

PLANNING, DESIGN AND ACCESS STATEMENT

Site Ref:	14147/HGN153	Applicant:	Mobile Broadband Network Limited
NGRs:	E 509007 / N 178420	Date:	11 July 2022
Site Name:	Hayes Fire Station Drill Tower		
Site Address:	Hayes Fire Station Drill Tower, Shepiston Lane, Hayes, London, UB3 1LL		
Proposal:	Removal of 1no existing 5m stub tower and 3no existing antennas to be replaced with 1no new 7.5m stub tower and 6no new antennas, installation of 1no new meter cabinet and internal upgrade of existing equipment room with associated ancillary development thereto.		
Planning Agent:	Avison Young (UK) Limited		
LPA:	Hillingdon Borough Council		

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Overview

Avison Young are planning consultants acting on behalf of Mobile Broadband Network Limited (MBNL), which is a joint venture co-owned by EE Limited and H3G (Three) (UK) Limited, to submit the application contained herein for proposed telecommunications development.

Enclosed you will find an application for Full Planning Permission prepared on behalf of Mobile Broadband Network Limited who is a licensed operator that provide Cellular Network based upon the Global System for Mobile (GSM) standard and Universal Mobile Telecommunications System (UMTS) within the United Kingdom.

The supporting documents submitted with this application are as follows:

- Application Form (as generated through Planning Portal)
- Application Fee
- Drawings 14147_HAYES FIRE STATION DRILL TOWER_002, 100, 150, 210, 260_C
- Planning, Design and Access Statement
- ICNIRP Certificate
- Copy of Civil Aviation Authority Letter
- 5G and Future Technology
- Connected Growth Manual – Digital Infrastructure
- IET Guide to 5G

We trust you will find the enclosed information sufficient to register and validate the application. Should you require any further information please direct your queries to the below contact.

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1. Introduction

1.1. Background

EE Limited is a 50-50 joint venture between Deutsche Telekom and France Télécom and was formed in 2010 through the merger of their respective T-Mobile (UK) and Orange U.K. businesses. On 3 September 2010, EE announced that Orange would join Mobile Broadband Network Ltd (MBNL), the joint venture management company formed in December 2007 between T-Mobile UK Ltd and H3G UK Ltd (Three UK). In 2016, EE was chosen to work in conjunction with the Home Office to deliver the Emergency Services Network (ESN), which will deliver a smarter, better and cheaper communications capability.

1.2. Public Benefits

The proposed upgrade subject to this application is part of the operators' continuous efforts to improve existing mobile network infrastructure across the country. This aligns with the applicant's license obligation to ensure high quality mobile coverage is accessible to the general public, which benefits local residents, businesses and visitors in a variety of social and economic aspects. In today's society the utility provisions for digital communications are an integral part of everyday life as it facilitates a variety of tasks such as phone calls, access to the internet, map navigation, video/music streaming, gaming, online banking and ecommerce. Virtual meetings can also be held with doctors, banking advisors, colleagues and other entities, which have proved necessary as a result of the global pandemic. Consequently, the proposal for telecommunications development submitted herein will contribute to the development and growth of the local area as part of the national strategy. In order to achieve these aims it is necessary for existing infrastructure to be upgraded with the latest equipment and technologies to ensure the robustness of each base station. In some instances where there is a significant shortfall in the network the applicant will also explore opportunities for new sites to fulfil network requirements. This overall strategy allows for greater improvements to the service provided as it can:

1. Improve the size of coverage area targeted;
2. Increase signal strength which results in faster speeds; and
3. Maximises capacity to handle ever-increasing volumes of data traffic throughout the day.

Additionally, the proposal herein seeks to introduce the latest 5G technologies which forms part of the national rollout and accords with the UK Government directive to ensure 5G is more accessible at a nationwide level. 5G is an essential delivery that will open new opportunities as it creates innovation that can increase the value of local areas. The way in which mobile phones are used has changed over time as a variety of everyday tasks can now be actioned from a single handset and this extends to other forms of technology which require stronger and faster digital connectivity. For example, a paramedic can remotely consult with doctors in real-time when out in the field.

It is evident that mobile phone usage has grown exponentially over recent years as more than 90% of the population now own a mobile phone. Customers expect to be able to use their mobile phones and tablets in all locations as these devices have become intrinsic to our personal and professional lives. UK operators are continuously trying to improve their network infrastructure in order to adapt to the changing environment and keep up with customer demands. The

consequences of the global pandemic also led to an increase in home-based working which highlighted the inadequacies of coverage provisions in non-urbanised areas where improvements are much needed. As part of the applicant's ongoing network programme, there is a requirement for infrastructure improvements in this area, which experiences a large volume of data traffic. The proposed works will also help towards futureproofing the network to reduce the frequency of works required at the site. Further technical justification can be found later in this statement.

1.3. Sustainability

Following COP26 there is a greater emphasis on considering the effects of future developments on sustainability and climate change. This is a material consideration for local planning authorities, and it is therefore essential to highlight the positive effects of telecommunications development on such environmental matters. In relation to this, Mobile UK published a report entitled *Connectivity and Climate Change: How 5G will help lay the path to net zero*¹ released in October 2021. The report details a number of areas in which 5G technology will help to mitigate climate change as it supports key industries such as healthcare, manufacturing, agriculture, transport and energy to reduce their environmental footprints. 5G technology will allow energy production and energy use to be better monitored and planned; transport infrastructure will be smarter, meaning cleaner, shorter journeys; manufacturing production processes will be less wasteful; agricultural practices will minimise their negative environmental consequences; and healthcare services will be improved through the use of remote consultancy and other telemedicine innovations.

