

SUPPLEMENTARY INFORMATION

1. Site Details

Site Name:	Stotfold Road (P91658)	Site Address:	P91658 Stotfold Road, Letworth Garden City, Hertfordshire, SG6 4JS
National Grid Reference:	E: 520436 N: 233367		
Site Ref Number:	EE: 71063	Site Type: ¹	Macro

2. Pre Application Check List

Site Selection (for New Sites only)

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

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

Site Specific Pre-application consultation with local planning authority

Was there pre-application contact:	Yes
Date of pre-application contact:	17/07/2024
Name of contact:	N/A

¹ Macro or Micro

Summary of outcome/Main issues raised:

A pre-application consultation letter and proposal details and drawings were emailed to the Chief Planning Officers of both North Hertfordshire District Council and neighbouring Central Bedfordshire Council on 17/07/2024. No responses have been received at the time of making the application.

Community Consultation

Rating of Site under Traffic Light Model:		Amber	
Outline of consultation carried out:			
A consultation letter and draft plans were emailed to Fairfield Parish Council, Letchworth Wilbury Ward Councillors (Councillors Amy Allen and Sean Nolan), Arlesey & Fairfield Ward Councillors (Councillors Jodie Chillery and Nick Andrews), Chris Hinchliff MP and Alistair Strathern MP on 17/07/2024.			
Summary of outcome/main issues raised (include copies of relevant correspondence):			
No responses have been received at the time of making the application.			

School/College

Location of site in relation to school/college (include name of school/college):
None nearby in line with Code.
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?	Yes	
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Has the Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator been notified?	Yes	
Details of response: An aerodrome notice was sent to London Luton Airport on 08/08/2024, copy of the notice and proof of delivery enclosed.		

Developer's Notice

Copy of Developer's Notice enclosed?	Yes	
Date served:	08/08/2024	Copy of notices and proof of delivery attached.

3. Proposed Development

The proposed site: KTL act on behalf of the mobile telecommunications operator EE/BT. The proposal is to upgrade and existing radio base station, in order to provide the latest 3G, 4G and new 5G technologies. The site is required to respond to customer complaints in the area and as such must be delivered with pace to meet this urgent demand. As part of EE/BTs continued network improvement program, there is a specific requirement for an upgrade to an existing base station installation on Stotfold Road, to ensure that the latest high quality 3G and 4G service provision is provided in this area of Letchworth. The proposed replacement mast will also ensure that new 5G coverage can be provided at this location. This ensures that coverage and capacity requirements are maintained and enhanced and customer experiences are improved. Mobile telecoms networks are now ubiquitous throughout the UK. It is an expectation that an individual can connect and use their mobile phone whenever and wherever they are. With the advent of new technology, under the banner of 5G, further advances are proposed and Central Government has seen the telecoms industry, and in particular 5G, to be at the forefront of economic development. This upgraded site will enable 5G coverage to be provided to this area of Letchworth. The Government recognises that widespread coverage of mobile connectivity is essential for people and businesses. 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.

The application site is located on public highway land to the west of Stotfold Road, approx. 55m to the south of the existing entrance to Wilbury Hills Cemetery. It is situated approx. 1.5km to the north west of Letchworth town centre. The site is an established radio base station comprising a 15 metre monopole supporting 3 no. antennas, together with 5 no. equipment cabinets. The mast is viewed in the context of the existing lighting columns and road signage, and is sited against the backdrop of mature trees some 10m in height. These linear items will provide context to the upgraded installation.

The surrounding area is mixed use in character, comprising residential to the south and agricultural to the east and further to the south west and the cemetery and dog training facilities to the north/north-west.



Image 1: The Application Site



Image 2: Ariel View of the Application Site. Source – Grid Reference Finder

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 prosperity at the local level and enable all places to share in the proceeds of growth.

5G service provision will bring faster, more responsive and reliable connections than ever before. More than any previous generation of mobile networks, it 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, the '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 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 upgraded radio base station will also meet the extra demands on the network in this area as more people use internet enabled handheld devices. It is a densification project for the operator's network to fill holes in service provision including coverage and capacity. This will enable the operator's customers to be able to use their handheld devices without calls being dropped or buffering occurring where there is a gap in the operator's network coverage and capacity ability. An upgraded site in this location will fill the gap in service provision and provide high quality, reliable, advanced 3G, 4G and 5G to this area of Letchworth.

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

As part of EE/BT's continued network improvement program and in direct response to ongoing customer complaints, there is a specific requirement to upgrade the existing mast on Stotfold Road to ensure that the latest high quality 3G and 4G service provision can be provided in this area of Letchworth for EE/BT and H3G.

The proposed replacement column and ancillary development will also ensure that new 5G coverage can be provided from this existing established radio base station for EE/BT and H3G, with minimal amendment to the visual amenity of the area. This ensures that coverage and capacity requirements are maintained and responds to customer complaints in the area.

Type of Structure (e.g. tower, mast, etc): 20.0m high Phase 7 MK2 pole

Description:

The proposed upgrade of an existing telecommunications base station installation comprising the removal of the existing 15m monopole and replacement with 20m monopole with wraparound ground based equipment cabinet supporting 9 no antennas, together with the removal of 2 no existing equipment cabinets, and the addition of 3 no new cabinets and ancillary development thereto.

Overall Height: 20.00 Metres

Height of existing building (where applicable):

Equipment Housing: Wraparound cabinet x1

Length: 1570mm

Width: 1800mm

Height: 750mm

Equipment Housing: Weston cabinet x1

Length: 1259mm

Width: 770mm

Height: 700mm

Equipment Housing: Wiltshire cabinet x1

Length:	1650mm
Width:	2000mm
Height:	755mm
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 – Fir green (RAL 6009)

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

The existing radio base station has been in situ in this location for a number of years and has become an established feature in the streetscene. Technology advances (including 5G service provision) and additional demands on the operator's mobile network system in the area have meant that larger 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, these new technologies for the latest 4G and 5G service provision and the design of the antennas required for them means that the existing pole is not able to support this new technology and therefore a replacement monopole is required.

The operator has carefully considered the design of the proposed replacement mast. The operator is proposing the most sensitive design currently available to provide the necessary coverage and capacity to the surrounding area. Due to all the technologies that will be available at this location (2G, 3G, 4G and 5G) larger antennas are required. The existing monopole is not structurally capable of supporting these larger antennas. Therefore, a replacement monopole is required to host the upgraded replacement antennas, and ancillary equipment.

Exposed antennas have been designed in this location as it is the most efficient way of providing coverage to the target coverage area. The antennas could also be upgraded in the future without significant design changes, whilst maintaining quality telecommunications in this area both now and in the future. If the antennas were shrouded, they would not provide such a good coverage. It is also likely that radical design changes would need to be made in the future in line with changes in technology and consumer demand.

If the antennas were to be more tightly packed they would cause interference with each other which would lead to buffering and dropped calls and ultimately a worse customer experience than is currently the case. This is an unacceptable situation for the operator and one which would fail the operators design brief of improving coverage to this cell area.

The antennas are required to have a top height of 20.00m in order to clear the adjacent mature trees and clutter and preventing 'clipping' and to ensure that ICNIRP guidelines are met. Any lower and the antennas would not be able to clear the surrounding mature trees and urban clutter and provide the necessary new coverage into the target coverage area in and around this area of Letchworth and beyond. If the antennas were to be any lower in height, then the operator's antennas would clip the surrounding vegetation and urban clutter and not provide

the required levels of new coverage. As such, an additional base station would be required in this cell area. This would lead to a proliferation of masts, contrary to national guidance.

The replacement column will also be able to be utilised by H3G (Three), allowing them to improve their coverage in this area, and will be capable of hosting future technologies for both EE/BT and Three if required. The futureproofing of the site supports the expansion of electronic communications networks, including next generation mobile technology, which is fully in line with the NPPF.

The existing site has been in situ for a number of years. As the site forms part of the operator's existing network it is not possible to move it without causing gaps in the network, which is wholly out of line with the operator's technical design brief and the Government guidance for operators to provide 5G coverage to the majority of the population by 2027. In addition, given the site is viewed in the context of the vertical elements of street furniture along Stotfold Road, including lighting columns and road signage, and it benefits from the backdrop of existing trees the location is considered to be suitable for an upgraded installation.

