SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Finedon Road SF	Site Address:	Grass verge on Finedon Road, Wellingborough, Northamptonshire, NN8 4BH.
National Grid Reference:	E: 490622 N: 269441		
Site Ref Number:	CTIL_20749622	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: This is an upgrade to an existing site.		
Were industry site databases checked for suitable sites by the operator:		No
If no explain why: This is an upgrade to an existing site.		

Site Specific Pre-application consultation with local planning authority

Was there pre-application contact:	Yes
Date of pre-application contact:	20.09.2021
Name of contact:	Graham Northern

[1] Macro or Micro

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Summary of outcome/Main issues raised:
A pre-application consultation letter and copy of the proposal drawings were sent to the Local Planning Authority by email on 28/07/2021. The case office responded outlining the General Permitted Development Order to clarify whether the application was Permitted Development.

Community Consultation

Rating of Site under Traffic Light Model:	~~Red~~	~~Amber~~	Green
Outline of consultation carried out: The local ward Cllrs for Finedon (Cllrs A J Weatherill, J Ekins and M J S Ward) and the local MP Peter Bone were sent a copy of the consultation letter and set of plans on 28.07.2021.			
Summary of outcome/main issues raised (include copies of relevant correspondence): No specific comments received to date.			

School/College

Location of site in relation to school/college (include name of school/college):
No schools located nearby.
Outline of consultation carried out with school/college (include evidence of consultation): N/A
Summary of outcome/main issues raised (include copies of main correspondence): N/A

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

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

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Developer's Notice

Copy of Developer's Notice enclosed?		No – Full Planning Application – Article 14 notice served 17/11/2021.
Date served:	An Article 14 notice and copy of the proposal drawings were sent to North Northamptonshire Council Highways Department on 17/11/2021.	

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 continued network improvement programme, there is a specific requirement for an upgrade to its existing installation at grass verge on Finedon Road to provide improved 2G, 3G, 4G and new 5G coverage and capacity, ensuring that this area of Finedon continues to have access to the latest technologies. This is in line with its legal obligations, as well as the Government aspirations for the UK to be a world leader in 5G. The site is an established radio base station comprising a light grey 17.5m monopole supporting 3 no. antennas, 2 no. equipment cabinets and 1 no. green electric meter cabinet and ancillary development thereto. The site is located on the east side of Finedon Road, at the back of the grass verge, away from the highway. To the east are semi-mature trees and bushes, with a large, grassed area beyond. To the north continues Finedon Road with industrial units further north and mature trees. West of the site is the junction of Meadow Close leading to Meadow Court Industrial Estate, containing commercial and industrial units with associated car parking. South of the site continues Finedon Road with commercial units and the junction of Roundhouse Way further north. The area contains a number of linear items including, lighting columns, road signage, equipment cabinets, palisade fencing, advertisement signage, the existing telecommunications column and associated equipment cabinets as well as semi-mature/ mature trees.

Enclose map showing the cell centre and adjoining cells if appropriate:
The amendments to the existing, established ground based installation will enable enhanced 2G, 3G and 4G coverage and capacity to the surrounding area as well as new 5G service provision for Telefónica to ensure high quality customer experience is obtained as demands on the network increase and technologies change.

Type of Structure *(e.g. tower, mast, etc): Orion monopole*	
Description: The removal of the existing 17.5m slim-line monopole supporting 3 no. antennas, 1 no. equipment cabinet, 1 no. electric meter cabinet and the installation of a replacement 20m slim-line monopole, supporting 6 no. antennas, 2 no. replacement equipment cabinets and ancillary thereto including 3 no. Remote Radio Units (RRUs) and 1 no. GPS module.	
Overall Height: 20m	
Height of existing building *(where applicable):*	N/A
Equipment Housing: York	
Length:	0.6 Meters
Width:	1.9 Meters
Height:	1.75 Meters
Equipment Housing: Shire	
Length:	0.6 Meters
Width:	1.05 Meters
Height:	1.75 Meters
Materials *(as applicable):*	
Tower/mast etc – type of material and external colour:	Steel – Grey (RAL 7035)
Equipment housing – type of material and external colour:	Steel – Grey (RAL 7035)

Reasons for choice of design, making reference to pre-application responses:
The existing radio base station has been in situ on the grass verge for a number of years and has become an established part of the streetscene. The site was approved, in February 2016 for a 17.5m high telecommunications monopole with associated equipment cabinets under LPA ref: WP/15/00796/FUL. However, technology advances (including 5G service provision) and additional demands on the operator's mobile network system in the area have meant that additional antennas need to be installed to facilitate all the data that is required to be carried for mobile superfast broadband. This enables customers to continue to be able to use their handheld devices for the purposes in which they have become accustomed, and now rely on in the modern world we live in, a similar scenario to the reliance on gas and electricity. However, this new technology and the design of the antennas required for 5G

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means that the existing column is not able to support this new technology and therefore a new slightly bigger column is required.

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 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 the existing 2G, 3G and 4G service provision currently being provided at this existing site. The 3 lower antennas will provide new 5G technology for the operator to the surrounding area. This makes the 5G antennas 3.5m 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 urban clutter and trees as such would not be able to operate effectively.

The replacement column will be located a few meters south of the existing column already in situ. It is not possible to utilise the same root foundation due to technical reasons. However, for all intents and purposes it will be seen as almost the same location as the existing once it is in situ and the existing column removed.

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 then the technology would not fit in the one column and another radio base station would be required, which would lead to the proliferation of masts contrary to national Government guidance set out in the NPPF and The Code of Best Practice. 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.

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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 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 existing telecommunications column and other vertical structures within the immediate area such as, road signage, advertisement signage and lighting columns. These vertical structures will continue to help the proposed upgrade to this established radio base station assimilate with the surrounding area.

