to the planning system to support the deployment of 5G and extend mobile coverage in England.

Chapter 5 – Realising the full benefits of 5G and advanced wireless connectivity
5G and other forms of advanced wireless connectivity pave the way for new services and applications that can have a transformative effect on our public services, businesses and our local economies, delivering this government's priority of growing the economy and creating

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Theale, Berkshire, RG7 4SA

better paid jobs. Wireless connectivity can support mobile healthcare workers and connected vehicles, improve traffic flow through our cities and enable our factories to be more productive, supporting the fourth industrial revolution. Our evidence is clear that the most significant economic benefits from 5G will come from widespread adoption of advanced 5G by industrial sectors, including manufacturing and logistics, and by public services.

The government is determined that the UK should take full advantage of these opportunities but this will only be possible if places across the country can attract commercial investment in 5G and other forms of advanced wireless connectivity and for that to be adopted at scale by businesses and public services.

Connected Places
Improving digital connectivity is one of the government's Levelling Up Missions. We want places and communities across the UK to share in the benefits of good connectivity, enriching lives and driving local growth.

We want to support connected places with their digital connectivity ambitions. We will do this by helping regions and local authorities to build the case for adopting new technology, attracting investment and removing practical barriers to the deployment of advanced wireless networks (emphasis added). Local and regional authorities play a pivotal role in facilitating the rollout of wireless connectivity and their role will become more critical than ever as investment in 5G continues, due to its technological complexity and the vast number of new applications and services it can support.

Local Leadership and Coordination

Local leadership can help to identify and break down barriers to deployment at a local level by bringing together stakeholders across the public sector and building strong relationships with industry. The installation of telecoms infrastructure involves a number of different local government departments (such as planning, estates, highways) and their activities can be siloed and uncoordinated.

It is essential that, at a leadership level, local and regional authorities recognise the importance of wireless connectivity and identify decision-makers within the organisation who are empowered to facilitate private sector investment.

Chapter 6: Driving adoption in key economic sectors
Adoption of 5G-enabled use cases in sectors such as healthcare, transport & logistics, manufacturing and agriculture will drive economic growth and productivity across the UK, delivering our priority of economic growth.

Key features of 5G for industry Dedicated 5G networks can enable:
- data analytics: Utilising operational and environmental sensor data to make real time decisions about equipment and operational performance.

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1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

• video surveillance and geolocation: Providing the location of workers and assets for security and safety purposes.
• tracking moving assets: Working with self-driving vehicle technology and software guidance systems to provide situational awareness of mobile assets.
automation: Enabling independently operating robots to perform operational tasks.

Local Policy

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

The development plan as defined by the Planning and Compulsory Purchase Act 2004 for Camden Borough Council comprises:

- The London Plan (2021)
- Camden Local Plan (2017)

The London Plan 2021 is the new Spatial Development Strategy for Greater London and was adopted in March 2021 and is now part of the statutory development plan. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth.

The Foreword of the Plan states:

'And it's about making London a city with clean air for our children to breathe, and a pioneering smart city with world-class digital connectivity supporting more digital -devices to improve the lives of Londoners and enable businesses to thrive.'

Chapter 1 of the London Plan deals with 'Planning London's Future - Good Growth'. Para.1.0.1 relates to 'Good Growth' that is "*socially and economically inclusive and environmentally sustainable and underpins the whole of the London Plan and each policy. It is the way in which sustainable development in London is to be achieved*".

Para 1.0.10 is within the Planning for Good Growth section of Chapter 1 and states:
'Planning for a 'smarter' city, with world-class digital connectivity will enable secure data to be better used to improve the lives of Londoners.'

Para 1.1.4 under 'Building Strong & Inclusive Communities' includes: '*… social, physical and environmental infrastructure that meets London's diverse needs is essential if London is to maintain and develop strong and inclusive communities.'* The corresponding policy in GG1 Building strong & inclusive communities states:

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Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

'Good growth is inclusive growth. To build on the city's tradition of openness, diversity and equality, and help deliver strong and inclusive communities, those involved in planning and development must:'

'… C provide access to good quality community spaces, services, amenities and infrastructure that accommodate, encourage and strengthen communities, increasing active participation and social integration, and addressing social isolation D seek to ensure that London continues to generate a wide range of economic and other opportunities, and that everyone is able to benefit from these to ensure that London is a fairer, more inclusive and more equal city'

I support and promote the creation of an inclusive London where all Londoners, regardless of their age, disability, gender, gender identity, marital status, religion, race, sexual orientation, social class, or whether they are pregnant or have children, can share in its prosperity, culture and community, minimising the barriers, challenges and inequalities they face.'