In a general sense, 5G will allow a greater efficiency in its own right when considering the consumption of energy and other resources. For example, one kilowatt-hour (kWh) of electricity is required to download 300 high-definition movies in 4G, but one kWh in 5G can download 5,000 ultra-high definition movies. The monitoring capabilities that digital communications can offer allow usage rates to be closely monitored, which in turn leads to more efficient planning to save energy and lower carbon emissions. A fast and strong digital connection is required to facilitate these means meaning the rollout of upgraded technology is necessary to continue the growth and development of areas locally and nationally.

Mobile operators are also making efforts to use renewable energy in their operations with a global ambition of reaching net zero emissions by 2050. Each individual code operator has set their own goals and business models for low carbon emissions to target innovative ways to reduce the dependency on fossil fuels. Such initiatives include adoption of zero carbon vehicles, increase the use of renewable energy, reduction of single-use plastic and other active engagement with suppliers and customers to reduce their overall footprint.

1.4. Site Selection

The applicant has adopted a sequential approach to site selection which is encouraged in the Code of Best Practice (2022) for mobile operators and National Planning Policy. Efforts have been made to utilise existing telecommunications sites wherever possible to prevent the unnecessary proliferation of base stations. In this instance an existing base station has been identified as requiring an upgrade meaning a new site was not needed to satisfy coverage objectives.

¹ <https://www.mobileuk.org/news/cop26-landmark-report-highlights-how-5g-will-help-lay-the-path-to-net-zero>

1.5. Pre-Application Consultation

Pre-application consultation letters were issued on 24th June 2022 to the Local Planning Authority, local ward councillors and local MP. An additional consultation letter was also issued to the Civil Aviation Authority as the site is located approx. 1.7km north of Heathrow Airport. On 30th June, National Air Traffic Services Safeguarding responded to the consultation confirming that the proposal does not conflict with their safeguarding criteria. To date no other responses have been received by the council or other consulted parties and thus an application has been submitted.

2. Design

2.1. The Proposal

The application site is located upon the drill tower at Hayes Fire Station on the eastern side of Shepiston Lane. The surrounding area comprises of mixed land use including residential properties, local shops and open green spaces. Directly to the south is a section of the M4 motorway, which signifies the high footfall that is experienced through this locality. This is further heightened by the proximity of Heathrow Airport approximately 1.7km south of the application site.

The development area accommodates an existing base station which is an established feature of this landscape that serves as an important cell within the wider mobile network due to the high density of users in this environment. The site is not on a listed building or within designated Article 2(3) land.

The description of development seeks to upgrade the existing site which comprises the removal of 1no existing 5m stub tower and 3no existing antennas to be replaced with 1no new 7.5m stub tower and 6no new antennas, installation of 1no new meter cabinet and internal upgrade of existing equipment room with associated ancillary development thereto.

As the proposed works involve the installation of apparatus more than 6 metres above the roof of the drill tower an application for Full Planning Permission is therefore submitted herein.

Site Photo	
	
Type of Structure (e.g. tower, mast, etc)	Stub tower
Overall Height	24.88 metres
Height of Existing Building (if applicable)	17.0 metres (tower grillage) 16.5 metres (parapet level) 16.3 metres (roof level)
Equipment Housing	WxDxH (in mm)
Meter cabinet	1110 x 415 x 1290

Materials (as applicable)	
Tower/mast etc – type of material and external colour	Galvanised Steel – manufactured grey RAL 7035
Equipment housing – type of material and external colour	Galvanised Steel – manufactured grey RAL 7035
Frequency	GSM 1865.5-1846.5 MHz
Modulation Characteristics ²	GMSK & UMTS
Power Output (expressed in EIRP in dBW per carrier)	56 dBm
Height of Antenna (m above ground level)	23.5 metres to centre of antennas

2.2. Design Considerations

The applicant has sought to cause as little impact on the visual amenity of the area as possible whilst also ensuring that sufficient coverage requirements are achieved. A further explanation of the application's technical justification is explained in a later section of this statement however, it should be acknowledged from the offset that the least amount of equipment and the smallest scale possible has been proposed to achieve the optimum coverage objectives. The resulting benefits will improve existing mobile coverage through stronger and faster connectivity and helps to prevent the need for additional sites in close proximity to futureproof the network for customer demands. Moreover, the proposed height of the antennas is the lowest possible height to ensure correct signal conveyance whereby a reduction in height may impact on the site's functionality as well as health and safety in relation to ICNIRP compliance. It should be emphasised that intervening elements such as buildings and trees can weaken signal strength meaning that a height increase is often necessary to counter these limitations. The operator's general practice will always endeavour to propose the least impactful design possible to sufficiently achieve the desired coverage levels and it should be recognised that any reduction in height or equipment would significantly compromise the site's effectiveness within the network. There are no alternative design solutions available with the required technologies meaning the proposed scheme is the least visually intrusive design for the site's upgrade.

Whilst it is not necessary to outline alternative locations as the proposal seeks to utilise an existing base station, which is in accordance with Government Guidance, it should be noted that if an upgrade cannot be progressed at this location, a new additional base station within proximity would be required to satisfy coverage objectives. This is a mature network which has grown and each site functions in conjunction with surrounding sites to provide blanket coverage. In circumstances when an upgrade cannot be achieved and a replacement site is required, this can lead to technical implications where coverage issues can occur. The existing base station was deemed acceptable in its inception meaning that no concerns were raised by the local planning authority in relation to its location within the immediate area and any associated sensitive assets. Though it is recognised that changes to a telecommunications site will to a degree be recognisable in any given environment, the visibility of equipment does not automatically lead to detrimental harm as each site must be assessed on its own merits and balanced against the public benefits to be provided in accordance with national planning policy. In this respect significant weight should be given to improving existing 4G coverage and introducing 5G technologies in recognition of the

² The modulation method employed in GSM is GMSK (Gaussian Minimum Shift Keying) which is a form of Phase Modulation.