The design of the column maintains its simple, functional, vertical structure which will not appear incongruous within the streetscene. This is especially so given its careful siting near other liner structures such as lighting columns. The column is proposed to be coloured light grey to match the existing column and other vertical structures including the lighting columns. It will also better assimilate with an often grey sky. Although the column can be coloured any other colour the LPA consider appropriate.

The equipment cabinets are designed to appear like the other existing cabinets already in situ. They are small for telecommunications apparatus and proposed to be coloured grey to match the proposed column. As this is an existing radio base station, 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 RRU's 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 above ground level underneath the antennas, at some 16m, they will not be overly prominent in the streetscene.

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 strikes a good balance between environmental impact and operational considerations. The proposed height and design represents the best compromise between the visual impact of the proposal on the surrounding area and meeting the operator's technical requirements for the site. Taking all matters into account it is considered that this proposal, to provide the latest 2G, 3G and 4G service provision and new 5G coverage providing high quality dense coverage and capacity, would not appear out of place within the streetscene.

Technical Information

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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, Telefonica 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 Telefonica's network the radio base station that is the subject of this application will be configured to operate in this way. All operators of radio transmitters are under a legal obligation to operate those transmitters in accordance with the conditions of their licence. Operation of the transmitter in accordance with the conditions of the licence fulfils the legal obligations in respect of interference to other radio systems, other electrical equipment, instrumentation, or air traffic systems. The conditions of the licence are mandated by Ofcom, an agency of national government, who are responsible for the regulation of the civilian radio spectrum. The remit of Ofcom also includes investigation and remedy of any reported significant interference. The telecommunications infrastructure the subject of this application accords with all relevant legislation and as such will not cause significant and irremediable interference with other electrical equipment, air traffic services or instrumentation operated in the national interest.	Yes	

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4. Technical Justification

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

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

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

There is a specific requirement to upgrade the existing radio base station at this location to enable enhanced 2G, 3G and 4G coverage and capacity to this area of Finedon as well as providing new 5G service provision for Telefonica.

5. Site Selection Process

Alternative sites considered and not chosen (not generally required for **upgrades/alterations to existing sites** including redevelopment of an existing site to facilitate an upgrade or sharing with another operator).

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.

The applicant's site selection strategy is to keep the overall environmental impact to a minimum. Utilising existing masts is always progressed where it is technically and legally possible and where it is the local planning authority's preferred environmental solution. New sites are only developed where there are no viable or accessible alternatives or it is the local planning authority's preferred approach. The feasibility of the acquisition, build and maintenance of the site also needs to be taken into account.

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In accordance with the above sequential approach, the proposal is to upgrade the existing radio base station in this location to maintain and enhance 2G, 3G and 4G coverage and provide new 5G service provision.

Site Type	Site name and address	National Grid Reference	Reason for not choosing site
N/A	N/A	N/A	Upgrade to existing site.

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

As referred to above, the applicant has taken a sequential approach and is seeking to retain the existing radio base station replacing the existing monopole in almost the same location as the existing 17.5m column proposed to be removed, to minimise the impact on the surrounding area.

These amendments to the existing radio base station will ensure that the latest superfast technologies will be able to be accessed by users in this area of Finedon, in line with the operators legal license obligations, and the Government's aspirations that everyone has access to the information super highway network, that the UK becomes a world leader in 5G and the customers' expectations that their handheld devices are able to operate wherever they are located whether that be indoors or outside.

It is considered that utilising an existing established radio base station installation is preferable to pursuing a second base station within the immediate vicinity, as it would reduce the visual impact therefore preserving the character and appearance of the surrounding area. Given the makeup of the area and the siting of existing telecoms infrastructure on the site, it was established that the upgrading of facilities through the use of existing infrastructure would be the most viable solution. Based on this sequential approach no other sites have been considered.

Environmental Information (refer to Section 2 of Site Finder Report):

No specific environmental considerations identified.

Land use planning designations (if Heritage Statement is required then include here or make reference to attached Heritage Statement):

No specific land use designations 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.

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

National Planning Policy Framework (July 2021)

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 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.

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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 Best Practice on Mobile Network Development in England (24 November 2016)

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The Code of Best Practice has been fully revised in November 2016 and is now even more supportive of mobile network provision in line with Government aspirations that everyone should have access to the information super highway no matter where they are located whether that be in rural or urban areas. This Code provides guidance to mobile network operators, their agents and contractors and equally to all local planning authorities in England. It supersedes the Code of Best Practice on Mobile Phone Network Development (2013).

The principal aim of this Code is to ensure that the Government's objective of supporting high quality communications infrastructure, which is vital to continued economic prosperity and social inclusion for all, is met. The development of such 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.

Section 2 of the Code highlights the Government's Communications Policy and Planning Policy. It acknowledges that the continued expansion and development of mobile networks is a key element of the National Infrastructure Delivery Plan 2016 – 2021. This recognises that digital communications are now a crucial component of everyday life, with improvements in connectivity being key to a vibrant economy (para 2.1).

Paragraph 2.2 goes on to state that consumers, businesses and public bodies increasingly rely on mobile communications and expect to receive a signal wherever they are. The Code indicates that recent changes in planning policy [and regulation] are intended to align with Government communications policy, where the ultimate goal is to achieve mobile coverage wherever it is needed. Section 2 of this Code also reiterates NPPF guidance in strongly supporting high quality communications infrastructure, which is seen as essential for sustainable economic growth.

Section 3 of this Code acknowledges that there are special operational and technical considerations associated with mobile network development, which have changed over time due to changes in technology and associated changes in demand. The Code acknowledges that there remains a reliance on radio masts to provide the main umbrella of coverage. Paragraph 3.1 explains that radio signals operate like light and must "see" over the target coverage area, they cannot be hidden and so there will always be a degree of visual impact.