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.

Para. 1.3.1 states *'The mental and physical health of Londoners is, to a large extent, determined by the environment in which they live. Transport, housing, education, income, working conditions, unemployment, air quality, green space, climate change and social and community networks can have a greater influence on health than healthcare provision or genetics. Many of these determinants of health can be shaped by the planning system, and local authorities are accordingly responsible for planning and public health'*. During the Covid-19 pandemic there was a much greater reliance on mobile digital connectivity to stay connected with family and friends and enabled working from home and home-schooling with many people continuing to work from home. Without the infrastructure which enables reliable connectivity, we could not stay connected.

Policy GG5 relates to 'Growing a good economy. The supporting text states:

'…..London is the engine of the UK economy, accounting for more than a fifth of the country's economic output. Its labour market, housing market and transport links are interconnected with the Wider South East city region, which shapes the development of the whole of the UK. Together, London and the Wider South East contribute a full half of the country's output. London has unique strengths in specialist fields like finance, business services, technology, creative industries and law, as well as attracting tourists from around the world, providing a gateway to the rest of the UK. The wealth this generates is essential to keeping the whole country functioning, but the benefits of economic success are not shared evenly within London itself.'

'… Projected growth towards 6.9 million jobs by 2041 provides an opportunity to strengthen London's economy for the future, and doing so will depend on increasing diversification. The Central Activities Zone and Northern Isle of Dogs will remain vital

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VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

to London's economic success, but growth in town centres across London will be equally important, alongside supporting local regeneration, investment in Opportunity Areas and enabling access to a wide range of jobs. Reasonably-priced, good quality employment space will be needed across London to make this happen'.

Para 1.5.4 states 'The right infrastructure is also required to help businesses succeed across London. The digital economy, underpinned by world-class digital connectivity, data and digital services is of ever-increasing importance, improving processes, opening up new markets and allowing more flexible working.'

GG5 'Growing a good economy' states:

To conserve and enhance London's global economic competitiveness and ensure that economic success is shared amongst all Londoners, those involved in planning and development must:

'… D ensure that sufficient high-quality and affordable housing, as well as physical and social infrastructure is provided to support London's growth
E ensure that London continues to provide leadership in innovation, research, policy and ideas, supporting its role as an international incubator and centre for learning'
'… H recognise and promote the benefits of a transition to a low carbon circular economy to strengthen London's economic success."

The New London Plan creates the strongest policies ever for Digital Connectivity.

Policy SI6 states:

A - To ensure London's global competitiveness now and in the future, development proposals should:

1)ensure that sufficient ducting space for full fibre connectivity infrastructure is provided to all end users within new developments, unless an affordable alternative 1GB/s-capable connection is made available to all end users

2) meet expected demand for mobile connectivity generated by the development

3) take appropriate measures to avoid reducing mobile connectivity in surrounding areas; where that is not possible, any potential reduction would require mitigation

4) support the effective use of rooftops and the public realm (such as street furniture and bins) to accommodate well-designed and suitably located mobile digital infrastructure.

Para 9.6.1 states that ***'the provision of digital infrastructure is as important for the proper functioning of development as energy, water and waste management services and should be treated with the same importance***. *London should be a world-leading tech hub with world-class digital connectivity that can anticipate growing capacity needs and serve hard to*

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1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

*reach areas. Fast, reliable digital connectivity is essential in today's economy and especially for digital technology and creative companies. It supports every aspect of how people work and take part in modern society, helps smart innovation and facilitates regeneration'(*emphasis added*).*

Camden Borough Local Plan (2017)

The Camden Local Plan sets out the Council's planning policies and replaces the Core Strategy and Development Policies planning documents (adopted in 2010). It ensures that Camden continues to have robust, effective and up-to-date planning policies that respond to changing circumstances and the borough's unique characteristics and contribute to delivering the Camden Plan and other local priorities. The Local Plan will cover the period from 2016-2031.

