

PLANNING, DESIGN, ACCESS & HERITAGE STATEMENT

Site Ref:	A01411	Applicant:	Net and MBNL
NGRs:	385512/394028	Date:	11 April 2023
Site Name:		Type:	Full Planning Application
Site Address:	CHURCH OF THE HOLY INNOCENTS, WILBRAHAM ROAD, FALLOWFIELD, MANCHESTER M14 6JS		
Proposal:	The installation of 1 No. GPS node positioned on the northern elevation of the tower at 21.50 metres above ground level and ancillary development thereto.		
Planning Agent:	Avison Young (UK) Limited		
LPA:	Manchester City Council		

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Overview

Avison Young are planning consultants acting on behalf of NET to submit the application contained herein for proposed telecommunications development.

Enclosed you will find an application for Full Planning Permission prepared on behalf of MBNL 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 56040- 002, 100, 150, 200, 250, 509 B3
- Planning, Design, Access and Heritage Statement
- 5G and Future Technology
- Connected Growth Manual – Digital Infrastructure
- IET Guide to 5G

NB: The proposed work falls within the Ecclesiastical Exemption (Listed Buildings and Conservation Areas) Order 1994 and therefore a Listed Building Consent application under the Planning (Listed Buildings and Conservation Areas) Act 1990 is not required.

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

The following statement is enclosed in support of this proposal and demonstrates the general development principles that have been adopted in the final detailed design of this proposal.

NET

NET has forged a close relationship with the churches and has opened a portfolio of church sites to the operators. NET oversees the full design and build process from the initial negotiations with the church to the build and maintenance of each site. Many of the 16,000 parish and guild churches across England are suitable for housing installations and are widely used by telecommunications operators.

Church buildings have a special significance in the communities they serve and it is recognised that the mission and environment of every church and its many listed buildings have to be protected. The Church of England has a strict legal process for granting permission to change the fabric of a church building and this also applies to any telecommunications installations. Without a comprehensive understanding of these special needs, church installations can be time consuming and difficult for both operators and parishes. NET has gained extensive experience through their work with the Archbishops' Council to develop a standard approach to both the practical and legal aspects of telecoms installations, which has resulted in a quicker and easier process for the applicant. Where louvres are to be replaced these will be carefully removed, logged and stored on site which is a condition of the Faculty Approval. The original louvres can then be reinstalled if / when the telecoms equipment is removed. NET are aware of the sensitivities of working on consecrated land and will ensure that all protective measures are in place.

Church buildings often provide good solutions as they are normally one of the tallest structures in an area to provide the required heights for optimal signal propagation and the antennas can often be concealed within the structure to preserve the external appearance of the host building.

MBNL

Everything Everywhere 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, Everything Everywhere 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 Hutchison 3G UK Ltd (H3G UK). In 2016, Everything Everywhere 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 network 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.

A more specific public benefit that is associated with church-based telecoms sites is that it also provides an extra source of income for the church. Such funds can be utilised to aid local communities for those who need it, which is a contributing factor to the improvement and development of local communities as a whole.

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.

As mentioned previously, church towers provide suitable spaces for housing telecommunications apparatus as it provides an ideal height above the surrounding built form for the antennas to face towards the target coverage area, which is a functional necessity for equipment of this nature. Consequently, it is often the case that there is a lack of suitable alternatives in any given area whereby existing buildings are architecturally unsuitable or would result in an exposed base station that would be visible from the surrounding public realm. The majority of equipment is located internally within this scheme although, the GPS node has to be external as it has to be able to see the sky and receive satellite information. This is particularly apparent when compared to alternative site types such as ground-based masts that have a greater potential for visual impact, especially within areas of increased sensitivity such as the curtilage of a listed building or designated conservation areas. By contrast, church sites enable a more discreet design as the

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

applicant endeavours to pursue internal installations wherever possible as a means of eliminating the potential visual impact on the aesthetics of church buildings and the surrounding area.

1.5. Application Site Details

Church of the Holy Innocents is a Grade II listed building and is not located within a conservation area. The church is located to the north of Wilbraham Road. The area is mixed in use and comprises of retail, commercial and residential properties. The existing site at the church is an integral site within the wider network as it serves a high volume of users in this area.