The proposed overall height at 20.00m; an increase of 5m total of the existing structure, is essential in order to provide sufficient coverage and capacity to the target coverage area. The latest 4G and 5G radio technologies operate in higher frequency bands than older technologies. Since they operate at higher frequencies where attenuation of the radio signal is naturally higher and the effects of clutter are greater it will normally require a higher structure to achieve the same coverage footprint. To increase capacity and data speeds to the user, the antenna will normally need to be mounted higher than conventional antennae. These factors usually drive a requirement for an increase in antenna height for the latest 4G and 5G service provision. In this case a small increase in height is required to ensure adequate coverage can reach over the tall trees nearby and in order to cover the large rural target coverage area.

Two of the existing ground based equipment cabinets will be removed, an additional wraparound cabinet is proposed on the base of the column and 3 no new additional cabinets are proposed, coloured green to match the existing, and blend in with the existing adjacent hedgerow. The replacement column will be coloured light grey as per the existing structure, which will allow it to assimilate with the typically grey British skyline.

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 technical requirements for the site. Taking all matters into account it is considered that this proposal, to provide enhanced 2G, 3G, 4G coverage and capacity, and new 5G service provision, delivering the capability required from a single network installation, would not appear out of place within the street scene.

Health and Safety - including ICNIRP compliance

International Commission on Non-Ionizing Radiation Protection Declaration attached (see below)

International Commission on Non-Ionizing Radiation Protection public compliance is determined by mathematical calculation and implemented by careful location of antennas, access restrictions and/or barriers and signage as necessary. Members of the public cannot unknowingly enter areas close to the antennas where exposure may exceed the relevant guidelines.

When determining compliance, the emissions from all mobile phone network operators on or near to the site are taken into account.

In order to minimise interference within its own network and with other radio networks, EE 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 EE Ltd's network, the radio base station that is the subject of this application will be configured to operate in this way.

All operators of radio transmitters are under a legal obligation to operate those transmitters in accordance with the conditions of their licence. Operation of the transmitter in accordance with the conditions of the licence fulfils the legal obligations in respect of interference to other radio systems, other electrical equipment, instrumentation, or air traffic systems. The conditions of the licence are mandated by Ofcom, an agency of national government, who are responsible for the regulation of the civilian radio spectrum. The remit of Ofcom also includes investigation and remedy of any reported significant interference.

The telecommunications infrastructure the subject of this application accords with all relevant legislation and as such will not cause significant and irremediable interference with other electrical equipment, air traffic services or instrumentation operated in the national interest.

4. Technical Justification

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

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

There is a specific requirement for an upgraded column and associated equipment cabinets at this location to allow EE/BT and H3G to improve their 3G and 4G coverage and capacity in and around the Letchworth area and be able to provide new 5G service provision to this cell. This ensures high quality indoor service provision is provided as well as ensuring that customers are able to continue to use their handheld devices for the purposes in which they have become accustomed, whilst on the move, as demands on the system for greater capacity augment as more customers access the data on the operator's network.

The dynamic nature of technological advances in the telecommunications industry coupled with ever increasing demand from subscribers dictates a continual reinvestment programme on the part of the operators. As a result, and in line with their licence requirements, mobile operators are

constantly developing their networks including filling holes where there is currently a lack of service provision.

Cellular networks are made up of several individual cell areas, each of which has a base station within it. A good analogy for describing a cellular network is that of a patchwork quilt with each cell area being one of the many patches that are sewn together making up the network 'quilt'.

Notably, there are 3 main elements to a radio base station; the cabin or cabinets contain the equipment used to generate the radio signals(s), the supporting structure that holds the antennas in the air or fixes them to a building or structure and the antennas themselves, which emit the radio signals (along with the necessary amplifier or receiver units). Other elements necessary for the base station to function are a power source, feeder cables that link the equipment housing to the antennas and the various support structures, grillages and fixings, often referred to in general terms as '*development ancillary to*' the base station.

These base stations then receive and transmit to mobile devices using radio waves. The antennas operate like an aerosol spray with signal transmitted along a central orientation and dissipating with distance.

In the early days of mobile communications, peripheral locations, high-level topographies and large-scale masts were often identified in order that transmission from a new base station could cover an expansive geographical area. However, whilst this approach was viable for early network generations, the number of mobile handset users has dramatically increased with time, as have the advancements in mobile technology itself. As a result, the cellular network construction and operational criteria have changed too. Because modern networks use higher frequencies with faster data rates whilst serving significantly increased numbers of mobile device users, typical network cell areas (i.e. the geographical area targeted for coverage for which a base station development provides a solution), are now smaller in their geographical expanse and tend to be directly proportionate to the number of users within it. They are also therefore greater in their number with base stations operating at a lower power output than their predecessors.

Mobile phone base stations operate on a low power and accordingly base stations therefore need to be located in the areas they are required to serve. Increasingly, people are also using their mobiles in their homes and this means the operator needs to position base stations in, or close to, residential areas.

Mobile connectivity and service is required where customers live, work and play. 5G coverage and superfast mobile broadband data capacity demand will continue to increase exponentially with the introduction of IoT (Internet of Things), machine to machine connectivity, automated transport/industry and other 'smart' applications. To this end the existing shared infrastructure within the built environment has had to be reviewed and adapted as appropriate.

The main benefits of 5G are that it will be much faster and have higher capacity than 4G, with download speeds in excess of 1 Gbps. To place this in context, customers will be able to download

- not merely stream - a full HD movie in less than 10 seconds on a 5G network. The same task would take closer to 10 minutes on 4G.

The case for 5G is compelling as it will bring faster, more responsive and reliable connections than ever before.

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.

Good connectivity allows people to access a wide range of essential services including emailing; downloading apps; social media; helping with homework; researching local events, businesses or transport timetables; managing personal finances; shopping; contacting local authorities; arranging medical appointments; general business functions; and much, much more.

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).

Alternative sites considered and not chosen:

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

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 upgrade the existing established telecommunications site. Due to the size of the required antennas to provide the enhanced 2G, 3G and 4G coverage and new 5G coverage to the area, a replacement column is required. The replacement pole required is wider, in order to structurally support the upgraded replacement antennas on behalf of the operator.

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, in line with the operator's legal license obligations, and the Government's aspirations that everyone has access to the latest information super highway network 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.

Land use planning designations:

The site is located within the Green Belt (London Area).

However, the application relates to a matter concerning prior approval, and as such it is not a material consideration that can be considered in the context of the site's location within the Green Belt. This is clarified by several appeal decisions, notably:

APP/R5510/W/15/3133767 – Uxbridge

At Paragraph 5, the Inspector clearly stated *"as the appeal relates to a matter concerning prior approval, it is not necessary for me to consider the proposal in the context of the site's location within the Green Belt. Accordingly, I have not considered this policy matter any further."*

APP/R5510/W/16/3156200 – Junction of Warren Road and Swakeleys Drive, Hillingdon

At Paragraph 8, the Inspector clearly stated *"the principle of this proposal is not in question and as such the matter of circumstances permitting development in the Green Belt does not apply."*

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

National Planning Guidance

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

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

National Planning Policy Framework (December 2023)

The Government's National Planning Policy Framework (NPPF) was published on 24 July 2018 and updates the 2012 version. In February 2019 the NPPF was revised again, with minor alterations to wording relating to housing supply and not any parts relating to telecommunications. The NPPF was updated in July 2021, in order to strengthen sections including requirements on improved design quality, a new requirement for Councils to 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. It was most recently updated again in December 2023, in relation to a number of themes including; flexibility for planning authorities in local housing need, clarification of Green Belt boundary alterations and acceptable brownfield development within the Green Belt. It strengthens the importance of building 'beautifully' and respecting the character of an area. It removes the need for annual five-year land supply updates, and protects neighbourhood plans from speculative development for five years. Also, the update encourages community-led and self-build developments and further protects agricultural land in its availability for food production. The update does not change any parts relating specifically in relation to telecommunications.

The Government's latest thinking continues to strongly support communications infrastructure. The NPPF remains very supportive of high quality communications. Indeed, a whole chapter is dedicated to high quality communications, emphasising the importance that the Government attaches to digital connectivity. Paragraph 118 states that advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. This wording echoes guidance set out in paragraph 42 of the 2012 version of NPPF. However, it also includes the importance of reliable communications infrastructure for both economic growth and social well-being.