The modulation method employed in UMTS is QPSK (Quad Phase Shift Keying) which is another form of Phase Modulation.

government's commitment to this rollout, which will result in socioeconomic improvements for the local community. Digital connectivity is an essential utility provider in today's society and a high-quality service must be provided by the operators in accordance with license obligations. Within the local area, the application site is an established base station, which sets precedence for telecommunications development in principle at this location, and this is further evidenced by the presence of other licensed operators.

Siting and Appearance

To maintain the overall appearance of the existing site, the applicant has adopted a minimalistic approach to utilise existing apparatus as much as possible and in this instance new support structures are needed to sufficiently accommodate the replacement technologies. This design layout strikes a balance between the site's technical requirements and visual amenity aspects as the new antennas will be positioned in the same location atop the fire station drill tower. As the scheme seeks to replace 1no existing stub tower, the overall change in appearance is thought to be minimal given the existing context as the equipment will remain concentrated on one central mast. The applicant considers this change to be relatively minor to residents and visitors in the local community when taking into account the existing layout at present which is a recognised feature and telecoms base station of this landscape.

The overall height of the apparatus will have a minor increase of approximately 1.78 metres which is necessary to ensure correct signal propagation towards the target areas as well as ICNIRP compliance. Further consideration has also been given to the proximity of co-located operators so as to prevent signal conflict. To reiterate, the replacement stub tower is necessary to counter the technical constraints of the site whereby the proposed height and spatial separation of the antennas is the minimum requirement to sufficiently achieve the optimal signal output in addition to compliance with the relevant health and safety regulations. A reduction in scale or height in this instance would significantly compromise the functionality of the base station, which is of prime importance.

Taken as a whole, the antennas will be read within the same air space across the skyline and compared to the existing site at present the cumulative effects of the proposed equipment is minimal when considering its established nature. Consequently, it is thought that visual amenity is not detrimentally impacted by this upgrade scheme but would in fact be maintained as a result of the minor development works. Although the base station is more discernible at a localised level, the simplistic design of the upgrade scheme will mimic a similar visual appearance to the current situation. When read in conjunction with the surrounding built form, the apparatus presents a minor profile that is capable of assimilating into the roofscape. As a result, the applicant considers the proposal to be acceptable in regard to its siting and appearance.

Following on from this, it is recognised that the equipment can be read at height from wider vantage points however the setting of this application site upon a utilitarian structure within the backdrop of a fire station and the adjacent motorway is thought to be an appropriate setting that should be taken into consideration in the assessment of this application. Additional regard should also be given to the natural eye line of local residents and passers-by as the equipment is located on a rooftop in which visibility would necessitate a bystander to purposefully look upwards. The drill tower is also positioned to the rear of the fire station land meaning it is set back from the main vistas of the surrounding public highways. This context reduces the site's visual prominence within the public realm. The applicant believes that views of the application site would be

uncommon and irregular which in turn reduces the risk of visual significance. As mentioned previously the proposed works will offer a minor visual change to the existing base station which is not thought to be a dominating feature within the surrounding streetscape from a greater distance.

In addition to this, there are several screening elements along the neighbouring road networks which will somewhat soften these views including buildings and street items such as trees and lighting columns that offer a similar vertical emphasis against the skyline. For passing traffic, these built features will occasionally reduce the site's visibility resulting in momentary and infrequent viewpoints only. These points are evidenced in the below images taken from the immediate locality where the existing equipment can be seen but is relatively small in profile due to the distance, the equipment's elevated height above ground level and the size comparison between the equipment, the host building and surrounding built form. When read in conjunction with the wider landscape perspective, the stub tower will present a relatively slim profile that is similar to the present site currently in situ.



These images illustrate the existing equipment's congruous nature across the skyline from these distant viewpoints meaning its overall prominence is less than substantial to passing pedestrians and motorists. The inconspicuous nature of the current base station is a transferable point that should be applied to the assessment of this application given the minor alterations proposed. Moreover, in relation to views along the adjacent M4 motorway, it is worth highlighting that such views are expected to be fleeting as vehicles would be in transit at high speeds. These arguments should therefore be materially considered in the determination of this submission.



Leading on from this, the proposal is not considered to adversely impact residential amenity despite the proximity of dwellings in the local area. The equipment is situated on the rooftop away from residential windows and other private spaces meaning there is no direct influence on the natural enjoyment of daylight, outlook or privacy for the local community. Additionally, it should also be reiterated that the application site accommodates an existing base station which sets precedence for telecommunications equipment at this location and is also befitting of the surrounding environment. The fire station drill tower is situated on the outskirts of the nearby residential area, which further emphasises its appropriateness in terms of siting. It is also inherently common for telecommunications equipment to be situated on existing structures and buildings, which is especially widespread in Greater London boroughs and big cities. As well as this, the applicant's decision to upgrade an existing site as opposed to identifying a new location is in accordance with planning guidance so as to prevent undue harm to visual amenity and proliferation. It is also important to emphasise the necessity of the proposed upgrade to ensure that old equipment is renewed in line with technological advancements. This allows the base station to operate at its optimal functionality in order to handle current and future network demands.