Paragraph 3.2 clearly indicates that in assessing the visual impact, greater emphasis than previously should now be placed on the radio planning requirements to achieve mobile coverage (as shown in the recent changes to permitted development rights, at the end of November 2016, and the reduced test in the most recent NPPF.

Paragraph 3.3 goes on to highlight that the [operator systems tend to be demand-led or to fulfil coverage obligations. With the ever increasing demand for data hungry applications available to a range of connected devices, such as smart phones and tablets, the requirement to upgrade and improve networks through changes to existing sites and the

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development of new sites is constant. As most parts of the country move on to a superfast highway, so the need to bring coverage to 'not spots' and improve coverage in 'partial not spots' intensifies.

Paragraph 3.4 of The Code provides advice to local Planning authorities who are concerned about proposals, stating that they should not 'look for problems' but should work proactively with the Mobile Network Operators to find solutions, in line with paragraph 187 of the NPPF.

Paragraph 4.1 of the Code acknowledges that customer expectations have evolved with technology. The expectation is that they will always be connected and able to access services in exactly the same way as fixed broadband for personal, educational and business purposes.

Paragraph 4.2 acknowledges that data, i.e. using the internet, puts increased demand on capacity and therefore the need for additional base stations to keep abreast of customer demand. However, changes in working practices for the operators, in line with national guidance, streamlining networks, sharing base stations has reduced the overall amount of infrastructure required.

The Code goes on to acknowledge that operators maximise the use of their existing network infrastructure for the provision of 4G services and are similarly upgrading their 3G network infrastructure to improve capacity and coverage. However, the revised Code continues to advise that this does not mean that there will not be a need for any new base stations. Indeed, for example, more base stations will be needed in areas where there has previously been only limited or no coverage and where coverage and capacity needs to be enhanced in line with Government commitments and customer demand.

Similarly, some new sites will be required to replace existing sites that are lost, for example, through redevelopment of an existing building. Some masts may need to be redeveloped or replaced to enable an upgrade in services to take place.

Section 5 relates to mobile connectivity in the 21st Century, explaining that mobile phones and other devices are now everywhere. Mobile connectivity is not just making calls and texts but also mobile broadband. The majority of mobile phones in the UK are Internet-enabled smartphones and large numbers of people also now own tablet devices. People are increasingly choosing to access the internet using a mobile device even when they have fixed broadband connection available.

The Code acknowledges that by the second decade of the 21st Century, the greatest increase in traffic across mobile networks was in data i.e. internet use (para 5.3). Paragraph 5.4 states that in terms of the wider economic impact of mobile connectivity, research by Deloitte on the economic impact of mobile broadband across a range of countries, showed that a doubling of mobile data use leads to an increase of 0.5% in the Gross Domestic Product

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per capita, while another study put the benefit of 4G mobile broadband to the UK economy at £75 billion over a decade.

Section 5 of the Code goes on to highlight that connectivity promotes social inclusion. In recent years, more people rely on a mobile phone than they rely on a landline. Furthermore, people on lower incomes are even more likely to live in a mobile only household, or to access the Internet using a mobile connection (para 5.5).

The 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 (para 5.7). 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 (para 5.8).

Paragraph 5.9 states that there is a need to continually upgrade and improve mobile networks, which will not function without the necessary infrastructure on which they rely. This is driven by increasing consumer demand for data, improved connectivity and more capacity, together with Government aspirations for improving connectivity and coverage.

The Code provides guidance on siting and appearance principles at Appendix A. It sets out a number of design principles in respect of telecommunications development. However, the code acknowledges that the options for design used by an operator will be affected by site conditions including requirement to link the site to the network, landscape features and coverage and capacity requirements. The main options for the operator include:

Mast and/or site sharing (including redevelopment of a site to enable upgrade or sharing with another operator);

- 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).

The Code in Appendix A acknowledges that it has been a long standing Government policy objective to support the sharing of masts and sites. Operators also aim to site share wherever viable.

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Concerning the erection of new ground based masts; The Code at Appendix A page 27 provides examples of where the environmental and visual impact of the mast can be greatly reduced.

- Placing the mast near similar structures. For example, industrial and commercial premises, road signs and lamp posts;
- Placing a mast within or adjacent to an existing group of trees. This option is more successfully implemented in or near wooded areas. It should also be noted that the top of the mast placed in trees will need to be above the tree-line in order for the equipment to work for the allowance of future tree growth;
- Using simple and unfussy designs. Masts which have complex designs are more likely to dominate and be in discord with the landscape and have adverse visual impacts, and
- Appropriate colouring. Masts seen against the sky are best left in their galvanised state or painted pale grey. Against a wooded backdrop, a matt green or brown colour scheme would be more applicable.

The Code continues to support sympathetic design and camouflaging including concealing antennas in familiar features such as flagpoles, street lamp posts, telegraph pole style designs and signs.

Local Policy

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

The Local Plan for the North Northamptonshire area comprises:

- **North Northamptonshire Joint Core Strategy 2011-2031 (Adopted July 2016)**

North Northamptonshire Joint Core Strategy 2011-2031 (Adopted July 2016)

The North Northamptonshire Joint Core Strategy (JCS) is the strategic Part 1 Local Plan for Corby, East Northamptonshire, Kettering and Wellingborough. It outlines a big picture to be developed in more detail through the Part 2 Local Plans prepared by the District and Borough Councils and by Neighbourhood Plans prepared by Neighbourhood Planning Groups.