The NPPF continues to support the expansion of electronic communications networks at paragraph 118. 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 supports the expansion of telecommunications:

"Planning policies and decisions should support the expansion of electronic communications networks..." (para. 118).

Paragraph 119 of the NPPF sets out the requirement to minimise the number of installations consistent with the efficient operation of the network and also includes being consistent with the needs of consumers and providing reasonable capacity for future expansion.

Paragraph 122 of the NPPF retains guidance from a previous NPPF version which relates to local planning authorities 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"* (emphasis added).

The NPPF builds on the aspiration to build a strong, competitive economy. Paragraph 85 states:

"Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking in to account both local business needs and wider opportunities for development. The approach taken, should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation⁴²"...

Footnote 44 of the NPPF states:

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

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

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

The aim of the Code of Practice is to support the government's objective of delivering high quality wireless infrastructure whilst balancing these needs with environmental considerations. It also has an important role in making sure that appropriate engagement takes place with local communities and other interested parties.

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

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

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

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

'8.Digital connectivity is vital to enable people to stay connected and businesses to grow. Fast, reliable digital connectivity can deliver economic, social and well-being benefits for the whole of the UK.

9.As the demand for mobile data in the United Kingdom is increasing rapidly, it is important that everyone has access to dependable and consistent mobile coverage where they live, work and travel.

10.The Future Telecoms Infrastructure Review (FTIR) and the National Infrastructure Strategy set out the government's long-term strategy for meeting its digital connectivity targets and delivering high quality, reliable digital infrastructure that works across the UK².

11.The government has committed to extending mobile coverage across the UK. The government has committed to extending mobile coverage across the UK. The

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

government's Levelling Up White Paper has set a mission that the UK will have nationwide 4G coverage, with 5G coverage for the majority of the population by 2030. In support of this, the government and the UK's mobile network operators agreed a £1 billion Shared Rural Network deal to extend 4G mobile geographical coverage to 95% of the UK by the end of the programme.

12.Next Generation Mobile Technologies: A 5G Strategy for the UK, and the update to this, set out the government's ambition for the UK to be a global leader in 5G to take early advantage of its potential and help to create a world-leading digital economy that works for everyone. The government also wants businesses and communities to benefit from investments in 5G as soon as possible. Through the government's 5G Testbeds and Trials programme we have seen its value to manufacturing, farming, transport networks and healthcare.

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

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

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

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

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

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

- Site sharing and use of existing structures: make use of existing structures, sites and masts wherever possible to reduce the need for new development.

- Consultation with local planning authorities, local communities and other stakeholders.
- Standardised and high-quality approach to planning applications, and the notification procedure: provide standardised supporting documentation for planning applications (where appropriate) within the context of national and local requirements.
- Compliance with guidance laid out in the International Commission on Non-ionizing Radiation (ICNIRP) public exposure levels guidance.

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

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

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

Siting and Design Principles

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

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

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

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

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

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

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

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

Para 27 requires that Local Planning Authorities consider these issues and consider the need for a site within a limited search area alongside the public benefit of improved connectivity. Para. 27

further considers that in general, it should not, therefore, be appropriate for planning authorities to seek wider evidence of alternative sites (beyond that required by the NPPF), unless they consider the proposed development is unacceptable having regard to the relevant material planning considerations

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

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

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

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

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

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

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

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

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

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

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

'66. With the introduction of 5G, more equipment will be required to provide coverage and capacity. 5G, as well as 4G, are data-driven technologies, and high volumes of data will be transmitted between base stations and wireless devices. 5G will require a denser network of base stations than previous generations, including more fixed line fibre optic cable for reliable and high capacity backhaul. The siting of 5G installations will be more constrained and guided by these special technical and operational considerations.

67. Due to the scale and technological constraints of 5G equipment, in some cases previous camouflage design solutions, such as tree mast designs and concealing antennas in flagpoles, may not be practicable or suitable. In these cases, simple designs with particular attention to colouration and finishes may help reduce visual impacts on a site-specific basis.

Local Policy

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

The statutory development plan as defined by the Planning and Compulsory Purchase Act 2004 comprises:

- **North Hertfordshire Local Plan 2011-2031 (Adopted Nov 2022)**

The North Hertfordshire Local Plan (NHLP) was adopted by the Council in November 2022 and sets out how and where new homes, jobs and infrastructure will be delivered in the district for the period up to 2031.

The Council's spatial vision for North Hertfordshire is:

- *"By 2031 North Hertfordshire will be an attractive and vibrant place where people will want to live, work and spend their leisure time.*
- *A mixture of quality new homes including affordable houses with a choice of tenure catering for the needs of North Hertfordshire's residents*
- *New development will have contributed to the creation of sustainable communities. These are safe, attractive and inclusive; well-integrated into settlements; respect local distinctiveness; raise the standards of sustainable design and architectural quality; make a positive contribution to the local area; and ensure the protection, restoration and enhancement of valuable natural and historic resources. Strategic and significant sites will have been masterplanned in accordance with the guiding principles set out within this Plan.*
- *New development will help to maintain and enhance the vibrancy of existing settlements, enabling the towns and villages to embrace their roles within the District's settlement hierarchy and provide an enhanced variety of new housing, employment opportunities and essential infrastructure that is of benefit to existing and future residents.*
- *North Hertfordshire will have a robust and prosperous economy (including sustainable tourism) with a greater mix of skilled jobs, focused in locations that best support the District's growing population. Local and smaller scale businesses will have had the opportunity to thrive and grow.*
- *The vitality and viability of the towns of Hitchin, Letchworth Garden City, Royston and Baldock are safeguarded in a way that takes account of their distinctive role. This will have been achieved through carefully planned development which meets the needs of these centres, retaining their market share in terms of their retail offer, whilst recognising the importance of preserving and enhancing their historic character. In local and village centres shopping facilities that meet local needs will be supported.*
- *The District's important natural and historic areas and buildings that help to create the distinctive identity of the District in both urban and rural areas will have been protected and enhanced where possible. The quality and attractiveness of the landscape of North Hertfordshire, which contributes to its distinctive character, will have been conserved and enhanced where possible. New green infrastructure will have enhanced the network of green corridors linking settlements to the open countryside, providing greater opportunities for healthy lifestyles.*
- *The rich biodiversity and geodiversity of North Hertfordshire will have been protected and enhanced where possible. Where new development could potentially have an adverse*

impact on biodiversity and geodiversity, measures will have been taken to ensure that the impact was either avoided or mitigated.

- North Hertfordshire will have a range of community, leisure, cultural and recreational facilities in locations that are accessible to the local population, creating cohesive communities that recognise the needs of the older population; and enhance the opportunities for children and young people.
- The District will play its part in addressing climate change by improving opportunities for travelling by public transport, walking and cycling, using natural resources more efficiently, reducing the demand for water, securing high quality sustainable design and managing the risk of flooding.
- By working in partnership with service providers, government bodies, the Local Enterprise Partnership, developers, other local authorities and other key bodies we will ensure the timely delivery of necessary supporting infrastructure."

The Spatial objectives to deliver this vision relevant to the proposal include (inter-alia):

- "Environmental
 - ENV1 Direct development towards the most sustainable locations which seek to maintain the existing settlement pattern.
 - ENV2 Protect and enhance the historic character of North Hertfordshire's towns, villages, hamlets and landscape by promoting good design that creates a distinctive sense of place.
 - ENV3 Protect, maintain and enhance the District's historic and natural environment, its cultural assets and network of open spaces, urban and rural landscapes.
 - ENV4 Mitigate the effects of climate change by encouraging the use of sustainable construction techniques, the appropriate use of renewable energy technologies and reducing the risk of flooding.
- Economic
 - ECON1 Support a vibrant, diverse and competitive local economy that provides a range of job opportunities enabling new and existing businesses to grow and thrive.
 - ECON2 Ensure an adequate supply of employment land, office accommodation and support facilities to meet the needs of new and existing businesses within our urban and rural areas.
 - ECON3 Provide for a greater mix of skilled jobs as well as providing opportunities for further education and skills training to promote investor confidence in locating to or remaining in the District.
 - ECON4 Maintain and enhance the vitality and viability of our town, neighbourhood and village centres, as well as strengthening the retail roles of our town centres ensuring that they remain competitive and attractive for modern-day use.
 - ECON5 Support and enhance local businesses, services and facilities in urban and rural areas through tourism.
 - ECON6 Sustain the vitality of our villages and the rural economy in supporting rural diversification whilst ensuring development is of an appropriate scale and character.
 - ECON7 Improve access opportunities, minimise the need to travel, and encourage journeys to be made by sustainable means of transport to ease congestion, reduce carbon emissions and the impacts on air quality management areas.

