SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Ashton Old Road	Site Address:	Footway of Ashton Old Road/ Gorton Road, Beswick, Manchester, Greater Manchester M11 3LW
National Grid Reference:	E: 386469 N: 397563		
Site Ref Number:	CS_30548100	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 publicly accessible up to date mast register.		
Were industry site databases checked for suitable sites by the operator:	Yes	
If no explain why: N/A		

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: A pre-application consultation letter, a consultation plan and a set of proposed plans were sent to the Chief Planning Officer via email, dated 12/10/2023. No comments were received to date.	

[1] Macro or Micro

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Annual area wide information to planning authority

Has annual area wide information been provided?	No
If no explain why:	
Summary issues raised: Cornerstones commercial relationship with VMO2 UK Ltd 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 VMO2 UK Ltd full update plan. However, Cornerstone is fully committed to working closely with Local Planning Authorities and following best practice guidance. Cornerstones aim to engage and work with the planning department at the earliest opportunity from when Cornerstones are instructed to deliver new infrastructure within your Local Authority area and often conduct strategic pre-rollout engagement meetings to discuss our wider rollout. If your Local Authority would like a meeting to discuss wider Cornerstone rollout plans, then please advise. We recognise the importance of developing connectivity.	

Community Consultation

Rating of Site under Traffic Light Model:	~~Red~~	Amber	~~Green~~
Outline of consultation carried out: A pre-application consultation letters and a set of proposed plans were sent to the local ward councillors for Ancoats & Beswick (Councillors Chris Joanne Northwood, Alan Good and Irene Robinson) via email, dated 12/10/2023. A pre-application consultation letter and a set of proposed site plans were sent to the local MP for Manchester Central (MP Lucy Powell) via email, dated 12/10/2023.			
Summary of outcome/main issues raised (include copies of relevant correspondence): Councillor Chris J. Nortwoods replied via email, dated 14/10/2023, stating that she does not have any objections to the proposal. No further comments were received to date.			

School/College

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Location of site in relation to school/college (include name of school/college): Happy Kids Heybury Close, Heybury Close, Manchester M11 3TY.
Outline of consultation carried out with school/college (include evidence of consultation): A pre-application consultation letter and a set of proposed plans were sent to the manager of Happy Kids Heybury Close via email, dated 12/10/2023.
Summary of outcome/main issues raised (include copies of main correspondence): No comments were received to date.

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

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

Developer's Notice

Copy of Developer's Notice enclosed?		Yes	No
Date served:	A developer's notice and a set of plans were sent to the Manchester City Council Highway Department via email on 24/10/2023. Copies of the developer's notice and proof of delivery are attached as part of this application		

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3. Proposed Development

The proposed site:

Background:

Cornerstone is the UK's leading mobile infrastructure services company. They acquire, manage and own over 20,000 sites and are committed to enabling best in class mobile connectivity for over half of all the country's mobile customers. They oversee works on behalf of telecommunications providers and wherever possible aim to:

- promote shared infrastructure
- maximise opportunities to consolidate the number of base stations
- significantly reduce the environmental impact of network development

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

The VMO2 currently requires new 5G to be installed on their network in this cell area due to the existing Vodafone site at Former Beswick Co-Op 217-223 Ashton Old Road Manchester M11 3WU which cannot be upgraded due to the existing rooftop not being able to support additional equipment for both operators. Therefore, a new site for VMO2 is required to provide the latest 2G, 3G, 4G and 5G technologies. Whilst the existing site is retained for Vodafone.



Image 1: Existing site (Source: Google Maps)

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Image 2: Proposed site location (Source: Google Maps)

The proposal comprises of the installation of 20m monopole supporting 6 no. antennas, 2 no. equipment cabinets, 2 no. transmission dishes and ancillary development thereto including the installation of 3 no. Ericson Radio Systems (ERSs) and 1no. GPS module.

The proposed radio base station is located on an adopted footway of Gorton Road, south of Ashton Old Road. The site is located in a mix-use area comprising residential properties on the northern side of Ashton Old Road, and industrial properties on the southern. The proposed installation will be seen from Piccadilly Apartments; however, it will be seen in the industrial context as well as other vertical elements of the street furniture in the situ which will minimise the visual impact on the character and appearance of the area; the site seen from this direction will also benefit from the backdrop of semi-mature and mature trees which will further minimise the visual impact of the proposal on the area.

There are a number of other linear street furniture items in the surrounding vicinity such as lighting columns, road signage, palisade fencing, telecommunication infrastructure, traffic lights, commercial signage, bollards and pedestrian guardrails, as well as semi-mature and mature trees which will help to assimilate the proposed radio base station to the surrounding area.

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

The installation of this ground-based installation will enable enhanced 2G, 3G and 4G coverage and capacity to the surrounding area as well as provide new 5G service provision for one of the Cornerstone operators to ensure high quality customer experience is obtained as demands on the network increase and technologies change.

The enclosed coverage plots shown the lack of coverage for technology within this surrounding area.

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The proposed location and height will allow for the optimum level of coverage to be provided to the target coverage area. As demonstrated in the coverage plots submitted with this application the levels of high-quality, reliable 5G coverage that will be provided to this area is significant. The new site will also improve capacity on the existing network, as more people require mobile access for phone calls and mobile internet at once. Increasing the capacity of the network will ensure more people are able to use their phones at the same time whilst reducing the risk of calls dropping, internet buffering etc. Improvements to capacity are not shown on coverage plots as the footprint of the coverage is not increased.

Type of Structure *(e.g. tower, mast, etc):* 20m Orion EMV2 Pole	
Description: The installation of 20m monopole supporting 6 no. antennas, 2 no. equipment cabinets, 2 no. transmission dishes and ancillary development thereto including the installation of 3 no. Ericson Radio Systems (ERSs) and 1no. GPS module.	
Overall Height: 20m	
Height of existing building *(where applicable):*	N/A Metres
Equipment Housing: York	
Length:	0.660 meters
Width:	1.900 meters
Height:	1.750 meters
Equipment Housing: Shire	
Length:	0.660 meters
Width:	1.050 meters
Height:	1.750 meters
Materials *(as applicable):*	
Tower/mast etc – type of material and external colour:	Steel – Goose Grey – RAL BS00A05
Equipment housing – type of material and external colour:	Steel – Goose Grey – RAL BS00A05

Reasons for choice of design, making reference to pre-application responses:
This proposal is for the installation of a new site to replace the one currently located on the side of the building at Former Beswick Co-Op 217-223 Ashton Old Road Manchester M11 3WU (NGR E: 386279 N: 397621) which is unable to be upgraded to provide the required technologies. As the replacement site needs to cover the same target coverage area as the existing site, it needs to be located as close to the existing site as possible. As demonstrated in the Alternative Sites section, the area surrounding the existing site has been fully investigated, and it was considered that the application site was the most viable and suitable location for the proposed equipment. The operator has carefully considered the design of the new proposed column. The operator is proposing the most sensitive design currently available to provide the necessary coverage and capacity to the surrounding area. Due to all the technologies that will be available at this location, 2G, 3G, 4G and 5G, 6 antennas need to be installed at the top of the slim-line

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monopole. These are split into a dual stack formation where 3 antennas will be located at the top and the other 3 will be located underneath. The 3 upper antennas will replace 2G, 3G and 4G service provision. The 3 lower antennas will provide new 5G technology for the operator to the surrounding area. This makes the 5G antennas 3.61m lower than the top of the pole. Thus, if the column were to be any lower, the antennas would not be able to clear the buildings and urban clutter and as such would not be able to operate effectively.