Furthermore, in relation to sensitive heritage assets there are no statutory listed buildings or conservation areas within direct proximity of the application site. Given that the nearest assets are some distance away from the site the applicant does not consider the proposal to have a detrimental impact on these designations as the proposed development would not be seen within

the same context as these areas of historical importance. Subsequently there is little demonstrable evidence of potential adverse harm in this regard.

In summary the proposed design is considered to be respectful of the surrounding elements and does not cause detrimental harm to the visual amenity of the immediate environment. The siting and appearance of this proposal is therefore within the boundaries of acceptability as it will cause minimal interruption to the current landscape and is in line with national planning policy to utilise existing sites and buildings. When taking into account the existing precedence for telecommunications equipment, the proposed upgrade displays a level of consistency with the current site which results in a similar extent of visual impact as the equipment presently in situ. Therefore, the applicant strongly believes the scheme demonstrates a sympathetic design that would not detract from the setting and character of the surrounding area and the proposed works are capable of being absorbed into the wider landscape.

Overall it is considered that the scheme does not demonstrate substantial harm to the local area, and in any event, it is argued that the public benefits of the proposal would outweigh any perceived harm. As the scheme seeks to introduce 5G technologies during a climate where economic recovery is paramount, the public benefits associated with this upgrade cannot be undervalued.

3. Planning Policy Considerations

Development Plan Policy Section 70 of the Town and Country Planning Act 1990 as amended requires planning applications and appeals to be determined having regard to the provisions of the Development Plan and other material considerations, and section 38 of the Planning and Compulsory Purchase Act 2004 requires applications and appeals to be determined in accordance with the Development Plan unless material considerations indicate otherwise.

3.1. Local Planning Policy

The following local planning policies are relative and have been considered in the submission of this application. It is argued that the proposal is in accordance with the below policies which promote high-quality connectivity and supports new telecommunications infrastructure when it can be demonstrated that the design and siting of the base station is respectful to its surroundings.

Hillingdon Local Plan: Part 2 Development Management Policies (Adopted January 2020)

Policy DMHB11 Design of New Development (Part 2)

In accordance with the above policies the application is of a high quality design in which the least amount of equipment technically necessary has been utilised. The site is of an appropriate height, scale and bulk when balancing technical constraints with the visual and residential amenity of the surrounding area. Careful consideration of the scheme's potential impact has been taken into account in the design process of this proposal which is considered to be respectful to the present context and any nearby heritage assets.

Policy DMHB21 Telecommunications (Part 2)

In line with this policy the scheme is considered to be of acceptable siting and appearance when read within the wider landscape perspective. There is little demonstrable harm caused to existing visual and residential amenity which protects the character and setting of the surrounding area. The applicant has also adopted a sequential approach to site selection in exploring existing sites and structures prior to identifying new base station locations. The application site is not located in direct proximity of any notable heritage assets. An ICNIRP certificate of compliance has been included with this application.

3.2. National Planning Policy

The National Planning Policy Framework was revised in July 2021. In relation to this policy the following sections are relevant in determining this application:

Section 2 – Achieving Sustainable Development

Paragraph 7 – *"The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs."*

The NPPF also encourages the achievement of sustainable development which can provide public benefits to building stronger and more competitive economic areas, as well as enhancing social

communities through increased communication and connectivity. These benefits feed into the overarching economic and social objectives of the NPPF.

Section 4 - Decision-Making

Paragraph 38 – “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 brownfield registers and 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.”

Section 6 – Building a strong, competitive economy

Paragraph 81 – “Significant weight should be placed on the need to support economic growth and productivity... This is particularly important where Britain can be a global leader in driving innovation.”

Section 10 – Supporting high quality communications

Paragraph 114 – “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 relation to these paragraphs, the Government’s Industrial Strategy sets out a vision to drive productivity improvements across the UK, and sets out a delivery programme to make the UK a leader in “artificial intelligence and big data”. The improvement of telecommunications capacity and provision of 5G is imperative to allow for areas to be connected, and is essential for economic growth which is expected to be delivered and upgraded over time.

Paragraph 115 – “The number of radio and electronic communications masts, and the sites for such installation, 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 (including wireless) should be encouraged. Where new sites are required (such as for new 5G networks, or for connected transport and smart city applications), equipment should be sympathetically designed and camouflaged where appropriate.”

In relation to this paragraph, it is demonstrated that a sequential approach to site selection has been adopted to ensure that existing telecommunications installations have been explored in the first instance to prevent unnecessary proliferation of masts. In this instance an existing base station has been identified for an upgrade scheme which negates the need to explore new locations.

Paragraph 116 – “Local planning authorities should not impose a ban on new electronic communications development in certain areas, impose blanket Article 4 directions over a wide area or a wide range of electronic communications development, or insist on minimum distances between new electronic communications development and existing development. They should ensure that:

- a) They have evidence to demonstrate that electronic communications infrastructure is not expected to cause significant and irremediable interference with other electrical equipment, air traffic services or instrumentation operated in the national interest; and

- b) *They have considered the possibility of the construction of new buildings or other structure interfering with broadcast and electronic communications services."*

Paragraph 117 – “*Applications for electronic communications development (including applications for prior approval under the General Permitted Development Order) should be supported by the necessary evidence to justify the proposed development. This should include:*

- a) *The outcome of consultations with organisations with an interest in the proposed development, in particular with the relevant body where a mast is to be installed near a school or college, or within a statutory safeguarding zone surrounding an aerodrome, technical site or military explosives storage area; and*
- b) *For an addition to an existing mast or base station, a statement that self-certifies that the cumulative exposure, when operational, will not exceed International Commission guidelines on non-ionising radiation protection; or*
- c) *For a new mast or base station, evidence that the applicant has explored the possibility of erecting antennas on an existing building, mast or other structure and a statement that self-certifies that, when operational, International Commission guidelines will be met.”*

In relation to this paragraph, the site is not located within 3km of a technical site or military explosives storage area, or within close proximity of any schools or colleges. The local planning authority was consulted with regards to the proposed upgrade scheme as well as the Civil Aviation Authority. An ICNIRP certificate is provided with this application to confirm that the proposal will not exceed International Commission guidelines. As the scheme is utilising an existing base station, it was not necessary to identify alternative site options.