A number of inter-related issues identified by this Spatial Portrait need to be addressed if sustainable growth is to be delivered in North Northamptonshire. These set the context for the overall vision and outcomes of the Plan, the most relevant to telecommunications are set out below:

- The lack of some key facilities and services, resulting in residents being reliant on larger centres outside North Northamptonshire. This is particularly the case in the southern area.
- The need to raise the quality of development and ensure that it connects to the existing settlement and contributes to making it more sustainable.
- Gaps in infrastructure service provision and need for new infrastructure to support growth.
- Viability challenges in securing the highest possible standards of development and infrastructure provision.

The vision for North Northamptonshire:

> "By 2031, North Northamptonshire will be a showpiece for modern green living and well managed sustainable development: a resilient area where local choices have increased the ability to adapt to the impacts of climate change and to global economic changes. The special mixed urban-rural character of North Northamptonshire will have been maintained through urban-focused growth supporting a strong network of vibrant and regenerated settlements, which each maintain their separate and distinct character within an enhanced green framework of living, working countryside"

Policy 1 – Presumption in Favour of Sustainable Development

When considering development proposals the Local Planning Authority will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area meeting the challenges of climate change and protecting and enhancing the provision of ecosystems services.

Policy 7 – Community Services and Facilities

Development should support and enhance community services and facilities, where appropriate by:

a) Providing on site where necessary or contributing towards accessible, new or enhanced community services and facilities to meet the needs arising from the development utilising, where possible, opportunities for the co-location of facilities or the use of existing suitable sites.

Policy 8 – North Northamptonshire Place Shaping Principles

Ensure quality of life and safer and healthier communities by:

i. Protecting amenity by not resulting in an unacceptable impact on the amenities of future occupiers, neighbouring properties or the wider area, by

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reason of noise, vibration, smell, light or other pollution, loss of light or overlooking.

Paragraph 4.21 - Improved infrastructure is necessary to cater for a growing population and to also deal with existing deficiencies. The phasing and delivery of the necessary infrastructure, in co-ordination with proposed growth for the area, is essential to achieving sustainable communities and protecting and enhancing North Northamptonshire's environmental assets.

Policy 10 – Provision of Infrastructure

Development must be supported by the timely delivery of infrastructure, services and facilities necessary to meet the needs arising from the development and to support the development of North Northamptonshire.

Digital connectivity is also an important part of supporting economic growth and reducing the need to travel as set out in Policy 10.

Promoting the provision of infrastructure and services needed to provide a competitive business environment, including transport and electronic communications infrastructure.

North Northamptonshire Economic Prospectus (June 2020)

This Economic Prospectus presents an overarching economic narrative for North Northamptonshire to articulate existing economic strengths and Unique Selling Points and focus attention on key opportunity areas to maximise its growth potential and realise growth priorities. It is placed within the context of the area's wider amenity offer and underpinning place shaping ambitions which seek to ensure that development is genuinely sustainable and inclusive by creating places where people want to live, work and do business.

Key Place Shaping Principles:

Sustainable growth and regeneration - Ensuring that physical, social and green infrastructure will be in place to match growth, improving and protecting countryside and buildings for future generations.

Health and wellbeing - Reducing health inequality, increasing life expectancy promoting social inclusion, sport and recreation and providing more access to healthy lifestyle options to improve health and wellbeing.

Connectivity - Sustainable transport, digital connectivity, network of walking and cycling opportunities for work and leisure.

South East Midlands Local Industrial Strategy (July 2019)

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The role of the Partnership is to unlock the full growth potential of the South East Midlands. It brings together partners from the public, private, education and not-for-profit sectors to secure infrastructure investment, develop a skilled workforce that meets employers' needs and provide business growth advice and access to finance to support key sectors.

The Strategic Economic Plan recognises that "*demand for higher data capacity and increasing speeds will continue and is set to be a key driver of economic growth, particularly for those working from home*", and states that "*we recognise the critical requirement for mobile connectivity in the area. The Government's ambitions for the UK to be a world leader in 5G technologies has particular resonance here… we will continue to work with government and public and private partners… to support the commercial rollout of new mobile technologies.*"

South East Midlands Strategic Economic Plan (SEMSEP) (November 2017)

This Strategic Economic Plan sets out how they intend to ensure that the South East Midlands economy not only continues to thrive, but contributes even more to the success of UK.

The Economic Plan sets out 3 priorities to ensure South East Midlands economy can keep thriving:

- Growing Business
- Growing Places
- Growing People

'Growing places' is all about investing in physical infrastructure, including transport, housing, energy, digital infrastructure and social infrastructure such as schools, hospitals, leisure and community facilities. There is a substantial body of evidence around such infrastructure's importance to economic growth.

Improvements in digital infrastructure open up opportunities for growth.

We recognise the critical requirement for mobile connectivity in the area. The Government's ambitions for the UK to be a world leader in 5G technologies has particular resonance here, given that the area already has world-leading facilities in Connected and Autonomous vehicles. The widespread application of which will require faster and more reliable communications. We will continue to work with government and public and private partners to ensure the area is open for pilots of new technologies, and to support the commercial rollout of new mobile technologies. It is also acknowledged that such technologies must provide wider and stable access for all areas.

SEMLEP's role in supporting the provision of energy, digital and social infrastructure is as follows:

> Working with local authorities and businesses, and through central government initiatives, partners and funding, to improve digital and mobile infrastructure, support

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the commercial rollout of new technologies, and encourage business take-up of these facilities.

Online Nation 2020 Report (June 2020)

Online Nation is an annual research report, published for the first time in 2019. Using research produced both 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 experiences of using the internet, alongside business models and industry trends. As well as looking at long-term trends, this year's report includes more recent data looking at online behaviour in the UK during the coronavirus (Covid-19) pandemic.