- ECON8 Ensure all development is supported by the necessary provision of, or improvements to infrastructure, services and facilities in an effective and timely manner to make development sustainable and minimise its effect upon existing communities
- Social
 - SOC2 Encourage safe and vibrant mixed communities that provide for the needs of all North Hertfordshire's residents.
 - SOC3 Improve access to, maintain and make provision for new facilities including community, sports, leisure, health and cultural facilities, that meet the needs of all North Hertfordshire's communities"

Page 18, paragraph 2.16 of the NHLP states "...sectors such as finance & insurance and information & communication make a substantial contribution to the District's overall economic output, although not employing a huge number of people. These represent opportunities for future expansion and development."

The Local Plan does not have a telecommunications specific policy however the following policies are relevant to the proposal:

Policy SP1 'Sustainable development in North Hertfordshire' states that:

"This Plan supports the principles of sustainable development within North Hertfordshire. We will:

- a) Maintain the role of key settlements within and adjoining the District as the main focus for housing, employment and new development making use of previously developed land where possible;
- b) Ensure the long-term vitality of the District's villages by supporting growth which provides opportunities for existing and new residents and sustains key facilities;
- c) Grant planning permission for proposals that, individually or cumulatively:
 - i. deliver an appropriate mix of homes, jobs and facilities that contribute towards the targets and aspirations in this Plan;
 - ii. create high-quality developments that respect and improve their surroundings and provide opportunities for healthy lifestyle choices;
 - iii. provide the necessary infrastructure required to support an increasing population;
 - iv. protect key elements of North Hertfordshire's environment including biodiversity, important landscapes, heritage assets and green infrastructure (including the water environment); and
 - v. secure any necessary mitigation measures that reduce the impact of development, including on climate change; and
- d) Support neighbourhood plans and other local planning initiatives where they are in general conformity with the strategic policies of this Local Plan."

Policy D1 'Sustainable design' states that:

"Planning permission will be granted provided that development proposals:

- a) Respond positively to the site's local context;
- b) Take all reasonable opportunities, consistent with the nature and scale of the scheme, to:
 - i. create or enhance public realm;
 - ii. optimise the potential of the site by incorporating Sustainable Drainage Systems (SuDS);

- iii. reduce energy consumption and waste; iv. retain existing vegetation and propose appropriate new planting;
- v. maximise accessibility, legibility and physical and social connectivity both internally and with neighbouring areas;
- vi. future proof for changes in technology and lifestyle;
- vii. design-out opportunities for crime and anti-social behaviour; and
- viii. minimise the visual impact of street furniture and parking provision;
- c) Have regard to the Design SPD, and any other relevant guidance;
- d) Within Letchworth Garden City have regard to the Letchworth Garden City Design Principles contained in Appendix 5; and
- e) For residential schemes, meet or exceed the nationally described space standards and optional water efficiency standards."

Perfectly Placed for Business: The refreshed Strategic Economic Plan (SEP): 2017–2030 (July 2017)

Developed by Hertfordshire Local Enterprise Partnership (working closely with businesses and stakeholders), the purpose of Perfectly Placed for Business – the refreshed Strategic Economic Plan for Hertfordshire – is to understand this "economic engine" better, to identify both its potential and its challenges, and then to agree where it needs to head and how it should get there.

Major trends which informed the Strategic Economic Plan include:

Digital connectivity and big data: This has transformed patterns of living and working over the last decade and the range of potential effects over the next decade is also likely to be substantial. The internet of things (IoT) is still in its infancy, yet its impact is likely to be pervasive. Closely related is the full exploitation of "big data" and how this will affect all forms of service delivery.

Changing urban forms: Patterns of urban transportation are in the process of being transformed – most immediately through services like Uber and, downstream, through autonomous vehicles. In parallel, the purpose of town centres – of all sizes – is changing very significantly. For the most part, their role in relation to retail is diminishing whilst their purpose as a social meeting place and cultural destination, enabled by digital connectivity, is growing. This is a radical transformation which is happening very quickly, and adaptation is paramount, particularly among Hertfordshire's medium-sized and small towns.

Changing lifestyles: Enabled in part by the transformation in digital connectivity, patterns of working and living are changing radically, particularly among younger people. The value placed on experiences is growing, in part in place of owning "things" (particularly houses). This is changing attitudes and expectations profoundly.

In nurturing the other crucial foundation of Hertfordshire's economy – its population of SMEs – the key areas for action are not new. To be a "perfect place for business", firms need to be able to find accommodation they can afford; they need to recruit people with appropriate skills; and they need to be able to access the support they require. Across the population of SMEs – and indeed more generally – it is also crucial that Hertfordshire's digital infrastructure is as good as it can be.

Enhancing both the provision of digital infrastructure and the effectiveness with which it is used is an on-going priority county-wide.

Hertfordshire Local Industrial Strategy Draft for consultation (September 2019)

The LIS Draft's overarching and enabling strategic theme is "Digital foundations, frontiers and futures". The rationale for this is that Hertfordshire is under substantial pressure in infrastructure terms and it needs to harness the possibilities of digital connectivity fully and effectively.

One of the aims of the region is to advance the concept of the Living Lab, focusing initially on Hatfield Business Park, and harnessing the full possibilities of 5G wireless connectivity.

Another is to ensure that areas where communities are emerging are economically vibrant and digitally exemplary, equipped to devise as yet unknown and unknowable solutions for sustainable mid-21st century living and working. Digitally enabled communities will improve the economic future of the county.

If the region is to achieve these aims, the correct infrastructure needs to be in place to enable 5G connectivity in the operator's networks.

Levelling Up the United Kingdom (February 2022)

The Department for Levelling Up, Housing and Communities (DLUHC) published the 'Levelling Up the United Kingdom White Paper' on 02 February 2022. Levelling up is a moral, social and economic programme for the whole of government. The Levelling Up White Paper sets out how the Government spread opportunity more equally across the UK.

The 'Levelling Up the United Kingdom White Paper' champions that

'the United Kingdom is an unparalleled success story – a multi-cultural, multi-national, multi-ethnic state with the world's best broadcaster; a vibrantly creative arts sector; a National Health Service which guarantees care for every citizen; charities and voluntary groups which perform a million acts of kindness daily; globally renowned scientists extending the boundaries of knowledge every year; entrepreneurs developing the products and services which bring joy and jobs to so many; and millions of citizens whose kindness and compassion has been so powerfully displayed during the COVID-19 pandemic.

But not everyone shares equally in the UK's success. While talent is spread equally across our country, opportunity is not. Levelling up is a mission to challenge, and change, that unfairness. Levelling up means giving everyone the opportunity to flourish. It means people everywhere living longer and more fulfilling lives, and benefitting from sustained rises in living standards and well-being.

This requires us to end the geographical inequality which is such a striking feature of the UK. It needs to begin by improving economic dynamism and innovation to drive

growth across the whole country, unleashing the power of the private sector to unlock jobs and opportunity for all. While there are world-leading and enterprising businesses and innovators right across the UK, economic growth and the higher productivity which drives it has been over-concentrated in specific areas, particularly the South East of England. A long tail of low-productivity businesses and places explain why UK productivity growth is too low compared to competitors. It is vital that we preserve and enhance the economic, academic and cultural success stories of the UK's most productive counties, towns and cities. But it is equally critical that we improve productivity, boost economic growth, encourage innovation, create good jobs, enhance educational attainment and renovate the social and cultural fabric of those parts of the UK that have stalled and not – so far – shared equally in our nation's success'.