Paragraph 118 - “*Local planning authorities must determine 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.”*

Section 12 – Achieving well-designed places

Paragraph 126 – “*The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.”*

In relation to this paragraph, the application seeks to upgrade an existing telecommunications site located on Hayes Fire Station Drill Tower and the proposed equipment is the least amount possible to allow the site to transmit sufficiently; we therefore consider this design to be respectful to the character of the area. Although the site’s change in appearance will to an extent be recognisable in any given context, efforts have been made to limit the visual impact on the surrounding amenity as far as practicable.

3.3. Code of Best Practice for Wireless Network Development in England 2022

The Code of Best Practice is a guidance document created by the Department for Digital, Culture, Media and Sport, which aims to support the government’s objective of delivering high quality wireless infrastructure whilst balancing the needs of environmental considerations. This

document has been developed in collaboration with mobile network representatives, other government departments, public bodies, local planning authorities and protected landscapes. 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 guidance aligns the agreed principles between operators and local planning authorities in respect to the siting and design of network infrastructure to outline the roles and responsibilities of both parties throughout the application process. Within this document it is recognised that digital connectivity is vital to enable people to stay connected and businesses to grow, and there is particular emphasis on the 5G rollout and future mobile generations, which will be vital for a range of uses and future smart city applications. Much of the principles in this guidance reflect those already highlighted in the NPPF however, there are notable excerpts to highlight for the council's considerations in the determination of this application.

With reference to Paragraph 19, the local planning authority is "*encouraged to support the deployment of digital infrastructure by:*

- *Incentivising connectivity: support the expansion of telecommunications networks, and take a 'joined-up' approach to the wireless infrastructure planning process, including ensuring that Local Plans effectively support the deployment of digital infrastructure.*
- *Facilitating sites: engage with operators when new sites have been proposed and discuss site requirements.*
- *Engagement with operators: respond positively to requests for engagement and make decisions in line with national policy and Local Plans. For planning applications, find solutions to issues and ensure timely decisions are made.*
- *Information and communication: ensure that members of the public can access information about any development proposals within their local area. Send communications promptly to an appropriate operator contact (or their representatives).*"

When considering the siting and design of any given proposal, Paragraph 22 states, "*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.*"

Moreover, Paragraph 29 states, "*There are factors that can affect the type of infrastructure that will be deployed... including location and the coverage and capacity requirements. 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.*
- *In rural areas, base stations often need to cover wider geographic areas. Operators may need to use tall masts or lattice towers to provide the required coverage. The location of masts can sometimes be dictated by access to transmission links back to the operator's main network and proximity to a power supply. Coverage in some areas can be limited because of the geography, topography and terrain.*"

The guidance also provides further explanations for technical and operational considerations as below:

Paragraph 64 – *"All wireless network installations are principally guided by the technical need for the site and the technical constraints placed upon transmitting a signal. The siting and design of such installations must therefore be balanced between visual impact and these needs and constraints. As set out in the siting and design section above, the three primary technical and operational considerations for installation sites 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 – *"Planning authorities should take account of these constraints, and those set out below, on network deployment and siting and design, when considering proposals."*

3.4. The London Plan 2021

The Plan recognises the strategic importance of providing necessary infrastructure, including modern communications networks that London requires to secure its long-term economic growth. The proposed works will improve digital connectivity to the benefit of Londoners and businesses. The site will ensure a high level of connectivity is sufficient to meet the rising demands of reliable data and services of the public as well as safeguarding the reduction of coverage within the surrounding area. This application is therefore an integral element in securing the Mayor's vision for the delivery of modern communications networks across London.

With particular reference to Policy SI 6 (Digital Connectivity Infrastructure), the applicant is committed to fulfilling network obligations to cater current and future demands to ensure high quality coverage is provided which continues to be faster and stronger. In line with this policy the applicant has also demonstrated efforts to utilise existing base stations, rooftops or other structures prior to identifying new locations to fulfil network objectives. Ongoing network upgrades are an essential aspect of London's global competitiveness which is recognised in the latest Plan.

3.5. Other Notable Reports and Reviews

The following reports highlight the importance of 5G technology. The recent pandemic has also shown an increased reliance on connected services due to the need for home-working and home-schooling, which is likely to continue in the post-pandemic era to an extent. It is therefore essential for mobile network operators to provide a reliable and resilient service to facilitate these needs, as evidenced in their significant contributions in the global response to the pandemic. Staying connected has become a defining feature of the modern economy and a significant trend of the 21st Century. Therefore, 5G will prove fundamental to fulfilling the potential of digital connectivity and will help drive the economy after the COVID-19 outbreak. For example, within the healthcare sector, hospitals and medical experts will have the ability to connect in real-time with their patients to diagnose and treat disease at the first point of contact to improve patient care. In terms of commercial benefits, manufacturers will look to leverage robotics, artificial intelligence (AI) and superfast connectivity to enable the remote management of production lines and to support the faster reconfiguration of factories.

