SUPPLEMENTARY INFORMATION

Background:

The proposal at the 100 New Oxford Street complex (3) is to provide part replacement coverage for a former base station site located atop of Castlewood House (ES)at the junction of New Oxford Street and Earnshaw Street. It was a well-established shared mobile telecommunications site comprising 14no. pole mounted antennas, 2no equipment cabins and ancillary development for Telefónica and Vodafone, as well as pole mounted antennas, lattice mast mounted antennas and associated equipment for EE and 3. It served the New Oxford Street, St Giles High Street and Tottenham Court Road Underground station area on behalf of both Telefonica and Vodafone. The reason behind the replacement is that that the Landlord, due to redevelopment of Castlewood House, served a 'Notice to Quit' (NTQ), legally requiring the applicant to remove their equipment. The Landlord's proposal to redevelop the site for an 11-storey mixed used development was approved under LPA Ref: 2017/0618/P.

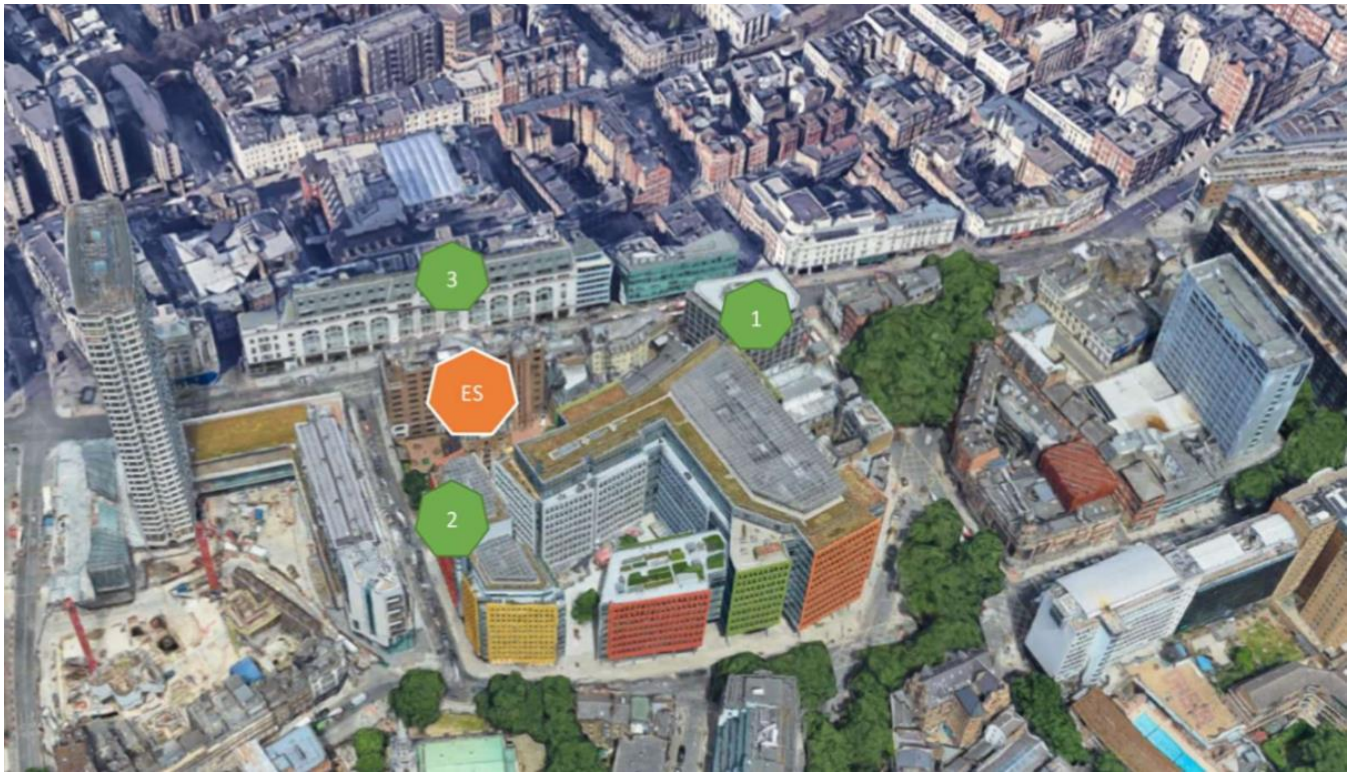


Image 1: Aerial map illustrating location of (ES) the decommissioned site and the sites which together will replicate the coverage and capacity provided by Castlewood House. (1) Albion House (for Vodafone), (2) Central St Giles (Telefonica and Vodafone) and (3) 100 New Oxford Street (for Telefonica)

The Application site (3) is one of three sites required as part of a 3 site split cell solution to fully replicate the coverage provided by the former Castlewood House. In conjunction with the application site which provides part replacement coverage to the north of the former Castlewood House cell area for both Telefonica, Albion House, 55 – 59 New Oxford Street will provide part replacement coverage to the east of the former Castlewood House cell area for Vodafone, (1) and Central St Giles (2) will provide part replacement coverage to the south of the former Castlewood House cell area for both Telefonica and Vodafone.

Currently, there is very limited coverage in this area of New Oxford Street, St Giles High Street and Tottenham Court Road Underground for both Telefonica and Vodafone, with the operators only having partial coverage and capacity in the cell area provided by neighbouring cells. It is therefore imperative that a shared replacement site is secured and integrated into the networks in order to begin to restore this critical infrastructure in this economically vital area of London New Oxford Street and St Giles to avoid any further loss of connectivity and the associated detrimental social and economic impacts.

Notably, Vodafone and Telefonica have submitted an appeal against Camden's decision to refuse planning permission at Central St Giles. (PINS Ref: APP/X5210/W/21/3272448). Planning permission was refused for Vodafone's proposals on Albion House (LPA: 2020/1649/P). Albion House has been redesigned to satisfy ICNIRP guidelines and new application has been made under Planning Portal PP-10004734.

Background:

Matt Warman, Minister for Digital Infrastructure wrote to all Local Authority Chief Executives in May 2021. The letter set out the Governments position in respect of 'digital connectivity' stating:

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

The Government is committed to extending mobile network coverage across the UK and providing uninterrupted mobile signal on all major roads, and our ambition is for the majority of the population to have access to a 5G signal by 2027. Last year we agreed a £1 billion Shared Rural Network deal with the UK's mobile network operators to extend 4G mobile geographical coverage to 95% of the UK by 2025.

The Government is also investing £200 million in a programme of 5G testbeds and trials to encourage investment in 5G so that communities and businesses can benefit from this new technology. The increased capacity, reliability and functionality offered by 5G is opening-up the potential for new, innovative services for individuals and increased productivity for industry".

1. Site Details

Site Name:	100 New Oxford Street	Site Address:	100 New Oxford Street London WC1A 1HB
NGR:	E:529960 N:381445		
Site Ref Number:	CTIL_237044_TEF_081555_VF_ N/A	Site Type:[1]	Macro

2. Pre-Application Check List

Site Selection (for New Sites only)
(would not generally apply to upgrades/alterations to existing sites including redevelopment or replacement of an existing site to facilitate an upgrade or sharing with another operator)

Was an LPA mast register used to check for suitable sites by the operator or the LPA?	**Yes**	
If no explain why: N/A		
Was the industry site database checked for suitable sites by the operator:	**Yes**	
If no explain why: N/A		

Site Specific Pre-application consultation with local planning authority

[1] Macro or Micro

Date of written offer of pre-application consultation:	31 October 2019
Was there pre-application contact:	Yes
Date of pre-application contact:	Various
Name of contact:	Matthew Dempsey

Summary of outcome/Main issues raised:

Pre-application consultation letters and drawings of the proposals were sent on the 05.06.2019. In addition, Paid Pre-App was undertaken on 31 October 2019 under LPA Ref 2020/0551/PRE.

In a response dated 04 February 202 the following general comments were made against a batch of sites including the 3 sites required as part of a 3-site solution to replace the former Castlewood House:

"I have discussed the proposals presented with colleagues and there are some accepted merits to the schemes with regards to general improvements to connectivity. It is also understood that with the expanding 'Knowledge Quarter' within Camden, it will be necessary to maintain and upgrade Telecoms/ Internet systems infrastructure and to provide up to date connectivity for academic institutions/ businesses/ Residents and other users. Having said that, there appears to be no immediate benefits for the residents living/ occupiers within blocks (who will have to put up with the installation work and any comings and goings in relation to ongoing maintenance). Please note: elsewhere it has been proposed to provide free internet connections to residents of host blocks as a way of increasing the public benefit of schemes of this nature (and to help get the residents on side – I did mention this on site).

Site visits both at roof top level and from street level/ public realm viewpoints have revealed that there would be several places around each site where the structures would be plainly visible from ground level. We should also consider the outlook from other buildings, and this is also considered to present an issue with regards visual impact.

To overcome the negative visual impacts of the proposed installations, we would suggest that any proposed equipment should be added to the existing features/ fabric of the buildings, e.g.) the existing central roof top structures, as this would minimise any impact of roof top 'clutter' by shielding/ masking new features (such as proposed antennas). In these circumstances; it is generally considered preferable to add to an antennas). In these circumstances; it is generally considered preferable to add to an existing structure rather than create a new one, or to significantly alter the roof form.

Also; rather than installing scaffolding style rig structures to house the apparatus, greater care should be taken to assess the host building to provide a bespoke solution to the visual impact. There is particular concern about altering the roof-form when appreciated from longer views. For example; 3 or 4 or 5 new scaffold rigs are considered to significantly alter the roof form.

Officers have suggested that apparatus should be painted/ coloured to match the existing roof top in each case, to help blend the equipment with the roof and minimise visual impact. It may be beneficial to include tidying up of roof tops (sites in general) as part of any proposal to ensure the visual impact of any installations is not considered to be negative. It should be noted that where proposals have been welcoming historically these included commitments to remove any unwanted equipment as part of the works.

Conservation and Heritage Officers also have particular concerns about the 'scaffolding' structures proposed to support antennas. In short, these are considered ugly. It is understood that it is far cheaper for the applicant(s) to propose more or less the same scaffolding rig structure at each site, however each site is different; and in order to minimise the visual impact of installations, each site should be treated as an individual design challenge rather than using a one size fits all approach. In this regard, it would be preferable to see antennas fixed directly to the host building (visual impact minimal), rather than constructing a 'rickety' tower to plonk them on (visual impact significant).

An alternative option would be to look at it from a different point of view. As stated above, it is acknowledged that there will be a greater need for more connectivity in general terms as technologies develop and demand increases, which in turn means there may also be demand for roof top space to house more telecoms equipment. And; given that our Heritage & Conservation Officers already have issues with the potential for the installations as proposed; it is probably worth pointing towards iconic examples of telecoms designs such as the K4 or K6 telephone box, designed by Giles Gilbert

Scott in the 1920s/ 30s. Unfortunately, modern public realm telecoms equipment is generally not quite so elegant".

The following site specific comments were made in respect of 100 New Oxford Street.

Preferred design / proposal:

The preferred design is to position the antenna on the main roof level of 100 New Oxford Street (31.30m AGL). Utilising an existing building is in complete accordance with national planning guidance, as the proposed antennas are out of the general eye line of the casual onlooker. Thus the visual presence of the radio base station will be minimised. This is especially so as the height of the host building is some 31.30m and the top height of the antennas is 32.7m. Therefore, the antennas will barely be noticeable once in situ even if the general public were to crane their necks upwards in an unnatural stance to see glimpses of the new antennas. The area is already established with rooftop antennas as Castlewood House opposite had the operator's equipment on it, up until recently. The proposed antennas will appear very similar to these. The building mass of 100 New Oxford Street will also ensure that the antennas will not be overly visible from ground level. This point is clearly demonstrated by the site line diagrams, design justification sketches which form part of this pre-application enquiry submission pack.

Prospect House - site specific advice:

"This block is of mixed heights, but raised to a maximum of 9 storeys above ground level. The position of many other tall and taller buildings in close proximity means the roof top can be appreciated from many nearby locations.