Information from Historic England:

Official list entry

Heritage Category: Listed Building

Grade: II

List Entry Number: 1270568

Date first listed: 03-Oct-1974

Date of most recent amendment: 06-Jun-1994

List Entry Name: CHURCH OF THE HOLY INNOCENTS AND ST JAMES

Statutory Address 1: CHURCH OF THE HOLY INNOCENTS AND ST JAMES, WILBRAHAM ROAD

Details

MANCHESTER

SJ89SE WILBRAHAM ROAD, Fallowfield 698-1/9/689 (North side) 03/10/74 Church of the Holy Innocents and St James (Formerly Listed as: WILBRAHAM ROAD, Fallowfield (North side) Church of Holy Innocents)

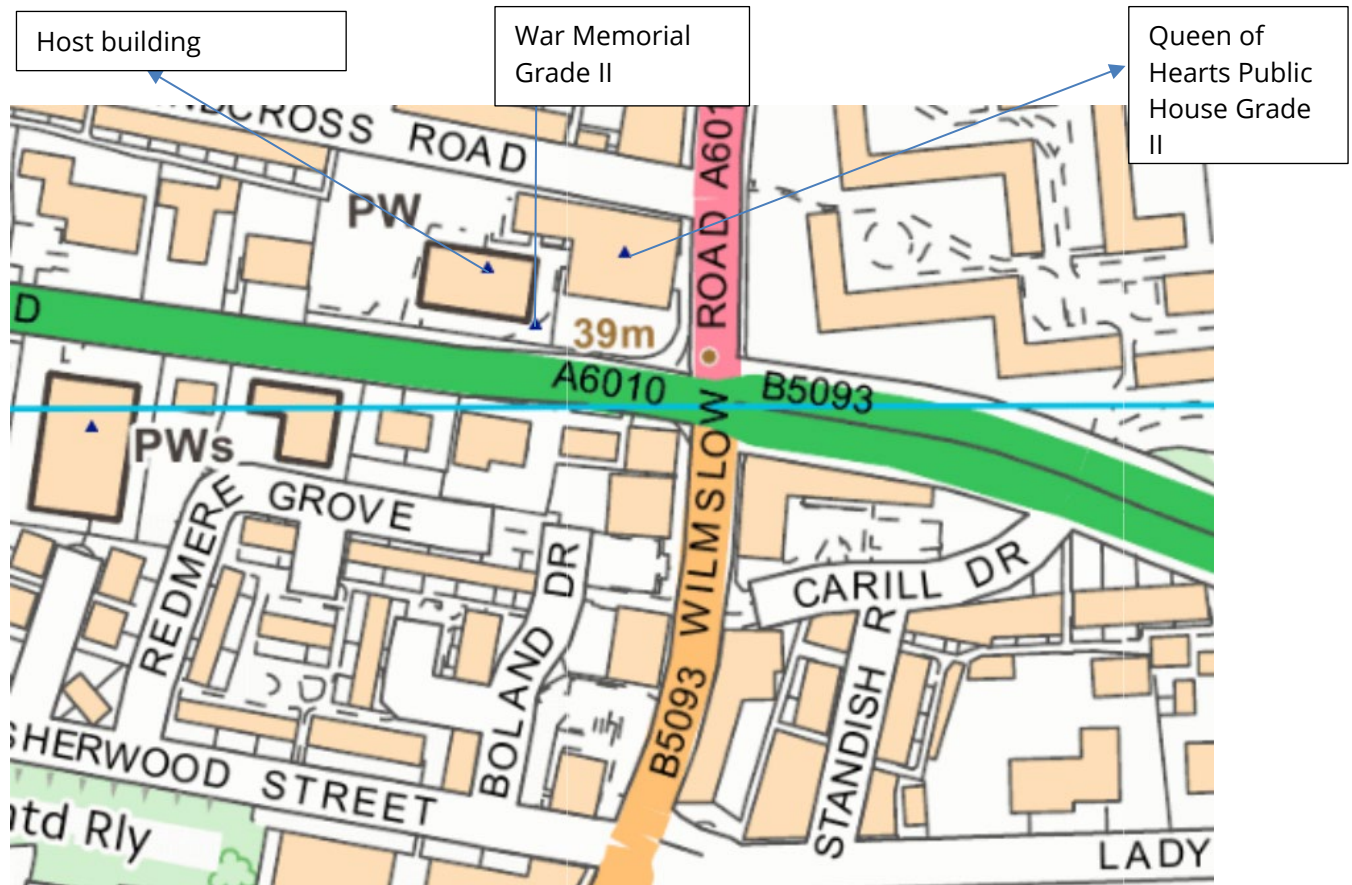
GV

II

Church. 1870-2, by Price and Linklater. Coursed yellow sandstone rubble with red sandstone dressings, steeply-pitched slate roof with diaper pattern of green slates. Gothic style of c.1200, all openings 2-centred arched with cusped heads. Nave with north and south aisles, south-west porch, south-east steeple, apsidal-ended chancel with south chapel and north vestry. The free-standing square 4-stage tower, with angle buttresses, corner pinnacles and octagonal spire with lucarnes, has a south doorway with set-in shafts and moulded head with ball-flower ornament, a 2-light window to the 2nd stage, circular clockfaces to the 3rd stage, and coupled 2-light belfry windows and corbel-tables to the top stage. The 5-bay aisles have buttresses and 2-light windows with quatrefoils in the heads, and the gabled porch to the south aisle has a doorway with double-chamfered surround and set-in shafts; the nave has a clerestory of 2 single-light windows to each bay, and a tripartite west window set in a blank arch, with a transomed 3-stage 2-light centre and 2-stage side lights. The 3-bay chancel with buttressed apse has 2-light windows with multifoils in the heads, under linked crocketed gablets. Parallel 2-bay south chapel in similar style. Interior not inspected. Forms group with former school to east (now the Queen of Hearts Public House, q.v.).

Listing NGR: SJ8550994043

Map of Listed Buildings in the surrounding area extract taken from Historic England.



As can be seen from the above, there are a couple of listed buildings in proximity. Our proposal given the small scale development will have minimal impact on the surrounding listed buildings.

There are no previous planning applications on this site which are relevant to the determination of this application.

Pre-Application Consultation

The church has been involved with the details of this scheme from an early stage. Using the traffic light rating model the proposal was rated amber. Accordingly, consultation letters were issued on 15th February 2023 to the Local Planning Authority, local ward councillors and local MP. There are no schools in proximity to the site.