The 'Levelling Up the United Kingdom White Paper' states that:

'The UK Government has made progress towards spreading opportunity around the country since 2019, alongside mitigating the worst effects of the pandemic, with: • £5bn for Project Gigabit to bring gigabit-capable broadband to 85% of the UK by 2025, and the £1bn Shared Rural Network deal with mobile operators delivering 4G coverage to 95% of the UK by the end of 2025; • five-year consolidated transport settlements amounting to £5.7bn in eight city regions outside London, £5bn of funding for buses and active travel over this Parliament; and £96bn for the Integrated Rail Plan delivering faster, more frequent and more reliable journeys across the North of England and the Midlands;

Levelling up is not about making every part of the UK the same or pitting one part of the country against another. Nor does it mean dampening down the success of more prosperous areas. Indeed, by extending opportunity across the UK we can relieve pressures on public services, housing and green fields in the South East. And levelling up can improve well-being in the South East by improving productivity in the North and Midlands. So, it is about the success of the whole country: realising the potential of every place and every person across the UK, building on their unique strengths, spreading opportunities for individuals and businesses, and celebrating every single city, town and village's culture. This will make the economy stronger, more equal and more resilient, and lengthen and improve people's lives. The economic prize from levelling up is potentially enormous. If underperforming places were levelled up towards the UK average, unlocking their potential, this could boost aggregate UK GDP by tens of billions of pounds each year. Levelling up skills, health, education and wellbeing would deliver similarly-sized benefits. Accumulated over time, those gains could easily surpass annual UK GDP. Success in levelling up is about growing the economic pie, everywhere and for everyone, not re-slicing it.

The United Kingdom's Geographical Disparities: Drivers and Potential Policy Approaches What does the economic and social geography of the United Kingdom look like? The UK has larger geographical differences than many other developed countries on multiple measures, including productivity, pay, educational attainment

and health. Urban areas and coastal towns suffer disproportionately from crime, while places with particularly high levels of deprivation, such as former mining communities, outlying urban estates and seaside towns have the highest levels of community need and poor opportunities for the people who grow up there. These disparities are often larger within towns, counties or regions than between them. They are hyper-local and pockets of affluence and deprivation may exist in the same district. Indeed, many of the worst areas of deprivation are found in the UK's most successful cities. While change is possible, in some cases, these differences have persisted for much of the last century. And some of the UK's most successful cities – such as Birmingham, Manchester, Leeds, Glasgow and Cardiff – lag behind their international comparators when it comes to productivity and incomes. What are the current and future drivers of geographical disparities? Over the past century, many trends have combined to create the spatial patterns seen across the UK today. Globalisation, technological progress, advances in transport, logistics and power, and the shift from heavy industry to knowledge-intensive sectors, as well as the rise of foreign holidays and shift from technical training to university education, have had a large and lasting impact on the economic geography of the UK. These dynamics of the global economy have benefited the UK overall, improving productivity, increasing wealth and driving up living standards through more innovation and competition. These dynamics, however, have not had the same positive economic and social impacts across the UK. While London and much of the South East have benefited economically, former industrial centres and many coastal communities have suffered. This has left deep and lasting scars in many of these places, damaging skills, jobs, innovation, pride in place, health and wellbeing. What are the factors that will help drive levelling up? Levelling up requires a focused, long-term plan of action and a clear framework to identify and act upon the drivers of spatial disparity. Evidence from a range of disciplines tells us these drivers can be encapsulated in six “capitals”.

- Physical capital – infrastructure, machines and housing.
- Human capital – the skills, health and experience of the workforce.
- Intangible capital – innovation, ideas and patents.
- Financial capital – resources supporting the financing of companies.
- Social capital – the strength of communities, relationships and trust.
- Institutional capital – local leadership, capacity and capability

This White Paper sets out that the new policy regime is based on five mutually reinforcing pillars. Firstly, the UK Government is setting clear and ambitious medium-term missions to provide consistency and clarity over levelling up policy objectives. These missions will serve as an anchor for policy across government, as well as catalysing innovation and action by the private and civil society sectors. These missions are ambitions that the UK Government has for all parts of the UK. Delivering on them, while being fully respectful of the devolution settlements, will require close and collaborative work with the devolved administrations. The missions are rolling decade-long endeavours and will be reviewed periodically by the UK Government. One mission relates to:

“Digital Connectivity

Mission: By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population" (my emphasis.

The White Paper notes the pivotal role that 'Digital Connectivity' has in boosting productivity, pay, jobs, and living standards by 'Growing the Private Sector'.

To help drive these improvements, the UK Government is setting four core missions, spanning living standards; research and development (R&D); transport infrastructure; and digital connectivity.

Para. 3.2.4 of the White Paper states 'By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population. This mission is focused on improving digital connectivity'.

The case for 'Digital Connectivity' action states:

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

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

The policy programme for 'Digital Connectivity' states:

'In 2020, the UK Government published the National Infrastructure Strategy, committing to providing £5bn in public funding to roll out gigabit broadband to at least 85% of the country by 2025, and subsequently to as close to 100% as possible, working with the private sector. Public investment will target premises that are hardest to reach and which would otherwise not be provided for by the private sector, ensuring no areas are left behind. Gigabit coverage has increased from 10% to over 60% in less than two years. Since 2019, coverage has improved across the UK, and the UK Government

anticipates the following additional improvements to be delivered as a minimum by 2025.

The UK Government has also agreed a £1bn deal with mobile operators to deliver the Shared Rural Network programme. This will see operators collectively increase 4G coverage to 95% by 2025. As a result of this collaboration, the vast majority of the UK will soon benefit from improvements to digital connectivity.

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

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

The West Midlands 5G (WM5G) Testbed started in 2018 with the mission of testing and proving the benefits of 5G to public and private sector productivity, creating jobs and boosting growth. The UK Government has invested £21m over three years, alongside investment from local government and the private sector. By working with local authorities and Mobile Network Operators (MNOs), WM5G has accelerated 5G deployment by over six months, resulting in the West Midlands being amongst the best connected places for 5G in the UK. In addition, WM5G has delivered a number of UK firsts, including a 5G road sensor network, 5G connected ambulance and capsule endoscopy trials, and a 5G application accelerator programme called 5prinG, which has already upskilled over 400 organisations on the benefits of 5G and allowed over 60 startups to develop new 5G products and services. We must ensure that people have sufficient digital skills to reap the benefits and prosperity arising from the digital economy. In 2020, the UK Government introduced a new digital skills entitlement, giving adults with low or no digital skills in England free access to new digital skills qualifications based on employer-supported national standards. The UK Government continues to work with local leaders to develop Local Digital Skills Partnerships. These collaborative partnerships are now operating in seven regions across England, with an eighth formally launching in Hull and East Yorkshire in early March. The UK Government will work with devolved administrations to consider how best

to share the insights and evaluation of the programme to help build digital skills capability across the UK'.

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. Maximising access and maintaining choice in telecommunications should will people to maintain and enhance economic, social and civic connections. Universal accessibility to telecommunications is vital to help overcome isolation or exclusion of urban life. Accelerating the extension of new communications modes should help to avoid new pockets of exclusion developing.

UK Wireless Infrastructure Strategy, April 2023

In April 2023, the UK Government published the 'UK Wireless Infrastructure Strategy'¹, a plan for delivering world-class digital infrastructure which the government identifies as an essential enabler for its 5 priorities of building a better, more secure, more prosperous future for the UK, including growing the economy, and creating better-paid jobs and opportunity right across the country. In her foreword, the Rt Hon Michelle Donelan MP, Secretary of State for Department for Science, Innovation and Technology, provides context for the strategy:

*"5G will be the cornerstone of our digital economy. With higher capacity and lower latency, standalone **5G will drive growth** in the industries of today and tomorrow, including in emerging sectors like artificial intelligence where Britain leads the world. Just take smart ports, where 5G-enabled remote operation can help us to move containers more quickly, efficiently, and safely, boosting our international competitiveness. **5G can improve our public services**, too, in everything from education to social care. In transport, for example, we can use 5G to power forward progress in everything from real time travel information to augmented reality navigation and self-driving buses and taxis.... This is an incredible opportunity; widespread adoption of **5G could see £159 billion in productivity** benefits by 2035".*

The Future Telecoms Infrastructure Review, 2018 sets out the ambition of the Government for the UK to become a world leader in 5G technology and ensuring world class connectivity for all. This ambition was reaffirmed in the 'UK Wireless Infrastructure Strategy', published in April 2023 which states in the Executive Summary:

"The next decade will see seismic changes both in terms of what wireless connectivity can deliver and how we can use it. The economic and social benefits from these changes promise to be vast, from supercharging growth to accelerating our transition to net zero. But these benefits can only be achieved with concerted action from government, industry, and others".