The relocated proposal shown in elevation is not considered to be appropriate and is considered to high for this building. Rather than positioning antennas on very high masts it would be preferable to see these positioned attached to the central roof structure instead.

We would need to see proposed elevations from all sides to properly assess the impacts and We would also advise taking photographs from the public realm showing all views surrounding the site to accompany any application, and ideally these would be overlaid with the proposed installations to give an indication of how the installation would look should it receive approval and be installed.

The site is within the Bloomsbury conservation Area, and also adjacent to nearby conservation areas, and; given the height of the proposed site/ development, it is considered that this could have impact on the character of the conservation areas. Additionally, there are very many listed buildings in close proximity to the site, particularly Banbridge House to the rear".

Jenny Bye Cornerstone's London Planning and Relationship Strategy Manager and the Head of Design from Clarke Telecom met with Matthew Dempsey of Camden Council on the 19th February 2020.

In response to LPA feedback the applicant has provided a full set of elevations, Line of Site elevations and a design rationale as part of this submittal pack together with photomontages

Community Consultation

Rating of Site under Traffic Light Model:	~~Red~~	Amber	~~Green~~

Outline Consultation carried out:

Prior to the submission of this application the applicant-initiated pre-consultation discussions with the local planning authority and stakeholders. This provides an opportunity for the LPA and stakeholders to discuss the development proposals and identify specific issues early.

Consultation with Bloomsbury Ward Councillors and Rt Hon Keir Starmer MP. Pre-application consultation letters and drawings of the proposals were sent on the 05.06.2019.

Summary of outcome/main issues raised (include copies of relevant correspondence): No site specific comments at the time of making the application.

School/College

Location of site in relation to school/college (include name of school/college): • None nearby in terms of the Code of Best Practice.
Outline of consultation carried out with school/college (include copies of main correspondence): N/A
Summary of outcome/main issues raised (include copies of main correspondence): N/A

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

Will the structure be within 3km of an aerodrome or airfield?		N/A
Has the Civil Aviation Authority/Secretary of State for Defence/Aerodrome Operator been notified?		N/A
Details of response: N/A – Full Planning Application		

Developer's Notice

Copy of Developer's Notice enclosed?		
Date served:	N/A – Full Planning Application	

3. Proposed Development

The proposed site:
The site This application relates to a new telecommunications installation at 100 New Oxford Street as shown on the photograph below:

Image 2: The application site

The proposal is for the proposed installation of a telecommunications base station comprising the installation of 6 no. antennas, 2 no. 300mm transmission dishes, 1 no. equipment cabinet, 3 no. flat pack frames and ancillary development thereto.

The application concerns the roof area serving a 9 storey multi-storey commercial building which lies on the north side of New Oxford Street

The application site is located atop of 100 New Oxford Street which is an unlisted building within Bloomsbury Conservation Area withing the setting of the Denmark Street Conservation Area and numerous listed buildings including the Grade II* Listed Congress House as illustrated in Image 3 below. The application site is in the Bloomsbury ward of the London Borough of Camden and is part of the Mayor of London's Central Activities Zone which is the globally iconic core of London.

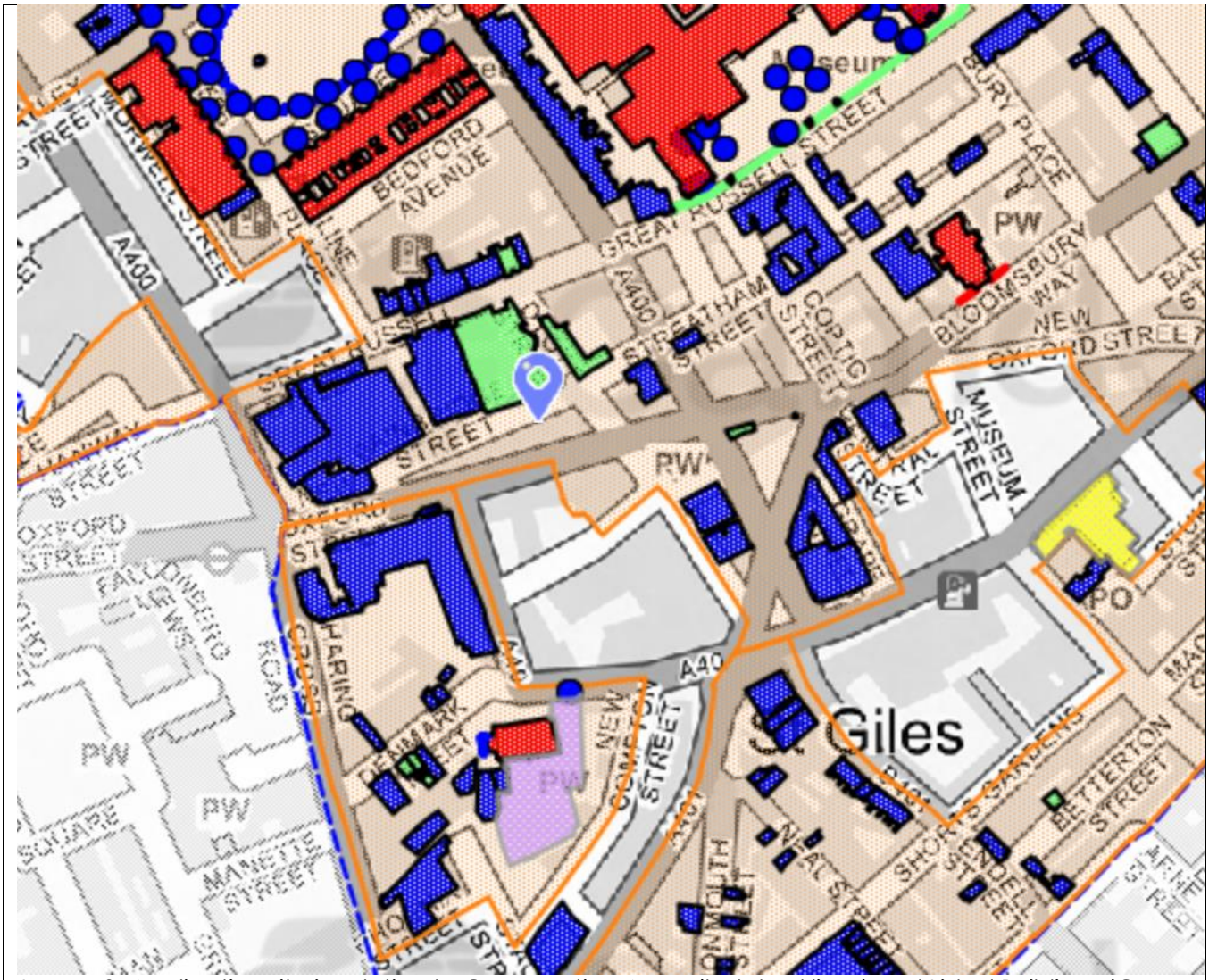


Image 3: Application site in relation to Conservation Areas (hatched lines) and Listed Buildings (Green Blocks)

Image 4: Site Location

Notably, footfall in the area is very high given the application site is located in a pivotal position in the heart of the West End linking the Bloomsbury, Covent Garden, Soho and Fitzrovia areas of Central London. The application site is in close proximity to Tottenham Court Road (41.33 million passengers per annum[1]), Covent Garden (17.54 million passengers per annum[2]) and Holborn (32.54 passengers per annum[3]) London Underground Stations which together serve in excess of 92 million visitors per annum. Furthermore, the users of the plethora of bus routes (22) which serve the area will be served by the provision of critical replacement infrastructure at the site and the reliable mobile digital connectivity it will help return to the area. The specific radio coverage implications of the loss of the site at Castlewood House and the area's ongoing significance at a pivotal point of the West End, one of London's most economically vital areas, adjacent to the new Tottenham Court Road Crossrail Station which when complete will be one of London's busiest stations, offering an interchange between the Northern, Central and Elizabeth line services with more than 170,000 passengers passing through every day (60 million per annum).

The provision of digital infrastructure, often referred to as the 'fourth utility' is acknowledged by both the Department for Digital, Culture, Media and Sport and the Mayor of London as 'being as important for the proper functioning of development as energy, water and waste management services and should be treated with the same importance'. Such infrastructure facilitates regeneration and is fundamental to the unique international, national and London-wide roles of the Central Activities Zone and contributes to the vitality, viability, attractiveness, adaptation and diversification of the international shopping and leisure destinations of the West End.

The applicant had a base station at Castlewood House immediately adjacent to the south of the application site which provided coverage to the local area. The applicant's turned off and removed their equipment in 2019, hence the need for the proposed replacement development to start to reinstate reliable mobile digital connectivity to this busy area ensuring Camden's ongoing competitiveness, in conjunction with an additional site for Vodafone at Albion House and for Vodafone and Telefonica at Central St Giles.

Image 5a: View of the former Castlewood House from Castle Point from New Oxford Street (west)

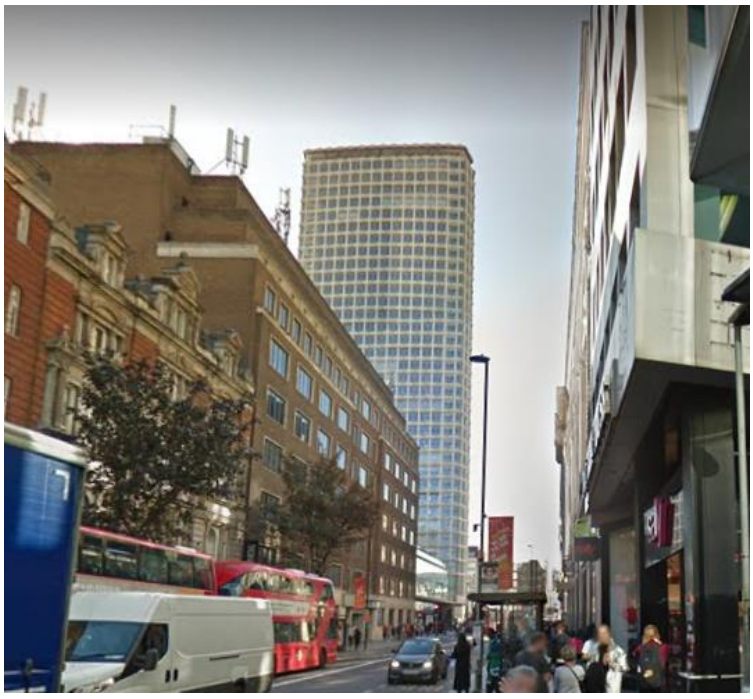


Image 5b: View of the former Castlewood House from New Oxford Street (east)

In terms of the built environment, the area contains a variety of different styles of buildings both in the immediate vicinity and in the surrounding area (Image 4). The application site is of traditional design when compared to the neighbouring buildings. The buildings vary in height and architecture with the application site being of a similar height to the former site at Castlewood House (Images 5a – 5b above).

New Oxford Street maintains a civic quality with some substantial Portland stone buildings on its northern side at around 9 storeys. In contrast Bucknall Street and areas to the south are more modern in style with the Central St Giles redevelopment being well known for its brightly coloured, ceramic façade. Centrepoint expresses a modernist rationality in its lower block (Centre Point House), with its landmark

tower being much more architecturally expressive. Surrounding properties are primarily in commercial and residential use with ground floor retail and restaurant uses.

There is also a range of existing street furniture and street trees, typical of an inner-city area: Street lighting columns, bollards, bus stops with digital advertising and wayfinder signage.

The site is within the Central Activities Zone (CAZ), the Central London Area, and is within the Tottenham Court Road Opportunity Area. The site is located within the southern area covered by the West End Project, Camden's largest transport and public realm improvement scheme. The site is highly accessible by public transport (PTAL 6B 'excellent'), being served by Tottenham Court Road underground station 200m to the west, Holborn underground station 500m to the east and numerous bus routes along New Oxford Street, Charing Cross Road, Tottenham Court Road and Denmark Street. The area will also be served by the Elizabeth Line, with the new station being constructed at Tottenham Court Road. Tottenham Court Road station is stated to be on the Crossrail 2 route.