In order to fit in to the operator's single grid network, an additional radio base station is required for VMO2 service in close proximity to the existing rooftop base station that will be retained for Vodafone service. The site is needed to replace 2G, 3G, 4G coverage and capacity for VMO2 to ensure that its customers experience access to the lates service provision currently available and have access to a new 5G network. This is because the operator cannot provide coverage from the existing rooftop site at Former Beswick Co-Op 217-223 Ashton Old Road Manchester M11 3WU (NGR E: 386279 N:397621), which cannot be upgraded for VMO2's technology requirements due to the design of the rooftop and being unable to structurally hold the new 5G antennas. The reasons more fully explained in section 5. The proposed new installation will also meet the extra demands on the network in this area as new technologies improve increasing the demand for 4G and new 5G technologies.

The proposed height at 20m is essential in order to provide coverage to the target coverage area. 5G new radio technologies operate in higher frequency bands than older technologies. Since it operates 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 in 5G.

The new antennas are all unshrouded for technical reasons. However, they have been designed to be as tight as possible and virtually the same width as the main column, to minimise their visual appearance. The higher the radio frequency the more signal attenuation there is. The higher frequency 5G antennas are unable to operate effectively through the Glass Reinforced Plastic that the shroud is made up of and as such if these antennas were to be shielded then they would not be able to provide the necessary coverage to the target coverage area. An additional installation would be needed elsewhere within the cell area, leading to the proliferation of masts.

This is the slimmest design possible which will enable all the multi technologies to be supported from this site. If the column and shroud width were to be any slimmer than the technology would not fit in the one column and another radio base station would be required, which would lead to the proliferation of masts contrary to national Government guidance set out in the NPPF and The Code of Practice. Similarly, if the column were to be a uniform width throughout then the overall width would have to increase which would appear more visually prominent in the streetscene, than the proposed design.

The proposed design is more visually sensitive and much easier to assimilate into a streetscene than lattice towers or more traditional monopoles with bulky headframes. These non-stealth

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designs are preferred by operators as they are structurally capable of hosting more equipment and give greater scope for antenna orientation and are thus more efficient structures. However, such designs would appear alien in this location. Therefore, the operator has compromised on obtaining maximum coverage in order to better assimilate in to the streetscene.

The design of the column resembles as closely as possible the lighting columns, road signage, and the existing telecom installation. These vertical structures will continue to help the proposed installation to assimilate with the surrounding area.

The design of the column maintains its simple, functional, vertical structure which will not appear incongruous within the streetscene. The presence of other linear urban structures such as lighting columns, road signage, palisade fencing, telecommunication infrastructure, traffic lights, commercial signage, bollards and pedestrian guardrails will assist with assimilation in the streetscene. The column is proposed to be coloured goose grey to match the surrounding lighting columns and other elements of street furniture. Although the column can be coloured any other colour the LPA consider appropriate.

The equipment cabinets designed to appear like the existing cabinets already in situ. They are small for telecommunications apparatus and proposed to be coloured goose grey to match the other cabinets already in situ. The equipment cabinets can be installed under the operators permitted development rights but have been included on the plans and in the description in order to remain fully transparent.

The ERSs are small each one about the size of a shoe box. They are designed to make the antennas more efficient and reduce the amount of ground-based equipment cabinets thus minimising the visual impact on the surrounding area. Given their height some 15.75m above ground level underneath the antennas they will not be overly prominent in the streetscene.

The transmission dishes are required in order to provide a link into the network. A clear line of sight is required in order for them to meet its design brief and therefore are required to have a centre line height of 14.75m.

The GPS module is very small; about the size of a tennis ball, located at the top of the column. It is designed to minimise the signal loss ensuring maximum service provision to 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 represents the best compromise between the visual impact of the proposal on the surrounding area and meeting the operator's technical requirements for the site. Taking all matters into account it is considered that this proposal, to provide the latest 2G, 3G and 4G service provision and new 5G coverage providing high quality dense coverage and capacity, would not appear out of place within the streetscene.

Health and Safety - including ICNIRP compliance

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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 VMVO2'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 transmitters 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 system. 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 included investigation and remedy of any reported significant interference.

4. Technical Justification

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 Beswick and provide new 5G service provision.

5. Site Selection Process

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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)

In accordance with the licence obligations and advice in the National Planning Policy Framework and the Code of Best Practice in England the applicant's network rollout team investigated the following siting and design options using this sequential approach to site selection:

- Upgrading their own existing base stations;
- Using existing telecommunications structures belonging to another communications operator. i.e. Mast and/ or site sharing, co-location;
- Installations on existing high buildings or structures including National Grid pylons;
- Using small scale equipment; and finally
- Erecting a new ground based mast site – (1st) Camouflaging or disguising equipment. (2nd) A conventional installation e.g. a lattice mast and compound.

Site Type	Site name and address	National Grid Reference	Reason for not choosing site
Existing Telecoms Site	Former Beswick Co-Op 217-223 Ashton Old Road Manchester, M11 3WU	E: 386279 N: 397621	Existing site which cannot support any additional equipment due to the rooftop design for the required technology and coverage needs required by the operator therefore this option cannot be upgraded and therefore discounted.
Greenfield	Network Rail Land, Ashton Old Road, Manchester M12 2DY	E: 386232 N: 397581	The triangle of land next to the overhead railway line has no access other than across third party land. As there is no access it has been discounted.
Greenfield	McGuinness Demolition, Rondin Road, Manchester M12 6BF	E: 386428 N: 397552	The site is part of the McGuinness demolition yard and access would be through the active demolition site which involves recycling, crushing aggregates and disposal of asbestos using 65 ton tracked excavators and other large plant. As telecoms sites require ongoing 24-hour maintenance access as well as construction access

			it is considered the site would be too dangerous to cross
Rooftop	Rooftop of Piccadilly Apartments, 401 Ashton Old Road, Manchester M11 2DJ	E: 386463 N: 397621	Due to the construction of the building there is no design available to support the operator's apparatus and provide the necessary coverage to the target coverage area.
Greenfield	Land behind hoarding Midland Street, Ashton Old Road, Manchester M12 6BL	E: 385885 N: 397619	It is not possible to install a mast installation at this location due to unresolvable underground services - that appear to be old railway workings - in order to deliver the required level of coverage to the target area. This site has therefore been discounted for this reason.
Greenfield	Ashton Old Road yard, 217-223 Ashton Old Road, Manchester M11 3WU	E: 386276 N: 397656	An installation at this location is considered to be too close to residential properties and other alternatives exist which are more appropriate in order to deliver the required coverage to the target area. This site has therefore been discounted for this reason.
Greenfield	Rylance Street, Beswick, Manchester, Greater Manchester M11 3NP	E: 386424 N: 397630	An installation at this location is considered to be too close to residential properties and other alternatives exist which are more appropriate in order to deliver the required coverage to the target area. This site has therefore been discounted for this reason.
Greenfield	Gorton Road, Beswick, Manchester, Greater Manchester M11 3LW	E: 386572 N: 397492	This site is too close to existing site which will cause technical Difficulties, therefore this location is discounted.
Greenfield	Ashton Old Road, Beswick, Manchester, Greater Manchester M11 2D	E: 386573 N: 397563	The is no sufficient space on the pavement to installation of telecom site on this location therefore this option is discounted.
Existing Installation	Telecom mast at Gorton Road, Beswick, Manchester, Greater Manchester, England M11 3LW	E: 386555 N: 397508	The operator has fully investigated upgrading this site to provide the latest technologies for 4G services as well as new 5G coverage/capacity into the VMO2 network. However, the slim line street furniture base stations that have been inserted into the local street