The Local Plan vision states:

"We want to make Camden a better borough — a place where everyone has a chance to succeed and where nobody gets left behind. A place that works for everyone."

The key objectives to help achieve this vision are to:

• provide democratic and strategic leadership fit for changing times;
• develop new solutions with partners to reduce inequalities and improve the physical and mental health and wellbeing of local residents;
• create conditions for and harnessing the benefits of economic growth;
• invest in our communities to ensure sustainable neighbourhoods; and
• deliver value for money services by getting it right first time.

Policy DG1 relates to Delivery and Location of Growth:

The Council will deliver growth by securing high quality development and promoting the most efficient use of land and buildings in Camden by:

a. supporting development that makes best use of its site, taking into account quality of design, its surroundings, sustainability, amenity, heritage, transport accessibility and any other considerations relevant to the site;
b. resisting development that makes inefficient use of Camden's limited land;
c. expecting the provision of a mix of uses where appropriate, in particular in the most accessible parts of the borough, including an element of self-contained housing where possible; and
d. supporting a mix of uses either on site or across multiple sites as part of an agreed coordinated development approach, where it can be demonstrated that this contributes towards achieving the strategic objectives and delivers the greatest benefit to the key priorities of the Plan.

Para 2.6 refers to "securing the infrastructure and services to meet the needs of our growing number of residents, workers and visitors. We have identified our infrastructure needs in the schedule in Appendix 1. This includes transport, utilities, education, health, open space, emergency services needs and digital infrastructure requirements."

Policy E1 relates to Economic Development:
The policy states that the Council will secure a successful and inclusive economy in Camden by creating the conditions for economic growth and harnessing the benefits for local residents and businesses.

Para 5.10 refers to digital infrastructure: "The Council recognises the importance of digital infrastructure in enterprise development and expects electronic communication networks, including telecommunications and high-speed broadband, to be provided in business premises."

Policy A1 relates to Managing the Impact of Development:

The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity.

Para 6.3 further refers to protecting amenity, stating that "The Council will expect development to avoid harmful effects on the amenity of existing and future occupiers and nearby properties or, where this is not possible, to take appropriate measures to minimise potential negative impacts."

Policy D1 relates to Design:

The Council will seek to secure high quality design in development. The Council will require that development:

a. respects local context and character;
b. preserves or enhances the historic environment and heritage assets in accordance with Policy D2 Heritage;
c. is sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation;
d. is of sustainable and durable construction and adaptable to different activities and land uses;
e. comprises details and materials that are of high quality and complement the local character;
f. integrates well with the surrounding streets and open spaces, improving movement through the site and wider area with direct, accessible and easily recognisable routes and contributes positively to the street frontage;
g. is inclusive and accessible for all;
h. promotes health;

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i. is secure and designed to minimise crime and antisocial behaviour;
j. responds to natural features and preserves gardens and other open space;
k. incorporates high quality landscape design (including public art, where appropriate) and maximises opportunities for greening for example through planting of trees and other soft landscaping,
l. incorporates outdoor amenity space;
m. preserves strategic and local views;
n. for housing, provides a high standard of accommodation; and
o. carefully integrates building services equipment. The Council will resist development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions.

Policy D2 relates to Heritage:

The Council will preserve and, where appropriate, enhance Camden's rich and diverse heritage assets and their settings, including conservation areas, listed buildings, archaeological remains, scheduled ancient monuments and historic parks and gardens and locally listed heritage assets.

In particular reference to conservation areas, the policy states:

The Council will:

e. require that development within conservation areas preserves or, where possible, enhances the character or appearance of the area;
f. resist the total or substantial demolition of an unlisted building that makes a positive contribution to the character or appearance of a conservation area;
g. resist development outside of a conservation area that causes harm to the character or appearance of that conservation area; and
h. preserve trees and garden spaces which contribute to the character and appearance of a conservation area or which provide a setting for Camden's architectural heritage.

Online Nation 2022 Report

Online Nation is an annual research report, published for the first time in 2019. Using research produced by Ofcom and others, it looks at what people in the UK are doing online, how they are served by online content providers and platforms, and their attitudes to and experiences of using the internet.