The Covid-19 pandemic has created unparalleled demand and pressure on the operator's network while people try to keep life and the economy moving through isolation and containment measures, with many people now working from home or remotely. This is a perfect example of why the operator must continue with its rollout as streamlined as is possible.

For the first time in history, all of the mobile networks sent out a government message to their customers with details of the new shutdown measures. The message from 24 March 2020 reads: '*GOV.UK CORONAVIRUS ALERT. New rules in force now: you must stay at home. More info and exemptions at gov.uk/coronavirus Stay at home. Protect the NHS. Save lives'*. Even the World Health Organisation launched a WhatsApp chatbox allowing people to get instant information about the coronavirus through the smartphone messaging application. None of this would be possible without the physical infrastructure associated with mobile phone industry such as masts, antennas, microwave dishes and cabinets.

The importance of mobile connectivity during the pandemic was reinforced by DCMS in succinct advice to local authorities and operators published on 02/04/20: '*Government recognises the ongoing importance of the telecommunications industry at this critical time. Now, more than ever, the country is reliant on fixed line and mobile communications networks. Telecommunications has therefore been included as one of the critical sectors in new government regulations and legislation in response to dealing with the COVID-19 outbreak.'* The advice sets out (albeit in relation to emergency access provision) that '*Fully operational telecommunications infrastructure is needed to support mass homeworking and critical connectivity to emergency services and hospitals. Network operators must be able to rectify network outages promptly and to mitigate any effects of network degradation over the duration of this emergency period*.'

On 13/05/20, MHCLG advised that '*site visits and the use of digital technology and virtual meetings should become the norm in planning casework.'* (MHCLG coronavirus update 13/05/2020). Lord Greenhalgh clarified: '*Local planning authorities and the Planning Inspectorate drive the planning process forward and should ensure that it continues to operate effectively to support economic recovery. Moving to digital events and processes will be critical. This means adapting to working virtually, including virtual hearings and events (such as using video-conferencing and/or telephone) and making documents available for inspection online. The Government expects everyone involved in the planning process to engage proactively.'* (MHCLG Written Statement HLWS231, 13/05/20).

Given the increasing extent of mobile only online access in households across the UK, the importance of continued mobile connectivity is highlighted to enable public participation in planning committees and other online activities, for example.

In a statement issued 22/06/20, MHCLG confirmed measures to "*enable development which has already received the grant of planning permission or listed building consent and would lapse between 23 March and 31 December 2020 to be extended until 1 April 2021*".

Digital Infrastructure Minister Matt Warman in his Keynote Speech at 'Connected Britain 2020' provided the latest endorsement from Central Government on the importance connectivity. He stated:

"The theme this year is the future of UK connectivity. But before I talk about that, I'd like to take this opportunity to thank everyone in the industry for their tireless efforts at keeping us all connected through an unprecedented period of disruption.

You have kept school children connected with their teachers, allowed isolated grandparents to speak to their grandchildren, and enabled great British businesses to power the economy through these difficult times. Without a good connection, I would not be able to join you all at Connected Britain. Thank you.

In my speech, I am going to touch upon the exciting work that the Government is doing on broadband and 5G, and also the efforts that we are taking to make these networks more secure for the long term.

But, first, I thought that I would reflect on the changed times that we are living in. COVID has altered the way we live, work and, most importantly, stay connected with our family and friends. The digital infrastructure that keeps us all connected was essential to our daily way of life under lockdown - and is now more important than ever as we head into recovery. Many of these changes - such as increased working from home - will stay with us for the foreseeable future.

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

The Digital Infrastructure Minister stated that underpinning the Government's connectivity ambitions would be a Digital Strategy which will set out how the Government will drive growth in the tech sector and economy, and ensure we maximise the benefits of a tech-led economic recovery.

"And to bring us full circle, at the strategy's heart will be our vision for providing world-class digital infrastructure to all, in a way that is safe, secure and built for the future".

A part replacement installation in this location will ensure that the latest high quality 2G, 3G, 4G services are maintained for Telefonica as well as providing new 5G in and around this area of Central London for both operators.

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

The site provider at Castlewood House served the operator with a notice to quit to enable his plans to redevelop the site to come to fruition. The original site has been decommissioned and is now off air. There is currently no coverage for Telefonica in this busy location within the capital. There is therefore an urgent need to provide replacement coverage as soon as possible, as the operator's customers are unable to utilize their handheld devices in this cell area contrary to the operator's legal requirements to provide a service and the customers reasons for purchasing their handheld devices. A replacement installation in this location will ensure that the latest high quality 2G, 3G, 4G as well as new 5G service provision is maintained and enhanced in and around New Oxford Street.

The 3G and 4G provision allows internet access, video calling, data downstreaming, accessing social media networks and emailing to name just a few of the benefits. Therefore, to maintain high quality indoor 3G and 4G services in to this area would promote activity in line with the general population demand as the ownership of smart devices increases. 5G service provision will bring faster, more responsive and reliable connections than ever before. 5G will deliver unparalleled speeds and capacity, with significantly reduced latency, which will be needed to deliver numerous innovative applications from autonomous cars to Internet of Things.

A replacement site in this location will ensure that the security of the latest technologies will be provided into the network particularly for the data hungry applications of the latest smart hand-held devices. The operator has followed a sequential approach to site finding and identified this site as part of this process. As an existing building, adjacent to the existing site, it will provide the necessary replacement coverage/capacity and improved services within this very busy commercial area of Central London.

3G and 4G signals by their very nature (as they carry high data rates) do not penetrate over long distances, (5G even less so), just a few hundred metres, depending on the topography of the land, building clutter and vegetation including trees in the area which can reduce their effectiveness.

Without this new site the numerous business, visitors, residents and students who depend on the service will notice their service sharply diminish resulting in dropped calls, the inability to make calls and non-existent or slow internet access. Clearly this would result in significant detrimental, social and economic impacts for the community should a replacement not be found and this is contrary to NPPF.

The operator is seeking to replace the existing installation on Castlewood House to enable enhanced 2G, 3G and 4G coverage and capacity to the surrounding area as well as new 5G services for Telefonica to ensure high quality customer experience is obtained as demands on the network increase and technologies change.

	
Image 6: Coverage with Castlewood House on air	Image 7: Coverage with Castlewood House removed.

Fact sheets on Radio Planning and Propagation, 5G services and General Background Information have been attached to this application for reference.

Type of Structure: Pole Mounted	
Description: The proposals relate to the installation of 6 no. antennas, 2 no. 300mm transmission dishes, 1 no. equipment cabinet, 3 no. flat pack frames and ancillary development thereto.	
Overall Height:	38.80m AGL / 38.80m AGL
Height of existing building:	Plantroom Level 36.30m
Equipment Housing: 1 x Eltek 4th Gen PSU Cabinet	
Length:	700mm
Width:	730mm
Height:	1800mm
Materials:	
Tower/mast etc – type of material and external colour:	Galvanised
Equipment housing – external colour:	Grey

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

Central Government attaches great importance to the design of the built environment and outlines this within Section 12 (Paragraph 124) National Planning Policy Framework (Revised). It states:

'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 keeping with the National Planning Policy Framework (NPPF) guidelines of using: "high quality communications infrastructure", the proposed design has been selected to minimise visual impact upon the surrounding environment.

Design Philosophy

The proposal is for the proposed installation of a replacement telecommunications base station comprising 6 no. antennas, 2 no. 300mm transmission dishes, 1 no. equipment cabinet, 3 no. flat pack frames and ancillary development thereto.

The proposed site will provide new 5G services, and it is one of 3 sites in a split cell solution required to pick up the loss of network coverage and capacity associated with the removal of 2G, 3G and 4G equipment from Castlewood House for both operators.

The equipment has been designed so that it resembles as closely as possible other items of rooftop infrastructure which are commonly found within an urban streetscene.

100 New Oxford Street is a 9-storey building with plantrooms. The building mass of 100 New Oxford Street will ensure that the antennas will not be overly visible or prominent from ground level or from the wider streetscene.

Utilising an existing building is in complete accordance with national planning guidance, as the proposed antennas are out of the general eye line of the casual onlooker. Thus, the visual presence of the radio base station will be minimised.

The proposed rooftop antennas will be grouped into pairs on the rooftop on the north east and north west. Each pair of antennas will be fixed to wall mounted poles attached to the plant rooms and will be viewed in the context of the plant room level. All 6 of the antennas are set back from the edge of the building thus minimising their appearance on the building.

The equipment cabinet is very small in relation to the scale of the building and is located in close proximity to the plant level. The cabinet and flatpack frames will be viewed in the context of the plant room thus their siting and appearance has been mininised.

The height and position of the antennas on the building are so that they can be justified from a technical perspective as the antennas need to clear the immediate roof so as not to create signal clipping and reflection. The height of a proposed antenna has to be offset against its positions on the roof, whereby the closer to the centre of the roof of the building the more height that is needed to clear the immediate roof space in front of the antenna. Furthermore, the additional height is required in order to avoid ICNIRP issues, which would sterilise a large part of the rooftop at lower levels. The pole mounted antennas enable the operators to provide the multiple technologies and meet their full coverage requirements to the target area within the permitted ICNIRP guidelines.

Furthermore, if the antennas were to be any lower, they would be blocked from obtaining a clear line of sight and therefore would not be able to operate effectively reducing the ability of the antennas to provide 3G, 4G and 5G coverage to the immediate area.

The site line plans (215/C) demonstrates that antennas cannot be seen from street level on New Oxford Street.

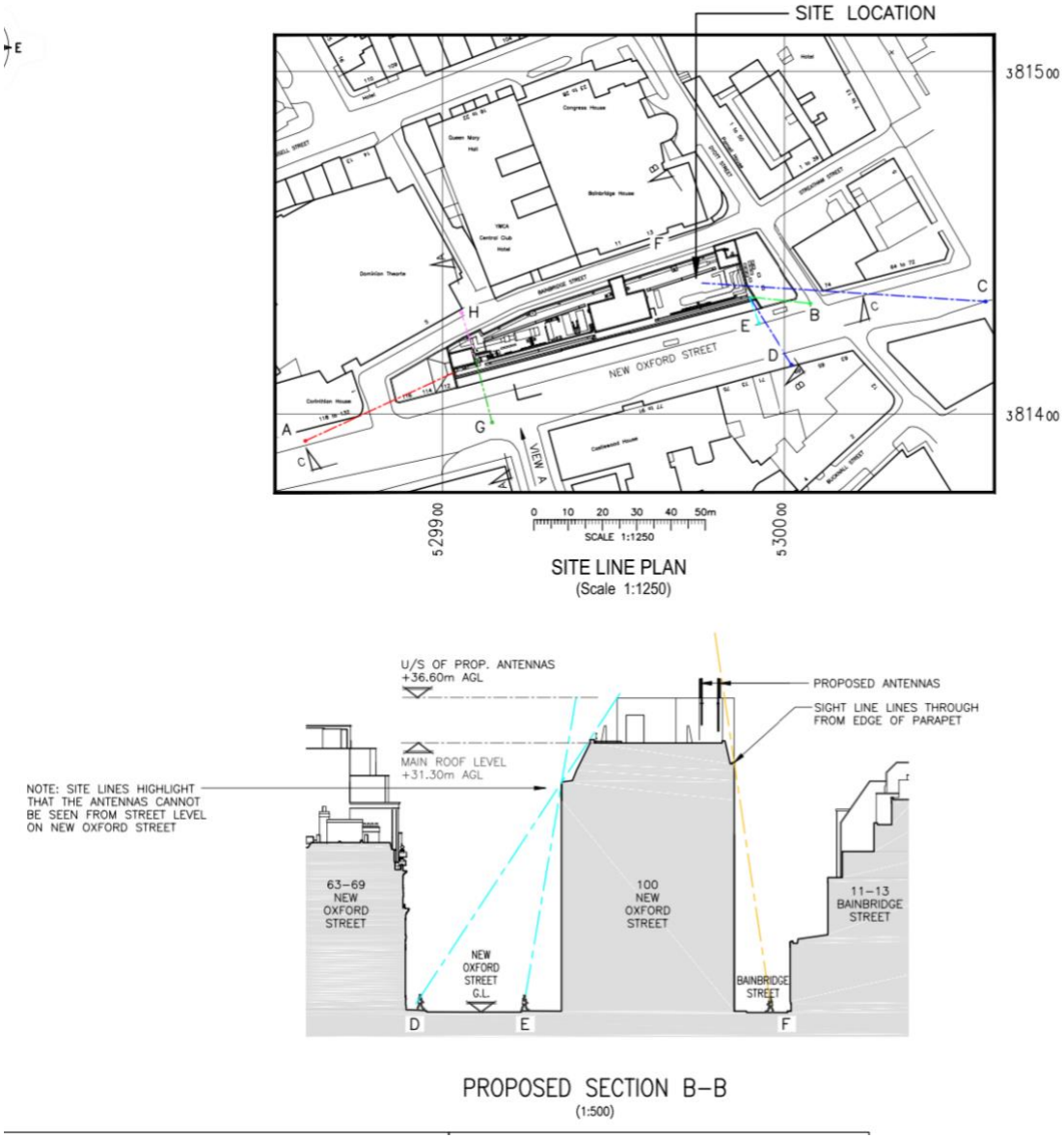


Image 8: Extract from Drawing Pack 201/C

The height is a direct requirement due to the fact that the taller a site the further it can send signal and this negates the need for additional sites to pick up the shortfall.