The Foreword of the 'UK Wireless Infrastructure Strategy' by Julia Lopez MP 'Minister of State for Department for Science, Innovation and Technology' states inter-alia:

"The more our lives are conducted online, the more access to the internet becomes critical for social and economic opportunity.

This is why delivering world-class digital infrastructure to all Britons is a fundamental mission of this government - and our efforts to build it the modern equivalent in scale and ambition to the Victorians' construction of the railways. Our plan is for every corner of our country to get lightning fast connectivity, not only to give people real choices about where to live and work today but so they will not be left out of future technological revolutions because of poor infrastructure.

It is this sense of purpose that underpins Project Gigabit, our flagship £5 billion programme to reach hard-to-reach communities across the UK with gigabit-capable broadband. It is complemented by a staggering competition now underway between commercial suppliers to supply Britons with great connectivity.

Extraordinary progress is being made on coverage. When I began my role in September 2021, gigabit coverage was just over 50%. Now, it stands at almost 75%. With £1bn of Project Gigabit's funding now available to suppliers, our contracts are not just delivering better internet but skilled jobs everywhere from Blandford to Berwick. By the end of next year, we hope to have every part of our country under contract.

Which is why the time is right to turn our sights to mobile connectivity, where the same sense of mission is needed to deliver the kind of wireless infrastructure that will transform how we live our lives and run our economy. This is not simply a matter of improving download speeds as people browse the internet on their phones or dial into work calls. It is far more transformative than that'.

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

The UK Government in the UK Wireless Infrastructure Strategy' recognises that 'growth in the digital sector is nearly 6 times faster than across the economy is a whole.

Connected Nations Report 2022

The Connected Nations Report 2022 was published in December 2022. The report confirms in line with the UK Wireless Infrastructure Strategy (April 2023) in respect of delivering a basic 5G signal for the majority of the population by 2027, 5 years early that 5G rollout is expanding, stating:

"5G rollout is expanding EE, Virgin Media O2, Three and Vodafone have continued to extend their 5G networks across the UK, and we are reporting individual mobile network operator (MNO) coverage for the first time, based on the High to Very High Confidence range which we established in 2021. These ranges cover an increasing probability that the coverage predicted by MNOs will translate into coverage on the ground. As noted above, the level of coverage provided outside of premises by at least one mobile network operator across this range is now at 67-77% (up from 42-57% last year). The coverage provided outside of premises from individual MNOs ranges from

39-58% at High Confidence, with a range of 31-45% at our Very High Confidence level. Though most 5G sites are focused around busy urban areas - providing additional capacity to existing mobile data services - we're now seeing coverage extending into smaller towns and other high footfall locations. The distribution of this investment remains broadly similar to last year, with 86% of sites in England, 8% in Scotland, 4% in Wales and 2% in Northern Ireland".

Connected Nations update: Spring 2023

The Connected Nations update: Spring 2023 report was published in May 2023. This is the first interim update to Ofcom's Connected Nations 2022 report. It is based on mobile coverage and fixed broadband availability across the UK as of January 2023. The report acknowledges that there has not been a significant increase in coverage since the December 2022 report, but the industry continues to develop its coverage footprint.

"4G: Coverage of 4G mobile networks across the UK has not seen significant changes over the last reporting periods. Around 92% of the UK landmass is predicted to have good outdoor 4G coverage from at least one operator, and this area includes nearly all of the premises in the UK. This is expected to rise to 95% by end of 2025 as a result of the SRN.

4G not-spots: The UK has both geographic and road not-spots (that is, areas where good 4G services are not available from any mobile operator). Geographic not-spots have remained the same since our December 2022 report at 8%. Road coverage remains largely the same with just 4% of all roads estimated to be an in-vehicle not-spot. This varies significantly across individual nations, particularly in Scotland and also in Wales. Wales has benefited by a percentage point drop in geographic notspots since our December report, which we attribute to the SRN scheme.

Calls and text coverage: As with 4G, predicted coverage for calls and text services remains largely unchanged over the previous reporting periods. The range of predicted coverage by MNOs varies from 85-93% of the UK landmass, depending upon operator. In addition, 99% of all UK premises are predicted to have coverage for outdoor voice calls from all MNOs.

Calls/text not-spots: Areas where people are unable to make a call or send a text from any operator (not-spots) is similarly unchanged, with around 4% of the UK geography estimated as a not-spot, and around 2% of the UK's roads estimated to be a not-spot for calls and texts made or received in vehicle. As with 4G, there are marked variations for individual nations; for example, geographic notspots across Scotland remain higher than for the rest of the UK, at around 10%.

5G: We continue to report on 5G coverage (outdoors premises) from 'All MNOs' and from 'At least one MNO', with coverage confidence levels ranging from high to very high. Coverage from 'At least one MNO' now ranges from 73% (very high confidence) to 82% (high confidence) of premises outdoors, up from 67% and 78% respectively when we reported in our December 2022 report".

Connected Nations update: Summer 2023

The Connected Nations update: Summer 2023 report was published in September 2023, and is the second interim update to the December 2022 annual Connected Nations report. It is based on mobile coverage and fixed broadband availability across the UK as of April and May 2023.

The report found that mobile coverage remains stable for 4G, with around 93% of the UK landmass predicted to have good outdoor 4G coverage from at least one operator. 5G coverage continues to edge forward steadily, with 85% of premises being able to get a 5G signal outdoors from at least one mobile network operator. However, the statistics for outdoor coverage on 5G networks from all operators are still very low – in England, only 14-24% of premises benefitted from outdoor 5G coverage from all operators as of April 2023.

5G coverage

Premises (outdoor) covered by at least one operator	May 2022	September 2022	January 2023	April 2023
UK	54-69%	67-78%	73-82%	76-85%
England	56-72%	70-81%	76-85%	79-88%
Northern Ireland	26-34%	37-44%	48-55%	54-60%
Scotland	48-61%	57-68%	62-73%	66-76%
Wales	35-48%	46-58%	49-61%	53-65%

Premises (outdoor) covered by all operators	May 2022	September 2022	January 2023	April 2023
UK	5-13%	11-20%	12-22%	12-22%
England	5-14%	12-22%	13-23%	14-24%
Northern Ireland	2-7%	4-8%	5-12%	5-12%
Scotland	3-10%	6-15%	7-17%	8-19%
Wales	2-6%	4-7%	5-8%	4-8%

Image 3: 5G coverage statistics (Source: Connected Nations update: Summer 2023 report)

The report also states:

“The UK Government targets for mobile include a target of 95% UK geographic coverage for 4G, and in April 2023 it published the Wireless Infrastructure Strategy where it announced a new ambition for the UK to have nationwide coverage of standalone 5G to all populated areas by 2030.”

Online Nation 2022 Report

The 'Online Nation 2022 Report' produced by Ofcom confirms the following:

- UK adults spend almost 4 hours a day online, 3 hours of which are spent on smartphones. (UK young adults (i.e., 18-24 year olds spend approximately 5 hours online and UK adults aged 55+ spend approximately 3 hours online)
- 73% of time spent online/day by UK adults was via a smartphone
- 1 in 5 people use only a smart phone for online access compared with 1 in 10 in 2020

With regards to increased usage of smartphones only for online access the report suggests:

“More people are using only a smartphone to go online. People were more likely in 2021 than in 2020 to only use a smartphone to go online (21% vs 11% in 2020)^[2]. There could be many reasons, but this may be because people were spending more time at home in late 2020 and early 2021 than in late 2021, and therefore used a wider range of devices. It may also reflect the larger screen size and better-optimised app functions of many smartphones, making them easier and potentially more cost-effective to use as a sole device for accessing the internet.