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			scene are not capable of accommodating all of the differing equipment that is required to meet the site-specific demand of both operators and customers for this area from a single street furniture pole, being mindful of the spectrum variations. To share an existing structure at this location would require significant redevelopment of the existing structure to a much more structurally robust mast capable of hosting all the differing antennas and equipment from both operators to address their spectrum variations. This would move away from the relatively uniform and slimline street furniture poles proposed and therefore it is felt that a secondary, more slimline, street-pole is a more appropriate and sensitive solution to 5G service provision whilst minimising impact for a street furniture setting. This existing telecommunications site has been discounted for VMO2's new technology requirements for this reason. A new replacement site for VMO2 is therefore needed to provide this operator with the latest 2G, 3G 4G and 5G technologies. The existing site will remain in place for current operator's technologies.
Rooftop	Rooftop of GJ Auto Repair Centre, Tuley Street, Beswick, Manchester, Greater Manchester, England, M11 2DY	E: 386733 N: 397465	Due to the construction of the building, there is no design available to support the operator's apparatus and provide the necessary coverage to the target coverage area. The rooftop is too low in order to deliver the required level of coverage to the target coverage area. This site has therefore been discounted for this reason.
Rooftop	Rooftop of Ashbury Meadow Primary School, Burbridge Close, Beswick,	E: 386473 N :397927	An installation at this location is located too far to the North to deliver the required level of coverage to the

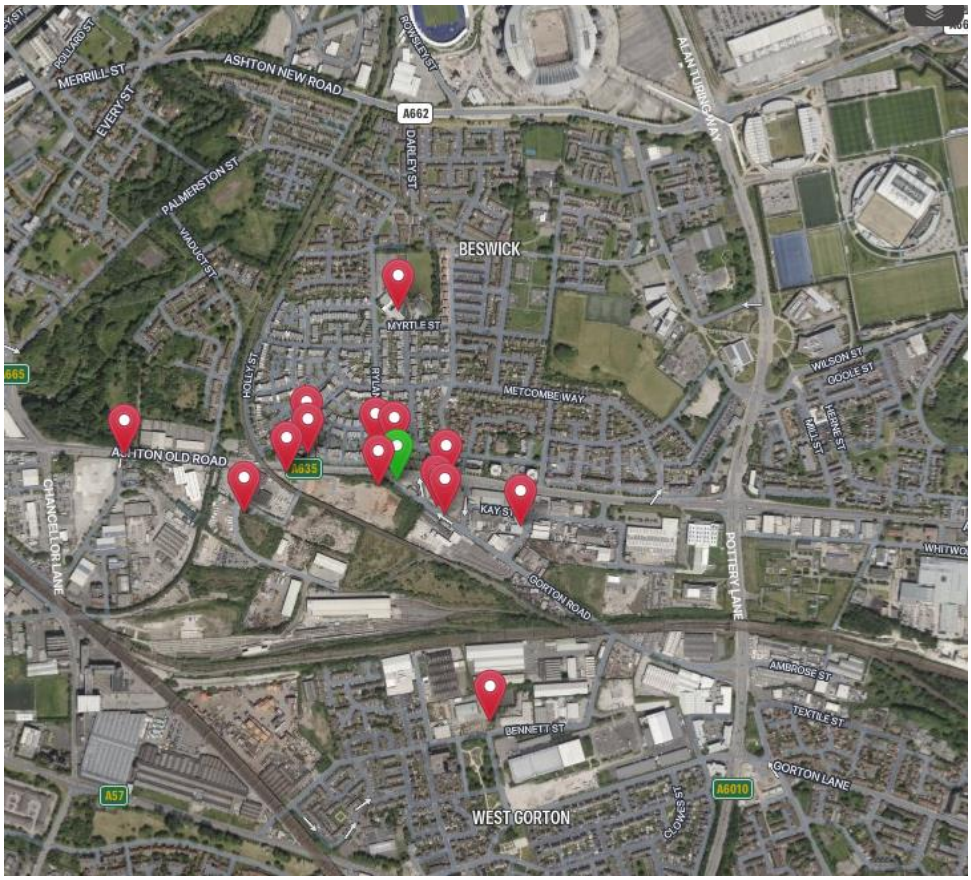
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	Manchester, Greater Manchester, England M11 3WH		target area. This site has therefore been discounted for this reason.
Existing Telecom	Lattice tower at Bennett Street, Beswick, Manchester, Greater Manchester, England M12 5BH	E: 386666 N: 397047	An installation at this location is located too far to the South to deliver the required level of coverage to the target area. This site has therefore been discounted for this reason.
Greenfield	Network Rail Rondin Road, Rondin Road, Ardwick, Manchester, M12 6BF	E: 386140 N: 397495	Previous proposal was submitted for a telecommunication infrastructure at this location (LPA ref: 134800/TEL/2022). However, application in relation to this site was withdrawn as at the time when application was made it was considerate that the proposed development would conflict with HS2 safeguarded route and would impact the ability to build and operate HS2. Currently due to uncertainty around HS2 project, and whether it will be possible to use the land for any development, this site was discounted.

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Map 1. Discounted sites map.

If no alternative site options have been investigated, please explain why: N/A
Land use planning designations: No land-use designation identified.
Additional relevant information (include planning policy and material considerations): **National Planning Guidance** Planning policy is provided at the national level by the National Planning Policy Framework (NPPF). It is a material consideration in planning decisions. It is not necessary to quote extensively from this document, but the following points are highlighted. **National Planning Policy Framework (July 2021)**

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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 NPPF has been recently revised again in September 2023 with an update on policy on planning for onshore wind development in England and does not affect any parts relating to telecommunications.

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

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

The NPPF makes reference to 5G:

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

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

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

Paragraph 118 of the NPPF retains the guidance set out in paragraph 46 of the 2012 NPPF version which relates to determining applications on planning grounds only. They should not seek to prevent competition between different operators, question the need for an electronic

communications system, or set health safeguards different from the International Commission guidelines for public exposure.

At the heart of the NPPF is the retained presumption in favour of sustainable development (para 11). For decision-taking this means approving development proposals that accord with an up-to-date development plan without delay or where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless the application of policies within the revised Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed or any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the revised Framework taken as a whole.

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

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

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

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

Footnote 42 of the NPPF states:

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

Code of Practice for Mobile Network Development in England

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 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 Practice on Mobile Phone Network Development (2016).

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

Principles and Commitment

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

The Government recognises the role of Planning in delivering the digital infrastructure that we need, in a sustainable and well-designed way, especially as households and businesses become increasingly reliant on mobile connectivity. Paragraph 13 of the Code continues to echo the NPPF guidance in strongly supporting high quality communications infrastructure, which is seen as essential for sustainable economic growth. More specifically that planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technologies (such as 5G) in order to support economic growth across the country.

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

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

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

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

Siting and Design Principles

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

The Code provides guidance on siting and appearance principles. It sets out several design principles in respect of telecommunications development and acknowledges that the options for design used by an operator will be affected by site conditions including requirements to link the site to the network, landscape features and coverage and capacity requirements.

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

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

Key Technical and Operational Considerations

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

- **Coverage**: wireless infrastructure needs to provide an appropriate level of coverage over the intended geographical area. This involves ensuring that antennas are elevated sufficiently (often via masts) to provide clear lines of sight for signals.