A number of alternative designs have been considered as set out below:

Reduce antenna numbers	Due to the technical requirements for Telefonica, the number of antennas cannot be reduced. 6 no antennas are needed here to provide part replacement 2G, 3G and 4G coverage as well as provide new 5G services for Telefonica, thus a reduction in antenna numbers is not possible.
Face mounted antenna on 100 New Oxford Street	The antennas cannot be face mounted on **100 New Oxford Street** elevations due to the location of windows and adjacent buildings.
Stub Mast	This type of design was not even considered for the application site but it is one of the designs available for the operators on a rooftop. Due to its bulk and industrial appearance, it is more appropriate for industrial settings rather than Bloomsbury Conservation Area. Moreover, a

	structural survey would need to be undertaken to confirm if the roof is able to support the weight of such a tower.
Use of smaller antennas:	The proposed antennas are 2.2m high. A top height of 38.90m/38.70m is required to reduce clipping and therefore not possible to use shorter antenna due to the additional frequencies that are now required to continue to provide the latest technologies and increased demand for mobile connectivity service that has been generated over the years. For example, shorter antennas would not provide the necessary latest 4G and new 5G technologies. In effect, shorter antennas would not provide all the necessary service provision to the surrounding area that customers have come to expect to be available whenever and wherever especially in this high density, busy part of the operators' network.
Face mounted antennas on plant room	Face mounting antennas on the plant room was investigated. However, antennas could not be face mounted on the plantroom as this would not be ICNIRP compliant. People would not be able to walk in front of the antenna, and the edges of the building would clip the signal. The height and position of the antennas is the preferred design and the minimum height needed to ensure both coverage and ICNIRP compliance.

In addition, we have produced plans showing the potential relocation positions at each end, including photos to show the congestion in each area. These plans are then supported by Sight Line drawings. Please refer to the attached Drawing No's: 210B, 211A, 212A, 214B, 215A and 216A.

Relocation Design Philosophy

Sector 1 – Proposed Relocated Position 1.

Sector 1 antenna support frame is currently positioned as close to the North parapet as possible with the antennas mounted high enough to avoid the existing hand railing. It is proposed that Rooftop access would be to the rear of the support frame in a gap left between the frame and existing louvres. From drawing 215 Current proposal section B-B, it is evident from the sight lines that the antennas would not be visible from position 'F', ground level on Bainbridge Street. The siting and appearance of this equipment is considered satisfactory.

If the Sector 1 support frame was moved further South, closer to the louvres, and with a rework of the frame to ensure the antennas are as far away from the parapet as possible, the antenna height would have to increase by approximately 2.0m to ensure ICNIRP compliance. This is necessary as rooftop access would now be in front of the antenna, and an outage would be required if the antennas remain at their current height.

Sector 1 - Proposed Relocated Position 2.

The proposed equipment cabinets will utilise existing plinths located behind the louvres, close to the middle of the roof. New steel grillage / support frame with be incorporated to support the new cabinets, spanning between the existing plinths. Another potential option would be to move the antenna support pole to this location and incorporate the antenna support poles into the new equipment cabinet support grillage, however the height to u/s antennas above roof level would need to be increased to avoid any potential coverage clipping issues. Plus, bracing may need to be incorporated into the design to stiffen up the pole.

Sector 1 would create an occupation exclusion zone on the North West plantroom roof, effectively sterilising it for future installation and requiring an outage for maintenance.

Sector 2– Proposed Relocated position 1.

Following the creation and review of the sight lines on drawing 215 (current proposal section B-B), it became evident that this proposal could be improved by slight reducing the antenna height, and reworking the antenna support frame to reposition the antennas approximately 0.8m further North. The u/s of antenna height above roof/parapet would still need to be high enough to ensure there are no clipping issues, however some of the existing handrail would have to removed and redesigned to achieve this.

Drawing 215, Relocated Proposal 1 – Section B-B, shows that the top of the antenna would not be seen at eye level from the opposite side of the street directly opposite.

Sector 2 - Proposed Relocated Position 2.

The second option would be to move the antennas onto the braced support frame mentioned above, as part of the equipment cabinet grillage. For the Sector 2 antennas, the height to underside is dictated by the height of the existing air conditioning ducting assumed to be a minimum of 4.0m above roof level and the potential clipping by the ductwork from this new antenna position. We have adopted a clipping angle of 22 degrees, (which gives the maximum electrical down tilt of 10, and maximum mechanical of 12 degrees). Therefore, the u/s antennas would be approx. 7.5m above roof level. Sector 1 antennas would be mounted at the same height if mounted in this position.

Given the height requirement above roof level we are moving away from braced poles and towards the requirement for a slimline lattice stub tower.

Summary: Optimum proposal would be as position 1 above. We could suggest to paint the antennas to colour the match the background, however there will always be positions along New Oxford Street, East of the site, where this 'improved' proposal will be visible. As shown by Elevation C-C relocated proposal on Drawing 216.

Sector 3– Proposed Relocated Position 1

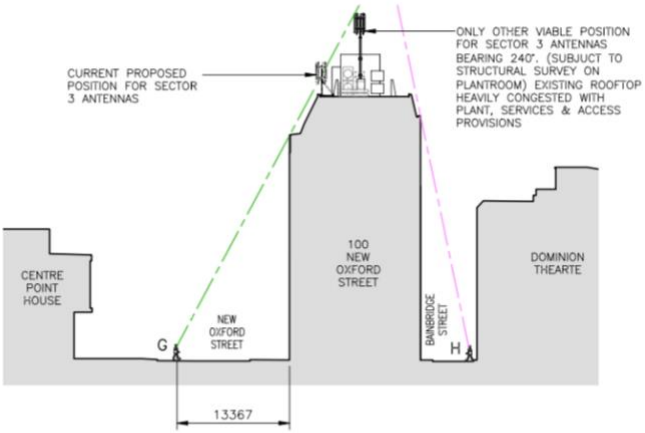
Due to severe congestion at the West end of the rooftop, the relocation positions are limited for Sector 3 antennas. Proposed Relocated position 1, subject to a full structural survey, would be a wall mounted pole fixed to the East face, of the West plant room. The height to u/s of antenna would need to be high enough to ensure the antenna does not clip the plantroom, resulting in a height requirement of 2.8m above plantroom parapet level.

It is considered that this will look imposing when viewed from Earnshaw Street opposite, as shown by view 'A' on Drawing 211. It is considered that the current proposal is much better in terms of siting and appearance.

This position would create an occupation exclusion zone on the West plantroom roof, effectively sterilising it for future installation and requiring an outage for maintenance.

Sector 3 - Proposed Relocated Position 2.

The antenna support pole could be relocated to a set of redundant plinths and to incorporate a new braced pole as set out above, however the height to u/s antennas above roof level would need to be considerable to avoid clipping the West plantroom roof. An approx. height to u/s antennas of 11.5m above roof level would be required, which would essentially require a slimline lattice tower stub mast on a roof. A further option for Sector 3 would be a GRP shroud around our current proposal.



Summary: The optimum proposal would be a wall mounted pole but it is considered that the visual impact would be far worse than our current proposal. The current option is therefore considered to be the optimum solution in terms of siting and appearance.

The technical requirements of mobile communication operators such as the applicant are acknowledged in the National Planning Policy Framework which states that local planning authorities should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections.

Placing masts near similar structures and utilising simple and unfussy designs is acknowledged in the 'Code of Best Practice on Mobile Network Development in England' to be less likely to dominate and be in discord with the landscape and as a result less likely to have a detrimental impact on the visual amenity of the surrounding area. This design is considered to be an appropriate solution and shows the applicants efforts to help mitigate the proposals impact on the visual amenity, whilst also ensuring that proliferation of masts is reduced by the utilisation of existing structures as outlined within NPPF. One of the fundamental aspects of the NPPF is a reduction in the proliferation of sites.

As noted above NPPF advises *"The number of radio and electronic communications masts, and the sites for such installations, should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. 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".*

It is therefore considered that the proposal before you strikes a good balance between environmental impact and operational considerations. The proposed height and design of the equipment represents the best compromise between the visual impact of the proposal on the surrounding area, and meeting the technical requirements for the site. Taking all matters into account it is considered that this proposal to deliver the capability for new and replacement services for Telefonica would not appear out of place within the street scene or host building, Bloomsbury Conservation Area.

Technical Information

International Commission on Non-Ionizing Radiation Protection Declaration attached International Commission on Non-Ionizing Radiation Protection public compliance is determined by mathematical calculation and implemented by	Yes	

careful location of antennas, access restrictions and/or barriers and signage as necessary. Members of the public cannot unknowingly enter areas close to the antennas where exposure may exceed the relevant guidelines. When determining compliance, the emissions from all mobile phone network operators on or near the site are taken into account.		

In order to minimise interference within its own network and with other radio networks, Telefonica UK Ltd operates its network in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision. As part of Telefonica UK Ltd's networks, the radio base station that is the subject of this application will be configured to operate in this way. All operators of radio transmitters are under a legal obligation to operate those transmitters in accordance with the conditions of their licence. Operation of the transmitter in accordance with the conditions of the licence fulfils the legal obligations in respect of interference to other radio systems, other electrical equipment, instrumentation or air traffic systems. The conditions of the licence are mandated by Ofcom, an agency of national government, who are responsible for the regulation of the civilian radio spectrum. The remit of Ofcom also includes investigation and remedy of any reported significant interference. The telecommunications infrastructure the subject of this application accords with all relevant legislation and as such will not cause significant and irremediable interference with other electrical equipment, air traffic services or instrumentation operated in the national interest.	

