SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Inkerman Street	Site Address:	LAND OFF INKERMAN STREET, COLLYHURST, MANCHESTER, M40 7TR
National Grid Reference:	E: 385534 N: 400620		
Site Ref Number:	30776500	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: Pre-application consultation letter and site plans were sent to the LPA to on 6th March 2024. No specific comments received to date.	

[1] Macro or Micro

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

Annual area wide information to planning authority

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 letters and site plans were sent to the local ward councillors for Harpurhey (Cllr Karney, Cllr Green and Cllr Collins) and local MP Graham Stringer.			
Summary of outcome/main issues raised (include copies of relevant correspondence): No specific comments received to date.			

School/College

Location of site in relation to school/college (include name of school/college): N/A
Outline of consultation carried out with school/college (include evidence of consultation):

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

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

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

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

Developer's Notice

Copy of Developer's Notice enclosed?	Yes	
Date served:	21/03/2024 – notice and proof of delivery included in this application.	

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

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 network improvement programme, the operator is in the process of upgrading a number of their existing sites in order to provide improved 2G, 3G and 4G coverage and capacity, and new 5G service provision. This is fully in line with the Government's aim to ensure that everyone is connected to the superhighway. As part of Cornerstone's continued network improvement programme, there is a specific requirement for a new radio base station at land off Park Road to provide improved 2G, 3G, 4G and new 5G coverage and capacity, ensuring that this area of Stretford has access to the latest technologies. The proposed works comprise the installation of 25.0m high lattice tower on concrete foundation, installation of 6 no. Antennas, 15no. ERS Units, 2no. Transmission Dishes and 1no GPS Module, installation of 3 no. Ground based cabinets and 2.1m high compound fence, ancillary development required thereto. The site is located on land off Inkerman Street in Collyhurst, situated to the rear of Win Wah Chinese takeaway. Inkerman Street connects Queens Road and Topley Street, both of which meet the west side of Rochdale Road either side of the takeaway. Rochdale Road is the main road which runs north and south between the Monsall and Smedley area. The area is a mixed use area, with residential properties to the south of the site and more to the east along Queens Road which continues southeast. Manchester Communication College is located to the northeast on the opposite side of Rochdale Road. To the north, beyond a small cluster of residential properties at Park View, is Queens Park extending to Hendham Vale industrial estate. The Rochdale Road junction with Queens Road is a busy junction, with an abundance of linear structures including lighting columns, telegraph poles, traffic lights, large mature trees and railings. There are also two existing telecommunications masts to the east of the junction on opposite sides of Queens Road.

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

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

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 Collyhurst area. This radio base station is therefore required to enable enhanced 4G coverage and capacity to the Collyhurst area, as well as new 5G services for VMO2 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):* CS1S Lattice Tower	
Description: The proposed works comprise the installation of 25.0m high lattice tower on concrete foundation, installation of 6 no. Antennas, 15no. ERS Units, 2no. Transmission Dishes and 1no GPS Module, Further installation of 3 no. Ground based cabinets and 2.1m high compound fence, Ancillary development required thereto.	
Overall Height: 25m	
Height of existing building *(where applicable):*	N/A
Equipment Housing: Percy PSU	
Length:	0.831 Metres
Width:	0.705 Metres
Height:	2.068 Metres
Equipment Housing: ERS Rach (x2)	
Length:	0.6 Metres
Width:	0.65 Metres
Height:	1.9 Metres
Materials *(as applicable):*	
Tower/mast etc – type of material and external colour:	Steel - Galvanised
Equipment housing – type of material and external colour:	Steel – RAL7035 (Grey)

Reasons for choice of design, making reference to pre-application responses:
The operator has carefully considered the design of the new proposed mast. The operator is proposing the most sensitive design currently available to provide the necessary coverage and capacity to the surrounding area, which ensures that the installation will not appear out of place within the built environment. Due to all of the technologies that will be available, 6 no. antennas need to be installed. Cornerstone requires new 5G technology to be installed into its network in this cell area. Both operators need to be able to provide 5G technology in this area as well providing enhanced 2G, 3G and 4G service provision. As a result, a new monopole and antenna headframe is

required to ensure that the latest technologies can be provided to the surrounding, mixed use area.

The proposed height at 25m is essential in order to provide sufficient coverage and capacity to the target area over the surrounding build environment. The latest 4G and 5G radio technologies operate in higher frequency bands than older technologies. Since they operate at higher frequencies where attenuation of the radio signal is naturally higher and the effects of clutter are greater it will normally require a higher structure to achieve the same coverage footprint. To increase capacity and data speeds to the user, the antenna will normally need to be mounted higher than conventional antennae. These factors drive a requirement for an increase in antenna height for the latest 4G and 5G service provision. The proposed height is also required as the site proposes the installation of 1 no. transmission dish. Transmission dishes need a clear line of sight to other dishes in the network to allow them to work effectively.

The antennas are proposed to be open and not shielded as this provides the optimal service provision to the surrounding area. If the antennas were to be shrouded, they would not be as efficient at providing the latest technologies to this cell area. Thus, an additional installation would likely to be required in this cell area which would lead to the proliferation of masts contrary to the NPPF. Given the dense residential development to the south of the site and dense commercial/industrial development to the north of the site, this loss in service provision if the antennas were to be shrouded would not be justified.

It is not considered that the installation will appear out of place, nor will it detrimentally affect the character or appearance of the area. In addition, there are several other existing vertical structures within the immediate area including street light columns, telegraph poles, road signage, palisade fencing, and mature trees which will help the installation to assimilate with its surroundings.

The proposed equipment will be coloured grey and will be located within a proposed fenced compound for health and safety reasons. The colouring of the antennas and associated headframe/steelwork grey will allow them to assimilate with the typically grey British skyline. The proposed fenced compound will be 2 metres high.

It is also proposed to install ERSs for each provider. These aspects of the proposal fall within the remit of 'ancillary development' and do not require permission in their own right. They are small for telecommunications apparatus, approximately the size of a shoe box. They are designed to act like a booster to make the antennas more efficient and reduce the amount and size of equipment cabinets at ground level. They further reduce the overall amount of apparatus required at this radio base station minimising the visual impact on the area. Given the site's location set back from Rochdale Road, couple with the position of the ESRs behind the antennas it ensures that this ancillary development to the installation will not appear prominent in the surrounding area.

It is therefore considered that the proposal before you strike a good balance between environmental impact and operational considerations. The proposed height and design

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

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

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 UK Ltd 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.

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.