- **Capacity**: where existing network infrastructure can no longer meet the demand for network capacity in a particular area, additional sites may be required within that coverage 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.

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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".

Manchester Unitary Development Plan (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 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:

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- 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 EM1 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.

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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.
- 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.

Manchester Digital Strategy 2021-2026

Manchester is home to a vibrant and thriving digital sector that plays an increasingly important role in the success of our city by providing opportunities for residents and attracting investment that drives sustainable growth.

This Digital Strategy will ensure that the city continues to support, sustain and grow out digital ecosystem, while strengthening its connection with the people, organisations and services that call Manchester home. It provides the foundation for us to achieve our aim of being a world-class digital city by 2026, supporting and contributing to the objectives set out in the Our Manchester Strategy.

This digital strategy for Manchester is the vision for Manchester's digital future. It sets the priorities that out whole city – our public, private, voluntary and community organisations and our 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.

Manchester is already one of Europe's fastest growing technology cities. We already have a strong and resilient digital sector, acknowledged as "the UK's second technology city", consistently outperforming "all cities outside of London" (The Data City, 2019). This is significant not only in terms of the scale of the sector but also in terms of its scope in covering both established and emerging technologies and providing a talent pool of digital and creative skills supporting consistent growth across all parts of the sector.

The new Digital Strategy aims to capitalise on our strengths, while acknowledging current challenges and looking to ways of ensuring inclusive recovery that are both sustainable and resilient, with digital inclusion, equalities and diversity at its heart. We want to put out people at the centre of this, not only making the best of digital to improve our lives but also ensuring that we can play an active role in codesigning and coproducing digital applications and services.

The digital place's theme states:

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

The future prosperity theme states:

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

Digital Places

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.

Our Manchester Strategy – Forward to 2025

The Our Manchester Strategy 2016-2025 sets out the long-term vision for Manchester's future. It details the priorities that the whole city – our public, private, voluntary and community organisations and our residents – will work together to put Manchester in the top-flight of world cities by 2025.

As in the Our Manchester Strategy, our vision remains for Manchester to be in the top-flight of world cities by 2023, when the city will:

- Have a competitive, dynamic, sustainable and fair economy that draws on our distinctive strengths in science, advanced manufacturing and culture, creative and digital businesses – cultivating and encouraging new ideas.
- Possess highly skilled, enterprising and industrious people.
- Be connected, internationally and within the UK.
- Play its full part in limiting the impacts of climate change.
- Be a place where residents from all backgrounds feel safe, can aspire, succeed and live well.
- Be clean, attractive, culturally rich, outward-looking and welcoming.

In order to achieve the ambitions set within the strategy vision, a number of priorities on key areas were created to address the challenges and build on the opportunities.

One of the priorities refers to *connected city* and it states:

- We will enable increased walking and cycling, and continue to develop an integrated, accessible, safe and green public transport system across the city and beyond.
- We will become a digitally inclusive city, with better digital infrastructure, access to digital technology and strong digital skills.

Greater Manchester Digital Strategy 2018-2020

The foreword to this Digital Strategy states:

'We live in a world where the number of digital devices has now passed the number of people. Digital technology is now shaping every aspect of our lives in ways which were inconceivable a generation ago: how we work, travel, shop, access services, meet people, communicate and are entertained.

Greater Manchester has always been a pioneer city region, with an eye for opportunity and the drive and pragmatism to seek out new solutions to old problems with almost 80000 digital and digital-intense creative businesses in Greater Manchester employing more than 82300 people generating £4.1bn of economic growth annually.

In the Greater Manchester Strategy we set a clear ambition to be a world-leading digital city region, and committed to taking an open, innovative and connective approach to delivering that ambition.

…to be a digital City-Region with a Difference and drive real change together, from the bottom up. We can only be a world leading city-region if we bridge the digital divide. Progress must be universal; geographically, socially and economically…using digital to connect young people to opportunity or tackle homelessness…we will capitalise on Greater Manchester's unique ability to use digital to connect and enhance our other high value sectors such as creative industries, health innovation and advanced manufacturing and materials.

The GM Digital Strategy asks why it is vital for Greater Manchester to be a leading digital City-Region and quotes:

"The future vitality of cities is increasingly based on their ability to use digital networks in intelligent, strategic ways" (Aspen Institute, Washington).

The Strategy goes on to state that:

…'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. As a result, people are now accessing more digital content and services from outside their own country, cross-border payments increasing, and small companies are more easily becoming more "multi-national".

Digital technology is increasingly the backbone of all industries, regardless of the nature and type of business. Embracing digital technology throughout all sectors, geographies and

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occupations is fundamental to Greater Manchester's current and future international competitiveness'.

"We want to be recognised as an international thought leader and do-er in digital innovation and adoption across our economy and communities"…

'This strategy is therefore founded on evidence that becoming a leading digital city- region is imperative to deliver our wider vision. We must do it to deliver the economic, social and inclusion improvements we need and want to see. We can do it because we have the vision, leadership and both the industrial and political will, coupled with strong academic, industrial and community foundations and an exciting and disruptive set of emerging activities and technology'.

The Digital Strategy sets out the Greater Manchester Vision: A city with a Difference:

"It would be fantastic if we led the country in encouraging digital innovation which supports businesses and investment, creating jobs and opportunity, but focusing on improving outcomes for people such as loneliness or homelessness in our society.

I don't want Manchester to be just a smart city – I want it to be the smartest city" (Andy Burnham Mayor of Greater Manchester).

The strategy goes on to state that the Vision for Greater Manchester is 'to be one of the best places in the world for developing and harnessing digital technology and to be recognised as being a top 5 European Digital City Region by 2020 which:

- Empowers and enables residents to have the highest quality of life; and
- Supports the creation of high quality jobs and achieves the maximum possible productivity levels'.

This strategy for Greater Manchester is an open, connected and innovative city region….

'Our Vision for Greater Manchester is holistic, with digital technology driving improvement across all areas of economy and society. A world-leading digital city is therefore, one which its businesses, public service providers and citizens are using digital technology by default and to the fullest: to grow their businesses and improve productivity to access skills, training and employment opportunities, to address global challenges that have a local impact, such as ill health, social isolation, homelessness and pollution; to improve the quality and value for money of public services'.

The Strategy sets out the Goals and Measures. Goal 6 relates to Digital Infrastructure and aims that by 2022-23 the average download speed across fibre, mobile and wireless will exceed 100Mbps.

The benefits for delivering this strategy are noted as:

- For young people, better connected insights on children's development from the very early years right through to leaving school, a transformative range of career opportunities and a means through which they can be accessed;
- For Working Age Population, the ability to access broader range of high quality job opportunities, and set up own business more easily;
- For business owners and investors, for greater range of opportunities to access the technology and support to digitise, opportunities to physically and digitally collaborate will be readily accessible and there will be more readily available flow of talent, capital and support to new innovative ideas and a market place that defines and presents problems and commissions solutions rather than buying off the shelf products and services.
- For Older people, there will be more support and solutions to social isolation, more ease and control for you and your family in terms of managing your own health care; and
- For all residents, a city that works around you in terms of living your life, where you can move around the city more easily and safely, improvements in, for example treating illness, improving air quality due to insights from pooled data, greater control over how and when you access public services.

Greater Manchester is aiming to become a world leading digital city by 2020. Greater Manchester plays a fundamental role in driving economic growth.