4. Technical Justification

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

Reason(s) why site required e.g. coverage, upgrade, capacity:
A mobile phone transmitter is designed to cover a specific area and links its coverage to the next site in the network, creating a patchwork of overlapping coverage 'cells' across the country. So, if a person is on the move, the network will transfer their calls from one site to the next. However, in certain areas there will be gaps between these cells, resulting in a loss of coverage. This can be for a variety of reasons, the most common being topography or buildings which block the path of the signal. The operators' network rollout programme is designed to identify and address these gaps within their coverage and ensure that people can use their phones whenever and wherever they are. The Government supports fully operational telecoms infrastructure, which is critical infrastructure, and wants to avoid network outages and degradation with the intention of obtaining reliable mobile digital connectivity. In the case of the current proposals, an existing site was decommissioned and in order to reinstate reliable mobile digital communications, this must be replaced. Without the replacement of a former base station at Castlewood House, the heart of Tottenham Court Road and St Giles will continue to suffer from unreliable mobile digital connectivity. This will have a detrimental effect, not only on residents and businesses but also in excess of 37 million passengers that use Tottenham Court Road on an annual basis who rely on the operator's networks, and those 200 million people visiting[2] Oxford Street (which is in very close proximity to the application site immediately to the west of New Oxford Street and Tottenham Court Road) has been redesignated as an 'International Centre'[3] which will lead to a generational shift in how Oxford Street is used and impact the more than 50% of mobile users in the area relying on the Telefonica's networks excluding their MVNOs potentially impacting millions of customers.

[2] https://osd.london/framework/
[3] https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf

An installation in this location will ensure that the latest high quality 2G, 3G and 4G service provision is reinstated in the area and enhanced with new 5G services for Telefonica.

The National Planning Policy Framework states that local planning authorities should not question the need for the telecommunications system, which the proposed development is to support. However, for the avoidance of doubt as set out below this replacement site is needed for Telefonica as part of a 3-site split cell solution to replicate the services previously provided by the former Castlewood House.

The enclosed coverage plots for Telefonica a provide a simple visual representation of the relevant coverage issues. The plots are modelled using a specialist tool and overlay shading on a base map to represent various signal strengths for coverage.

Indoor coverage provision is imperative across the UK, arguably more so within the major cities such as this area of London where connectivity plays a particularly vital role in commerce. During the COV1D 19 pandemic many people are self-isolating or working from home or remotely and are reliant on indoor coverage provision, more so given the government measures[4] announced on 04/01/2021 to work from home where possible, further setting the scene for how essential mobile connectivity continues to be. Without the installation subject to this application, the vital indoor levels, which allow customers to access services from within buildings, will continue not be achieved and residents and businesses will continue to suffer.

The tool demonstrates that the removal of the former site at Castlewood House resulted in a wide-ranging deficiency in indoor penetration and outdoor coverage. The loss of services has affected the, New Oxford Street, Bloomsbury Street and Tottenham Court Road, Tottenham Court Road London Underground and Crossrail and the local road network which forms part of the West End Project which includes the application site. As illustrated in the coverage plots the introduction of the application proposal would reinstate high levels of coverage, including in-building penetration, which is the ideal within urban areas, within this replacement cell area. There is a clear and demonstrable need for the proposal which derives from the fact that it will partially replace a decommissioned site.

Coverage maps are a useful tool for establishing network coverage in an area. They are developed using assumptions regarding the handset use, expected level of call reliability and signal loss within a vehicle or a building. However, plots only tell part of the story as even when the coverage plots provided show good coverage in an area there may still be a requirement to improve capacity and as such local network services. Coverage plots show coverage issues only; they cannot show capacity issues.

Coverage plots are attached to this application for information. They clearly demonstrate a need for this proposal. Notably, coverage plots cannot illustrate the capacity of the site which the surrounding sites are not designed to service.

The term 'capacity' refers to the fact that each case station can only provide services to a certain number of users at any one time. When this 'Capacity' is exceeded, although 'Coverage' remains present, the base station cannot provide service to any further users and calls/text/data usage would be unavailable. This is contrary to the purposes in which the operator's customers purchased their handheld devices as well as the Government's latest thinking that everyone should have access to the information superhighway wherever they are.

Further detail regarding the general operation of the network can be found in the accompanying document entitled 'General Background Information for Telecommunications Development'. In addition, fact sheets on Radio Planning and Propagation have been attached to this application for reference. This information is provided to assist the local authority in understanding any technical constraints on the location of the proposed development.

[4] https://www.gov.uk/government/speeches/prime-ministers-address-to-the-nation-4-january-2021

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

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

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

Alternative site options considered and rejected are as follows:

Site Type	Site name and address	National Grid Reference	Reason for not choosing site
Rooftop	Castlewood House, 77-91 New Oxford Street, London, WC1A 1DG	E: 529984 N: 181402	This is the NTQ site where the operator was originally located. An NTQ was served, the site has been decommissioned and is currently off air. This site is no longer available hence the need for a replacement site.
Rooftop	St Giles in the Fields Church, High Street, London, WC2AH 8LG	E: 529961 N: 181267	This building is too low to provide the necessary coverage to the target coverage area. The surrounding tall buildings would prevent the antennas from being effective and an additional installation would still be required. There is also insufficient space in the church spire to accommodate a radio base station.
Rooftop	Fairgate House, New Oxford Street, London, WC1A 1HB	E:529983 N: 181435	The building is lower than the surrounding properties. Therefore, the antenna signal would be blocked. This site is therefore not suitable.
Rooftop	Burtons, 118/132 New Oxford Street, London, WC1A 1HL	E: 529850 N: 181399	This property is listed and therefore would have a greater impact on the character and appearance of a heritage asset than the preferred option which is not statutorily protected. The site also borders the next cell. A radio base station in this location would interfere with the existing radio base stations operation causing it not to work as effectively. This would be detrimental to the operation of the network in this area. As the site is on the edge of the search area it would not provide as good a coverage as the preferred option. This site has therefore been discounted for these reasons.

Rooftop	55 New Oxford Street, London, WC1A 1BS NGR	E: 530057 N: 181418	A site in this location would provide significant uplift in coverage due to the operators existing network configuration. As such, it would not provide the necessary coverage to the target coverage area for Telefonica. It has therefore been discounted for this reason. However, it should be noted that Vodafone intend to utilise this roof as part of Telefonica and Vodafone's joint 3 site split cell solution to replace Castlewood House.
Rooftop	64-76 New Oxford Street, London, WC1A 1BS	E: 530025 N: 181455	A site in this location would provide significant uplift in coverage due to the operators existing network configuration. As such, it would not provide the necessary coverage to the target coverage area for Telefonica. It has therefore been discounted for this reason.

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

Notably, as previously stated Paragraph 113 states *'The number of radio and electronic communications masts, and the sites for such installations, should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. 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'*.

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

See below.

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

Relevant Planning Policy is detailed below.

Additional relevant information (planning policy and material considerations):

From the outset, it should be appreciated that irrespective of the proposed installation's use as a telecommunications base station, any change in form in the streetscene will always be, to some degree, a noticeable alteration to those residents and regular passers-by found closest. However, it should be recognised that visibility or a development's siting and appearance, does not automatically result in an overwhelming adverse harm.

In light of the above it is considered that the planning assessment of this case should concentrate on whether the proposed installation in terms of its siting and appearance are significant as to outweigh other material planning matters.

National Planning Guidance

Planning policy is provided at the national level by the National Planning Policy Framework (NPPF). It is a material consideration in planning decisions. The NPPF is pro – development with a 'presumption in favour of sustainable development' being seen as a golden thread, running through both plan making and decision taking'.

The thrust of this guidance is positive and a reminder to LPAs that we need to build the requisite infrastructure to enable economic growth.

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

National Planning Policy Framework (February 2019)

The governments National Planning Policy Framework (NPPF) was published on 24 July 2018 and updates the 2012 version. In February 2019 the NPPF was revised again, with minor alterations to wording relating to housing supply and not any parts relating to telecommunications. The Government's latest thinking continues to strongly support communications infrastructure. The NPPF remains very supportive of high-quality communications. Indeed, a whole chapter is dedicated to high quality communications, emphasising the importance that the Government attaches to digital connectivity. Paragraph 112 states that advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. This wording echoes guidance set out in paragraph 42 of the 2012 version of NPPF. However, it also includes the importance of *reliable* communications infrastructure for both economic growth *and social well-being*.

The NPPF continues to support the expansion of electronic communications networks at paragraph 112. It notes that policies should set out how high-quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time. The economic and social benefits of providing high quality and reliable communications infrastructure are well documented and can be found later in this Supporting Information Statement.

The NPPF makes reference to 5G:

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

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

Paragraph 113 of the NPPF retains the requirement to minimise the number of installations consistent with the efficient operation of the network but also includes being consistent with the needs of consumers and providing reasonable capacity for future expansion.

Paragraph 116 of the NPPF retains the guidance set out in paragraph 46 of the 2012 NPPF version which relates to determining applications on planning grounds only. They should not seek to prevent competition between different operators, question the need for an electronic communications system, or set health safeguards different from the International Commission guidelines for public exposure.

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

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

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

The NPPF builds on the aspiration to build a strong, competitive economy. Paragraph 80 states:

'Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking in to account both local business needs and wider opportunities for development. The approach taken, should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation[40]'...

Footnote 40 of the NPPF states:

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

he NPPF provides guidance on proposals affecting heritage assets. Paragraph 189 states that '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.

Paragraph 190 goes on to state that local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset).

The NPPF goes on to provide guidance on considering the potential impacts of development on heritage assets. Paragraph 193 states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.

Paragraph 196 retains advice provided in the 2012 version of NPPF relating to the degree of harm. It states that '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.

Given the sites location within Bloomsbury Conservation Area, it is required by paragraph 189 of the NPPF that the detail and assessment in this report is considered to be *"proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance."*

In order to relate to key policy, the following levels of harm may potentially be identified when assessing potential impacts of development on heritage assets, including harm resulting from a change in setting:

- **Substantial harm or total loss.** It has been clarified in a High Court Judgement of 2013[5] that this would be harm that would *'have such a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced';*
- **Less than substantial harm.** Harm of a lesser level than that defined above;
- **No harm** (preservation). A High Court Judgement of 2014[6] is relevant to this, in which it was held that with regard to preserving the setting of a listed building or preserving the character and appearance of a Conservation Area, preserving means 'doing no harm'.

[5] EWHC 2847, R DCLG and Nuon UK Ltd v. Bedford Borough Council

[6] EWHC 1895, R (Forge Field Society, Barraud and Rees) v. Sevenoaks DC, West Kent Housing Association and Viscount De L'Isle

It is important to note that preservation does not mean 'no change'; it specifically means 'no harm'. Historic England's *Historic Environment Good Practice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment* (referred to as GPA 2[7]) states that "*Change to heritage assets is inevitable but it is only harmful when significance is damaged*". Thus, change is accepted in Historic England's guidance as part of the evolution of the landscape and environment. The factor that matters is whether such change is neutral, harmful or beneficial to the significance of an asset. This is discussed in detail under Planning Assessment.

Public benefits are defined within the NPPG and could be anything that delivers economic, social or environmental progress. Benefits do not always have to be visible or accessible to the public in order to be genuine public benefits.

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

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

The principal aim of this Code is to ensure that the Government's objective of supporting high quality communications infrastructure, which is vital to continued economic prosperity and social inclusion for all, is met. The development of such infrastructure must be achieved in a timely and efficient manner, and in a way, which balances connectivity imperatives and the economic, community and social benefits that this brings with the environmental considerations that can be associated with such development. The Code also has an important role in making sure that appropriate engagement takes place with local communities and other interested parties.

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

Paragraph 2.2 goes on to state that consumers, businesses and public bodies increasingly rely on mobile communications and expect to receive a signal wherever they are. The Code indicates that recent changes in planning policy [and regulation] are intended to align with Government communications policy, where the ultimate goal is to achieve mobile coverage wherever it is needed.

Section 2 of this Code also reiterates NPPF guidance in strongly supporting high quality communications infrastructure, which is seen as essential for sustainable economic growth.

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

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

Paragraph 3.3 goes on to highlight that the [operator systems tend to be demand-led or to fulfil coverage obligations. With the ever-increasing demand for data hungry applications available to a

[7] Historic England, *Historic Environment Good Practice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment* (Swindon, 2015).

range of connected devices, such as smart phones and tablets, the requirement to upgrade and improve networks through changes to existing sites and the development of new sites is constant. As most parts of the country move on to a superfast highway, so the need to bring coverage to 'not spots' (i.e. areas where there is no mobile coverage from any operator) and improve coverage in 'partial not spots' (i.e. where there is some coverage but not from all operators) intensifies.