The latest Online Nation 2022 report (published June 2022) found that for most people in the UK, being online is a major part of daily life. Being online allows people to connect with others, sometimes in ways they may not be able to do offline. Data shows how we benefit from a range of online services, from messaging and calling platforms to gaming platforms, online news outlets and online shopping.

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Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

The Meta-Owned social media apps (Facebook, Instagram, Whatsapp and Facebook Messenger) made up the top four smartphone apps most visited daily by UK adults in September 2021. The top-reaching smartphone app was Whatsapp (88% of UK online smartphone using adults) closely followed by the Facebook app (87%).

94% of UK adult internet users aged 16+ said they used an online communications service for making voice/video calls or sending messages in 2021, and 80% of children aged 3-15 did the same.

The 2022 report found that the UK adult internet users spent almost 4 hours online a day in September 2021, with 3 of those hours being spent on smartphones. One in five people only use a smartphone to go online compared to one in ten last year. News and government public services are among the most-visited websites and apps in the UK.

The majority (67%) of UK internet users aged 13+ feel that the benefits of being online outweigh the risks. 43% agree that being online has an overall positive impact on their mental health.

The report found that 60% of children aged 8-15 say that using social media and messaging platforms makes them feel closer to their friends. More than three-quarters of children aged 12-15 said that being online can help with their school/homework, whilst half said it can be used to learn a new skill.

The Online Nation 2022 report acknowledged that the global pandemic since March 2020 has resulted in significant changes in online behaviour. Online shopping habits developed during the lockdown periods have remained. The largest online platforms' revenues and profits increased significantly during the lockdown periods and this growth continued in 2021. The growth is being driven by UK consumers increased spend on e-commerce and entertainment subscription services, while advertising revenues are also increasing with the continuing brand migration to online.

Figure 1.2 of the Online Nation 2022 report indicates that the percentage of UK online adults accessing the internet, by device, in 2021 was the highest by smartphone at 88%. In September 2021 73% of the time spent online by UK adults per day was on a smartphone.

Figure 1.2: Percentage of UK online adults accessing the internet, by device: 2021

Percentage of adult internet users	Smartphone	Tablet	Laptop	Smartphone only
2021	88%	43%	53%	21%

Source: Ofcom Adults' Media Literacy Tracker 2021: Core survey and CATI omnibus survey. IN1. Which of these devices do you use to go online? (MULTI CODE) Base: All adults 16+ that go online (at home or elsewhere) (excluding those who did not give a response at the postal survey) (3577)

Reproduced from Online Nation 2022 Report

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The table below indicates the most-missed device among adults were it be taken away from them, using data collected 2014-2019. As can be seen, nearly half of all adults say that their mobile device is the device they would miss the most were it taken away from them.

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'. 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.