The Report goes on to states that:

“In September 2021 73% of the time spent online by UK online adults per day was on a smartphone. UK online adults are also spending slightly more time using tablets than computers, demonstrating that there is a clear preference for using mobile devices to go online. Those aged 25 to 34 spend the highest proportion (85%) of their online time using a smartphone, followed by 35-44s (80%); 15-24s (78%); 45-54s (74%) and those aged 55+ (55%).^[3]”

Therefore, without the improved network coverage and capacity that the proposed essential infrastructure will bring, EE's network users living, working and travelling in the local area, and those of the associated MVNOs, will not benefit from reliable mobile digital connectivity when using their smartphones for business, education and personal purposes.

Planning Assessment

The main issues arising from this prior approval notification are whether the proposed mast due to its scale and siting would be a visually obtrusive feature which would be detrimental to the character and appearance of the area. Whether any perceived harm would outweigh the significant social and economic benefits associated with the increased service provision attributed to the proposal and other valid material considerations as outlined within NPPF, the North Hertfordshire Local Plan its spatial vision the relevant strategic objectives which support the provision of a vibrant, diverse and competitive local economy, encourage safe and vibrant communities and support improved access to and make provision for new facilities.

The upgraded mast and associated cabinets fully comply with the NPPF, and the policies of the NHLP as it will increase overall connectivity for the area of Letchworth. Access to a high quality, reliable superfast mobile network is not just 'a nice to have' but an essential part of everyday life. Indeed many, including the former Minister for Digital Infrastructure Matt Warman, consider it to be the fourth utility service as important as gas, water and electricity, a life line for many especially during the COVID-19 pandemic where people were able to see their loved ones, speak to friends

^[2] Ofcom Adults' Media Literacy Tracker 2021: Core survey IN1. Which of these devices do you use to go online? (single coded)
Base: All adults aged 16+ who go online at home or elsewhere (excluding those who did not give a response at the postal survey)
– 3,577

^[3] Ipsos, Ipsos iris Online Audience Measurement Service, 1 September– 30 September 2021, adults age: 15+, UK. Note: Custom data supplied by Ipsos.

and family and arrange virtual meetings allowing some form of normality in a very abnormal situation.

Principle of Development

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

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

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

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

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

Siting

The siting of the proposed radio base station has been carefully considered. To this end, the proposed mast will be located against an existing backdrop of hedgerow and mature trees which rise in height to some 10m in height. There are a number of existing vertical elements of street furniture in the immediate vicinity, including lighting columns and road signage. Consequently, the visual impact of the proposed upgraded radio base station will be minimised within the streetscene as the majority proposed monopole will be screened by the existing mature trees which line Stotfold Road. Due to this vegetation the replacement column despite the increase in height by 5m will not be widely visible outside of its immediate vicinity on Stotfold Road, and will assimilate well with the existing vertical structures already in situ in the immediate locale. The site is a significant distance; over 80m away, from the nearest residential properties. This is in full accordance with the aspirations of the NPPF and the policies of the North Hertfordshire Local Plan. The upgrade of an existing telecommunications base station is wholly in line with policies SP1 and D1 of the NHLP.

Government guidance states that in order to limit visual intrusion, the number of radio and telecommunication masts and the sites should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. Use of existing masts, buildings and other structures for new electronic communications capability should be encouraged. Where new sites are required equipment should be sympathetically designed and camouflaged where appropriate. The proposal fully complies with this Government guidance. The existing site will be upgraded, allowing EE/BT and H3G to provide better quality coverage and capacity to the area, as well as new 5G service provision. This is fully in line with policies SP1 and D1 of the NHLP.

The proposed 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. Their limited height and scale will ensure that these cabinets will not be detrimental to the visual amenity of the area and will match the existing.

It is acknowledged that the proposal is sited within the Green Belt (London Area). However, the application relates to a matter concerning prior approval, and as such it is not a material consideration that can be considered in the context of the site's location within the Green Belt. This is clarified by several appeal decisions, notably:

APP/R5510/W/15/3133767 – Uxbridge. At Paragraph 5, the Inspector clearly stated *"as the appeal relates to a matter concerning prior approval, it is not necessary for me to consider the proposal in the context of the site's location within the Green Belt. Accordingly, I have not considered this policy matter any further."*

APP/R5510/W/16/3156200 – Junction of Warren Road and Swakeleys Drive, Hillingdon. At Paragraph 8, the Inspector clearly stated *"the principle of this proposal is not in question and as such the matter of circumstances permitting development in the Green Belt does not apply."*

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

Appearance

The proposal is for the upgrade of an existing telecommunications base station installation comprising the removal of the existing 15m monopole and replacement with 20m monopole with wraparound ground based equipment cabinet supporting 9 no antennas, together with the removal of 2 no existing equipment cabinets, and the addition of 3 no new cabinets and ancillary development thereto.

If the overall mast height was to be lower, the antenna height would not be able to clear the surrounding mature trees and they would not be able to operate effectively and the operator would require an additional installation within this cell area to relocate the coverage provided by the existing antenna which would lead to the proliferation of masts contrary to national planning guidance.

The design of the mast needs to be like this to be structurally capable of hosting all the operator's equipment on this one installation.

Exposed antennas have been designed in this location as it is the most efficient way of providing coverage to the target coverage area. The antennas could also be upgraded in the future without significant design changes, whilst maintaining quality telecommunications in this area both now and in the future. If the antennas were shrouded, they would not provide such a good coverage. It is also likely that radical design changes would need to be made in the future in line with changes in technology and consumer demand. The proposals are therefore in full compliance with NPPF, Code of Practice and Policies SP1 and D1 of the NHLP.

The equipment cabinets are small for telecommunications radio base stations and will be colored green to match the existing and blend in with the existing vegetation, so they will not be visible within the wider streetscene. These cabinets could be installed under the operators permitted development rights but have been included on the plans and in the description in order to be transparent.

It is considered that the proposals for an upgraded ground-based station installation are fully in accordance with Policies SP1 and D1 of the North Hertfordshire Local Plan. The upgraded installation will continue to enable the operators to provide a high-quality service to its customers and access to the current technologies by improving coverage and capacity, as well as enable new 5G services into the network.

Lack of Coverage – Material Consideration

The upgraded installation is significant to enable continuous coverage of the telecommunication network, ensuring that this area of Letchworth continues to get the mobile coverage it needs. The current proposals will facilitate the development of an advanced broadband telecommunications infrastructure in line with National Government guidance contained within the NPPF and the UK Wireless Digital Infrastructure Strategy, the North Hertfordshire Local Plan, and the Hertfordshire Local Enterprise Partnership and Local Industrial Strategy which all support infrastructure especially where growth takes place.

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

Without this new radio base station the operator's customers would experience increasing numbers of dropped calls and buffering unable to access the internet on their handheld devices.

The proposed radio base station is in full conformity with the Policies SP1 and D1 of the NHLP. The proposals will ensure the improvement of high-quality communications infrastructure for the community, investing in improved community facilities which meet essential everyday needs, as important as gas and electricity. Indeed, high quality telecommunications is often seen as the fourth utility service.

The proposed upgraded installation will help improve the area's economic prosperity, strengthen the urban economy's by supporting local businesses to start, grow, adapt and diversify. It will support a better environment for today and tomorrow by reducing the need to travel and in turn minimise carbon emissions. The 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.

Economic and Social Benefits

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

In such instances, as described above, the NPPF supports development that improves the economic, social and environmental conditions in the area. Enhancing the 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.

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

Paragraph 38 of the revised NPPF states that:

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

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

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

'by reducing red tape and barriers to investment, the Government will support the market to deliver the internationally competitive fixed and mobile digital 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 UK's 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.

Further to the Government's commitment to improve connectivity, on 24th November 2016 the new permitted development rights for telecommunication operators came in to 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](https://www.ice.org.uk/getattachment/media-and-policy/policy/national-needs-assessment-a-vision-for-uk-infrastr/National-Needs-Assessment-PDF-(1).pdf.aspx)). It sets out the infrastructure needs for the UK which includes the importance of digital technology. An extract of this assessment can be found below:

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

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

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

The upgraded installation in this location will allow two operators to utilise the same installation and provide new and improved high quality 3G and 4G coverage and capacity and future 5G service provision supporting the Government's aim of *'focusing on ensuring that everyone is connected to the information superhighway'*. This fully meets the aspirations of the NPPF and the Local Plan.