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

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

A mobile phone transmitter is designed to cover a specific area and links its coverage to the next site in the network, creating a patchwork of overlapping coverage 'cells' across the country. So, if a person is on the move, the network will transfer their calls from one site to the next. However, in certain areas there will be gaps between these cells, resulting in a loss of coverage. This can be for a variety of reasons, the most common being topography or buildings which block the path of the signal. The operators' network rollout programme is 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 install a radio base station at this location to enable and enhance 2G, 3G and 4G coverage and capacity to area of Collyhurst and provide new 5G service provision. Furthermore, the installation will be designed so that two operators can utilise the same installation and provide new 5G coverage to its network and improved 2G, 3G and 4G services. This negates the need for further radio base stations in the vicinity for either of these two operators.

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[3]	Site Name and address		NGR	Reason for not choosing[4]
GF - Greenfield	Name	Needwood Close GF		O - Other
	Line 1	Needwood Close	Eastings	A planning application has been submitted and development has started on this site to erect retail space, residential homes and a publ
	Line 2	Collyhurst	385604	
	Town	Manchester	Northings	park (Known as Collyhurst Village) This location has therefore been discounted.
	County	Greater Manchester	400398	
	Postcode	M40 8LB		
GF - Greenfield	Name	W.S. Motors GF		O - Other
	Line 1	Scropton Street	Eastings	A planning application has been submitted and development has started on this site to erect retail space, residential homes and a publ
	Line 2	Collyhurst	385677	
	Town	Manchester	Northings	park (Known as Collyhurst Village) This location has therefore been discounted.
	County	Greater Manchester	400487	
	Postcode	M40 8AL		
RT - Roof Top	Name	Manchester Communication Academy RT		T - Technical Difficulties
	Line 1	Silchester Drive	Eastings	Due to the construction of the building there is no design available to support the operator's apparatus and provide the necessary coverag to the target coevrage area.
	Line 2	Collyhurst	385653	
	Town	Manchester	Northings	
	County	Greater Manchester	400717	
	Postcode	M40 8NT		
GF - Greenfield	Name	Signal Drive SW		P - Planning
	Line 1	Signal Drive	Eastings	An installation at this location is considered to be too exposed with limited screening/backdrop and surrounded by residential properties. Other alternatives exist which are more appropriate in order to deliver the required coverage to the target area. This site has therefore beer discounted for this reason.
	Line 2	Collyhurst	385738	
	Town	Manchester	Northings	
	County	Greater Manchester	400535	
	Postcode	M40 8NN		
GF - Greenfield	Name	Rochdale Road Bus Stop SW		T - Technical Difficulties
	Line 1	Rochdale Road	Eastings	It is not possible to install a street furniture installation at this location due to unresolvable underground services in order to deliver the required level of coverage to the target area. This site has therefore been discounted for this reason.
	Line 2	Collyhurst	385678	
	Town	Manchester	Northings	
	County	Greater Manchester	400892	
	Postcode	M9 5QL		
RT - Roof Top	Name	Manchester Communication Primary Academy RT		T - Technical Difficulties
	Line 1	Parkstead Drive	Eastings	The rooftop is both too low and due to the construction method/material of the building there is no design available to support the operators apparatus and provide the necessary coverage to the target area.
	Line 2	Collyhurst	385684	
	Town	Manchester	Northings	
	County	Greater Manchester	400812	
	Postcode	M40 8NT		
RT - Roof Top	Name	Sheridan Court RT		T - Technical Difficulties
	Line 1	Ridgewood Avenue	Eastings	Due to the construction of the building there is no design available to support the operator's apparatus and provide the necessary coverag to the target coevrage area. This site is also too far south-west to deliver the level of coverage to the target area.
	Line 2	Collyhurst	386025	
	Town	Manchester	Northings	
	County	Greater Manchester	400384	
	Postcode	M40 8GF		
ETS - existing Telecom site	Name	Queens Road Streetworks		RD - Redevelopment not possible
	Line 1	Queens Road	Eastings	The live site has been discounted as the structure is unable to suppo the apparatus involved in an upgrade. Therefore we have pursued alternate options.
	Line 2	Collyhurst	385674	
	Town	Manchester	Northings	
	County	Greater Manchester	400644	
	Postcode	M40 8AL		

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

If no alternative site options have been investigated, please explain why: N/A
Land use planning designations: N/A
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 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.

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

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.

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

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

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:

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

- 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 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 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

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

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

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

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

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

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 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.
- 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.

Greater Manchester Local Industrial Strategy (June 2019)

This Local Industrial Strategy sets out how Greater Manchester (GM) will forge its future. It states that it will build on GM's position as a 'leading European digital city-region; enable the digitalisation of all sectors; and capitalise on the links between digital and creative industries that feed internationally significant clusters in broadcasting, content creation and media, and maximise growing assets in cyber security.

It aims to put in place the integrated 21st century infrastructure needed for digital driven, clean and inclusive growth.

A top 5 city-region for the digital economy in Europe, with full fibre broadband and 5G coverage.

The Strategy states that GM will take a 'Made Smarter' approach to all industries, supporting forms to adopt new digital and creative techniques and enabling the digitalisation of all sectors.

The strategy has a specific section relating to infrastructure and acknowledges its importance:

'…The city-region now aims to upgrade, integrate and future-proof its infrastructure, to create a 21st century city-region with extreme digital connectivity, clean and inclusive growth and – through work with others – improved access to national and global markets.
Existing partnerships are working to improve digital infrastructure in the city-region to meet national targets of roll out of 5G technologies for most people by 2027'.

The Local Industrial Strategy sets out an objective to ensure the vision for infrastructure is met:

- World-class connectivity – digitally and through an integrated transport network within all parts of GM.

To achieve the ambitions of the GM Local Industrial Strategy it identifies actions around 5 foundations of productivity: Infrastructure, Ideas, People, Business Environment and Places. These are noted as being essential attributes of every successful economy. It also identifies opportunities grouped under 4 Grand Challenges – Artificial Intelligence and Data, the Ageing Society, Future Mobility and Clean Growth.

The Vision for the Digital, Creative and Media is set out in the Local Industrial Strategy and reproduced below:

'GM will be a leading European digital City-Region, with the infrastructure, skills and networks needed to digitise all sectors, and internationally significant clusters in broadcasting, content creation and media and cyber security'.

To help meet the vision the strategy states that GM will continue to transform the digital connectivity of the city-region to drive economic growth and innovation, working with Government to meet national targets of full roll-out of 5G technologies for most people by 2027.

The Local Industrial Strategy acknowledges that GM will aim to become one of the best digitally connected city-regions in the UK. It fully supports the development of 5G networks.

The Greater Manchester Digital Blueprint (April 2020)

The GM Digital Blueprint builds on the Greater Manchester Digital Strategy and states that this blueprint sets out the next chapter in Greater Manchester's ambition to be recognised as a world-leading digital city region, with an ongoing commitment to taking an open, innovative and connective approach to delivering that ambition.

It states that Greater Manchester remains committed to being a digital city-region. The ambition is still for Greater Manchester to be a top 5 European Digital City-Region and recognised globally for its digital innovation. Benefitting from top level physical infrastructure, and a highly skilled, ready-to-go digital workforce.