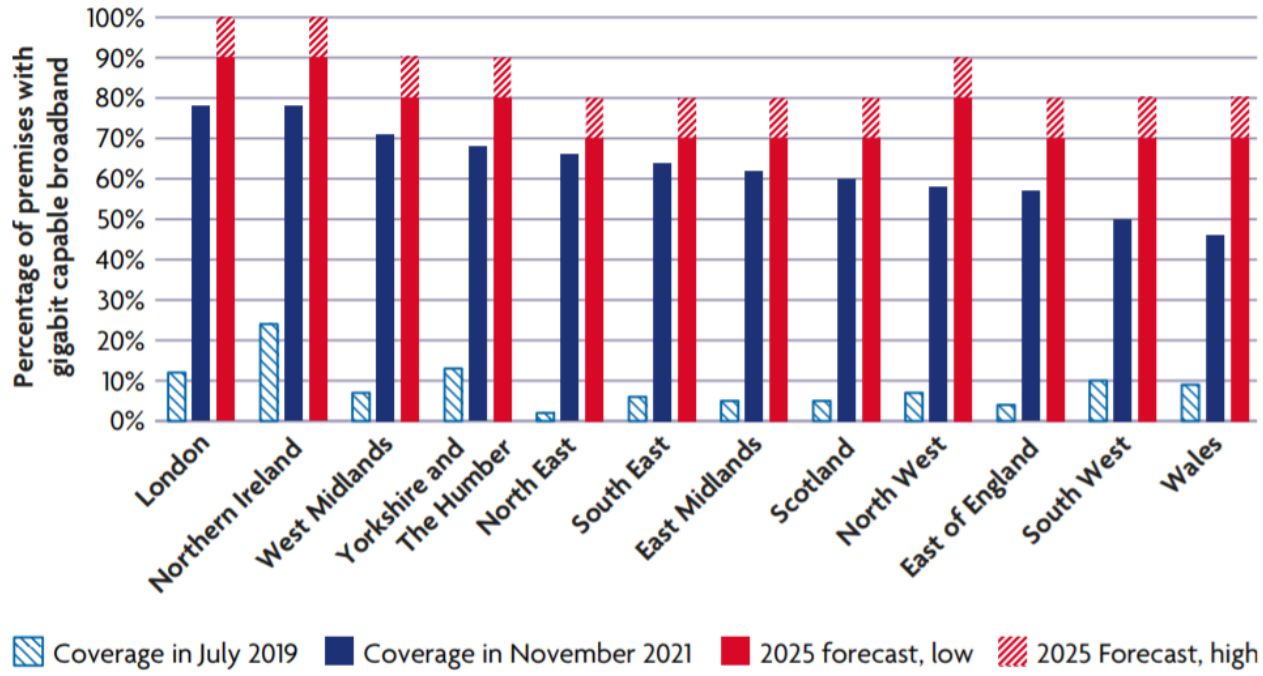
More broadly, high quality digital infrastructure can deepen local labour markets through remote working, making it more attractive for both workers and companies to locate regionally. It also allows for the development of high-value sectoral clusters, which can drive growth and jobs in new areas. Existing 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.

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 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.

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 Matters

The main issues arising from this application for full planning permission are whether the proposal 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 improved and new service provision for telecommunications development 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 London Local Plan and the Camden Local Plan.

The proposed antennas and associated equipment fully comply with the NPPF, London Local Plan and Camden Local Plan as it will improve capacity and provide new 5G services to this area of Holborn. 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 proposal is for the installation of new telecommunications apparatus at the rooftop of Mid City Place, to replace the existing installation at the Penderel House rooftop which is to be removed due to redevelopment of the host building. The principle of siting telecommunications equipment on the rooftops of the buildings along High Holborn has already been accepted by the Local Planning Authority many years ago. The installation is wholly in line with national planning policy guidance on taking a sequential approach and seeking to utilise existing buildings and upgrading existing sites. The rooftop of Penderel House has hosted telecommunications apparatus for many years for both operators. Due to the redevelopment of the host building, the new roof height will not be technically possible for the effective function of telecommunications equipment to provide new 5G service. The rooftop of Mid City Place, on the opposite side of High Holborn, is therefore proposed as the new location for the new telecommunications equipment. This is fully in line with the NPPF and Code of Practice in relation to the use of existing buildings and is also in accordance with policy SI6 of the London Local Plan and policies DG1, A1 and D1 of the Camden Local Plan as it ensures that the scale, form and design of the development would have no unacceptable impact on the character and distinctiveness of the surrounding area and conservation area.

Government guidance states that in order to limit visual intrusion, the number of radio and telecommunication masts and the sites 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. Use of existing masts, buildings and other structures for new electronic communications capability should be encouraged. Where new sites are required, equipment should be sympathetically designed and camouflaged where appropriate. The proposal fully complies with this Government guidance. The proposed installation will reflect the design and characteristics of the existing, allowing the operator to provide enhanced capacity and new 5G services to the area. This is in line with the guidance in the NPPF and Code of Practice, as well as the aims to improve digital connectivity as outlined in Policy SI6 of the London Local Plan.