The Report sets out its findings:

With respect to the consumer and industry it found that time spent online, and associated revenues grew in 2019.

- In September 2019 the average time spent online each day by adults aged 18+ was 3 hours 29 minutes. In comparison, on average, adults spent 3 hours 19 minutes watching TV on a TV set each day,2 and 2 hours 40 minutes listening to radio each day.
- 71% of all measured time spent online was on smartphones. 35% of internet users only accessed the internet on mobile devices (smartphone or tablet).
- Just 13% of adults do not use the internet
- In 2020, a fifth (22%) of UK adults have a smart speaker in the home and 11% of all UK households own some kind of 'smart home' technology (including devices such as smart home security, smart lighting and smart heating).

Key Matrics Online Consumer Market

UK online consumer market	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Internet take-up (%)	76	79	80	82	85	86	88	87	87	89
Smartphone take-up (%)	27	39	51	61	66	71	76	78	79	82
Tablet take-up (%)	2	11	24	44	54	59	58	58	54	52
Laptop take-up (%)	55	61	62	63	65	64	64	63	60	57
Consideration that the smartphone is the most important device for internet access (%)	n/a	n/a	n/a	32	32	38	46	48	52	60

As the table above highlights 60% of the consumer market consider Smartphones are now the most important device for internet access.

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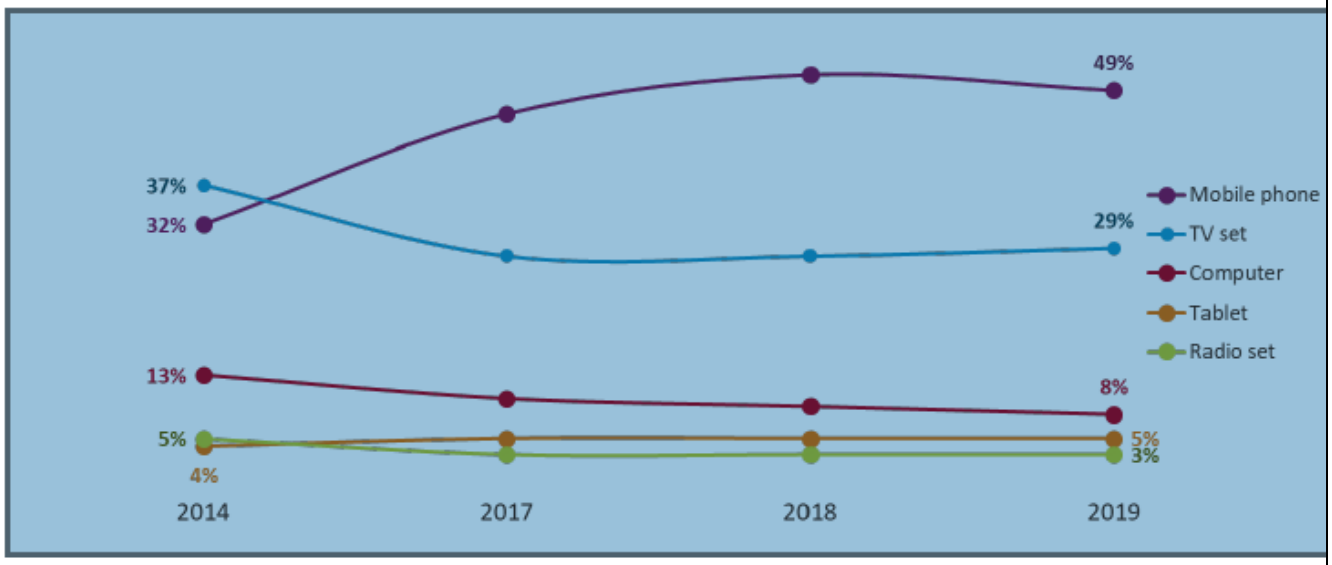
In September 2019, 81% of all measured time spent online was on a mobile device (both tablet and Smartphone).

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



Source: Ofcom Adults' Media Literacy Tracker 2014-2019

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

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

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

The report sets out in its findings:

The UK's fixed and mobile networks have generally coped well with increased demands during the pandemic. A shift to more people being at home drove increased demand on

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

broadband networks during the day, although peak usage remained in the evening. Mobile networks also experienced increases in voice traffic.

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

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

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

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

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

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

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

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

Connected Nations 2021 Report (June 2021)

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

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

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

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

1.5 The report acknowledged that the internet helped most children continue their education throughout lockdown. Virtually all households with school-aged children had access to the internet at home. 7% did not have fixed broadband and 4% had access only to a mobile phone. 1 in 5 did not have access to an appropriate device

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for their schoolwork all the time. The Report found that 2020 saw the rapid adoption of digital remote education by teachers, parents and children such as video conferencing, and platforms for setting and collecting work. In the first few weeks of lockdown in spring 2020, two thirds of children in England were not receiving any live or recorded lessons. By January 2021, this was down to just one in ten. The Report suggests that the use of these platforms may continue such as for those who can't attend school due to illness, or to provide additional revision materials.

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

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

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

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

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

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

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

1.13 The Report notes that the smartphone is the most-used device for accessing the internet for all age groups apart from those aged 65 +. It found that in 2020, 85% of

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internet users aged 16 + used a smartphone to go online, compared to nearly 75% accessing the internet via a computer and just over 50% using a tablet to access the internet. One in ten adults also stated that they only use a smartphone to go online and three in ten used their phone to complete an online form or app on a weekly basis.

In February 2021 the Government said that more than 1.7 million app users across England and Wales had been advised to isolate by the NHS COVID-19 app, following close contact with someone who had tested positive.