Online Nations 2021 Report

This report has found that people have become more dependent on online services due to the effects of the pandemic. By the end of 2020, 94% of homes had internet access, which is up from 89% in 2019. The report also found that more time was spent online with an average of 3 hours 37 minutes per day on smartphones, tablets, and computers (nine minutes more than in 2019) as well as an average of 1 hour 21 minutes per day watching online services such as Netflix and BBC iPlayer on television sets (24 minutes more than in 2019). In September 2020, UK internet users spent nearly four times as much time on smartphones (an average of 2 hours 19 minutes a day) than they did on computers (37 minutes). This clearly shows the reliance on good connectivity and the proposed upgrade submitted herein helps to provide improved 4G coverage and to provide 5G coverage, which will allow much faster and stronger downloads.

Connected Nations 5G Performance 2021

5G rollout has continued at pace with the number of mobile base stations providing 5G services more than doubling over 2020 to over 6,500 sites across the UK. 87% of these are in England, 8% in Scotland, 3% in Wales and 2% Northern Ireland. It is estimated that 5G is available from at least one mobile network operator (MNO) outside 42-57% of premises. The four Mobile Network Operators (MNOs) – EE, O2, Three and Vodafone – each estimate they provide 4G outdoor coverage to circa 99% of premises. Networks' coverage of the UK landmass ranges from around 79% to around 86%. There has been some incremental progress in increasing coverage across each of the UK Nations by the MNOs, including 46 fresh deployments towards their Shared Rural Network commitments. Networks have continued to perform well despite significant demands as people and businesses relied on their phone and broadband connections during national lockdowns because of the pandemic. Average monthly data usage on fixed networks has increased to 453GB, from 429GB in 2020 and from 315GB in 2019. Whilst peak usage remains in the evening, networks continued to see high demand during the day due to increased home-working circumstances.

This application site is located within a vital area where network provisions must be enhanced to allow people to work at home, to allow schools to teach online and to enable better accessibility in all parts of the country, which will in turn relieve pressures for home-working and e-learning.

Government Joint Statements from DCMS and MHCLG

The Government is highly aware that 5G is vitally important for the United Kingdom. To enable this to happen the permitted development rights [in England] were reviewed to enable faster 5G rollout (NB: a legislation amendment came into force on 4th April 2022). Permitted development rights for electronic communications infrastructure are a critical element in the planning regime for streamlined and cost-effective deployment of telecommunications infrastructure. They benefit both mobile network operators and local planning authorities in the effective management of limited time and resources. Permitted development rights also facilitate investment in network infrastructure resulting in improved service to customers and help in delivering significant socioeconomic benefits to society both nationally and locally. Reforms to planning laws will mean fewer phone masts will be needed overall to level up the country with improved 4G and 5G mobile coverage as telecoms firms will be able to upgrade existing infrastructure in the first instance before needing to build new masts.

Digital Infrastructure Minister Julia Lopez said, *"We've all felt the frustration of having the 'no bar blues' when struggling to get a phone signal, so we're changing the law to wipe out mobile 'not spots' and dial up the roll out of next-generation 5G."*

This proposal is to provide 5G and is critical in the Government's long-term strategy.

Queen's Speech May 2021

The Queen's Speech announced that the Government will strengthen national infrastructure proposals to extend 5G mobile coverage and high-speed broadband in the Product Security and Telecommunications Infrastructure Bill, which includes new legal duties on telecoms firms to increase security across the UK networks. The Speech went onto say, *"My Government's priority is to deliver a national recovery from the pandemic that makes the United Kingdom healthier and more prosperous than before."*

This proposal therefore will help the country's economy.

Digital Nations Ministers

Chris Philp MP is tasked with meeting the Government's target for the whole of the UK to have access to gigabit-speed broadband connectivity by 2025 and majority 5G coverage by 2027. This proposal will aid in securing this target.

The Digital Nations Ministers met virtually on 18th November 2021 to discuss the digital government agenda. It stated, *"The global pandemic has proven beyond doubt that digital technologies play a crucial role in allowing our governments to meet the needs of our citizens whether in relation to delivering healthcare, social support, information, or education. We affirm our shared commitment to using digital technology to build back better. Acknowledging the continued impact of the COVID-19 pandemic on our societies, we discussed the opportunities digital innovation offers in tackling these, and other emerging challenges, including climate change, and exclusion and inequalities. As digital governments in open societies, we share a commitment to promoting inclusion, sustainability, and our shared values. We reaffirm our shared aim to work together to accelerate our digital transformation and become more proactive, responsive, and resilient digital governments. Working together, our governments will continue to use technology to break down barriers between government and people, and to embrace innovative digital solutions that deliver real-world impact."*

The statement looked at 3 key themes:

1. Sustainable Innovation – Technological advances, such as in the use of big data and artificial intelligence, offer ground-breaking opportunities for governments and the international community to tackle our most pressing challenges, including climate change. As sustainable digital governments, we affirm a shared commitment to making better use of data, digital tools, and technologies to reduce the environmental impacts of our government's own operations, and to strive to address the sustainability considerations of digital activities.
2. Inclusive Innovation – We remain committed to putting people at the centre of digital transformation. We will continue to deliver inclusive policies that narrow the digital divides: this includes widening access to the Internet and to digital tools and technologies, enhancing our digital infrastructure to reach underserved communities, building digital skills and digital confidence, and designing for accessibility. We recognise our

responsibility to ensure no individual is left behind as we accelerate the digital transformation of our governments.

3. Values-Driven Innovation – We believe that public trust in the digital services and tools we develop and deploy are paramount to their successful adoption. As leading digital governments in open societies, we recognise that accelerating digital transformation must therefore be guided by our shared values. We affirm our shared commitment to putting in place the right safeguards, including for human rights, data protection, data ethics, and to promoting transparency and public confidence in public sector use of data and digital technologies.