Siting

Registered Address:
Cornerstone Telecommunications, Infrastructure Limited,
Hive 2, 1530 Arlington Business Park, Theale, Berkshire, RG7 4SA.
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VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

The existing site has become an established feature within the area and is located on the rooftop of an office building where there is telecommunications equipment belonging to multiple operators. This includes several antennas and RRUs mounted on support poles fixed to existing steelwork on multiple sides of the building, which ensures that the new proposed installation will not appear out of place. High Holborn is lined with other large buildings with rooftops of a similar height, as well as some large mature trees immediately west of Mid City Place at the junction with Red Lion Street. The existing telecommunications apparatus on the Penderel House rooftop can only be seen from some distance to the east along High Holborn, but otherwise is not visible from public vantage points due to the roof height and building front design. This will also be the case with the new installation on Mid City Place rooftop, as shown in the submitted photomontages. The host building and proposed installation benefits from a multi-level rooftop. This will ensure that the impact of the installation will be minimised within the Bloomsbury Conservation Area as the new antennas will not be visible from public vantage points and will appear very similar to the existing apparatus which is commonplace in dense urban areas. This is in full accordance with the London Local Plan and policies A1, D1 and D2 of the Camden Local Plan.

The RRU's are designed to make the antennas more efficient and reduce the amount of additional equipment cabinets required. This minimises the impact on the visual amenity of the area. The proposed RRUs in this instance are to be located on the same support poles beneath the antennas and as such will not appear prominent in the landscape. As previously stated, transmission dishes are required to provide a link into the operator's network, requiring a clear line of sight and thus justifying the centre line height of 41.5m and 45m above ground level (0.5m and 4m above upper roof level respectively). Similar to the RRUs, the dish will not have a detrimental impact on visual amenity, landscape character and the distinctiveness of the conservation area due to its small size. The proposal is therefore in accordance with policies A1, D1 and D2 of the Camden Local Plan.

Appearance

The design of the antennas is a simple, functional design. The proposed antennas will be mounted on support poles fixed to existing steelwork, similar to the existing installation at Penderel House and will therefore limit the volume of development. The proposed RRUs and ERS units will also be mounted to the same support poles. The proposed equipment will be coloured to match the existing.

The design of the radio base station is one of the most sensitive designs available to the operator, which will upgrade an existing site which utilises an existing building. This is in line with the requirements of NPPF which supports equipment which is sympathetically designed and camouflaged where appropriate [paragraph 118], The Code of Practice as well as the aspirations of policies DG1, A1, D1 and D2 of the Camden Local Plan.

As previously mentioned, the proposed height of the antennas and transmission dishes is essential to provide new 5G coverage and replacement 2G, 3G and 4G service provision to the surrounding area. 5G radio signals are more sensitive to physical obstructions than older

technologies. This is because the higher the frequency band the greater the reduction in signal strength, increasing the likelihood of dropped calls and reduced data rates for internet browsing, for example. Any physical object obstructing the propagation of radio signals causes a reduction in the signal strength reaching a customer's device. A common term for these objects is 'clutter' such as buildings, trees and hills. Generally, the higher the signal frequency the more it will be impacted by clutter. It is for this reason that the antennas are unshrouded, as 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 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 maximising their propagation.

If the antennas were proposed to be at a lower height, such as mounted on a lower roof level or from a streetworks monopole, the antennas would not be able to clear the surrounding urban clutter and as such would not operate effectively. 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.

In line with the NPPF, London Local Plan, policies DG1, E1, A1, D1 and D2 of the Camden Local Plan, as well as the Code of Practice and the UK Wireless Infrastructure Strategy, the operator has chosen the most sensitive design available to provide 5G and improved 2G, 3G and 4G coverage and capacity to this area of Holborn. As a result, the antennas are located on support poles fixed to existing steelwork to closely resemble the existing installation at Penderel House, to minimise impact on visual amenity within the surrounding area and the local character and distinctiveness of the Bloomsbury conservation area.

Lack of Coverage – Material Consideration

In accordance with NPPF, London Local Plan and Camden Local Plan, the proposed installation is significant to enable continuous coverage of the telecommunication network, ensuring that this area of Holborn continues to get the mobile coverage it needs for VMO2 and Vodafone's customers as well as new 5G coverage for the Mobile Virtual Network Operator's (MVNOs) which use the operators' networks. Therefore, the proposal will not only provide a service for one operator but those who buy network space off them, which is at least 3 with Vodafone and 4 with VMO2. This will provide a choice for those customers who consider the level of coverage in their area when selecting which operator they agree future contracts with.

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. This is also in line with the London Local Plan policy SI6 and Camden Local Plan policy DG1 and the aspirations of Central Government for everyone to have access to the superfast highway

networks wherever they are and that all the populated areas have access to a 5G service by 2030.