There was some preapplication correspondence with Robert Griffin who had some concern about the location of the GPS node when viewed against the architectural features of the church. The GPS was therefore relocated to address these concerns. The revised location has been considered appropriate by the conservation team and addressed the previous concerns raised.

2. Design

2.1. The Proposal

The application seeks to upgrade the existing site which comprises the installation of 1 No. GPS node located externally on the tower at a height of approximately 21.50 metres above ground level. The node is located on the northern elevation of the tower and is positioned next to architectural features on the tower and therefore is not overly visible. The GPS will be attached with resin bolts to the mortar to ensure the fabric of the building is not damaged. The node has to be able to “see” the sky to receive satellite information therefore can not be located internally. The node is small in scale and will not be overly visible.

In order to provide improved mobile coverage to satisfy current and future network demands in this area it is necessary to upgrade this site. The majority of the upgrade works proposed are internal and do not require consent.

The works will be carried out by specialist crafts people to ensure that the fabric and integrity of the building is not harmed.

The works necessitate a full planning application due to the fact that the GPS node is being positioned externally on a listed building. The listed building element will be considered under the ecclesiastical exemption route and will be undertaken through the Faculty Process and therefore, the listed building element does not need to be determined by the LPA.

2.2. Design Considerations

The applicant has sought to cause as little impact as possible to the fabric and architectural qualities of the listed building in addition to the character and setting of the surrounding area. Efforts have been made to preserve existing visual and residential amenity in the surrounding area whilst also ensuring the technical objectives of the site remain achievable. 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 in pursuit of the least impactful design that can achieve the required objectives.

The site selection process has been outlined earlier in this statement however, it is important to reiterate the suitability of this application site and its ability to conceal telecommunications equipment which is of significant visual benefit. In accordance with Government Guidance an existing base station has been selected for the proposed development. The existing site was deemed acceptable by the LPA in its inception meaning that no concerns were raised by the local planning authority in relation to its location on a listed building. Though it is recognised that changes to a telecommunications site will to a degree affect the current context in situ, such effects do not always result in significant 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 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.