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

Section 4 of the Code sets out the evolution of mobile networks from 2G voice calls and text to 4G superfast mobile broadband which are now approximately the same speeds as fixed broadband connection.

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

Paragraph 4.2 acknowledges that data, i.e. using the internet, puts increased demand on capacity and therefore the need for additional base stations to keep abreast of customer demand. Also, 3G base stations, originally using higher frequencies didn't travel as far and therefore each base station covered a smaller area. However, changes in working practices for the operators, in line with national guidance, streamlining networks, sharing base stations has reduced the overall amount of infrastructure required.

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

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

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

The Code acknowledges that by the second decade of the 21st Century, the greatest increase in traffic across mobile networks was in data i.e. internet use (para 5.3). Paragraph 5.4 states that in terms of the wider economic impact of mobile connectivity, research by Deloitte on the economic impact of mobile broadband across a range of countries, showed that a doubling of mobile data use leads to an increase of 0.5% in the Gross Domestic Product per capita, while another study put the benefit of 4G mobile broadband to the UK economy at £75 billion over a decade.

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

The Code illustrates that mobile connectivity helps in the delivery of public services e.g. to access Central and Local Government via online services, acknowledging that lives are more likely to be saved when a 999 call is made from a mobile than from a landline, Telehealth is becoming increasingly important and text message reminders also improve compliance with medication and keeping NHS appointments.

Good mobile connectivity also promotes sustainability e.g. it reduces the need to travel and thus carbon emissions (para 5.7). The Code continues to support mobile telecommunications network as it is seen as a crucial piece of national infrastructure in economic, community and social terms (para 5.8).

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

Section 7 of the Code sets out the need for all agencies to work together to deliver connectivity that is essential to the country's economy and society including Central Government which provides the overall strategy for connectivity, mobile operators to deliver the mobile network development through the planning system and helping to identify land and structures suitable for mobile infrastructure. Local Planning authorities can also ensure that the planning function works in tandem with other relevant departments and agencies such as their own economic development departments and appropriate digital connectivity teams in order to facilitate digital connectivity.

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

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

The Code in Appendix A acknowledges that it has been a long-standing Government policy objective to support the sharing of masts and sites. Operators also aim to site share wherever viable. If operators are able to share sites, and install more equipment on each site, this reduces the overall visual impact of network infrastructure, because even though shared sites will tend to be slightly bigger, it means that fewer sites are needed to improve coverage and capacity, infrastructure becomes more feasible, and is more cost-effective to deploy. In fact, sharing of sites is now the norm, and network operators now share much of their network infrastructure via joint venture commercial arrangements.

However, the Code also highlights the constraints of mast sharing. Acknowledging that mast sharing may not be an appropriate environmental or technical solution in all cases. Visual intrusion may occur. The Code indicates other constraints which may include:

- Coverage problems – The existing mast may be poorly located or not have sufficient height to give the required coverage;
- Radio interference – Antennas need a separate amount of vertical and horizontal separation. This could lead to the visual impact of the mast significantly increasing;
- Structural Loading – The existing mast may not be able to hold extra equipment. The existing mast may need to be strengthened, redeveloped or replaced with a bigger structure with a consequent effect on visual amenity.

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

The Code also provides advice on more sensitive locations including conservation areas and listed buildings. It states that operators may be able to avoid specific locations such as listed buildings, but not an entire protected area. In such cases, they should seek to minimise the impact through sensitive design and appropriate siting of the proposals.

Local Policy

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

The Local Plan for the area comprises:

- The London Plan 2021
- Camden Local Plan (2017)

The London Plan 2021

The London Plan 2021 is the new Spatial Development Strategy for Greater London and was adopted in March 2021 and is now part of the statutory development plan. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. Chapter 1 of the London Plan deals with 'Planning London's Future - Good Growth'. Para.1.0.1 relates to 'Good Growth' that is "*socially and economically inclusive and environmentally sustainable and underpins the whole of the London Plan and each policy. It is the way in which sustainable development in London is to be achieved*".

Para 1.1.4 under 'Building Strong & Inclusive Communities' includes: '*… social, physical and environmental infrastructure that meets London's diverse needs is essential if London is to maintain and develop strong and inclusive communities.*' The corresponding policy in GG1 Building strong & inclusive communities states:

> *'Good growth is inclusive growth. To build on the city's tradition of openness, diversity and equality, and help deliver strong and inclusive communities, those involved in planning and development must:'*
>
> *'… C provide access to good quality community spaces, services, amenities and infrastructure that accommodate, encourage and strengthen communities, increasing active participation and social integration, and addressing social isolation*
> *D seek to ensure that London continues to generate a wide range of economic and other opportunities, and that everyone is able to benefit from these to ensure that London is a fairer, more inclusive and more equal city'*
>
> *'I support and promote the creation of an inclusive London where all Londoners, regardless of their age, disability, gender, gender identity, marital status, religion, race, sexual orientation, social class, or whether they are pregnant or have children, can share in its prosperity, culture and community, minimising the barriers, challenges and inequalities they face.'*

Improving digital infrastructure supports the Government's 'levelling up' agenda, by helping local areas to retain and attract businesses and talent as well as by reducing regional inequalities.

Para. 1.3.1 states '*The mental and physical health of Londoners is, to a large extent, determined by the environment in which they live. Transport, housing, education, income, working conditions, unemployment, air quality, green space, climate change and social and community networks can have a greater influence on health than healthcare provision or genetics. Many of these determinants of health can be shaped by the planning system, and local authorities are accordingly responsible for planning and public health'*. During the Covid-19 pandemic there has been a much greater reliance on mobile digital connectivity to stay connected with family and friends and has become has enabled working from home and home-schooling. Without the infrastructure which enables reliable connectivity, we could not stay connected.

Policy GG5 relates to 'Growing a good economy. The supporting text states:

> *'…..London is the engine of the UK economy, accounting for more than a fifth of the country's economic output. Its labour market, housing market and transport links are interconnected with the Wider South East city region, which shapes the development of the whole of the UK.*

Together, London and the Wider South East contribute a full half of the country's output. London has unique strengths in specialist fields like finance, business services, technology, creative industries and law, as well as attracting tourists from around the world, providing a gateway to the rest of the UK. The wealth this generates is essential to keeping the whole country functioning, but the benefits of economic success are not shared evenly within London itself.'

'… Projected growth towards 6.9 million jobs by 2041 provides an opportunity to strengthen London's economy for the future, and doing so will depend on increasing diversification. The Central Activities Zone and Northern Isle of Dogs will remain vital to London's economic success, but growth in town centres across London will be equally important, alongside supporting local regeneration, investment in Opportunity Areas and enabling access to a wide range of jobs. Reasonably-priced, good quality employment space will be needed across London to make this happen'.

The right infrastructure is also required to help businesses succeed across London. The digital economy, underpinned by world-class digital connectivity, data and digital services is of ever-increasing importance, improving processes, opening up new markets and allowing more flexible working. Convenient transport connections and street, rail and waterway networks that allow the efficient movement of goods and people are also vital, alongside the schools, healthcare facilities and other amenities that employees need to be healthy and productive.'

GG5 'Growing a good economy' states:

To conserve and enhance London's global economic competitiveness and ensure that economic success is shared amongst all Londoners, those involved in planning and development must:

'… D ensure that sufficient high-quality and affordable housing, as well as physical and social infrastructure is provided to support London's growth
E ensure that London continues to provide leadership in innovation, research, policy and ideas, supporting its role as an international incubator and centre for learning'
'… H recognise and promote the benefits of a transition to a low carbon circular economy to strengthen London's economic success."

The proposed base station installation is critical infrastructure which will partly reinstate the connectivity lost when Castlewood House was decommissioned. It will provide world class digital connectivity which will support the digital economy. Reliable mobile digital connectivity supports London's growth, and contributes to the low carbon economy by enabling flexible working amongst other things. In terms of supporting London's role in innovation toward growing a good economy.

Chapter 2 of the London Pan 2021 deals with 'Spatial Development Patterns'. It sets out that the areas of London which will experience the most significant change in terms of delivering a substantial amount of new homes and jobs and London will need over the lifetime of the Plan as 'Opportunity Areas'.

Para. 2.0.4 notes that infrastructure is key to this delivery, with '*proper planning of utilities and communications capacity and the social infrastructure that supports the day-to-day lives of Londoners'*. Para.2.0.6 add that the Central Activities Zone (CAZ) and town centre network '*are complex parts of London, with a wide mix of uses and unique local character'* which 'have a crucial role to play in supporting London's growth'.

Para. 2.0.7 states that '*Growth and change have not always benefited Londoners equally'…. 'To address this, it is important that there is a strong focus on sustainable and inclusive regeneration in these areas, with boroughs, the Mayor and other partners working closely with the local community to bring about the right sort of change and investment'*.

Policy SD1 addresses 'Opportunity Areas'. The application site is within the Tottenham Court Road Opportunity Area as identified in the Mayor of London's Proposals Map.

Demonstrating the importance of critical infrastructure such as that proposed in this application, policy SD1 'Opportunity Areas' clarifies in Part A that the mayor will:

> *7) monitor progress in delivering homes, jobs and infrastructure, taking action where necessary to overcome any barriers to delivery'* amongst other things.

Part B requires LPAs to amongst other things:

> *'3) plan for and provide the necessary social and other infrastructure to sustain growth and create mixed and inclusive communities, working with infrastructure providers where necessary'*.

Para. 2.1.69 states '***Central London is a key driver for both London's economy and the UK economy as a whole, comprising both the CAZ*** *and Northern Isle of Dogs (see Policy SD4 The Central Activities Zone (CAZ) and Policy SD5 Offices, other strategic functions and residential development in the CAZ) and the closely related areas of Canada Water and City Fringe/Tech City. It contains a large number of OAs, many of which are maturing or underway and benefiting from successful development schemes that will be completed over the next few years'(*emphasis added*)*.

Figure 2.11 of the London Plan (Image 9 below) shows the application site is in the Tottenham Court Road Opportunity Area, forecast to provide an additional 300 homes and 6000 jobs. It also shows the nearby Tottenham Court Road station is on the proposed Crossrail 2 route, which is clarified on Page 70 of the plan as a Strategic Infrastructure Priority. The part reinstatement of critical infrastructure to the Opportunity Area including the already heavily trafficked station will provide reliable mobile digital connectivity to residents, businesses and visitors to the area now and into the future.

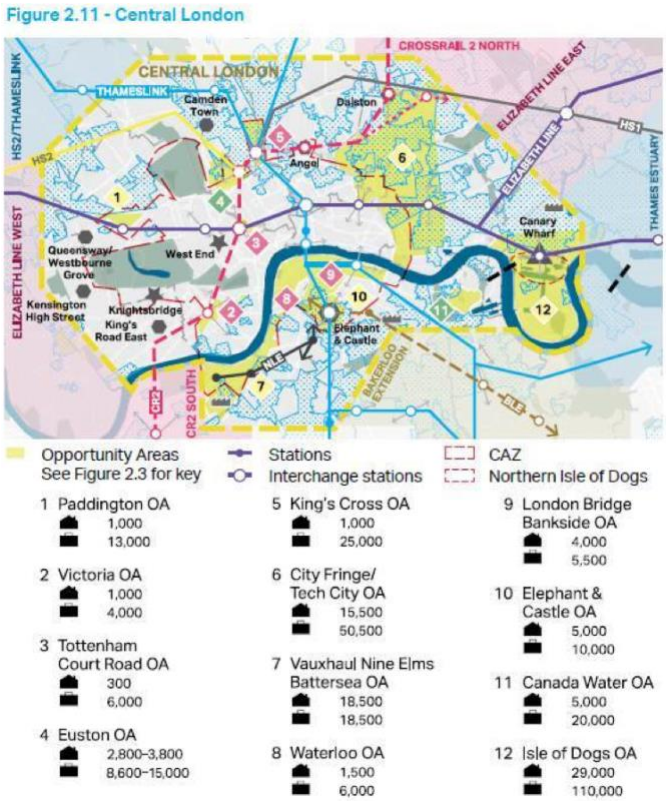


Image 9: Central London Spatial Development Pattern

Policy SD4 relates to 'The Central Activities Zone' (CAZ) and states:

> *'… I Infrastructure to sustain and enhance the CAZ and its agglomeration of strategic functions including its public transport and digital connectivity and its potential to accommodate new development should be secured.'*

Para. 2.4.1 states *'The CAZ is the vibrant heart and globally-iconic core of London. It is **one of the world's most attractive and competitive business locations**. It accommodates one third of London's jobs and generates almost 10 per cent of the UK's output. It contains the seat of national Government and is internationally renowned for its culture, night-time economy, tourism, shopping and heritage. It is also home to more than 230,000 residents'(*emphasis added).