Planning Assessment

The main issues arising from this application to upgrade the existing base station at the grass verge of Finedon Road is whether the replacement monopole and replacement cabinets, due to their scale and siting, would be a visually obtrusive feature which would be detrimental to the character and appearance of the area, and whether any perceived harm would outweigh the significant social and economic benefits associated with the increased service provision attributed to the proposal and other valid material considerations as outlined within NPPF, which fully supports the roll out of 5G and the next generation connectivity to accelerate business opportunities and growth to ensure the economy is resilient and competitive, the relevant policies from North Northamptonshire JCS, North Northamptonshire Economic Prospectus, South East Midlands Local Industrial Strategy, and SEMSEP.

The replacement of the existing monopole fully complies with policy 10 of the JCS, North Northamptonshire Economic Prospectus, South East Midlands Local Industrial Strategy and SEMSEP as it will improve the infrastructure and services for this area of Finedon. 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 Minister for Digital Infrastructure Matt Warman, consider it to be the fourth utility service as important as gas, water and electricity, a life line for many especially during the COVID-19 pandemic where people were able to see their loved ones, speak to friends and family and arrange virtual meetings allowing some form of normality in a very abnormal situation.

The principle of siting telecommunications column in this location is long established with the existing 17.5m column and associated equipment being approved in 2016 under LPA ref: WP/15/00796/FUL. This application proposes to remove the existing 17.5m monopole and install a replacement 20m high monopole in almost the same location as the existing column. The replacement column will continue to be in alignment with other linear items of street furniture.

The existing site has become an established feature within the streetscene. The NPPF supports the use of existing telecommunications facilities. As this is a replacement column at an established radio base station, the proposals meet this policy requirement. 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

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the new technologies in the one installation. The existing site has become an established feature within the streetscene. There are a number of vertical structures for the proposed replacement column to assimilate with including, lighting columns, and road signage. These perpendicular items of street furniture are similarly designed to the proposed column i.e. to be simple, functional, vertical structures. The lighting columns in the immediate area also help soften the visual impact of the proposed replacement column in the streetscene. Consequently, the visual impact of the proposed amendments to the existing radio base station will be minimised within the streetscene as the proposed column will assimilate well with the existing vertical structures already in situ in the immediate locale. This is in full accordance with the NPPF.

The design of the monopole has been carefully considered. To this end, it remains a simple, functional slim-line monopole. The replacement monopole will resemble as closely as possible the existing established column already in situ. The main monopole will be split in to two sections. The upper section is 406mm and the lower section is 457mm in width. 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 light grey but can be coloured any other colour if the LPA consider it appropriate.

If the column were to be any lower, the antennas would not be able to clear the surrounding trees 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.

In order to reduce the visual impact on the surrounding area the antennas have been positioned in a dual stack formation, with 3 antennas at the top of the mast at an antenna top height of 19.8m and the other 3 antennas are proposed to be located underneath at an antenna top height of 17.2m. 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.

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 upgrade complies with this policy requirement. The proposed upgrade is in complete accordance with NPPF in this regard as it is an existing radio base station where the location of the existing monopole will continue to be used.

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

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blockages including Glass Reinforced Plastic, which is what the shroud is made from. This affects the 5G antennas more so than any other technology. The result being they cannot operate effectively close to Glass Reinforced Plastic or any other blocking material. Therefore there is a technical reason why the 5G antennas need to be unshrouded. The latest 4G technology are also affected more so than older technologies by propagation, and are therefore less efficient if they are shrouded. As such, the other antennas also need to be unshrouded to ensure that the latest technologies are provided to the surrounding area, helping meet the SEMSEP meet its ambition to grow places, as improvement to digital infrastructure open up opportunities for growth.

The presence of the linear structures including road signage, lighting columns, and advertisement signage will ensure that the proposed replacement column will not appear incongruous within the streetscene. Thus, there will be no detrimental loss of visual amenity to the area or environmental intrusion in line with the NPPF.

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 and existing telecommunications monopole 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. This in itself is not a valid reason to conclude that it is not appropriate at a specific location. Indeed, Inspectors at appeal have noted that by their very nature to be effective masts are required to be taller than surrounding structures 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 Best 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 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.

It is also noted that under the operators permitted development rights existing columns can be replaced with new structures up to 20m in height. This demonstrates that the Government considers that 20m street works columns are acceptable without the need to obtain further

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permission from the Council for their installation. Further emphasising the point that the Government is not concerned with column heights up to 20m 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. Utilising the existing radio base station is fully in line with the NPPF. Whilst a new site is not required, a replacement column is. In order to provide a new 5G service in this locality, the operator is unable to utilise the existing structure as it is not physically capable of supporting all the legacy technologies comprising 2G, 3G and 4G as well as the new bigger 5G antennas. Therefore, a replacement column is required in order to maintain, upgrade and provide the latest and new 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 remain a simple, functional, vertical structure in the streetscene similar to the existing column in this location.

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 and new 5G service provision. 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 replacement column is one of the most sensitive designs available to the operators, designed to resemble as close as technically possible the existing established telecommunications column. 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 Best Practice.

The proposed amendments to the existing site are part of essential infrastructure. The column and antennas do not emit any noise, odour, vibration, artificial light or disturbance from air. The site is not located near or on areas of ecological interest, areas of landscape importance, archaeological sites, conservation areas or buildings of architectural or historic interest. Maintenance of the equipment cabinets is usually once a year, where the engineer can walk to site with hand held tools and will be no more regular than is currently the case. This is in line with Policy 8 of the JCS.

As this is an existing radio base station, the replacement and new equipment cabinets do not require planning permission, as they can be installed under the operators permitted development rights. In order to remain fully transparent, they have been included on the plans and in the description. The operator's proposed equipment cabinets are similar to the existing equipment cabinets already in situ at this existing telecommunications site. Their limited height and scale will ensure that the cabinets will not be detrimental to the visual amenity of the area and will be finished in a grey colour similar to the other equipment

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cabinet. However, they can be coloured any other colour that the LPA considers appropriate.