NET have been working with the Church of England since 2004. They take this responsibility very seriously and in every instance look at each church independently to determine the most appropriate bespoke solution which is included within the detailed design drawings.

The church tower is a focal point in the area given the churches elevated position and the proposed scheme does not alter the skyline due the node being small in scale and located lower down on the tower. NET have been undertaking work on listed buildings for nearly 20 years and have worked on all grades of listed churches, locally listed churches and non-listed buildings. Over this period NET have gained a vast experience of working on protected buildings and always ensure that all precautions are undertaken to prevent damage to the fabric of the protected asset.

Views of the church from the surrounding public realm





Church when viewed from Wilbraham Road.



Above church when viewed from the junction of Wilmslow Road and Wilbraham Road



Above the church from Landcross Road.

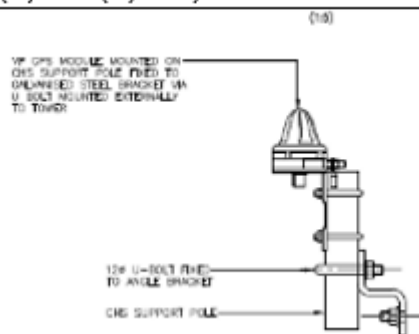
The only external element proposed is the GPS node which will be located on the Northern elevation.

GPS Node

The GPS node is proposed to be located on the church tower at approximately 21.50 metres above ground level.

GPS nodes receive information but do not transmit meaning it must be positioned to have a clear view of the sky to receive satellite information.

98.5 (D) x 68 (H) mm



A GPS module is a small cell node measuring 68mm diameter x 98.5mm. An example image has been included (above) for reference. The GPS module is required for TDD (Time Division Duplex) technologies specifically in relation to providing 4G and 5G coverage so it is an essential element of the proposed equipment.

Full details of the fixings are detailed in drawing 509 B3.

Conclusion

Due to the small scale of the GPS, its height above ground level and the long distance views of the tower, 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 or the host building. The siting and appearance of this proposal is suitable and is in line with national planning policy to utilise existing sites and buildings. 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.

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

Manchester's Local Development Framework Core Strategy Development Plan Document (2019 Citywide development control policies) and the saved Unitary Development plan policies are relevant in the determination of this application:

In particular, the following policies are relevant in the determination of the proposal:

Core strategy:

Policy SP1 and DM1

Policy SP1 – Spatial Principles:

All development should:

- optimise the City's economic performance
- extend economic benefits to residents and/or neighbourhoods
- contribute to the decoupling of growth from emissions
- improve and contribute to lifetime neighbourhoods of choice and place shaping adapt to and mitigate for climate change
- be located to reduce the need to travel
- consider the needs of all members of the community
- make a positive contribution to the health and wellbeing of residents
- seek to improve community safety and reduce crime
- be the most efficient use of natural resources
- improve the quality of the natural environment and the built environment
- reuse previously developed land wherever possible

In terms of the above the provision of good connectivity will entice businesses to an area and will allow people to work at home which in turn has economic benefits to an area and reduces the need to travel which is in line with this policy. The proposal is therefore in compliance with policy SP1.

Policy DM1 sets out a list of guidance which development should have regard to:

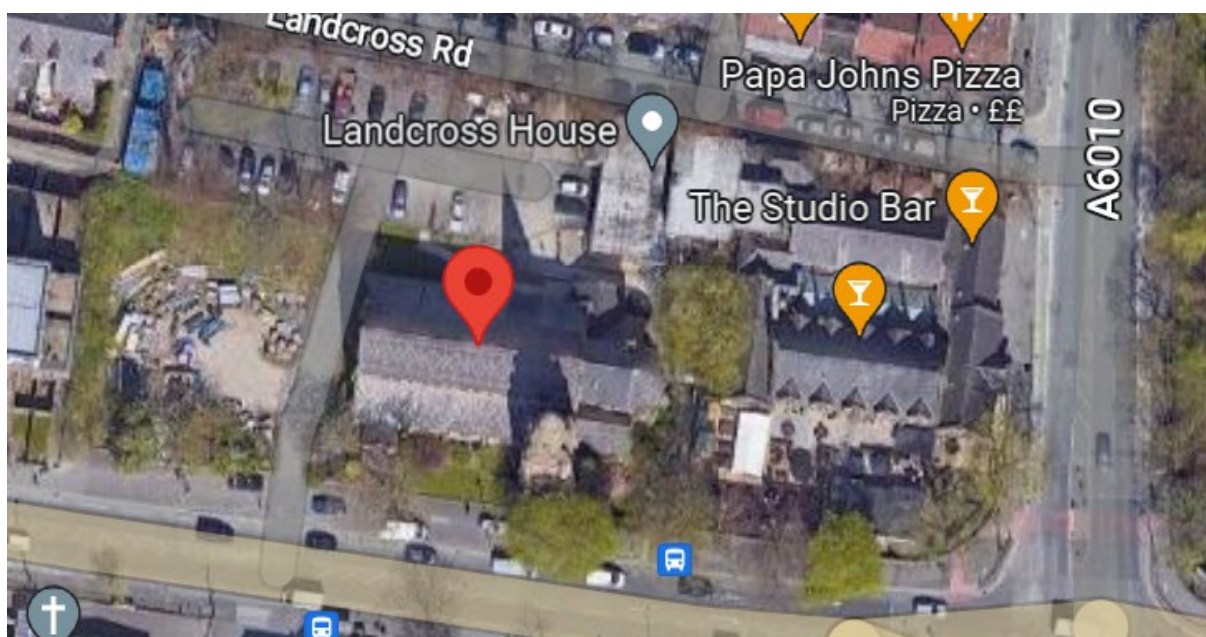
The policy is not particularly relevant in the determination of this application due to the small scale of the proposal, however criteria 1 in relation to siting layout scale form and massing is appropriate. In terms of this element, the antenna is small in scale measuring 69mm by 120mm and therefore is appropriate in scale and will be coloured to match the tower to further reduce its presence.

Saved Unitary Development Plan:

Policy DC17 1 – Telecommunications

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

In terms of this policy the proposal is to upgrade an existing site. The GPS antenna is mounted externally, it is small in scale and has been positioned carefully to make the best use of the architectural features to ensure that it is not overly visible. It has been positioned to ensure that it does not affect any architectural features of the church. Additionally, from public vantage points due to the screening of the site by tall trees, the installation will not be highly visible.



The photo above illustrates that there are a number of mature trees surrounding the site and that views of the node will be limited given its small scale and its orientation on the church. The proposal is therefore in compliance with policy DC17.

Greater Manchester Digital Strategy 2018-2020

The foreword to this Digital Strategy states: 'We live in a world where the number of digital devices has now passed the number of people. Digital technology is now shaping every aspect of our lives in ways which were inconceivable a generation ago: how we work, travel, shop, access services, meet people, communicate and are entertained. Greater Manchester has always been a pioneer city region, with an eye for opportunity and the drive and pragmatism to seek out new solutions to old problems with almost 80000 digital and digital-intense creative businesses in Greater Manchester employing more than 82300 people generating £4.1bn of economic growth annually. In the Greater Manchester Strategy we set a clear ambition to be a worldleading digital city region, and committed to taking an open, innovative and connective approach to delivering that ambition.

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

"The future vitality of cities is increasingly based on their ability to use digital networks in intelligent, strategic ways" (Aspen Institute, Washington). The Strategy goes on to state that: ...'digital technology has catalysed the interconnection of the global economy, with the internet enabling the free exchange of goods and services, providing consumers with greater choice and businesses with access to skills, resources and customers. As a result, people are now accessing more digital content and services from outside their own country, cross-border payments increasing, and small companies are more easily becoming more "multinational". Digital technology is increasingly the backbone of all industries, regardless of the nature and type of business. Embracing digital technology throughout all sectors, geographies and occupations is fundamental to Greater Manchester's current and future international competitiveness'. "We want to be recognised as an international thought leader and do-er in digital innovation and adoption across our economy and communities"... 'This strategy is therefore founded on evidence that becoming a leading digital city-region is imperative to deliver our wider vision. We must do it to deliver the economic, social and inclusion improvements we need and want to see. We can do it because we have the vision, leadership and both the industrial and political will, coupled with strong academic, industrial and community foundations and an exciting and disruptive set of emerging activities and technology'. The Digital Strategy sets out the Greater Manchester Vision: A city with a Difference: "It would be fantastic if we led the country in encouraging digital innovation which supports businesses and investment, creating jobs and opportunity, but focusing on improving outcomes for people such as loneliness or homelessness in our society. I don't want Manchester to be just a smart city – I want it to be the smartest city" (Andy Burnham Mayor of Greater Manchester). The strategy goes on to state that the Vision for Greater Manchester is 'to

be one of the best places in the world for developing and harnessing digital technology and to be recognised as being a top 5 European Digital City Region by 2020 which:

Empowers and enables residents to have the highest quality of life; and

- Supports the creation of high quality jobs and achieves the maximum possible productivity levels’.