There have been numerous appeal decisions where the Inspector has attached significant weight to the benefits, alternative options, technical constraints and NPPF in a balancing exercise of all the valid material considerations, including visual impacts and the impact on residential amenity.

The issue of benefits and a planning balance was also considered in Appeal Ref: APP/L1765/W/18/3197522 Land at junction of Andover Road and Athelstan Road, Winchester. The proposal related to the installation of a 17.5m street works pole and associated equipment cabinet at land at the junction of Andover Road and Athelstan Road, Winchester.

The Inspector found at Paragraph 9 *'The Government places a high priority on the provision of high-quality communications. The National Planning Policy Framework (the Framework) at Paragraph 112 states, "Advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections". In this instance, the proposal is not so much seeking to provide significantly higher standards but to maintain recent local provision*

of 3G and 4G services as a result of a notice to quit from a nearby site that was providing these services. The Council has commented that service provision would be 'adequate' without the proposal, but the appellant has an obligation to provide not only appropriate coverage but also capacity for the network. I attach significant weight to the public benefit arising from the continuation of local service provision'.

In March 2020, the decision of Birmingham City Council to refuse planning permission for a proposed telecommunications upgrade was overturned by the Planning Inspectorate (APP/P4605/W/19/324191). Within the decision notice, the Inspector stated:

'In this case, the proposed development would result in harm to the visual amenity of the area, with particular regard to the proposal's scale and siting. As such, conflict would arise with Policy PG3 of the Birmingham Development Plan insofar as the development would not reinforce local distinctiveness with a design that responds to site's conditions and the context of the local area. However, I conclude that this harm would, on balance, be outweighed by the economic and social benefits that would stem from the proposed upgrade which would not be realised whilst reducing the height of the mast. Therefore, in the round, the proposal would accord with saved UDP Policies 8.55 and 8.55A-C, the SPD and Framework paragraphs 112 and 113. Collectively, these seek to support the expansion of shared next generation mobile technology to create a modern, high quality and reliable communications infrastructure that is essential for economic growth and the life of the local community'.

Good connectivity allows people to access a wide range of essential services and a further explanation on some of these key benefits is provided below:

Economic benefits

- Creating more productive and cost efficiencies for businesses
- Businesses offering online services can extend their products to a broader audience
- Local areas and businesses can benefit from tourists and visitors as hotels, attractions, and restaurants can be booked online from anywhere in the world
- Business owners and services like doctors can provide a faster and more cost-effective service by offering both online appointments and ordering
- Digital connectivity facilitates economic growth, something which the Government is keen to progress and promote
- 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 facilitate learning on the job procedures, thanks to technologies such as Augmented Reality (AR) goggles, which, for example, can give the likes of engineers real-time instructions on how to fix a machine on a production line.

Social benefit

- Mobile communications can help people to stay in touch wherever and whenever, which can help improve social wellbeing
- Convenient access to online commerce or businesses

- Contacting emergency services is easier, especially in remote areas
- Giving the ability to manage our personal finances and information 24/7
- Using a mobile wherever you go can provide better personal security
- Having access to social networking sites and applications can keep people entertained with their lifestyles and interests
- Access to real-time transport information or timetables
- Smart meter reads for utilities such as gas or electric
- Contacting local authorities
- Promotion of smarter and productive ways of working. For example, working from home can help minimise commuting which can provide better work and home life balance

Sustainability and Environmental benefits

- Facilitating remote access to services, education, and commerce, reducing the need to travel and in turn minimising carbon emissions.
- Better monitoring and control of energy consumption through climate change technology, smart metering and smart energy grids.
- 5G infrastructure requires fewer heat generating electronic components.
- 5G enabling of the Internet of Things (IOT) sensor deployment can manage and alert us to pollution risks, health hazards and flood risk.
- Provision of smart technologies within the agricultural sector will facilitate more efficient and less wasteful practices helping to limit negative impacts.
- 5G networks allow monitoring of traffic flow resulting in less congestion and better air quality. They also make driverless cars possible; a means of transport that offers better fuel efficiency.
- Smart cities and buildings can rely upon 5G networks to enable buildings and infrastructure to use automated energy saving through better and more efficient lighting, heating, cooling and other operations.

Health benefits

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

Education benefits

- Facilitates access to educational establishment databases or booking systems for securing places for the likes of school dinners, field trips, extra-curricular activities, student/teacher reviews, etc.
- Provides access to school/college/university apps for setting and submitting homework/coursework, ensuring news and notifications are delivered efficiently, and for parent/student/teacher interactions.

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.

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

Education:

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

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

Health:

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

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

Health and Safety

The upgraded installation conforms to current government planning guidelines regarding potential health effects arising from telecommunications development. The operator has attached a declaration that the site conforms to ICNIRP guidance. This is in full accordance with NPPF.

Recent court cases have confirmed that the *public perception* of health risks can be a material consideration within the land-use planning system. The weight to be attached to this issue has to be determined accordingly in each case by the decision maker. It has been generally held, and widely established at planning appeal, that health concerns are not a sufficient basis alone for withholding planning permission providing it has been demonstrated that the upgraded installation will comply with the ICNIRP guidelines.

The publication of the National Planning Policy Framework continues to highlight the Government's view that the planning system is not the appropriate mechanism for determining health safeguards. It sends a clear message to local planning authorities stating that they must 'determine applications on planning grounds. They should not seek to prevent competition between different operators, question the need for the telecommunications system, or determine health safeguards if the proposal meets International Commission guidelines for public exposure'. This is reiterated in the Code of Practice.

Notably, Ofcom have now undertaken 5G audits in the major cities and the results indicate that the exposure level are a small fraction of the limits. This further reinforces the PHE guidance in respect of 5G which states: "It is possible that there may be a small increase in overall exposure to radio waves when 5G is added to an existing network or in a new area. However, the overall exposure is expected to remain low relative to guidelines and, as such, there should be no consequences for public health." (<https://www.gov.uk/government/publications/5g-technologies-radio-waves-and-health>).

Summary

EE/BT are proposing to upgrade the existing established radio base station in this location. The design of the existing structure is not capable of supporting the latest 4G and 5G technologies for the operator. Therefore, a replacement column is needed to provide the latest, high capacity 2G, 3G and 4G coverage and new 5G ability in this area of Letchworth.

The upgraded site is located in an area where the presence of telecommunications equipment is already established, where the site is viewed in the context of existing vertical structures within the streetscene including light columns and road signage, and the site benefits from a backdrop of existing mature trees and hedgerow, which will aid in screening the upgraded installation, particularly in long views. The wider monopole is required for structural integrity and to ensure that the orientations of the antennas can deliver the required coverage to the target coverage area. On balance, the amendments to the radio base station will not have a detrimental impact on the visual amenity of the surrounding streetscene. The amendments will provide enhanced 2G, 3G and 4G coverage and capacity to the surrounding area as well as new 5G coverage. Thus providing a high quality service to the operator's customers and access to the latest technologies whenever and wherever they are. Any limited harm will be outweighed by the benefits associated with providing and maintaining the latest high quality communications in line with NPPF and the Government's strong commitment to a world leader in 5G.

The proposed overall height at 20.00 metres is essential in order for the antennas to clear the surrounding trees and be able to reach the target coverage area, to maintain and provide

replacement high quality 3G, 4G and new 5G service provision to Letchworth. This will fully meet the national Governments aim of 'ensuring that everyone is connected to the information superhighway' and the national policies set out in the NPPF. If the height of the column were to be reduced then the antennas would not be able to operate effectively, leading to a degraded service for the operator's customers especially for the higher frequency technologies including the latest 4G technology and 5G service provision.

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

The social and economic benefits of providing continued, reliable and high quality mobile broadband connections including 5G support sustainable growth meeting the needs of the population and strengthening global competitiveness. This is fully supported by the NPPF, UK Wireless Digital Infrastructure Strategy, the North Hertfordshire Local Plan, and the Hertfordshire Local Enterprise Partnership and Local Industrial Strategy. These benefits are strong material considerations which outweigh any perceived loss of visual amenity to the surrounding area.

Confirmation that submitted drawings have been checked for accuracy

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