The Strategy notes that in terms of mobile internet, despite good public Wi-Fi coverage in most public buildings across Greater Manchester, and on Metrolink and many buses, Wi-Fi provision is patchy in public places and there are still barriers to access (registration requirements and cost) in many parts of Greater Manchester.

The Strategy also acknowledges that digital exclusion is closely linked with social exclusion.

The Greater Manchester Action Plan for Infrastructure at 8.1 States that the connectivity which Greater Manchester requires is to increase average mobile and fixed broadband internet speeds and aims to improve call and mobile coverage including securing a national 5G test bed status thus positioning Greater Manchester at the forefront of next generation 5G mobile.

The strategy notes 5 digital enablers: Social Networks, Mobile internet/apps, digital health, infotainment and e-commerce.

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

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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.

Greater Manchester Infrastructure Framework 2040 (GMCA)

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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:

o Support the lives and well-being of people, communities and the environment within Greater Manchester.

o Be age-friendly and support the economic and social participation of both young and old.

o Support strategically identified growth for parts and communities within Greater Manchester.

o Be flexible, robust and met the existing and future needs of the communities and technological change.

o Provide world-class connections and access to opportunity for all.

o Provide world-class digital infrastructure which provides a platform for GM to embrace emerging technological and societal changes.

o 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:

o more people will mean more homes and businesses, and more consumers of digital services.

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o 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:

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

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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.

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.

The Greater Manchester Digital Blueprint 2023-26

The blueprint has been developed in collaboration with stakeholders from across Grater Manchester's digital sector and shares strategic commitments to put our people, our environment, and our place firmly at the heart of our plans.

The purpose of this Digital Blueprint is to better the lives of people and for them to be empowered by the opportunities a digitally fuelled city-region brings. To use technology and data better to make this a greener, fairer, more prosperous city region.

The ambition for the Greater Manchester set in the Digital Blueprint is to be world-leading digital city-region, where people, places and environment are at the heart of the plans. It sets the goal to have more inclusive and sustainable approach to build on the region's greatest assets.

Digital Blueprints aims for Greater Manchester to be a place with the fastest-growing digital economy in Europe, where communities, business, academia and public services work together to create opportunity, innovate and invent; and where growth benefits everybody. Where Greater Manchester is a world-leading digital city-region, recognised globally for its digital innovation. Just in 2022 there was £532 million invested in Greater Manchester companies, and over 69000 creative, digital and tech sector roles advertised.

The Blueprint recognises the potential for Greater Manchester for businesses growth. With the world class digital infrastructure, and existing physical infrastructure, the region can create a digital place, into which entrepreneurs and innovators from across the globe want to

connect. 78% of companies in digital sector within Greater Manchester reported expansion in 2022 (source: Manchester Digital Skills Audit).

The Digital Blueprint underpins and supports the commitments in the Greater Manchester Strategy 2021-31. It has also set priorities that will help to digitally enabling a greener, fairer, more prosperous city-region for everyone, those are:

- Empowering people and communities
- Building responsible, data driven public services
- Enabling a resilient and prosperous economy
- Creating connected, inclusive, sustainable places
- Strengthening our position as a global digital influencer

Digitally enabling a resilient and prosperous economy – to achieve this we will both enable all businesses to use technology better and support the creation and scaling of digital organisations for the benefit of the UK and the people of Greater Manchester.

Creating connected, inclusive, sustainable places – to mission of this priority is to build world class digital infrastructure, ethically using technology and to create resilient, connected, accessible and sustainable places for everyone. As one of the steps to ensure fulfilment of this priority will be provision of world class digital infrastructure that stimulates economic growth and enables the development of our growth zones, across sectors and locations.

The key strategic enablers set in the GM Digital Blueprint are:

- Building digital skills and literacy for life, education, work and business
- Strengthening our digital talent pipeline
- Extending our world class digital infrastructure, technology and data
- Harnessing academia, testbeds and research

Online Nation 2022 Report (June 2022)

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

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

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

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

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

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

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

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

Figure 1.2 of the Online Nation 2022 report indicates that the percentage of UK online adlts 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%

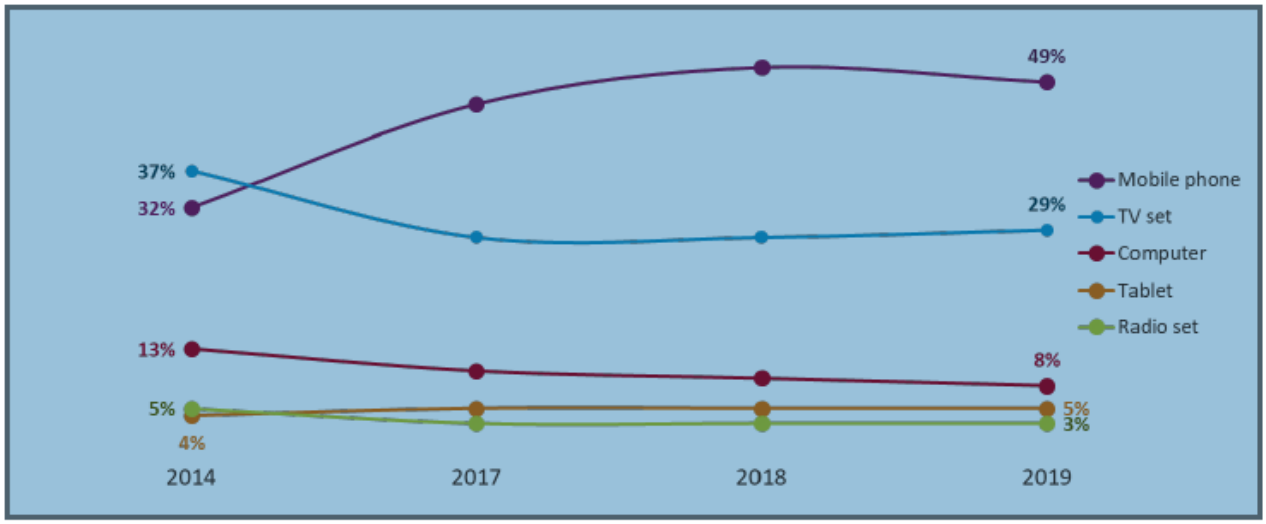
Source: Ofcom Adults' Media Literacy Tracker 2021: Core survey and CATI omnibus survey. IN1. Which of these devices do you use to go online? (MULTI CODE) Base: All adults 16+ that go online (at home or elsewhere) (excluding those who did not give a response at the postal survey) (3577)

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



Source: Ofcom Adults' Media Literacy Tracker 2014-2019

Levelling Up the United Kingdom (February 2022)