This clearly shows that digital connectivity is high on the Government agenda and this proposal aids in providing the UK with high-quality connectivity.

Councils and Connectivity 2 – A report by Building Mobile Britain and Mobile UK, May 2019

"Mobile operators have ambitious plans to further enhance their networks and will soon be starting initial commercial rollout of 5G, the next generation in mobile technology. This ambition matches the Government's objective for the UK being a world leading digitally connected economy. However, mobile operators cannot achieve this objective alone – action is needed by all stakeholders, including national and local government. It is vitally important that residents and businesses can access 5G in the future. It promises to radically transform our economy and society for the better...it is vital that councils attempt to understand why good quality mobile connectivity will become more important, and what they need to do to ensure that local residents and businesses have access to the best possible mobile connectivity in the future."

A Councillor's Guide to Digital Connectivity – published by the Local Government Association, September 2019

"With better access to high speed and reliable broadband and mobile connections, local communities can access public services more conveniently and purchase goods online at a lower cost. People can work from home, cutting out their commute and improving their quality of life. Businesses can grow, become more productive, sell their products in a global market and access a raft of services not available to those offline. Tourists can find out more information about local attractions and share photographs of their experiences with friends and on social media. In contrast, areas stuck in the digital slow lane are less attractive places to live, work and visit, and risk being left behind as other areas reap the benefits of our digital revolution.

5G will enable exciting new services and applications including:

- *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 councils 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."*

Future Telecoms Infrastructure Review – Published by DCMS, July 2018

"When looking at the speed, resilience and reliability that consumers want and businesses need in order to grow, it is clear that full fibre and 5G are the long-term answer. These technologies have the potential to transform productivity, and to open up new business models. Full fibre networks are faster, more reliable, and more affordable to operate than their copper predecessors. 5G will deliver faster and better mobile broadband, and enable revolutionary uses in industry sectors like manufacturing, health and transport alongside finishing the roll out of 4G networks to meet existing mobile demand, we want the UK to be a world leader in 5G to take early advantage of this new technology. We have set a target that the majority of the population will have 5G coverage by 2027 the technical capabilities and performance characteristics of 5G are clear. 5G is expected to deliver faster and better mobile broadband services to consumers and businesses, and to enable innovative new services for industry sectors, including manufacturing, transport, immersive technologies and healthcare."

Statement of Strategic Priorities for Telecommunications, The Management of Radio Spectrum, and Postal Services – updated version published by DCMS October 2019

"The Government is committed to providing the UK with world-class digital connectivity that is gigabit-capable, reliable, secure and widely available across the UK. We want the nationwide deployment of gigabit-capable broadband networks at pace. Alongside improving 4G coverage to meet existing mobile demand, the Government wants the UK to be a world leader in 5G, and for the majority of the population to have 5G coverage by 2027. 5G is expected to deliver faster and better mobile broadband services to customers and businesses, and to enable new services for industry sectors, including manufacturing, logistics and immersive technologies. 5G creates an opportunity for market expansion - in the type of wireless services available and in the number of providers of networks and services. The Government's view is that there would be strategic advantages in a model that maintains the benefits of network competition between multiple mobile network operators, while enabling new solutions to connectivity challenges, including in-building coverage, rural coverage and industrial applications."

The above statement highlights the importance of rolling out a 5G network and this application will futureproof the site for the foreseeable future and ensure that the local community has access to high-quality connectivity. In a broader perspective this will help to eliminate areas of no, or poor, coverage. High-quality connectivity is seen by the Government as the way to economic recovery and the public benefit of such infrastructure outweighs any minimal harm to the area.

In summary, it is our opinion that the proposal meets all local and national policy requirements.

4. Technical Justification

In the assessment of this application, material weight should be given to the public benefits that will be provided to local residents and visitors in this area. The site will form part of an improved coverage network which will also introduce 5G technology to allow for faster download speeds and better signal. More information on 5G can be found in the accompanying documents: 5G and Future Technology, Connected Growth Manual Digital Infrastructure and The Institution of Engineering and Technology's Guide for Local Planning Authorities Regarding 5G Masts and Small Cells.

The consequences of the global pandemic have also highlighted the inadequate nature of infrastructure in suburban and rural areas in particular as a result of increased home-working and e-learning for school. Existing base stations have struggled to handle increased data traffic demands which demonstrates the importance of improving digital connectivity in all parts of the country. In addition to improving signal strength, speed and capacity for current demands the proposed works will also aid in futureproofing the quality of the network through its greater robustness. As a licensed code operator, the applicant has a legal obligation to ensure a high-quality service is accessible to the public throughout the UK as it contributes positively towards the socioeconomic development at local and national levels. This is particularly apparent in densely populated areas that experience high levels of footfall on a daily basis.

The demand and focus on delivering the 5th generation of mobile phone technology is the primary objective of licensed operators in the UK as part of the national rollout. In today's climate the existing 4G network has allowed users to video stream at much faster data speeds allowing the integration of smart phones into wider uses than previous generations. The inevitable consequence of technological advancements means that customers expect tasks to become even quicker and simpler.

To quote the 5G and Future Technology document, *"It is estimated that 5G will directly contribute to an additional £7 Billion a year to the UK economy in just six years from roll-out. Although 5G will undoubtedly bring new opportunities and huge benefits to society, we cannot escape from the requirement that new structures, antennas and ancillary equipment will be needed. But to do so the network needs to be surveyed, designed and planning approval obtained. It has been acknowledged by Government that we must ensure that we have the infrastructure in place to deliver 5G across our major centres and transport networks."*

The introduction of 5G technology will improve the country's digital connectivity and appeal to visitors and businesses alike through the creation of smarter technology which will benefit the British economy.