The Blueprint goes on to say that this is the place that does digital differently.

'We want our citizens' lives to be bettered, and for them to be empowered by the myriad of opportunities a digitally fuelled city-region provides'.

The Blueprint for Greater Manchester digital sets out a 3 year approach to meeting these ambitions:

…'investing heavily in digital infrastructure, connectivity and transport offering bredth and depth of expertise across digital and creative services, e commerce, technology, hardware and software.

We're creating a digital place where innovators from across the globe want to tap into and a place where businesses already here can thrive'.

The 3 year aims include:

- By 2023, the average download speed across fibre, cable mobile and wireless will exceed 100Mps compared to a Q4 2917 baseline of 32Mps.
- Employment and skills in digital and creative industries 86000 people employed in 2019 growing to 96000 in 2023.
- Overall economic growth £5 billion in creative digital and technology economy growing to £5.5 billion by 2025 and £7 billion by 2029.

The digital priorities are set out as follows:

- Empowering people
- Enabling innovative public services
- Digitally enabling all businesses
- Creating and scaling digital businesses
- Being a global digital influencer

Enablers to these priorities are noted as including extending world-class digital infrastructure:

'We will ensure that Greater Manchester has the digital infrastructure it needs to be a world class digital city region'.

The aims are noted as:

- Deliver ubiquitous high speed digital connectivity over full fibre and 4G and 5G mobile across the whole city region by 2025.
- Driving market investment in fibre and mobile by minimising roll out costs.

Greater Manchester Infrastructure Framework 2040 (GMCA)

This is a pre-cursor to the GM Infrastructure Strategy. The aim is to focus on developing infrastructure which ultimately improves the lives of all those living and working within Greater Manchester.

The Infrastructure Framework acknowledges a number of key challenges, one of which is digital and the need to provide pervasive, affordable, resilient digital connectivity. The Framework notes that 'Digital technology is increasingly the backbone of the major industries and our daily lives'.

The Framework goes on to states that approaching 2040, GM will need to be a Smart and digitally ready City Region. To achieve this, and support on-going digitalisation, the region will require resilient fixed connectivity (through fixed fibre) supported by 5G (and subsequent technologies). It will also need to streamline the process for installation of new infrastructure within the street space.

The Framework notes the vision for the GM Infrastructure Strategy:

'Develop and maintain a holistic infrastructure system that is robust, accommodates sustainable growth and supports the ambitions of the Greater Manchester Strategy to make "Greater Manchester one of the best places in the world to grow up, get on and grow old".

The Greater Manchester Infrastructure Strategy should seek to:

- Support the lives and well-being of people, communities and the environment within Greater Manchester.
- Be age-friendly and support the economic and social participation of both young and old.
- Support strategically identified growth for parts and communities within Greater Manchester.
- Be flexible, robust and met the existing and future needs of the communities and technological change.
- Provide world-class connections and access to opportunity for all.
- Provide world-class digital infrastructure which provides a platform for GM to embrace emerging technological and societal changes.
- Support a carbon-neutral GM and be economically, environmentally and socially sustainable.

The Framework identifies a key infrastructure trend to 2040 as Digital (Telecommunications Operators) including mobile infrastructure:

- As the population and employment is due to rise:
  - more people will mean more homes and businesses, and more consumers of digital services.
  - There will be a growing demand for high-speed, resilient data connectivity to facilitate changing patterns such as shopping patterns moving online, whilst flexible working becomes more prevalent.
- Changing workforce:

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

o More productive, higher skilled, higher paid jobs more specialised and skill activities needs digital infrastructure to support higher skilled industries – which may require increased digital infrastructure.

- Environmental Change:

o Improving efficiencies of buildings and appliances. The use of smarter technologies within each infrastructure sector will look to improve efficiencies further.

The Framework comments on digitalisation noting the importance of it and how it has transformed the way in which we go about our everyday lives:

'We live in an increasingly digital world. Technologies that are visionary today rapidly become part of everyday life tomorrow. In turn, people's expectations are rising constantly. "Digital" now encompasses an increasing array of technologies, from sensors, smartphones and robots, to augmented reality, cloud computing and data analytics. These technologies are changing the way in which we live and places we live in. Digital technologies are being used to make cities more smooth running, more productive, and more democratic. The pervasiveness of digital technology in our lives represents a major change. For these technologies to function effectively, it is fundamental that a robust and diverse underpinning infrastructure is installed that ensures a future-proofed platform for the development of these and many new technologies for years to come.

As our homes, businesses and cities become more reliant on digital technology to function the robustness of these systems becomes even more critical'.

The Framework states that 'anyone in GM should be able to access resilient, seamless connectivity at a speed they need anywhere and anytime'.

- New technologies, artificial intelligence and atomisation:

o Improvements in artificial intelligence and atomisation technologies will transform infrastructure sectors and business markets.

o Digital infrastructure will be crucial to supporting future technology and a Smart City Region.

o Embracing digital technology throughout all sectors, geographies and occupations is fundamental to GM's current and future international competitiveness.

The Framework acknowledges that the vision of moving to a smart and digitally-ready city-region requires future digital infrastructure to be strong fixed resilient connectivity, supported by 5G (and beyond), big data systems and other nascent technologies such as Artificial Intelligence and machine learning. Without connectivity it is acknowledged that processing the sheer volumes of data necessary to create a network of communicating devices will be impossible. As such, the Framework states that big improvements are required to increase the provision of wired and wireless (through 5G or subsequent technologies and Wi-Fi provision) across GM. Without the more basic technology solutions (such as passive fibre connectivity and 5G) the smart-region solutions and value-added outcomes will struggle to be brought to fruition.

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

The Framework notes that 5G roll out is expected from 2020. However, the timing and costs of roll out is uncertain and international standards have yet to be agreed. It is possible that there will only be one network upon which providers deliver their services or that each provider might need to invest.

With regards to the Regional Centre if Challenge 8 is to be met to provide pervasive, affordable, resilient digital connectivity the challenge is early roll out of 5G especially in areas where mobile data use is congested such as the Regional Centre.

The Framework also states that GMCA and the Districts together with digital and telecommunication providers need to drive forward opportunities to promote connectivity and uptake in the Regional Centre.

Manchester Digital Strategy 2021-2026 (March 2022)

This digital strategy for Manchester is the vision for Manchester's digital future. It sets the priorities that our whole city – our public, private, voluntary and community organisations and residents – will be able to work on together to make Manchester one of the world's leading smart cities and digital economies in the next five years.

The priorities of the Manchester Digital Strategy will contribute directly to the delivery of five of the ten Our Manchester Strategy priorities:

• We will become a digitally inclusive city, with better digital infrastructure, access to digital technology and strong and lifelong digital skills.