There is an identified need for this installation to ensure that the latest technology in the form of 5G can be brought to this area of Holborn and improved 2G, 3G and 4G capacity to match increased demand. Filling this hole in current service provision is fully in line with the vision of the London Local Plan which highlights how their digital priorities relating to skills and businesses will be delivered, as well as how improved digital infrastructure will help to enable economic growth and transformation, which is also reflected in Policy E1 of the Camden Local Plan. It is also recognised that improved digital connectivity will increase productivity, contributes towards businesses growth and develop inclusive communities.

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 which fully supports the improvement of digital infrastructure, 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 Holborn area to embrace emerging technologies and societal changes. 5G infrastructure is fundamental to enable digital technologies to function. The proposals will ensure that any Vodafone or VMO2 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.

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.

Without this installation, the operator's customers would experience increasing 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.

In accordance with the NPPF, London Local Plan policy GG5 and Camden Local Plan policy E1, the proposed installation will help improve the area's economic prosperity, strengthen the

urban economy 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. 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.

By enhancing the 2G, 3G and 4G service provision to the surrounding area and providing new 5G coverage into the operator's network, this would fully support the the vision and objectives of the Camden Local Plan.

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. As such it needs the 21st century infrastructure to enable this objective to become a reality. An upgraded installation in this location enabling 5G service provision to the Holborn area will ensure that this aspiration is fully met.

The Councillor'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 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 118 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.

An installation in this location will fill the current gap in the latest high quality service provision and enable Vodafone, VMO2 and MVNOs who buy network space off them 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.

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 an upgraded radio base station in this location providing the latest 2G, 3G, 4G and 5G technologies will support the improvement of connectivity infrastructure accelerating 4G and 5G technologies to speed up much longed

for economic and business growth, increasing digital inclusion, so all people can access services, education and training, helping residents to access the opportunities they need to lead prosperous and rewarding lives and supporting the economy to be resilient and competitive.

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. An installation in this location will help the Holborn region to meet its aim of having effective and efficient infrastructure to support investment which includes digital infrastructure.

The Code of Best 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.

In the Code of Best Practice it acknowledges 'the pressure on networks to upgrade and improve networks through changes to existing sites and the development of new sites is constant. 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 Online Nation 2021 Report highlights the importance of continued access to the latest technology on mobile devices, with 35% of the internet users only accessing the internet on mobile devices (Smartphone or tablet).

The Report goes on to note that 60% of the consumer market consider smartphones are now the most important device for internet access. In September 2019, 81% of time spent online was on a mobile device (both tablet and Smartphone). Furthermore, nearly half of all adults consider that their mobile device is the device they would miss most if it were taken away.

The Online Nation 2021 Report found that until early this year, online video calling was used much less than other online communication services, with 35% of online adults using online video calling at least weekly in the 12 months to February 2020. In May 2020, this had doubled to 71% of online adult consumers using online video calling services at least weekly, with 38% using them at least daily. Their research suggests that 7% of adult internet users used video calling for the first time as a result of the coronavirus pandemic.

Consumers in the UK continue to decrease their use of landline calls in favour of using mobile calls and mobile data. Between 2012 and 2018, the total volume of outgoing landline calls in the UK more than halved, decreasing by 59 billion minutes, from 103 to 44 billion minutes. Over the same period the volume of outgoing mobile phone calls increased, but only by 29 billion minutes, from 132 to 161 billion minutes. This suggests that consumers are not simply substituting landline calls with mobile networks calls. There are indications that they are substituting at least some landline calls with online voice and video calls. On smartphones, online calling can offer a lower cost alternative to making calls using a voice tariff: 87% of UK adults who have ever used online voice or video calls did so using a smartphone.

The operator not only has a license requirement to provide a certain level of 2G/3G/4G coverage to the population, but the operators' are also obliged to meet the growing consumer demand for 5G coverage, especially as more people are 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. There is currently no 5G service provision that is provided by VMO2 and Vodafone in this cell area. The least impact on the surrounding environment in order to fill this gap is via the installation of a new radio base station on the rooftop of Mid City Place.

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 policy DG1 of the Camden Local Plan. 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 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 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. Enhancing the 2G, 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.