Para. 2.4.2 states *'The density, scale and mix of business functions and activities in the CAZ are unique and are underpinned by the connectivity provided by public transport, walking and cycling networks. This agglomeration results in exceptional levels of productivity, which is not replicated elsewhere in the UK, and provides national benefits. It **requires different or tailored approaches** to the application of national policy to address its distinct circumstances'(*emphasis added*)*..

Para. 2.4.4 sets out the **strategic functions** of the CAZ which include, but are not necessarily limited to:

"a. functions associated with the State, Government and Monarchy
b. diplomatic organisations (such as embassies and high commissions)
c. agglomerations of nationally and internationally significant offices and company headquarters connected with finance, business, professional bodies, associations and institutions
d. uses connected with science, technology, media, communications and cultural sectors of regional, national and international importance
e. centres of excellence for higher and further education and research
f. centres of medical excellence and associated specialist facilities
g. legal establishments of regional, national and international importance
h. arts, culture, leisure, entertainment and activities and areas of regional, national and international importance
i. retailing, including specialist outlets, of regional, national and international importance
j. tourism facilities including hotels and conference centres
k. specialist creative clusters including for example clothing, fashion, jewellery, printing, antiques, musical instruments, art and culture
l. transport facilities, especially for public transport of regional, national and international importance
m. places of worship and places of assembly of regional, national and international importance
n. use and enjoyment of the River Thames
*o. heritage, built environment, the Royal Parks and other green and open spaces (public and private)". (*emphasis added)

Para. 2.4.17 acknowledges that '**Digital connectivity** and associated infrastructure is a key consideration in the CAZ where densities of commercial development in particular are high. Where necessary, development proposals should seek to aggregate demand in areas not currently served by high-speed connectivity and liaise jointly with providers to ensure that infrastructure requirements can be planned and delivered appropriately (see Policy SI 6 Digital connectivity infrastructure)'.

The CAZ diagram's below shows the relationship between Opportunity Area 5: Tottenham Court Road and the West End International Retail Cluster / Town Centre, both located within (and in the case of the International, slightly outside of the wider West End Specialist Cluster.

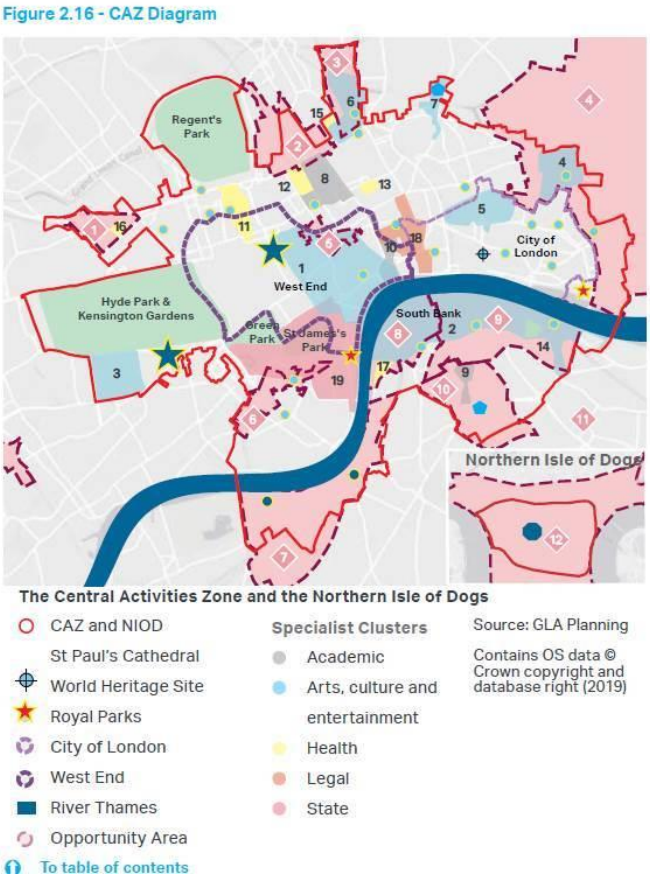


Image 10: CAZ diagram

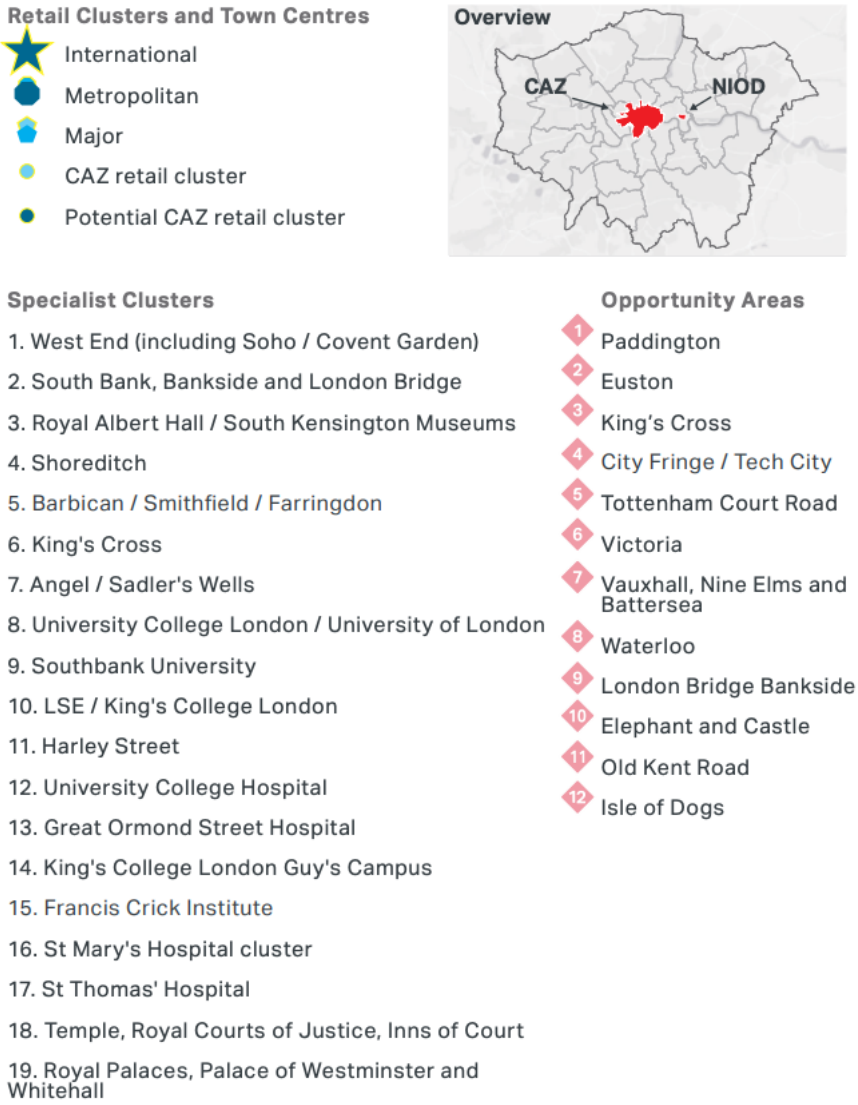


Image 11: CAZ Clusters

The application site is located within the vibrant heart and globally-iconic core of London. The Tottenham Court Road CAZ retail cluster (which includes the application site) has '*a strategic night-time function involving a broad mix of activity during the evening and at night, including most or all of the following uses: culture, leisure, entertainment, food and drink, health services and shopping.*' economy classification of the corresponding economy classification identified for the area in Table A.1.1 is NT1 – Areas of international or national significance. In terms of commercial growth potential, Table A.1.1 clarifies the application site is located in an area with medium growth potential, which '*includes town centres with moderate levels of demand for retail, leisure or office floorspace, and with physical and public transport capacity to accommodate it.*' It is clear that the area in which the application site is situated is classified as an area of international or national significance in terms of the night time economy, and is poised to provide medium grown in terms of town centre uses such as retail, leisure and offices. The critical physical infrastructure proposed at the application site to help provide replacement coverage for the loss of Castlewood House will support this growth potential – people do not want to live or work in or visit areas where their essential mobile phone connectivity cannot be relied upon.

Policy E8 relates to 'Sector growth opportunities and clusters'. Para. 6.8.1 states 'The Mayor wants London to continue to provide the best environment in the world in which to do business, so that businesses of all different sizes and sectors can reach their growth potential. This includes supporting business and employment across all sectors of the economy and capitalising on new growth opportunities in emerging sectors……

"• tech and digital sector – which supports the growth and evolution of all sectors in the economy. Planning should ensure that new developments have the digital connectivity required to support London's global competitiveness (see Policy SI 6 Digital connectivity infrastructure). ….The Mayor will support the growth of the tech and digital sector across all of London"

*'**tech and digital sector** – which supports the growth and evolution of all sectors in the economy. Planning should ensure that new developments have the digital connectivity required to support London's global competitiveness (see Policy SI 6 Digital connectivity infrastructure). … The Mayor will support the growth of the tech and digital sector across all of London'*

Digital connectivity and the benefits it brings to London's global competitiveness now and in the future receives more prominence and importance in the London Plan 2021. Paras 9.6.1 – 9.6.9 encourage the delivery of high-quality / world-class digital infrastructure.

Policy SI 6 relates to 'Digital Connectivity Infrastructure'. Point A.3 seeks to avoid situations such as the application proposal (i.e. coverage due to be lost through redevelopment not being replaced before it is actually lost) do not arise again by requiring developers to work with operators. Policy SI6 states '*To ensure London's global competitiveness now and in the future, development proposals should: A.3 "take appropriate measures to avoid reducing mobile connectivity in surrounding areas; where that is not possible, any potential reduction would require mitigation".*

Para 9.6.1 states that ***'the provision of digital infrastructure is as important for the proper functioning of development as energy, water and waste management services and should be treated with the same importance**. London should be a world-leading tech hub with world-class digital connectivity that can anticipate growing capacity needs and serve hard to reach areas. Fast, reliable digital connectivity is essential in today's economy and especially for digital technology and creative companies. It supports every aspect of how people work and take part in modern society, helps smart innovation and facilitates regeneration'(*emphasis added*).*

Paragraph 9.6.6 states 'Access for network operators to rooftops of new developments should be supported where an improvement to the mobile connectivity of the area can be identified. Where possible, other opportunities to secure mobile connectivity improvements should also be sought through new developments, including for example the creative use of the public realm'.

Paragraph 9.6.8 states '*The Mayor will work with network operators, developers, councils and Government to develop guidance and share good practice to increase awareness and capability amongst boroughs and developers of the effective provision of digital connectivity and to support the delivery of policy requirements. The Mayor will also help to identify spatial gaps in connectivity and overcome barriers to delivery to address this form of digital exclusion, in particular through his Connected London work. Boroughs should encourage the delivery of high-quality / world-class digital infrastructure as part of their Development Plans'*.

The policies relating to Design (Chapter 3) and heritage conservation (policy HC1) seek to promote proposals that are of *'good design'* and are sympathetic to the heritage assets and their surroundings. The proposed replacement base station is well positioned and of a scale, appearance and shape that responds to the local context and historic assets while also acknowledging the area's social and economic needs.