"Examples of this new world that will emerge from ubiquitous 5G coverage involves such things as connected and autonomous vehicles, traffic management, smart manufacturing with heterogenous autonomous machines, direct machine to machine communication, advanced medical devices, automated agriculture, far greater security provision, more stable and reliable connectivity and advances in further application development with uses not yet identified. All of the above provides an insight into the future development of connectivity in our modern world and also provides a further insight into the expected minimum eight-fold increase in data usage by each mobile operator over the next 5-6 years."

The national government recognises the importance of the 5G rollout which is a stance taken by government minister Margot James, the NPPF and The National Infrastructure Commission.

"5G has the potential to dramatically transform the way we go about our daily lives, and we want the citizens of the UK to be amongst the first to experience all the opportunities and benefits this new technology will bring...." – Margot James, the government minister for digital).

"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." – NPPF (July 2018)

"Getting 5G deployment right will be critical in a future where connectivity is becoming integral to almost all parts of the economy, and the UK will put its future growth and competitiveness at risk if falls behind." – 'Connected Future' National Infrastructure Commission 2016

Although Central Government understands that this may present concerns with the various design solutions proposed, it is important that all Local Planning Authorities understand the technical needs of 5G and better understands the wider advantages of such new technology. The government have also expressed support for new telecoms installations and the deployment of new technology. It is seen as essential for the country to develop and exploit the advantages of such new technology to the direct benefit of the public and the economy.

4.1. Coverage

The licence granted to EE and Three demands that strict coverage qualities are met nationwide. It is essential that the benefits of mobile phones are available across the population. Mobile networks are constantly reviewed to ensure that there is adequate coverage and capacity to meet customer demands. In the current environment there is an expectation for signal coverage to be available at home, in the workplace, while shopping, enjoying leisure activities or in transit.

4.2. Quality

In order to ensure there is sufficient coverage within buildings such as homes, shops, offices etc. the radio signal has to be of adequate strength to penetrate walls. In urban and suburban areas a dense network of base stations is therefore required, which are sometimes less than 1 km apart. The improvement of 3G and 4G signal and introduction of 5G in this area will encourage economic advancement in accordance with national policy which seeks to develop and grow connected environments.

4.3. Capacity

The upgrade of telecommunications masts across the country is an inevitable consequence of the continued growth of mobile phone usage. More sites are required to address the increasing traffic demands of each mobile user for tasks such as video/music streaming. For instance, each cell or base station is limited to handling a finite number of calls meaning that areas of high usage will require additional cells to meet network demands and avoid congestion.

4.4. The Radio Implication of the Site

Radio signals are transmitted through the network by using fixed links at such frequencies that necessitate an uninterrupted line of sight. To achieve this, the antennas must reach a sufficient height above surrounding buildings and trees. In more rural locations the undulating topographies will also have detrimental implications on signal propagation which require mitigation. The proposed development must also be in a position to provide strong radio coverage to the target area that can also be received inside buildings. As a result, it is integral that antennas have an unobstructed view towards the wider target area as it optimises the quality of signal.

The radio planning tool identifies deficiencies in the network and predicts the location from which the optimum coverage will be provided. Within these areas existing base stations are selected for an upgrade. The proposed installation subject to this application stems from this process where it is imperative for mobile operators to provide high quality coverage to its customers. This is achieved through the improvement of existing network infrastructure and introduction of new base stations to fill in blank spots.

4.5. Health and Safety

The proposal for this site has been designed within International Commission on Non-Ionising Radiation Protection (ICNIRP) public exposure guidelines and therefore Health and Safety concerns should not be a planning consideration. An ICNIRP certificate is submitted with this application.

In addition to this, The Institution of Engineering and Technology's Guide for Local Planning Authorities regarding 5G Masts and Small Cells, provides a brief overview of 5G technology and the health issues that are often misunderstood. It concludes by saying, *"Small 5G base stations in our towns and cities will allow improved network coverage. They will reduce radio wave exposure to individual smartphone users and improve local 5G capacity for all manner of useful bandwidth-hungry applications. And a good 5G fibre base local broadband infrastructure will be important to local communities over the coming decades in view of the ever-increasing amounts of data being consumed by the general public."*

5. Conclusion

A requirement for improved network coverage has been identified in this area. This is an upgrade of an existing site which will provide essential services for residents and businesses within the immediate vicinity. It was therefore not required to explore alternative sites in line with National Planning Policy. In today's society there is a strong reliance on connected services which demonstrates a necessity for high-speed coverage in all areas of the UK. The effects of the global pandemic have also led to increased home-working where current network infrastructure is in much need of improvement.

The proposed works have been designed sensitively in consideration for the character and appearance of the surrounding area in which the least impactful scheme has been proposed to minimise the visual impact of the proposal whilst also ensuring the coverage objectives can still be achieved. A reduction in equipment or scale would therefore substantially impact the quality of signal provided and the overall functionality of the site.

The applicant has also demonstrated efforts to respect the existing visual amenity of the surrounding area in which the proposal is capable of preserving the local character and setting. Additional regard has also been given to the proximity of any historical and natural assets to ensure these are duly protected as far as practicable.

The site will be valuable in the Government's desire for high-speed connectivity and ensuring its accessibility throughout the UK wherever and whenever required. It is considered that the proposal complies with national and local policy. It is therefore considered that the public benefits provided by the proposed upgrade would outweigh the minimal visual change in the appearance of this site.

The applicant considers the proposal to be an acceptable development which should be viewed favourably by the local planning authority.