We have used these to create four overarching themes for the Digital Strategy:

1. Smart people:

We will ensure that everyone can gain and sustain the skills, aspirations, and confidence to fully participate in the digital world; providing the basis for Manchester to become an inclusive, diverse, successful and ethical smart city.

2. Digital places:

We will create digital neighbourhoods providing access, connectivity and support for all residents and businesses and digitally enabling enhanced health and wellbeing.

3. Future prosperity:

We will enable the digital economy and ecosystem to grow, continue to attract new digital businesses & sectors and support a resilient and inclusive economy.

4. Sustainable resilience:

We will use digital imaginatively for innovation to meet zero carbon and climate resilience goals and to create open inclusive connectivity with enhanced digital infrastructure as a utility not just a commodity.

Digital Places is about making sure the city itself, alongside its people, drives us towards a more digitally enabled future.

In a digital place, high quality and open digital infrastructure is ubiquitous at every level. Its leaders think towards the future and make sure that the changes we make to our physical environment today support the technological demands of tomorrow, and therefore much of Digital Places is about how we plan for and consider these future requirements in everything that we do to create a built environment that is fully digitally enabled.

Smart places are places where connectivity is ubiquitous and universal, where people, organisations and smart devices are all connected. They are places where information is collected and shared in a way that allows anyone to understand and interrogate it, coming up with their own solutions to our greatest challenges. Smart places are also climate-resilient and adaptive, supporting our transition to a zero carbon economy as well as being sustainable, adaptable and future-proofed.

Connectivity is also of critical importance to Manchester 's creative and cultural industries, which overlap with the digital and tech sectors. Our cultural sector has been reliant on digital to keep operating throughout the COVID-19 pandemic, and there is a role for Digital Places in supporting the city 's Cultural Recovery Plan. The digital transformation of the sector is likely to continue, and we must support it by making is easier for creators to digitising, distributing and monetising artistic products online.

Secondly, we know that improved access and technology can enhance access to existing public services. Using the example of health services, digital delivery means that services become more accessible and have wider benefits, for example enabling older people to continue to live in their own homes. Digitisation of health and care records also provides the opportunity to better integrate services as well as offering an opportunity for innovation providing new approaches to tackling embedded health challenges in the City including Health Ageing.

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 statutory development plan as defined by the Planning and Compulsory Purchase Act 2004 comprises the extant Unitary Development Policies of the Manchester Unitary Development Plan and the Manchester Core Strategy Development Plan Document.

Manchester Unitary Development Plan (Adopted July 1995)

The Manchester Unitary Development Plan (UDP) was adopted in July 1995 as the strategy document which set out guidelines for all development in Manchester and provided a framework from which to base decisions about planning applications.

The Manchester Core Strategy was adopted on 11 July 2012 which is the key development plan document in the LDF. It replaces significant elements of the UDP. However, a number of policies remain extant following the adoption of the Core Strategy including Policy DC 17.1 relating to telecommunications.

Policy DC 17.1 states that applications for telecommunications development will normally be approved if the Council can be satisfied that the development has been sited and designed to minimise its impact on residential amenity and in environmentally sensitive areas. Wherever possible the Council will expect the potential of existing buildings and masts, including the sharing of such facilities, to be fully explored before agreeing to additional separate development.

In the justification to Policy DC 17.1 the Council recognises the need for Manchester to be at the forefront in the field of telecommunications. The Council therefore starts from the presumption in favour of sustainable development and investment in the telecommunication systems serving the city. Equally, it wishes to ensure that new developments are brought forward in a way which protects residential amenity and minimises the visual impact of such development particularly in conservation areas and other environmentally sensitive areas in parks and the river valleys. The Council is also concerned to make maximum possible use of existing buildings and facilities by encouraging operators to share facilities wherever possible in order to avoid unsightly duplication and clutter.

Manchester Core Strategy DPD (Adopted July 2012)

The Manchester Core Strategy was adopted in July 2012 and sets out the long term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against.

The Core Strategy Vision states that:

'By 2027 Manchester will be:

- A successful and accessible city in the front rank of cities in Europe and the world.
- A city with a growing economy driven by the strength of the Regional Centre and Manchester Airport which supports a successful City Region. The knowledge based economy flourishes with an entrepreneurial community, characterised by a fully skilled, inclusive working population.

- Meeting the challenge of climate change at the forefront of environmental initiatives and improvement and continuing to deliver sustainable development and a more effective green infrastructure.
- A city with an increased and sustainable healthy population and a community which both benefits from and drives the City's productivity upwards.
- A city with neighbourhoods where people choose to live all their lives.

In order to help meet this vision the Core Strategy sets out a number of spatial objectives.

Spatial Objective SO1 relates to spatial principles and aims to provide a framework within which sustainable development of the city can contribute to halting climate change.

Spatial Objective SO2 relates to the economy and supports a significant further improvement of the City's economic performance and spread the benefits of this growth across the City to reduce economic, environmental and social disparities, and to help create inclusive communities.

SO4 relates to Centres and aims to provide a network of distinctive, attractive and high quality centres, strengthening local identity, providing essential services close to homes and local access to healthy foods.

Policy SO1 relates to spatial principles and states inter alia that development in all parts of the City should:

- Make a positive contribution to neighbourhoods of choice including making a positive contribution to the health, safety and well-being of residents.
- Considering the needs of all members of the community regardless of age, gender, disability, sexuality, religion, culture, ethnicity or income.
- Minimise emissions.
- Improve access to jobs, services, education and open space by being located to reduce the need to travel.

Policy EC1 relates to employment and economic growth in Manchester. The policy states that the priorities for economic growth include:

- Ensuring the continued social, economic and environmental regeneration of the city.
- Ensuring the connectivity to international markets for the import and export of goods to ensure competitiveness in international markets.

Policy DM1 relates to development management. It is a general design policy which is not specifically related to telecommunications but contains some relevance for such applications. The policy states that all development should have regard to the following inter alia:

- Appropriate siting, layout, scale, form, massing, materials and detail.

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

- Impact on the surrounding areas in terms of design, scale and appearance of the proposed development. Development should have regard to the character of the surrounding area.
- Effects on amenity including privacy, light, noise, vibration, air quality, odours, litter, vermin, road safety and traffic generation.

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.

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.

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

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.