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

Digital connectivity: The case for action

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

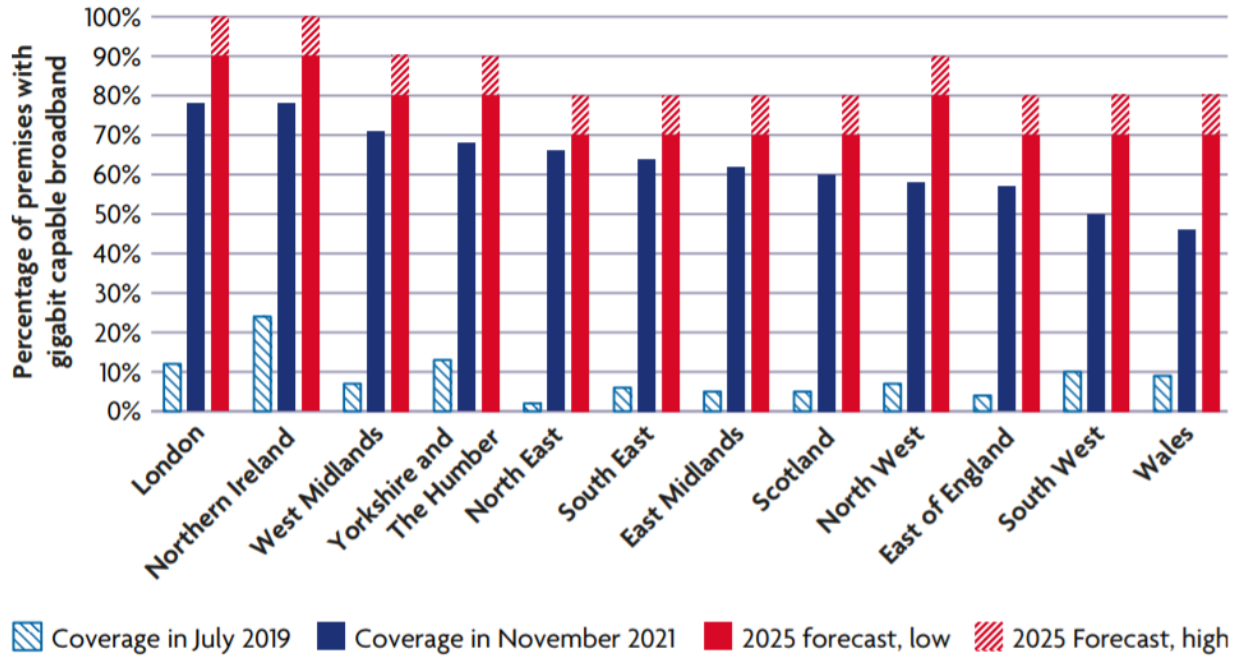
More broadly, high quality digital infrastructure can deepen local labour markets through remote working, making it more attractive for both workers and companies to locate regionally. It also allows for the development of high-value sectoral clusters, which can drive growth and jobs in new areas. Existing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

The policy programme

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

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

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



Source: Levelling Up the United Kingdom.

In 2022, the UK Government published the Wireless Infrastructure Strategy. This review how far the private sector delivers wireless infrastructure across the country and determine whether there are any market failures in places that need to be addressed, and how the UK Government could tackle these.

We must ensure that people have sufficient digital skills to reap the benefits and prosperity arising from the digital economy. In 2020, the UK Government introduced a new digital skills entitlement, giving adults with low or no digital skills in England free access to new digital skills qualifications based on employer-supported national standards. The UK Government continues to work with local leaders to develop Local Digital Skills Partnerships. These collaborative partnerships are now operating in seven regions across England, with an eighth

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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.

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

Market dynamics are also changing:

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

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

1. Ensuring good connectivity for all

As networks are upgraded with 5G technologies over the next decade, 4G will continue to play an important, albeit diminishing, role in providing mobile connectivity across the UK.

Coverage reporting also needs to improve so that it more accurately reflects consumers' actual experience, equipping them with the information they need to choose the right contract. In turn, we expect this to drive further commercial investment to address previously unidentified gaps - ensuring that people and businesses get the connectivity they need, whether to start and grow a business or to have a remote healthcare appointment.

2. Setting a bold 2030 ambition

Given the substantial potential that 5G offers for businesses and public service delivery, we are setting out a bold vision for the next generation of our national networks to galvanise

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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.

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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.

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.

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 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, the relevant policies from Manchester UDP, the Manchester Core Strategy, the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy.

The monopole and associated antennas fully comply with Policy DC17.1 of the Manchester UDP as it will increase overall connectivity for the area of Beswick. 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 into force in November 2016, which enabled sites such as this one to be built under the operators permitted development rights, (as the column height does not exceed 20m), with prior approval for siting and appearance being the only matters that the local planning authority can take into consideration.

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

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

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

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

Siting

The siting of the proposed radio base station has been carefully considered. Furhermore, there are a plethora of existing vertical elements of street furniture in the immediate vicinity, including lighting columns, telegraph poles, another operators monopole installed further down the street, palisade fencing, road signage, commercial signage, traffic lights, bollards and pedestrian guardrails. Consequently, the visual impact of the proposed radio base station will be minimised within the streetscene as the proposed monopole will assimilate well with the existing vertical structures already in situ in the immediate locale. The site will be set on the Gorton Road footway seen in a context of industrial area and mature trees that rise to some 17.5m in height when looking from the main road. This is in full accordance with the aspirations of Policy DC17.1 of the Manchester UDP, Policy DM1 of the Manchester Core Strategy, and Code of Practice.

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. Furthermore, the revised Code of Practice (March 2022) at Para 29 states that placing a mast within or adjacent to an existing group of trees, vegetation and other natural features can reduce visual impact. Care should be taken to minimise the unnecessary loss of existing trees, though antennas will need to be sufficiently elevated to clear the treeline and the trees may need to be maintained to prevent growth above a certain level. Both the NPPF and Code of Practice recognise the importance of improved connectivity whilst utilising existing trees to provide a screen and backdrop for the proposed monopole. Therefore, this proposal is in accordance with the updated NPPF and revised Code of Practice.

If the monopole were to be reduced in height, then the trees could cause clipping. the antennas would not be able to clear the surrounding buildings and urban clutter as such 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.

The proposed equipment cabinets do not require planning permission, as they can be installed under the operators permitted development rights once the radio base station is built. 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 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 and Policy DC17.1 of the Manchester UDP, 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. It is not possible to utilise the existing column as it is not structurally capable of supporting the new heavier and bigger 5G antennas and latest 4G antennas and their associated feeder cables which run up the middle of the column. Thus, a slightly larger column is required in order to support all the new technologies in the one installation. Therefore, a new ground-based installation is required.

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

As Section 5 above demonstrates there are no more suitable sites that are located within less sensitive locations than the current proposed site, and, as this is a site to continually provide existing coverage the operator is even more restricted in locating a more suitable site in which to provide new coverage to the target coverage area in this part of Beswick. A streetworks installation is the most viable option in this area due to the low-lying rooftops, varying topography and residential nature which would not suit either a rooftop or greenfield installation.

Without this site customers would experience buffering and dropped calls as the operator would lose its coverage in this area, creating a hole in coverage.

In line with Policy DC17.1 of the Manchester UDP and NPPF, 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. 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

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The design of the monopole has been carefully considered. To this end, it is a simple, functional slim-line monopole, with the main column being split in to two sections. This column width is essential in order to safely support the antennas at the top of the column and the feeders for all four technologies which are hidden within the main column. The column is proposed to be painted goose grey, in order to match the existing installation and other vertical elements in the area. However, the monopole can be painted any colour should the Local Planning Authority consider that an alternative colour would be more appropriate. This is in line with Policy DC17.1 of the Manchester UDP and the Policy DM1 of the Manchester Core Strategy.

In order to reduce the visual impact on the surrounding area the antennas have been positioned at the top of the monopole. The antennas are positioned as tight as possible and will only be marginally wider than the main column width, rather than being a bulky headframe, as such will not appear dissimilar to a shrouded design. This is in full accordance with Policy DC17.1 of the Manchester UDP and the Policy DM1 of the Manchester Core Strategy.

Government guidance states that in order to limit visual intrusion, the number of radio and telecommunication masts and the sites should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. Use of existing masts, buildings and other structures for new electronic communications capability should be encouraged. Where new sites are required, equipment should be sympathetically designed and camouflaged where appropriate. The proposed installation complies with this policy requirement.