This strategy for Greater Manchester is an open, connected and innovative city region.... ‘Our Vision for Greater Manchester is holistic, with digital technology driving improvement across all areas of economy and society. A world-leading digital city is therefore, one which its businesses, public service providers and citizens are using digital technology by default and to the fullest: to grow their businesses and improve productivity to access skills, training and employment opportunities, to address global challenges that have a local impact, such as ill health, social isolation, homelessness and pollution; to improve the quality and value for money of public services’. The Strategy sets out the Goals and Measures. Goal 6 relates to Digital Infrastructure and aims that by 2022-23 the average download speed across fibre, mobile and wireless will exceed 100Mbps. The benefits for delivering this strategy are noted as:

For young people, better connected insights on children’s development from the very early years right through to leaving school, a transformative range of career opportunities and a means through which they can be accessed;

- For Working Age Population, the ability to access broader range of high quality job opportunities, and set up own business more easily;
- For business owners and investors, for greater range of opportunities to access the technology and support to digitise, opportunities to physically and digitally collaborate will be readily accessible and there will be more readily available flow of talent, capital and support to new innovative ideas and a market place that defines and presents problems and commissions solutions rather than buying off the shelf products and services.
- For Older people, there will be more support and solutions to social isolation, more ease and control for you and your family in terms of managing your own health care; and
- For all residents, a city that works around you in terms of living your life, where you can move around the city more easily and safely, improvements in, for example treating illness, improving air quality due to insights from pooled data, greater control over how and when you access public services. Greater Manchester is aiming to become a world leading digital city by 2020. Greater Manchester plays a fundamental role in driving economic growth

The Strategy notes that in terms of mobile internet, despite good public Wi-Fi coverage in most public buildings across Greater Manchester, and on Metrolink and many buses, Wi-Fi provision is patchy in public places and there are still barriers to access (registration requirements and cost) in many parts of Greater Manchester. The Strategy also acknowledges that digital exclusion is closely linked with social exclusion. The Greater Manchester Action Plan for Infrastructure at 8.1 states that the connectivity which Greater Manchester requires is to increase average mobile and fixed broadband internet speeds and aims to improve call and mobile coverage including securing a national 5G test bed status thus positioning Greater Manchester at the forefront of next generation 5G mobile. The strategy notes 5 digital enablers: Social Networks, Mobile internet/apps, digital health, infotainment and e-commerce.

Greater Manchester Local Industrial Strategy (June 2019)

This Local Industrial Strategy sets out how Greater Manchester (GM) will forge its future. It states that it will build on GM's position as a 'leading European digital city-region; enable the digitalisation of all sectors; and capitalise on the links between digital and creative industries that feed internationally significant clusters in broadcasting, content creation and media, and maximise growing assets in cyber security. It aims to put in place the integrated 21st century infrastructure needed for digital driven, clean and inclusive growth. A top 5 city-region for the digital economy in Europe, with full fibre broadband and 5G coverage. The Strategy states that GM will take a 'Made Smarter' approach to all industries, supporting firms to adopt new digital and creative techniques and enabling the digitalisation of all sectors. The strategy has a specific section relating to infrastructure and acknowledges its importance: '...The city-region now aims to upgrade, integrate and future-proof its infrastructure, to create a 21st century city-region with extreme digital connectivity, clean and inclusive growth and – through work with others – improved access to national and global markets.