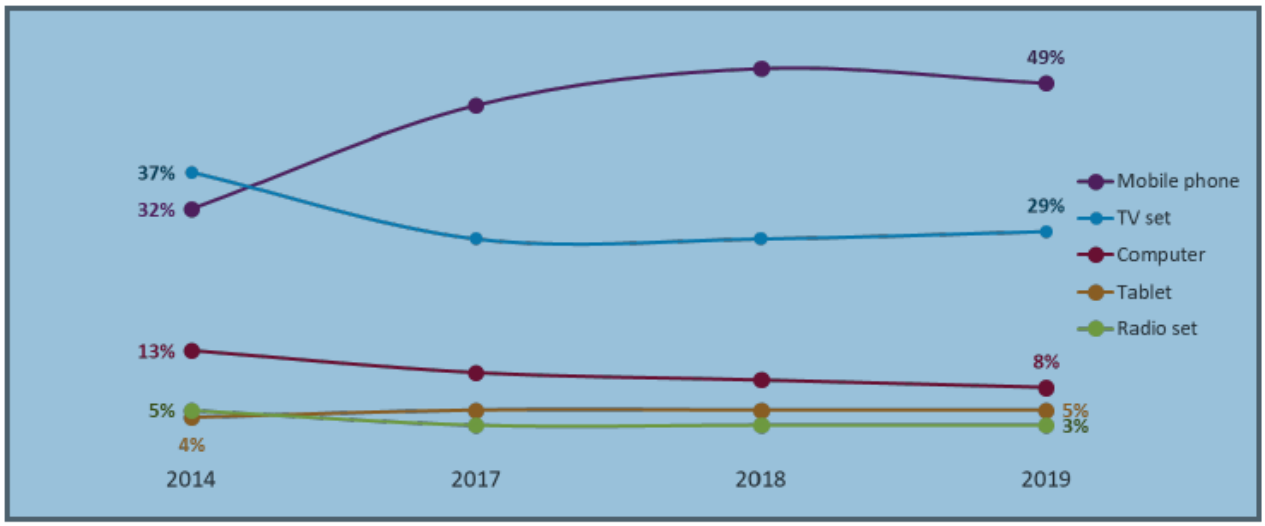
Figure 1.2: Percentage of UK online adults accessing the internet, by device: 2021

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

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.



The Report found that social media and messaging sites reach 98% of the UK adult digital population. On average, visitors aged 18+ spent 49 minutes per person per day on social media sites, considerably more time on average than in key areas such as news sites (12 minutes per user), e-commerce sites (14 minutes) and even gaming sites (31 minutes).

Ninety-two per cent of time spent on social media sites took place on a mobile device (smartphones and tablets) rather than on a computer, compared to 81% of total time spent online.

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

The Connected Nations December 2020[2] report is published as the UK continues to address the challenges of the coronavirus (Covid-19) pandemic; a time when people, families and businesses have come to rely on their phone and broadband connections as never before. We report on how the networks have performed during this period and how the availability of services has evolved.

The report sets out in its findings:

The UK's fixed and mobile networks have generally coped well with increased demands during the pandemic. A shift to more people being at home drove increased demand on broadband networks during the day, although peak usage remained in the evening. Mobile networks also experienced increases in voice traffic.

The number of mobile base stations providing 5G services has risen ten-fold, to around 3,000 across the UK. 87% of these are in England, 7% in Scotland and 3% in both Wales and Northern Ireland.

Mobile coverage is generally stable. The four mobile network operators (MNOs) – EE, O2, Three and Vodafone - each estimate they provide outdoor coverage to 98%-99% of premises. Their networks' coverage of the UK landmass ranges from around 79% to around 85%. The Shared Rural Network programme agreed in March 2020 will extend coverage beyond this by 2025.

A small, but significant number of properties are still struggling to get connected. We estimate that 43,000 premises cannot access either a decent fixed broadband service, or good 4G coverage, indoors.

Mobile data consumption continues to rise, increasing by 42% compared with last year. 83% of the total data traffic was consumed in England with about 10% in Scotland, 4% in Wales and 3% in Northern Ireland (largely in line with UK population distribution). Reflecting this growth, the traffic carried in England in June exceeded that carried across the whole UK in February.

The report acknowledges that being connected has never been more important in the UK. "*People have been relying on phone and broadband services more and more over recent years, and the Covid-19 pandemic during 2020 has brought this reliance into even sharper view. In March 2020, life changed suddenly for millions of people across the UK. Fast, reliable broadband and mobile connections were essential to allow them to work from home, keep up with schoolwork, access medical appointments and public services, stay in touch with friends and family, order shopping online, and keep themselves entertained*".

The report acknowledges that "during the first COVID 19 lockdown, UK MNOs coped successfully with the changes in data and voice traffic volumes and distribution as many

[2] https://www.ofcom.org.uk/__data/assets/pdf_file/0024/209373/connected-nations-2020.pdf

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

people began working from home and schools were shut during the Covid-19 spring lockdown. New peaks were reached for most of the network metrics reported by MNOs just before or during the week lockdown measures were first introduced across the UK in March 2020. Although these peaks generally reduced with the gradual easing of lockdown, they have remained higher than they were before (in line with the historical trend for incremental growth in data consumption)".

The report further notes that the "*MNOs all experienced some form of congestion on their networks in this period, but successfully mitigated this, in part by increasing interconnect capabilities between themselves. Some operators applied further temporary upgrades to their voice and data capabilities in order to cope with increased demands during this period, for example deploying temporary base stations in and around hospitals (particularly at the Nightingale hospitals) to provide additional capacity*".

"*Compared to periods before the spring lockdown, mobile voice traffic increased by 10-45% across the operators. One operator observed an increase in average call duration from about 2.5 minutes (pre-lockdown) to 4 minutes in the week lockdown measures were introduced. These call lengths and volumes spiked in March, before gradually stabilising. Within this general trend for growth, we can also observe drops in average call duration and data traffic around 8pm for the 10-week period from 26 March 2020, coinciding with the nation coming together to applaud the efforts of the NHS during the Covid-19 crisis. Increased amounts of voice traffic were also offloaded to Wi-Fi, although with significant variations between operators*".

Levelling Up the United Kingdom (February 2022)

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

Chapter 3 - The Policy Programme:

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

This mission is focused on improving digital connectivity.