The RRU's are designed to make the antennas more efficient and reduce the need for additional equipment cabinets at ground level. This minimises the impact on the visual amenity of the area. In order to maximise signal efficiency the RRU's need to be as close as possible to the antennas, hence they need to be located underneath the antennas towards the top of the column. Given their height above ground level and their small size, approximately that of a shoe box, they will not appear prominent as they will be out of the general eye line of casual passers-by.

The proposed replacement column accords with NPPF because the equipment will resemble other linear structures within the area, 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 Best Practice on Mobile Network Development in England to be less likely to dominate and be in discord with the streetscene and as a result less likely to have a detrimental impact on the visual amenity of the surrounding area.

Lack of Coverage – Material Consideration

The proposed upgrade is in accordance with the NPPF, the JCS objective to fix the gaps in infrastructure service provision and need for new infrastructure to support growth, policy 7 of the JCS by providing on site where necessary or contributing towards accessible, new or enhanced community services and facilities to meet the needs arising from the development utilising, where possible, opportunities for the co-location of facilities or the use of existing suitable sites. The proposed installation is significant to enable continuous coverage of the telecommunication network, ensuring that this area of Finedon continues to get the mobile coverage it needs for Telefonica customers as well as new 5G coverage. It will also provide 5G coverage for the Mobile Virtual Network Operator's (MVNOs) which use the Telefonica 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 Telefonica. 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 support the aspirations of Central Government for everyone to have access to the superfast highway network wherever they are and that the majority of the population have access to a 5G service by 2027.

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The proposed upgrade to the radio base station will also fully comply with the North Northamptonshire Economic Prospectus as it will improve the existing digital infrastructure, through improving digital connectivity. Therefore, there is an identified need for this upgrade to ensure that the latest 4G and 5G technology can be brought to this area of Finedon, ensuring there is sufficient capacity in the network to prevent buffering as greater demands on the network lead to additional pressure on capacity. If there is insufficient capacity then even if coverage is available customers would increasingly be unable to utilise their handheld devices for the manner in which they have become accustomed. Filling this lack of 4G capacity and bringing 5G into the area is fully in line with the requirements of the NPPF and South East Midlands Local Industrial Strategy and SEMSEP all of which recognises the importance of providing 21st Century Infrastructure to support an increasing population.

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).

The proposal 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 Coventry to embrace emerging technologies and societal changes. The latest 4G and 5G infrastructure is fundamental to enable digital technologies to continue to function. The proposal will ensure that any Telefonica customer and the MVNO's who buy network space off this operator 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 4G and 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 upgrade to the existing 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 compatible. If the 5G network is not available then the customers' would not be able to utilise these handheld devices for the purposes in which they were purchased. This would be contrary to the aspirations of Central Government which aspires to everyone having access to the superfast highway network wherever they are, and that the majority of the population have access to a 5G service by 2027.

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In accordance with North Northamptonshire Economic Prospectus, South East Midlands Local Industrial Strategy, and SEMSEP, the proposed upgrade 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 upgraded 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 future proofing the site so that it is able to provide new 5G coverage into the operator's network, this would fully support the vision of Central Government that people will be able to access the 'information highway' wherever they are.

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 areas need the 21st century infrastructure to enable this objective to become a reality.

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

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

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

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

Access to the internet in whatever medium now impacts every facet of our lives but only benefits those who can access and use it. The benefits of internet connectivity are key for both residents and businesses alike and an upgraded radio base station in this location

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providing the latest 2G, 3G, 4G and 5G technologies will support the Central Government objectives to improve connectivity infrastructure to speed up economic and business growth.

In line with guidance contained within the NPPF, an upgraded radio base station in this location will enable fast, reliable, secure internet accessibility wherever the user is located. This would fully meet the latest operators' coverage and capacity requirements for 3G, 4G and 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.

As part of the operators 4G licence obligations, many customers will benefit significantly from a vastly improved service provision in this locality. They will be able to gain access to the very latest technologies and connectivity, to high speed data services. Digital technology has catalysed the interconnection of the global economy, with the internet enabling the free exchange of goods and services, providing consumers with greater choice and businesses with access to skills, resources and customers. Upgrading the existing telecommunications equipment at this site will help meet the SEMSEP grow places, as they recognise the critical requirement for mobile connectivity in the area.

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

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

The Online Nation 2020 Report highlights the importance of continued access to the latest technology on mobile devices, with 35% of the internet users only accessing the internet on mobile devices (Smartphone or tablet).

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

It is therefore imperative that the operator continues to invest in ensuring that the latest technologies are available on its network, so that customers are able to continue to use their

handheld devices wherever they are, for whatever reason, for the purposes in which they were purchased.

Economic and Social Benefits

The NPPF strongly supports sustainable development, as does policy 1 of the JCS. Mobile communication plays a significant role in sustainable development, being able to access the internet via a mobile device allows people to access a wide range of central and local government services buy groceries, manage finances, apply for jobs/university, and carry out school projects, send emails, download applications, send and receive instant messages, participate in social media, streaming and downloading data to name just a few of the benefits of being able to use an internet enabled handheld device. It also allows people to work from home or on the move without needing to return to the office. Residents and businesses will enjoy better accessibility, assisting home-base working by improving the electronic means of communication and the roll-out of high-speed broadband helping to promote live-work development. This reduces travel time, carbon emissions and increases the speed in which information is processed/shared. The proposals therefore fully comply with NPPF and policy 1 of the JCS 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.