Existing partnerships are working to improve digital infrastructure in the cityregion to meet national targets of roll out of 5G technologies for most people by 2027'. The Local Industrial Strategy sets out an objective to ensure the vision for infrastructure is met: • World-class connectivity – digitally and through an integrated transport network within all parts of GM. To achieve the ambitions of the GM Local Industrial Strategy it identifies actions around 5 foundations of productivity: Infrastructure, Ideas, People, Business Environment and Places. These are noted as being essential attributes of every successful economy. It also identifies opportunities grouped under 4 Grand Challenges – Artificial Intelligence and Data, the Ageing Society, Future Mobility and Clean Growth. The Vision for the Digital, Creative and Media is set out in the Local Industrial Strategy and reproduced below: 'GM will be a leading European digital City-Region, with the infrastructure, skills and networks needed to digitise all sectors, and internationally significant clusters in broadcasting, content creation and media and cyber security'. To help meet the vision the strategy states that GM will continue to transform the digital connectivity of the city-region to drive economic growth and innovation, working with Government to meet national targets of full roll-out of 5G technologies for most people by 2027. The Local Industrial Strategy acknowledges that GM will aim to become one of the best digitally connected city-regions in the UK. It fully supports the development of 5G networks.

Greater Manchester Infrastructure Framework 2040 (GMCA) This is a pre-cursor to the GM Infrastructure Strategy. The aim is to focus on developing infrastructure which ultimately improves the lives of all those living and working within Greater Manchester.

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

The Framework goes on to states that approaching 2040, GM will need to be a Smart and digitally ready City Region. To achieve this, and support on-going digitalisation, the region will require resilient fixed connectivity (through fixed fibre) supported by 5G (and subsequent technologies). It will also need to streamline the process for installation of new infrastructure within the street space. The Framework notes the vision for the GM Infrastructure Strategy: 'Develop and maintain a holistic infrastructure system that is robust, accommodates sustainable growth and supports the ambitions of the Greater Manchester Strategy to make "Greater Manchester one of the best places in the world to grow up, get on and grow old". The Greater Manchester Infrastructure

Strategy should seek to:

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

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

- As the population and employment is due to rise: o more people will mean more homes and businesses, and more consumers of digital services. o There will be a growing demand for high-speed, resilient data connectivity to facilitate changing patterns such as shopping patterns moving online, whilst flexible working becomes more prevalent.
- Changing workforce: o More productive, higher skilled, higher paid jobs more specialised and skill activities needs digital infrastructure to support higher skilled industries – which may require increased digital infrastructure.
- Environmental Change:

Improving efficiencies of buildings and appliances. The use of smarter technologies within each infrastructure sector will look to improve efficiencies further. The Framework comments on digitalisation noting the importance of it and how it has transformed the way in which we go about our everyday lives: 'We live in an increasingly digital world. Technologies that are visionary today rapidly become part of everyday life tomorrow. In turn, people's expectations are rising constantly. "Digital" now encompasses an increasing array of technologies, from sensors, smartphones and robots, to augmented reality, cloud computing and data analytics. These technologies are changing the way in which we live and places we live in. Digital technologies are being used to make cities more smooth running, more productive, and more democratic. The pervasiveness of digital technology in our lives represents a major change. For these technologies to function effectively, it is fundamental that a robust and diverse underpinning infrastructure is installed that ensures a futureproofed platform for the development of these and many new technologies for years to come. As our homes, businesses and cities become more reliant on digital technology to function the robustness of these systems becomes even more critical'. The Framework states that 'anyone in GM should be able to access resilient, seamless connectivity at a speed they need anywhere and anytime'.

- New technologies, artificial intelligence and atomisation: o Improvements in artificial intelligence and atomisation technologies will transform infrastructure sectors and business markets. Digital infrastructure will be crucial to supporting future technology and a Smart City Region. Embracing digital technology throughout all sectors, geographies and occupations is fundamental to GM's current and future international competitiveness.

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

Without the more basic technology solutions (such as passive fibre connectivity and 5G) the smart-region solutions and value-added outcomes will struggle to be brought to fruition. The Framework notes that 5G roll out is expected from 2020. However, the timing and costs of roll out is uncertain and international standards have yet to be agreed. It is possible that there will only be one network upon which providers deliver their services or that each provider might need to invest. With regards to the Regional Centre if Challenge 8 is to be met to provide pervasive, affordable, resilient digital connectivity the challenge is early roll out of 5G especially in areas where mobile data use is congested such as the Regional Centre. The Framework also states that GMCA and the Districts together with digital and telecommunication providers need to drive forward opportunities to promote connectivity and uptake in the Regional Centre.

This proposal will aid in realising the ambition of the authority by providing good connectivity.