Digital connectivity: The case for action

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

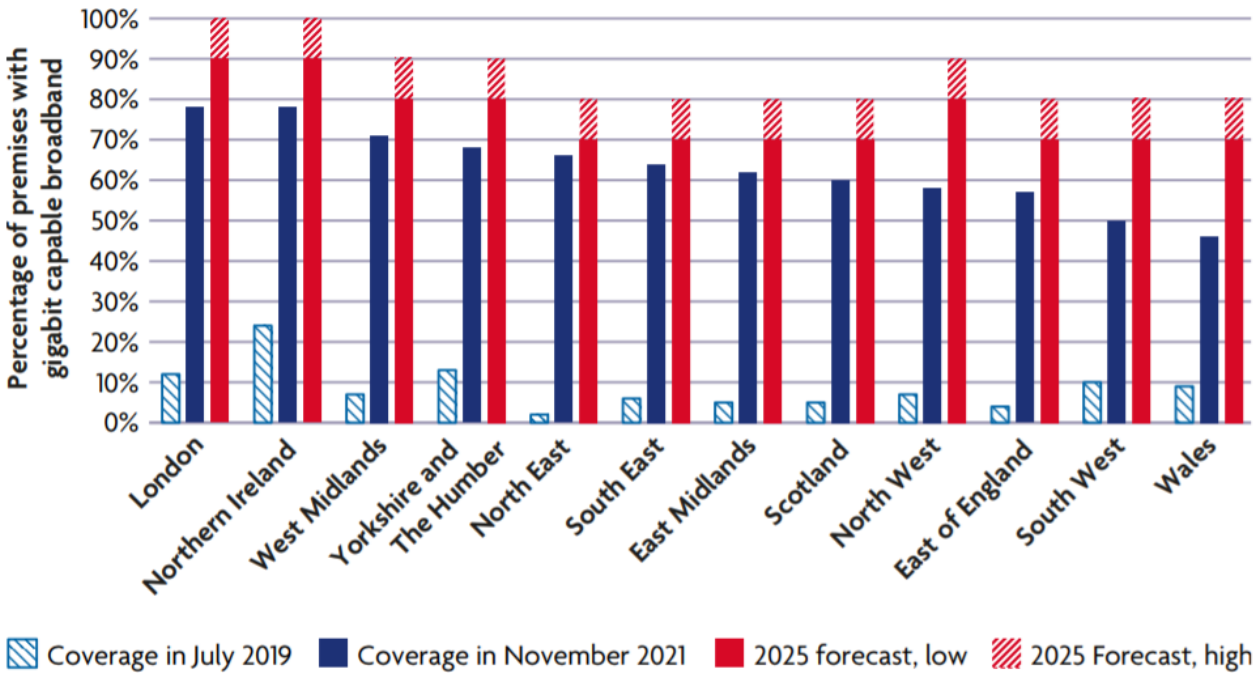
only materialise if businesses and workers have the skills to take advantage of improved infrastructure.

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

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

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

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



Source: Levelling Up the United Kingdom.

5G has the potential to radically change the way people live and make businesses more productive and competitive. The UK Government's ambition is for the majority of the population to have access to a 5G signal by 2027. Since 2017, the UK Government has provided £200m in funding for 5G Testbeds and Trials, supporting over 200 startups and SMEs across a range of sectors – including healthcare, manufacturing, Agri-Tech and creative industries – to better understand how to use the technology to develop new solutions and services.

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

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

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

Planning Assessment

The main issues arising from this prior approval notification are whether the proposed mast and antennas due to their scale and siting would be a visually obtrusive feature which would be detrimental to the character and appearance of the area. Whether any perceived harm would outweigh the significant social and economic benefits associated with the increased service provision attributed to the proposal and other valid material considerations as outlined within 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 Manchester

UDP and Core Strategy, Greater Manchester Digital Strategy, Greater Manchester Digital Blueprint, Greater Manchester Local Industrial Strategy (LIS) and Greater Manchester Local Infrastructure Framework.

The principle of siting telecommunications equipment in this area was accepted by the local authority many years ago, with two existing radio base stations east of the Rochdale Road junction on Queens Road. The proposal which this application is the subject of is very similar to the accepted proposals, with the exception of a lattice structure due to the height requirement of the proposed mast. This is so that the base station will provide coverage and capacity, as well as new 5G service provision for VMO2 to the entire target coverage area and therefore will prevent the proliferation of masts in line with the NPPF.

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 lifeline for many especially during the COVID-19 pandemic where people were able to see their loved ones, speak to friends and family and arrange virtual meetings allowing some form of normality in a very abnormal situation.

The principle of development has been established by the Government when the new permitted development rights came in to force in April 2022, which enabled sites such as this one to be built under the operators permitted development rights, with prior approval for siting and appearance being the only matters that the local planning authority can take in to consideration.

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

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

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

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

Siting

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

The siting of the proposed radio base station has been carefully considered. To this end, the site is located away from the concentrated residential areas and nearby to other large linear structures as seen at the Rochdale Road junction. This includes two existing telecommunications masts to the east of the junction and several large mature trees surrounding the site. This will help the proposed mast assimilate into the developed area. This is in accordance with policy DC17.1 of the UDP and policies EC1 and DM1 of the Core Strategy.

Technical requirements have dictated the siting of the proposed equipment. The operator has spent a considerable amount of time identifying a potential site and the proposed location is considered to present the best balance between operational/technical requirements and environmental impact. The proposed installation will provide enhanced 2G, 3G and 4G coverage to the area, as well as new 5G service.

Image 1: View of the proposed site on Inkerman Street looking south

The proposed equipment cabinets and fencing do not require planning permission, as they can be installed under the operators permitted development rights. In order to remain fully transparent, they have been included on the plans and in the description. The operator's equipment cabinets are similar to those of other statutory undertakers which are

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

commonplace in urban areas. Their limited height and scale will ensure that these cabinets will not be detrimental to the visual amenity of the area.

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

3G and 4G signals by their very nature (as they carry high data rates) do not penetrate over long distances, (5G even less so), just a few hundred metres, depending on the topography of the land, building clutter and vegetation including trees in the area which can reduce their effectiveness. Therefore 3G, 4G and 5G radio base stations need to be close to their customer demand.

As Section 5 above demonstrates there are no more suitable sites that are located within less sensitive locations than the current proposed site to provide new 5G coverage to the target coverage area in this part of Collyhurst.

In line with the Local Plan policies, the proposed installation is an item of essential infrastructure and therefore will not cause any loss of privacy nor will any occupants of nearby properties be overlooked. The column and antennas do not emit any noise, odour, vibration, artificial light or disturbance from air. The only noise emitted is from a cooling fan within the equipment cabinets, which only operate during hot weather conditions. However, within a few metres the noise is inaudible, particularly when taking into account the ambient noise levels of the area which include passing traffic and the nature of the business that operate in the vicinity. The proposed installation will not cause any traffic generation as it is not a visitor destination. Maintenance of the equipment cabinets is usually once a year, where the engineer can walk to site with handheld tools.

Appearance

In accordance with the guidance contained within the NPPF and Manchester UDP and Core Strategy policies, the visual impact on the area has been minimised. The radio base station is proposed to be a lattice tower with open headframe which is required to provide the latest technologies for both operators. Given the makeup of the area that includes large, mature trees, lighting columns, telegraph poles and commercial signage. The lattice tower also allows views through it. The least amount of equipment possible has been proposed. The equipment will be coloured grey as this is considered the best colour to assimilate with the typically grey British skyline.

It is essential that the 5G antennas are unshrouded. As the radio frequencies get higher, required for data carrying, the antennas are less able to propagate through immediate blockages including Glass Reinforced Plastic, which is what the shroud is made from. This affects the 5G antennas more so than any other technology. The result being they cannot

operate effectively close to Glass Reinforced Plastic or any other blocking material. Therefore there is a technical reason why the 5G antennas need to be unshrouded. The latest 4G technology are also affected more so than older technologies by propagation and are therefore less efficient if they are shrouded. As such, other antennas also need to be unshrouded to ensure that the latest technologies are provided to the surrounding area, helping this area of Manchester achieve optimum coverage levels and provision of new 5G coverage in line with the NPPF.