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. This is in full accordance with the local plan which supports development which makes a positive contribution to the health, safety and well-being of residents, and which considers the needs of all members of the community, as well as improving access to jobs, services, and education, whilst being able to reduce the need to travel.

The proposals fully comply with the NPPF, Code of Practice, London Local Plan, Camden Local Plan and UK Wireless Infrastructure Strategy, which support continued economic growth. 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. Holborn's local 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, homelessness and pollution; to improve living standards and well-being; and to improve the quality and value for money of public services.

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 revised 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'.

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 social and economic benefits are a significant material consideration which should be weighed against the visual impact associated with a 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

Registered Address:
Cornerstone Telecommunications, Infrastructure Limited,
Hive 2, 1530 Arlington Business Park, Theale, Berkshire, RG7 4SA.
Registered in England & Wales No. 08087551.
VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

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. 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 Government objectives of being a world leader in 5G. The proposed installation will fully support these national and local 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.

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 market place. 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 Holborn 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 provide an upgrade to the existing radio base station in Holborn to provide enhanced 2G, 3G, 4G and new 5G is significant.

On the 23 September 2020, the 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…

….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…

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Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA

This Keynote Speech my 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 Digital Infrastructure Minister Matt Warman MP on the 24 May 2021 (a copy is enclosed with the application docs) 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.

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.

The proposed upgraded installation in this location will allow the operator to 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'. This fully meets the aspirations of the NPPF.

An upgraded installation in this location providing 5G will ensure that the expansion of the electronic communications network is facilitated and that high quality communications infrastructure is provided to the immediate area. This is in full accordance with the operator's 4G license obligations.

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

Education

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

The proposed upgrade to the existing installation in this new location will allow the operator to provide 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'. This fully meets the aspirations of the NPPF.

An upgrade to the existing 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 4G license obligations and the Council's aims and aspirations to be a smart city and have high quality 5G infrastructure, promoting and growing the digital sector and increasing digital inclusion.

Summary

This application is for the installation of a new radio base station at the rooftop of Mid City Place, to upgrade and replace the existing established radio base station on the Penderel House rooftop which is to undergo redevelopment. The proposed 11 no. antennas and associated apparatus is required in this area of Holborn to provide the latest, high capacity 2G, 3G 4G and new 5G coverage for VMO2 and Vodafone.

The new site is located in an area where the presence of telecommunications equipment is long established. The proposed support poles fixed to existing steelwork are required to ensure that the antennas can provide sufficient capacity to the cell area and clear the surrounding urban clutter. On balance, the radio base station will not have a detrimental impact on the visual amenity of the surrounding streetscene. The amendments will provide enhanced 2G, 3G and 4G coverage and capacity to the surrounding area and new 5G coverage. Thus providing a high-quality service to its customers and access to the latest technologies whenever and wherever they are. Any limited harm will be outweighed by the benefits associated with providing and maintaining the latest high-quality communications in line with NPPF and the Government's strong commitment to a world leader in 5G. If the challenge is to be met to provide pervasive, affordable, resilient digital connectivity, the challenge is early roll out of 5G especially in areas where 5G coverage is currently non-existent for the operator.

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. In this case it was not possible to upgrade the existing site at the same location, but a nearby existing building is to be utilised, which fully complies with the sequential approach.

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, Code of best Practice, London Local Plan objectives, Camden Local Plan policies and objectives and UK Wireless Infrastructure Strategy. These benefits are strong material considerations which outweigh any perceived loss of visual amenity to the surrounding area.

Confirmation that submitted drawings have been checked for accuracy

Name: (Agent)	James Dodd	Telephone:	0161 785 4500
Company:	Clarke Telecom		07435999685
Company Address:	Clarke Telecom Limited, Unit E, Madison Place, Northampton Road, Manchester, M40 5AG	Email Address:	James.dodd@clarke-telecom.com
Signed:	J.Dodd	Date:	31/01/2024
Position:	Town planner	(on behalf of Cornerstone)	

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

Registered Address:
Cornerstone Telecommunications, Infrastructure Limited,
Hive 2, 1530 Arlington Business Park, Theale, Berkshire, RG7 4SA.
Registered in England & Wales No. 08087551.
VAT No. GB142 8555 06

Cornerstone, Hive 2,
1530 Arlington Business Park,
Theale, Berkshire, RG7 4SA