As Section 5 above demonstrates there are no more suitable sites that are located within less sensitive locations than the current proposed site, and, as this is a replacement site the operator is even more restricted in locating a more suitable site in which to provide replacement and new coverage to the target coverage area in this part of Beswick.

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

The presence of the linear structures including lighting columns, telegraph poles, road signage, bollards, the existing telecom installation, commercial signage, palisade fencing,

and pedestrian guardrails will 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 Policy DC17.1 of the Manchester UDP.

The installation of this 20m slim-line column designed to be as similar as possible to the other linear structures found in the immediate area will be no more at odds with the streetscene and character of the area than the other vertical structures within the immediate locale.

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

Telecommunications apparatus by their very nature must be taller than surrounding built and natural form to ensure its efficient operation. The Code of Practice explains this requirement fully in paragraph 3.1, 'radio signals operate like light and must "see" over the target coverage area…' To suggest that it is inappropriate development because it is taller than adjacent lighting columns or road signage is no more relevant than suggesting that street lighting columns are inappropriate because they are taller than road signage or traffic lights. They are all essential pieces of infrastructure within a streetscene that carry out differing functions and therefore cannot be considered on the same merits. Should a street lighting column be capable of the provision of high quality 2G/3G/4G and 5G telecommunication services for the operator then this would be a reasonable consideration, but this is clearly not the case. As such, the proposal should not be considered negatively due to it being taller per se than other vertical structures. Reasonable consideration of the proposal in the context of nearby street furniture can only conclude that the presence of other vertical structures in the immediate area only seeks to provide a setting wherein a base station may appear more congruous from which to provide an important service to a wider area.

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 (GPD) 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. There is nothing in the legislation which limits the number of installations that can be erected in a certain locality, nor that they cannot be located on transport corridors. Given the nature of the area which contains numerous vertical structures and several mature trees the proposed radio base station would not appear prominent nor out of place.

It is also noted that under the operators permitted development rights existing columns can be replaced with new structures up to 20m in height with the submission of a license notification to the Council. This demonstrates that the Government considers that 20m streetworks columns are acceptable without the need to obtain further permission from the Council for their installation. Furthermore, on non-designated sites not on the highway, but

which could be located next to the highway, existing sites can be replaced with installations up to 30m in height without the need for further planning permission from the Council, under the operators permitted development rights. Further emphasising the point that the Government is not concerned with column heights up to 30m on highway locations per se.

NPPF states at paragraph 115 the number of radio and electronic communications masts, and the sites for such installations, should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. In order to provide the latest 4G technology and 5G service in this locality, a new site is required in order to provide the latest technologies to the surrounding area. The operator has already explained above, it is unable to shroud the antennas, but the design is as slim as possible and will represent a simple, functional, vertical structure in the streetscene similar to the existing lighting columns and other operators monopole on the street.

If the column and shroud were to be any slimmer, then the multi technologies would not be able to fit in the same installation and an additional radio base station would be required which would be contrary to national planning guidance. It would also not be structurally capable of supporting all the technologies including the latest 4G coverage as well as 5G service provision for Cornerstone. If the column were to be the same width throughout then it would have to be as wide as the antennas at the top of the column. This would appear more visually prominent in the streetscene than the current proposals.

The design of the radio base station is one of the most sensitive designs available to the operators, designed to resemble typical existing urban linear street furniture. This is in line with the requirements of NPPF which supports equipment which is sympathetically designed and camouflaged where appropriate [paragraph 115], The Code of Practice as well as the aspirations of Policy DC17.1 of the Manchester UDP and the Policy DM1 of the Manchester Core Strategy.

The proposed new site accords with NPPF and Policy DC17.1 of the Manchester UDP and the Policy DM1 of the Manchester Core Strategy because the equipment will resemble other linear structures within the area and will expand the network, ensure 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 for 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 Beswick 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 VMO2 network which includes GiffGaff, Tesco Mobile, Sky Mobile, and Lyca

Mobile. So, the proposal will not only provide a service for one operator but those who buy network space off them, which is at least 4 with VMO2. This will provide a choice for those customers who consider the level of coverage in their area when selecting which operator, they agree future contracts with.

The current proposals will facilitate the development of an advanced broadband telecommunications infrastructure in line with National Government guidance contained within the NPPF which supports infrastructure especially where growth takes place. By providing the latest 4G technology and new 5G service provision the proposals will also help meet the aspiration of the Greater Manchester Digital Strategy and Manchester Digital Strategy to be a world-leading digital city region. Embracing digital technology throughout all sectors, geographies and occupations is fundamental to Greater Manchester's current and future international competitiveness according to the Digital Strategy. Becoming a leading digital city-region is imperative to delivering the Greater Manchester Digital Strategy and Manchester Digital Strategy Visions of delivering the economic, social and inclusion improvements it needs and wants. It will help Manchester become the smart city, an aspiration of the Greater Manchester Mayor. Digital growth plays a fundamental role in driving economic growth.

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

In line with the Greater Manchester Infrastructure Framework which fully supports the development of 5G, the proposals will provide world-class connections and access to opportunity for all in this cell area, as well as providing world-class digital infrastructure which provides the platform for Greater Manchester to embrace emerging technologies and societal changes. 5G infrastructure is fundamental to enable digital technologies to function. The proposals will ensure that any VMO2 customer in this cell area will be able to access resilient, seamless connectivity at a speed they need anywhere at any time. Without the more basic technology solutions such as 5G, smart-region solutions and value-added outcomes will struggle to be brought to fruition.

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

Without this new radio base station, the operator's customers would experience increasing numbers of dropped calls and buffering unable to access the internet on their handheld devices. They would also not be able to access the 5G network, a demand which is increasing rapidly as customers update their handheld devices to ones that are 5G

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compatible. If the 5G network is not available, then the customers' would not be able to utilise these handheld devices for the purposes in which they were purchased. This would be contrary to the aspirations of Central Government which aspires to everyone having access to the superfast highway network wherever they are.

In accordance with the Greater Manchester Infrastructure Framework, the Greater Manchester Local Industrial Strategy and the Greater Manchester Digital Strategy and Manchester Digital Strategy, 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. The radio base station will support the delivery of healthcare provision and accessibility by enabling people greater access to online services, NHS appointment reminders, reminders to take medicines, make appointments etc. As well as assisting hospital outpatient appointments and emergency consultations carried out remotely via video link, connected ambulances, live streaming of CCTV footage etc.

By enhancing the 2G, 3G and 4G service provision to the surrounding area and providing new 5G coverage into the operator's network, this would fully support the Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, the Greater Manchester Local Industrial Strategy and the Greater Manchester Digital Strategy.

The way 5G works, it is closely connected with the Smart City agenda and will enable centralized control of lots of different street infrastructure owned or managed by councils, such as street lights, water meters and bus stops. As such it needs the 21st century infrastructure to enable this objective to become a reality. A new installation in this location enabling 5G service provision to the Beswick area will ensure that this aspiration is fully met.

The Councillor's Guide to Digital Connectivity notes that a survey conducted by the Confederation of British Industry found that 81% of firms said that they see more reliable mobile connectivity as essential. Studies have also shown that mobile broadband is associated with positive impacts nationally, such as higher GDP and increased employment.

Therefore, the Government fully supports high quality communications infrastructure, even more so with the advent of 5G. The NPPF continues to strongly support telecommunications connectivity and states at paragraph 112 that local planning authorities should support the expansion of electronic communications networks. It acknowledges that advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being.