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

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

The presence of the linear structures including telegraph poles and lighting column ensure that the proposed column will not appear incongruous within the streetscene. Thus, there will be no detrimental loss of visual amenity to the area or environmental intrusion in line with the Manchester Unitary Development Plan (1995) and the Manchester Core Strategy (2012).

The open headframe is a technical requirement for the operators without which they would not be able to fit all their multi technology within the same structure and therefore an additional structure would be required within the cell area which would lead to the proliferation of masts contrary to national guidance. The proposed headframe is slightly wider than that of the existing, which is necessary to allow for the upgraded antennas and proposed RRUs to be installed at the required orientations.

As previously explained in this supporting statement, the latest 4G and new 5G radio technologies operate in higher frequency bands than older technologies. At higher frequencies, attenuation of the radio signal is naturally higher and the effects of clutter are greater. It therefore follows that these antennas require a larger structure to achieve the same coverage footprint. As a result, to increase capacity and data speeds to the user, the antenna will normally need to be mounted higher than conventional antenna. If the mast were to be any lower, the antennas would not be able to provide the necessary 5G coverage to the target coverage area as they would not be able to clear the surrounding urban clutter. As a result, the antenna signal would not be able to 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.

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

This is a prior approval application where the principle of this type of development is already established by the Government under the Town and Country Planning (GPDO) Order 2015 (as amended) which states that this type of development is permitted subject to the prior approval of the siting and appearance of the installation. This is therefore akin to an outline planning permission. Given the nature of the area and the fact that a previous similar proposal by the applicant has already been accepted by the council, it is considered that the proposal would not appear prominent nor out of place.

The proposed installation site accords with NPPF and policy DC17.1 of the UDP because the equipment will expand the network, ensuring high quality communications infrastructure is maintained whilst minimising the number of radio base stations in the area. Placing masts near similar structures such as lighting columns, utilising simple and unfussy designs is acknowledged in the Code of Practice on Mobile Network Development in England to be less likely to dominate and be in discord with the streetscene and as a result less likely to have a detrimental impact on the visual amenity of the surrounding area.

Lack of Coverage – Material Consideration

In accordance with the NPPF, the proposed installation is significant to enable continuous coverage of the telecommunication network, ensuring that this area of Collyhurst continues to get the mobile coverage it needs for VMO2 customers as well as new 5G coverage. It will also maintain and improve coverage for the Mobile Virtual Network Operator's (MVNOs) which use the networks which includes GiffGaff, Tesco Mobile, Sky Mobile, Talk Talk Mobile, and Lyca Mobile. So, the proposal will not only provide a service for the operator but those who buy network space off them, which is at least 5 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.

he current proposals will facilitate the development of an advanced broadband telecommunications infrastructure in line with National Government guidance contained within the NPPF which supports infrastructure especially where growth takes place. By providing the latest 4G technology and new 5G service provision the proposals will support the aspirations of Central Government for everyone to have access to the superfast highway network wherever they are and that the majority of the population have access to a 5G service by 2027. This is also in line with the ambitions of the Greater Manchester Digital Strategy which recognises that the future vitality of cities is increasingly based on their ability to use digital networks in intelligent, strategic ways.

The proposed radio base station will also fully comply with the NPPF and policy EC1 of the Core Strategy as Manchester will play a major role in the economic growth of the region. They will continue to develop a diverse economy with accessible employment and deliver significant increases in the number of businesses and jobs, which also includes enhancing digital infrastructure. There is an identified need for this site to ensure that coverage is maintained, and in order to provide the latest 5G technology can be brought to this area of Collyhurst, ensuring there is sufficient capacity in the network to prevent buffering as greater

demands on the network lead to additional pressure on capacity. If there is insufficient capacity then even if coverage is available customers would increasingly be unable to utilise their handheld devices for the manner in which they have become accustomed. Ensuring that the 2G, 3G and 4G coverage is sufficiently enhanced and providing new 5G coverage to the area is fully in line with the requirements of NPPF which recognises the importance of providing 21st Century Infrastructure to support an increasing population.

The proposed radio base station is in full conformity with the Greater Manchester Digital Strategy. It acknowledges that the digital infrastructure is required to increase investment to create the right conditions for growth. As such, the Greater Manchester Digital Strategy fully supports the extension of good quality digital connectivity to all parts of the region. The proposed radio base station, providing 5G into the network in this area of the city, will help meet the opportunities set out in the Greater Manchester Digital Strategy as the global economy shifts, so do the opportunities in Manchester, including digital adoption and connectivity.

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).

Without this radio base station, the operator's customers would not be able to access the 5G network, a demand which is increasing rapidly as customers update their handheld devices to ones that are 5G compatible. If the 5G network is not available then the customers' would not be able to utilise these handheld devices for the purposes in which they were purchased. This would be contrary to the aspirations of Central Government which aspires to everyone having access to the superfast highway network wherever they are, and that the majority of the population have access to a 5G service by 2027.

In accordance with the NPPF the proposed installation will help improve the area's economic prosperity, strengthen the urban economy's by supporting local businesses to start, grow, adapt and diversify. It will support a better environment for today and tomorrow by reducing the need to travel and in turn minimise carbon emissions. This is in accordance with policy SO1 of the Core Strategy. It will support a better environment for today and tomorrow by reducing the need to travel and in turn minimise carbon emissions. This is in accordance with the NPPF and the Local Plan. 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 ensuring the 2G, 3G and 4G service provision to the surrounding area is maintained, and providing new 5G coverage into the operator's networks, this would fully support the vision of Central Government that people will be able to access the 'information highway' wherever they are. It also supports the vision of the Greater Manchester Digital Strategy which recognises improved digital connectivity as a way to maximise opportunities for growth and investment in the region.

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. Manchester aims to have good quality digital connectivity, in line with the smart city agenda. As such it needs the 21st century infrastructure to enable this objective to become a reality. A new site in this location enabling 5G service provision to Collyhurst will ensure that this aspiration is fully met.

Mobiles can only work with a network of base stations in place where people want to use their mobile phones or other wireless devices. Without base stations, the mobile phones and other devices we rely on simply won't work.

The 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.

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

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

A new installation in this location will fill the current gap in the latest high quality 5G service provision and enable VMO2 and the 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 Central and Regional Government's aspirations that everyone has access to the superfast communications network, contained within the NPPF.

Access to the internet in whatever medium now impacts every facet of our lives but only benefits those who can access and use it. The benefits of internet connectivity are key for both residents and businesses alike and a radio base station in this location providing the latest 2G, 3G, 4G and 5G technologies will support the Central and Local Government objectives to improve connectivity infrastructure to speed up economic and business growth.