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

Providing the latest digital infrastructure to enable improvements in digital technology empowers and enables residents to have the highest quality of life, supports the creation of high quality jobs and achieves the maximum productivity levels. It also helps the economy to be resilient and competitive. This is in full accordance with the ambitions of South East Midlands Local Industrial Strategy, North Northamptonshire Economic Prospectus and SEMSEP. It will help Finedon become an area where its businesses, public service providers and citizens are using digital technology by default and to the fullest to grow their businesses and improve productivity to access skills, training and employment opportunities to address global challenges that have a local impact such as ill health, social isolation, and pollution; to improve living standards and well-being, helping people to lead prosperous and rewarding lives; and to improve the quality and value for money of public services.

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

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

Education:

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

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

Health:

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

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

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

Paragraph 38 of the NPPF states that:

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

Providing improved 3G and 4G coverage and capacity and new 5G service provision in this area will fully meet paragraph 38 of the NPPF, North Northamptonshire Economic Prospectus, South East Midlands Local Industrial Strategy and SEMSEP.

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

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

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

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

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

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

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

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

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

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

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

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

'A lack of digital connectivity has a detrimental effect on business operations, productivity and output and hence competitiveness in the global marketplace. Securing digital connectivity is thus critical to the UK's long-term prosperity. A key challenge for the digital sector is a persistent digital divide between those who have access to the latest technologies

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and those who do not, with resulting social and economic exclusion, particularly as dependence on e-services and digital communications increases'

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

…In relation to electronic communications development, it also states that local planning authorities must determine applications on planning grounds only and they should not seek to prevent competition between different operators, or question the need for an electronic communications system. As set out in planning practice guidance, it is in the public interest for local planning authorities to have effective delegation arrangements in place to ensure

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that decisions on planning applications that raise no significant planning issues are made quickly and that resources are appropriately concentrated on the applications of greatest significance to the local area'

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

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

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

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

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

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

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

The report acknowledges that the gains are not just at national level. A more extensive digital infrastructure helps local areas to attract and retain businesses and talent, thereby playing a vital role in reducing regional inequalities. Providing a supportive environment for digital

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infrastructure is one of the few things the Government can do that costs little, boosts growth and helps level up the UK….the key is speed. **The faster a network is built, the bigger the regional gains** (emphasis added). The telecommunications industry faces challenges on this front. The COVID-19 pandemic has increased demand on networks but delayed the availability of new spectrum to provide additional capacity.

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

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

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

> *'Now, more than ever, people need access to dependable and consistent mobile coverage where they live, work and travel. The coronavirus pandemic has highlighted the importance of digital connectivity and ensuring that networks have sufficient capacity and resilience to meet demand. Increased connectivity will also be key to our recovery. As the UK seeks to build back better, our changes to the planning system will help to extend and improve mobile coverage, including in rural areas, to benefit communities and businesses.*
>
> *The government is committed to extending mobile geographical coverage across the UK and providing uninterrupted mobile signal on all major roads, and to be a global leader in 5G… The government is investing £200 million in a programme of 5G testbeds and trials to encourage investment in 5G so that communities and businesses can benefit from this new technology. Our ambition is for the majority of the population to have access to a 5G signal by 2027. The increased connectivity and capacity offered by 5G is opening-up the potential for new, innovative services for individuals and industry…*
>
> *It is also essential that the planning system can effectively support the delivery of the mobile infrastructure that we need'…*
>
> *The government response set out that, subject to a technical consultation on the detail of the proposals, including the appropriate environmental protections and other safeguards, we would take forward changes to:*

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- *Enable the deployment of radio equipment housing on land without the need for prior approval, up to specified limits and excluding sites of special scientific interest, to support 5G deployment;*
- *Strengthen existing masts up to specified limits to enable sites to be upgraded for 5G and for mast sharing without the need for prior approval;*
- *Enable the deployment of building-based masts nearer to highways to support deployment of 5G and extend mobile coverage, subject to prior approval and specified limits; and,*
- *Enable higher new masts to deliver better mobile coverage and mast sharing, subject to prior approval and specified limits".*

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

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

Summary

This is an upgrade to an existing established radio base station in this location. It is not possible to utilise the existing 17.5m column and provide the latest 5G communication technologies. The design of the existing monopole column is not capable of supporting the new 5G technologies for Telefonica. Therefore, a replacement column for Telefonica is needed to provide this operator with the latest 2G, 3G, 4G and 5G coverage in almost the same location as the existing established monopole.

The proposed column has been carefully sited as close as possible to the existing established monopole already in situ and will remain at the back of the grassed verge, away from the highway. It cannot be located in exactly the same location as the existing column which is proposed to be removed for technical reasons. However, for all intents and purposes it will be seen in the same location as the existing column and in time will become established in the streetscene. There are other vertical structures in the vicinity of the proposed installation including lighting columns, road signage and advertisement signage. 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 and trees ensuring the antennas are able to reach the target coverage area,

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to maintain and provide new high quality 2G, 3G, 4G and 5G service provision to this part of Ermine. This will fully meet the national Governments aim of 'ensuring that everyone is connected to the information superhighway', that the majority of the population have access to a 5G signal by 2027 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 which have lower antenna propagation.

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

The social and economic benefits of providing reliable and high quality mobile broadband connections including 5G support growth in productivity, efficiency and labour force participation across the whole economy. This is fully supported by the NPPF and the relevant policies from North Northamptonshire JCS, North Northamptonshire Economic Prospectus, South East Midlands Local Industrial Strategy, and SEMSEP.

Confirmation that submitted drawings have been checked for accuracy

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Signed:	joshua fiteni	Date:	17/11/2021
Position:	Town Planner	Company: (on behalf of Cornerstone and above operator)	Clarke Telecom Limited

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

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