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

An installation in this location will fill the current gap in the latest high quality service provision and enable VMO2 and MVNOs who buy network space off VMO2 to maintain access to their

handheld devices wherever they are for the purposes in which they were purchased. This is fully in line with the Government's aspirations that everyone has access to the superfast communications network, the NPPF, and the Manchester Digital Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework and the Grater Manchester Local Industrial Strategy.

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 new radio base station in this location providing the latest 2G, 3G, 4G and 5G technologies will support Greater Manchester's aspirations to be a world-leading digital city-region and one which promotes the growth of the digital sector, increasing digital inclusion, so all people can access services, education and training.

In line with guidance contained within the NPPF, the Council's, Manchester UDP, the Manchester Core Strategy, the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy, a new radio base station in this location will enable fast, reliable, secure internet accessibility wherever the user is located. An 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. An installation outside this search area, regardless of whether there are existing sites, would not allow the operator to provide their desired level of coverage and therefore would not adequately maintain and provide new coverage and capacity.

As part of the operators 4G licence obligations, many customers will benefit significantly from a vastly improved service provision in this locality. They will be able to gain access to the very latest technologies and connectivity, including 5G, to high-speed data services, the importance of which is highlighted in the Manchester UDP, the Manchester Core Strategy, the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy. An installation in this location will help Greater Manchester to meet its ambition of being digitally inclusive.

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 Code of Practice acknowledges that there will be times when there is a need for a new radio base station, where sites have been lost, where areas have limited or no coverage and where coverage and capacity need to be enhanced. This application is one such example where there is a need to enhance 3G and 4G provision and provide new 5G services within this area.

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In the Code of Practice, it acknowledges *'the pressure on networks to upgrade and improve networks through changes to existing sites and the development of new sites is constant. With the increasing consumer demand and the Government's ambitious aspirations it is becoming more important to improve connectivity and capacity. This is due to the ever-increasing demand for data hungry applications to be available to a range of connected devices, such as smartphones and tablet computers. However, The Code notes that upgrading and improving mobile networks will not be possible without the necessary infrastructure on which they rely'*. Therefore, there is a significant need to locate the equipment in this area.

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 authority's Core Strategy and the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, Infrastructure Framework and Local Industrial Strategy. Mobile communication plays a significant role in sustainable development, being able to access the internet via a mobile device allows people to access a wide range of central and local government services buy groceries, manage finances, apply for jobs/university, and carry out school projects, send emails, download applications, send and receive instant messages, participate in social media, streaming and downloading data to name just a few of the benefits of being able to use an internet enabled handheld device. It also allows people to work from home or on the move without needing to return to the office. Residents and businesses will enjoy better accessibility, assisting home-base working by improving the electronic means of communication and the roll-out of high-speed broadband helping to promote live-work development. This reduces travel time, carbon emissions and increases the speed in which information is processed/shared. The proposals therefore fully comply with NPPF, to minimise the effects of climate change reducing the need to travel and therefore the carbon footprint.

In such instances, as described above, the NPPF supports development that improves the economic, social and environmental conditions in the area. Enhancing the 2G, 3G and 4G coverage and capacity in this area and providing new 5G services will fully meet this national policy objective. Continuing to transform the digital connectivity of the city-region to drive economic growth and innovation, working to meet national targets of full roll-out of 5G technology for all populated areas are connected to the 5G network by 2030 will comply with the ambitions of the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy.

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

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(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. 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.

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 Greater Manchester achieve its ambition of being a world-leading digital area and one which its businesses, public service providers and citizens are using digital technology by default and to the fullest to grow their businesses and improve productivity to access skills, training and employment opportunities to address global challenges that have a local impact such as ill health, social isolation, and pollution; to improve living standards and well-being; and to improve the quality and value for money of public services.

The enclosed Cornerstone Local Authority Engagement Brochure September 2020, emphasises further the benefits of high quality mobile connectivity including: promoting economic growth by attracting investment from business, which creates jobs and regional prosperity in line with national and local economic strategies; helps local businesses to offer a broader range of services, boosting the local economy; helps local Councils to offer online services such as school admissions and local information for residents supports local companies by facilitating working from home, offers social benefits such as being able to connect with vulnerable family and friends (a life line during COVID 19 lockdown) or contact the emergency services 24/7, and helps local councils to offer online services such as paying council tax bills which provides a more efficient service to name but a few benefits.

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

Education

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

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

Health

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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 revised NPPF states that:

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

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

The social and economic benefits are a significant material consideration which should be weighed against the visual impact associated with a radio base station in this location. HM Treasury outlined such benefits in its report '*Fixing the Foundations: Creating a More Prosperous Nation*' – July 2015. Paragraph 7.1 of the plan stated that reliable and high quality 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*

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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 which is also acknowledged in the Manchester digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy. 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 Manchester Digital Strategy, the Our Manchester Strategy, Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy align with the Government objectives of being a world leader in 5G. The proposed installation will fully support these national and local aspirations.

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

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

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- 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 market place. Securing digital connectivity is thus critical to the UK's long term prosperity. A key challenge for the digital sector is a persistent digital divide between those who have access to the latest technologies and those who do not, with resulting social and economic exclusion, particularly as dependence on e-services and digital communications increases'*

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

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Telecommunications Infrastructure Review outlines a package of measures to create the right market and policy conditions to deliver world-class connectivity for citizens and businesses. As a result, the pressure to provide a replacement radio base station in Beswick to provide 2G, 3G, 4G and 5G is significant.

The proposed installation in this location will allow the operator to provide new and improved high quality 2G, 3G and 4G coverage and capacity and new 5G service provision supporting the Government's aim of '*focusing on ensuring that everyone is connected to the information superhighway*'. This fully meets the aspirations of the NPPF, and the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy.

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

Summary

It is not possible to utilise the existing radio base station at the rooftop at Former Beswick Co-Op, 217-223 Ashton Old Road, Manchester M11 3WU. The design of the existing installation on the rooftop is not capable of supporting the new 5G technologies for both VMO2 and Vodafone. Therefore, a new installation for VMO2 is needed to provide this operator with the latest 2G, 3G 4G and 5G technologies. The existing site will remain in place for Vodafone technologies.

The proposed site has been carefully sited on the footway of Gorton Road adjacent to Ashbury Service Station. When looking at the site from the Ashton Old Road and residential properties along it, the proposed installation will be seen in the industrial context of the area, as well as mature trees on the other side of Gorton Road, and another operators mast located further down the road. It is also in alignment with other lighting columns and another operators monopole. There are numerous other vertical structures in the vicinity of the proposed installation including lighting columns, telegraph poles, road signage, bollards, commercial signage, traffic lights, palisade fencing, pedestrian guardrails, the existing telecom installation and mature trees. 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. The vertical structures help the proposed installation assimilate with the streetscene and not appear alien in the immediate area.

The proposed height at 20m is essential in order for the antennas to clear the surrounding urban clutter, trees and ensure the antennas are able to reach the target coverage area, to maintain and provide new high quality 2G, 3G, 4G and 5G service provision to Beswick. This will fully meet the national Governments 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 the latest 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, Manchester UDP, the Manchester Core Strategy, the Manchester Digital Strategy, the Our Manchester Strategy, the Greater Manchester Digital Strategy, the Greater Manchester Infrastructure Framework, and the Greater Manchester Local Industrial Strategy. These benefits are strong material considerations which outweigh any perceived loss of visual amenity to the surrounding area.

Confirmation that submitted drawings have been checked for accuracy

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