The proposed installation in this location would fully meet the latest operators' coverage and capacity requirements for 3G, 4G and new 5G provision. This would be wholly in line with the Government's latest aspirations to strongly support advanced, high quality and reliable communications infrastructure, essential for economic growth and social well-being, where the NPPF notes that decisions should support the expansion of electronic communications networks.

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, 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. Ensuring that adequate 2G, 3G and 4G coverage is provided to the area, as well as introducing new 5G service provision, will help meet the Greater Manchester Digital Strategy's ambition to become more digitally connected.

The Code of Practice acknowledges that upgrading and improving mobile networks will not be possible without the necessary infrastructure on which we rely. With increasing consumer demand and the Government's aspirations for high quality communications infrastructure it is ever more important to improve connectivity and capacity.

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

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

Economic and Social Benefits

The NPPF strongly supports sustainable development, as does the Manchester UDP and Core Strategy, the Greater Manchester Local Industrial Strategy and the Greater Manchester Infrastructure Framework. 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 and the policies within the Manchester UDP and Core Strategy, Greater Manchester Digital Strategy, Greater Manchester Digital Blueprint, Greater Manchester Local Industrial Strategy (LIS) and Greater Manchester Local Infrastructure Framework, 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 support 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 and local policy objective. Continuing to transform the digital connectivity of the area to drive economic growth and innovation, working to meet national targets of full roll-out of 5G technology and that all populated areas are connected to the 5G network by 2030, will ensure economic growth and social well-being.

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 Manchester UDP and Core Strategy, Greater Manchester Digital Strategy, Greater Manchester Digital Blueprint, Greater Manchester Local Industrial Strategy (LIS) and Greater Manchester Local Infrastructure Framework, all of which aspire to improve connectivity and access to enhanced 4G/new 5G services across the city region.

Providing the latest digital infrastructure to enable improvements in digital technology empowers and enables residents to have the highest quality of life, supports the creation of high-quality jobs and achieves the maximum productivity levels. It will help this area of Collyhurst comply with the aims of objectives of the relevant Manchester UDP and Core Strategy policies and objectives outlined above.

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

Education:

The relationship between 5G and education is evolving at a massive rate with educators exploring the relevance of Virtual Reality (VR) technologies for education and training. Crucially, VR can support remote learning, allowing students a presence in the classroom even when working elsewhere.

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

Health:

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

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

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

Paragraph 38 of the NPPF states that:

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

Providing improved 3G and 4G coverage and capacity and new 5G service provision in this area will fully meet paragraph 38 of the NPPF, the aspirations of the Manchester UDP and Core Strategy, Greater Manchester Digital Strategy, Greater Manchester Digital Blueprint, Greater Manchester Local Industrial Strategy (LIS) and Greater Manchester Local Infrastructure Framework.

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

HM Treasury outlined such benefits in its report 'Fixing the Foundations: Creating a More Prosperous Nation' – July 2015. Paragraph 7.1 of the plan stated that reliable and high quality fixed and mobile broadband connections support growth in productivity, efficiency and labour force participation across the whole economy. They enable new and more efficient

business processes, access to new markets and support flexible working and working from home.

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

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

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

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

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

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

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

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

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

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

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

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

The Assessment goes on to note that 'Universal digital connectivity would serve as an equaliser of economic opportunity in that it enables participation in a modern digital economy'. Therefore, this Needs Assessment further explains the consequences of a lack of coverage and the effects this has on social and economic prosperity. This clearly highlights the importance of maintaining and enhancing high quality 2G, 3G and 4G coverage and capacity in this area as well as providing new 5G in this area, where the social and economic benefits will outweigh the environmental considerations.

The Government's continued strong support for connectivity is further evidenced by the DCMS who launched their UK wide Digital Connectivity Portal on 20 December 2018. The Digital connectivity portal provides guidance for local authorities and network providers on improving connectivity in local areas. The Government wants everyone in the UK to benefit from world-class connectivity no matter where they live, work or travel. The Future Telecommunications Infrastructure Review outlines a package of measures to create the right

market and policy conditions to deliver world-class connectivity for citizens and businesses. As a result, the pressure to upgrade the existing network to provide 2G, 3G, 4G and 5G is significant.

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

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

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

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

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

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

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

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

….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…

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

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

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

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

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

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

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

On the 1 October 2020, as part of the Speed up Britain Campaign, The Centre of Policy Studies Report published 'Upwardly Mobile: How the UK can gain the full benefits of the 5G revolution'. The report identifies what the 5G opportunities are and what the Government needs to do so we can all benefit from this vital new technology. It states that delays to the rollout of 5G could cost the country tens of billions of pounds in lost economic output. The former Government advisers Alex Jackman and Nick King argue that Government's 'levelling up' agenda and the UK's recovery from the COVID-19 pandemic is at risk without a faster 5G rollout – to the tune of £41 billion.

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

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

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.

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

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

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

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

An installation in this location will ensure that the expansion of the electronic communications network is facilitated and that high quality communications infrastructure is provided to the immediate area. This is in full accordance with the operator's 5G license obligations and the Council's aims and aspirations to expand and improve digital infrastructure as required and to have the latest high quality 5G infrastructure, promoting and growing the digital sector and increasing digital inclusion.

Summary

A new installation for VMO2 is required to provide the operator and the MVNOs with the latest 2G, 3G, 4G coverage and capacity and new 5G service provision to the area of Collyhurst.

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

The proposed height at 25m is essential in order for the antennas to clear the surrounding urban clutter, and ensure the antennas are able to reach the target coverage area, to provide improved high quality 2G, 3G and 4G, and new 5G service provision to Collyhurst. This will fully meet the national Government's aim of 'ensuring that everyone is connected to the information superhighway' and the national policies set out in the NPPF. If the height of the column were to be reduced then the antennas would not be able to operate effectively, leading to a degraded service for the operator's customers, especially for the higher frequency technologies including 4G technology and new 5G service provision.

Site selection was progressed in accordance with the applicant's licence obligations, advice in the NPPF and the Code of Practice and represents the least environmentally intrusive, technically suitable, available option.

The social and economic benefits of providing reliable and high quality mobile broadband connections including 5G support growth in productivity, efficiency and labour force participation across the whole economy. This is fully supported by the NPPF, the relevant policies identified in the Local Plan for Manchester and the Greater Manchester Digital Strategy.

Confirmation that submitted drawings have been checked for accuracy

Name: (Agent)	James Dodd	Telephone:	01617854500
Company:	Clarke Telecom		07435999685

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

Company Address:	Unit E Madison Place Northampton Road Manchester M40 5AG	Email Address:	Jamesdodd4@hotmail.co.uk
Signed:	J.Dodd	Date:	22/03/2024
Position:	Town Planner	(on behalf of Cornerstone)	

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