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. This proposal seeks to provide 4G and 5G coverage whereby a network evolves around existing sites and one site links with another. If an existing site cannot be upgraded or is unable to provide coverage to an area, then an alternative site within proximity would be required.

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 statutory safeguarding zone surrounding an aerodrome, technical site or military explosives storage area. The local planning

authority were also consulted with regards to the proposed upgrade scheme. 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 is designed to be respectful to the character and setting of the surrounding area. The proposal is of a high quality design that utilises an existing building which will also result in negligible visual impact on the both the building and surrounding landscape.

Section 16 – Conserving and enhancing the historic environment

Paragraph 194 - *"In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary."*

Paragraph 201 - *"Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss..."*

Paragraph 202 - *"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use."*

It is considered that the proposal is in accordance with these paragraphs as the application has been designed sensitively to be respectful of the identified heritage assets. The node is small in scale and will not be overly visible. Considerable efforts have been made to ensure the least amount of potential impact is imposed when balanced against technical constraints and the advancement of digital connectivity carries significant weight when considering the public benefits to be provided. Mobile operators are obligated to provide high quality connectivity across the country as a licensed utility provider in which sensitive heritage assets and land designations are often unavoidable circumstances to ensure high quality coverage can be provided to all areas of the country.

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. 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 on to 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.

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. 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.

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 licensed code operators 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

There are approximately 1400 peer-reviewed publications on the biological and health effects of radiofrequency (RF) signals, which are used in mobile communication technology. The scientific community have collated, summarised and assessed these publications in research reviews with the most influential in the UK being the Stewart Report (*Mobile Phones and Health*) by the Independent Expert Group on Mobile Phones under the chairmanship of Professor Sir William Stewart. These research reviews are used by Governments to develop policy on exposure to radio frequency signals.

Published in May 2000, the Stewart Report concluded that the balance of evidence did not suggest that exposures to radio frequency fields below international guidelines could cause adverse health effects, although it acknowledged that biological effects might occur below these values. The report stressed, however, that a biological effect does not necessarily mean a negative impact on health. Walking, drinking a glass of water or listening to music all produce biological effects.

Since 2000, over 30 further reviews have been carried out, carefully considering many hundreds of pieces of research. Most have made similar recommendations and have come to similar

conclusions: that research should continue to address any gaps in the knowledge; and that overall, the possibility of adverse health effects from mobile communications remains unproven.

Further, the reviews stress that exposures from base stations (or masts) are, in the words of the National Radiological Protection Board (now part of Public Health England), *“extremely unlikely to cause any effects on biophysical grounds.”* [A Summary of Recent Reports on Mobile Phones and Health (2000-2004), NRPB, Jan 2005].

In June 2011 the World Health Organisation (WHO) noted that *“A large number of studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established as being caused by mobile phone use”* [WHO Factsheet 193: Electromagnetic Fields and Public Health: Mobile Telephones]. In April 2012, the Independent Advisory Group on Non-ionising Radiation (AGNIR) published a report entitled *Health Effects from Radiofrequency Electromagnetic Fields*. This report concluded that there is no convincing evidence that mobile phone technologies cause adverse effects on human health. AGNIR also found that although a substantial amount of research has been conducted, there is no convincing evidence that RF field exposure below the internationally agreed guideline levels applied in the UK causes health effects in adults or children.

In addition, the International Commission on Non-Ionizing Radiation Protection reviewed its guidelines in 2009 and concluded *“ICNIRP reconfirms the 1998 basic restrictions in the frequency range 100 kHz–300 GHz until further notice.”* [ICNIRP statement on the *Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz)*].

Research reviews are used by guideline setting bodies and Governments to develop advice and public policy on exposure to the signal used by mobile communications technology.

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.

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 listed building and the surrounding area in which the least impactful scheme has been proposed to minimise any detrimental impact whilst also ensuring the coverage objectives can still be achieved.

The applicant has also demonstrated efforts to respect the existing visual amenity of the surrounding area as the small scale nature of the proposal allows the external appearance of the listed building to be preserved. This follows a sequential approach to site selection as an existing building has been utilised to house a discreet design that will provide significant public benefits as a result. It is therefore considered that the public benefits provided by this site outweigh the minimal visual change in the appearance of the host building. Additionally, the proposed works will be carried out by specialist to ensure that the host building is not damaged.

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.