The Local Plan was adopted by the Council in 2017 and sets out policies and guidance for the development of the borough until 2031. The Council's vision for the borough is set out in the Camden Plan which also acts as the vision for the Local Plan. It states:

"We want to make Camden a better borough – a place where everyone has a chance to succeed and where nobody gets left behind. A place that works for everyone".

Policy D1 relates to design and sets out the criteria against which proposals will be assessed.

The first two criteria of the policy are considered relevant to the proposal and state:

> *The Council will seek to secure high quality design in development. The Council will require that development:*
> *a. respects local context and character;*
> *b. preserves or enhances the historic environment and heritage assets in accordance with Policy D2 Heritage*

Policy D2 deals with Heritage in Camden and has a specific section on Conservation Areas. An assessment of the current proposals against this policy is included in the Heritage Impact Assessment and below in Section 6. The criteria that are considered relevant to the proposals are:

> *"Conservation areas are designated heritage assets and this section should be read in conjunction with the section above headed 'designated heritage assets'. In order to maintain the character of Camden's conservation areas, the Council will take account of conservation area statements, appraisals and management strategies when assessing applications within conservation areas.*
> *The Council will:*
> *e. require that development within conservation areas preserves or, where possible, enhances the character or appearance of the area;*
> *g. resist development outside of a conservation area that causes harm to the character or appearance of that conservation area; and*

Para. 2.1 states "*Camden, along with London as a whole, is experiencing significant change, with substantial population growth and increases in demand for housing and employment*". Para. 2.2 confirms that the "*Council's objective is to create the conditions for growth to provide the homes, jobs and other facilities needed to support it, while ensuring that growth delivers opportunities and benefits for our residents and businesses. This plan aims to deliver sustainable growth while continuing to preserve and enhance the features that make Camden such an attractive place to live, work and visit*".

Policy G1 deals with 'Delivery and location of growth'. Policy G1 sets out the conditions to create the conditions for growth to deliver the homes, jobs, infrastructure and facilities to meet Camden's identified needs and harness the benefits for those who live and work in the borough.

The Policy notes that development will take place throughout the borough with the most significant growth expected to be delivered through (e) a concentration of development in the growth areas including Tottenham Court Road.

In respect of 'Growth areas' Para 2.19 states "a significant proportion of Camden's growth up to 2031 is expected to be delivered in the six identified growth areas of King's Cross, Euston, **Tottenham Court Road**, Holborn, West Hampstead Interchange, and Kentish Town Regis Road. Tottenham Court Road is identified in the London Plan as Opportunity Areas or Areas for Intensification.

Para. 2.20 of the Local Plan confirms '*these areas are identified as being suitable for large-scale redevelopment or significant increases in jobs and homes, and are based around transport interchanges. The majority of these areas are within Central London and therefore their* ***redevelopment will contribute towards the continued success of Central London and to London's national and international role****, as well as providing opportunities to bring benefits across the borough and the local area*" (emphasis added).

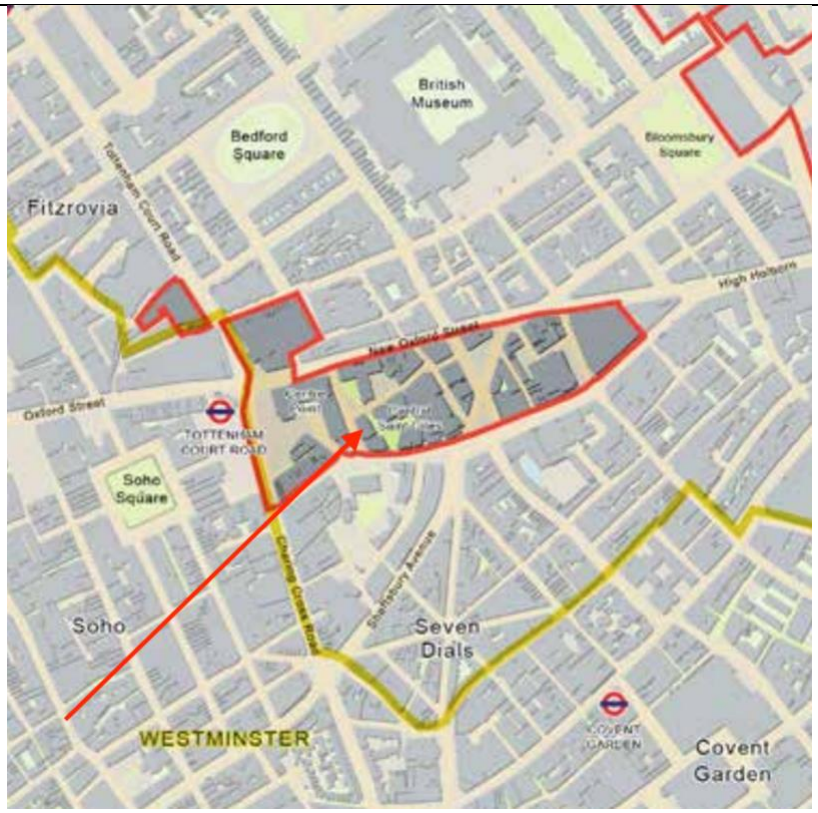


Image 12: The Tottenham Court Road Growth area

(Source: Camden Local Plan)

Para. 2.28 of the Local Plan establishes that the Tottenham Court Road growth area includes parts of both Camden and Westminster and includes Tottenham Court Road Crossrail station located within the western extent of the growth area. Image 12 above shows those areas within Camden only. Tottenham Court Road Underground is located just outside the Camden Local Plan growth area but within the London Plan Opportunity Area (Image 11 above). Growth here is being supported by the transport enhancements as part of Crossrail and Crossrail 2, in addition to upgrades to the Northern Line and ticket hall area. These works will see a significant increase in the number of passengers using this area and improvement of the public realm is a high priority.

Para. 2.29 requires that development within the Tottenham Court Road growth area should contribute to the Council's wider vision and objectives for this part of the borough. Policy aspirations include: a balanced mix of uses, including housing and affordable housing, significant provision of offices and other employment opportunities, community facilities, and retail to support the Central London, maximising densities compatible with local context, sustainable design principles and public transport capacity.

In Para.2.52 the Council recognises the unique role, character and challenges of Central London in particular in balancing its economic, social and cultural role and will support and promote the area as a successful and vibrant part of the capital to live in, work in and visit and states *"we will work together with partners to deliver the West End Project, which will transform the area around Tottenham Court Road, boosting business and create new public spaces for the community and visitors to enjoy";*

The Local Plan does not have a policy that is directly relevant to the installation of telecommunications in the Borough. Paragraph 5.10 'Digital Infrastructure' which is included in the supporting text for Policy E1 – 'Economic Development' states that the *"Council recognises the importance of digital infrastructure including telecommunications"*. Indeed recognising the importance of Digital Connectivity, the Mayor for London through the Greater London Borough Authorities has amended planning application forms in order to monitor 'Mobile Connectivity' and the implementation of London Plan Policy SI 6, in order to help avoid recurring situations like this one at the application site is to help rectify.

Paragraph 2.6 of the Local Plan sets out key priorities for delivering growth and harnessing its benefits which include:

> *Securing the infrastructure and services to meet the needs of our growing number of residents, workers and visitors.*

The paragraph goes onto state that this includes '*digital infrastructure'*.

Appendix 1 sets out the infrastructure that is required to deliver the Local Plan. Item 66 deals with digital connectivity and the relevant project/programme is to result in:

> *"Improved internet access through the acceleration of high-speed connectivity, including public wireless systems".*

In Policy E3 'Tourism', the Council recognise the importance of the visitor economy in Camden and will support tourism development and visitor accommodation. The Council expect new, large-scale tourism development and visitor accommodation to be located in Central London, particularly the growth areas of King's Cross, Euston, Tottenham Court Road and Holborn.

As set out in Section 4 of this statement, people are relying more and more on their mobile devices for internet access whether at home or on the move; this is no longer a 'nice to have' it is 'critical infrastructure'.

Camden Planning Guidance Digital Infrastructure (March 2018)

The planning guidance document is intended to support the policies of the Local Plan, including Policy E1, to assist with '*delivering growth and harnessing Sits benefits'* by '*securing infrastructure and services to meet the needs of Camden's growing numbers of residents, workers and visitors'*, aiming to '*enable improved internet access through the acceleration of high speed connectivity…*'.and is a material consideration in determining planning applications.

The first and fourth key messages are particularly relevant to the proposed reinstatement of critical infrastructure development and state:

- *The Council will support the expansion of electronic communications networks, including telecommunications and high-speed broadband*
- *The Council will require applications for telecommunications development to be supported by the necessary evidence to justify the proposed development.*

The critical infrastructure on the rooftop of Castlewood House provided reliable mobile digital connectivity to the area, ensuring Council's wider and planning objectives are being worked toward. The loss of mobile digital coverage and capacity to the area will actively prevent the objectives of the Local Plan being met.

The proposed development will not only result in the expansion of telecommunication networks in the area by introducing 5G to the Tottenham Court Road Opportunity Area and CAZ, but more importantly it will partially reinstate the coverage lost from the site at Castlewood House which was removed as part of the site providers redevelopment plan. The proposals will not only help the local economy bounce back from the Covid-19 pandemic but also enable future growth in line with Government aspirations for 'World Class Connectivity'. This will also be achieved by keeping the number of installations to a minimum which is one of the principle aim's set out in paragraph 13 of the guidance, which states (mirroring para 113 of the NPPF):

> *"In particular, the Council will aim to keep the numbers of radio and telecommunications masts and the sites for such installations to a minimum consistent with the efficient operation of the network. Existing masts, buildings and other structures should be used unless the need for a new site has been demonstrated to the satisfaction of the Council".*

The need for the replacement development is demonstrable and has clearly been set out in this statement.

Digital Camden (2014)

The strategy was published in 2014 and sets out a series of actions to support the uptake of high quality, next generation connectivity. It prioritised '*creating the conditions for and harnessing the benefits of economic growth*' including '*stimulate an expansion of high-speed internet access across the Borough…*'.

Having a digital strategy in 2014 shows that wider Camden Council was a leading proponent of the UK Government's Digital Strategy initiative, and understood even then the economic benefit of good quality communications services.

This was detailed in the document UK Digital Strategy A new approach to digital change for our borough (2016), in which Camden set out '*We believe it's about enabling the transformation of government, business and society for the better*.' Under the Unlocking Growth recommendations for the UK Digital Strategy Recommendation 6: '*The UK Digital Strategy needs to continue focusing on accelerating superfast connectivity which is particularly poor within inner London as well as incubating the rollout of next generation mobile and telecommunications connectivity to enable ubiquitous access to the internet and greater competition. Central and local public service estate should be used to boost connectivity, following Camden's 'digital rooftops' initiative.*' With regard to Smart Cities, it says '*Alongside this a whole new wave of service innovation is being driven through the digitisation of our lives with cars, health monitors and mobile phones providing vast amounts of information that offer fundamentally different and disruptive ways of delivering services.*' The objectives of Digital Camden and the Digital Strategy will not be met without the provision of replacement coverage and capacity following the removal of Castlewood House. The site at 100 New Oxford Street forms part of a 3-site split cell strategy to replicate the services of Castlewood House.

The proposed development would reinstate and maintain online connections for businesses and residents already online by maintaining the coverage and capacity that has been following the removal of Castlewood House from the network. It will also improve services to Telefonica customers as well as their MVNO's by providing 5G services.

Camden Planning Guidance Design (Draft July 2020)[8]

The Draft planning guidance document is intended to support the policies of the Local Plan and is a material consideration in determining planning applications. However, this guidance has less weight than the Local Plan or other adopted development plan documents. The Draft guidance states that it does not specifically apply to telecommunications as they are considered in other guidance. However, there is a section in the guidance which is relevant to Heritage and looks at integrating new development with heritage assets. The guidance states that:

> "*Development proposed to a heritage asset or in close proximity to a heritage asset is informed through understanding of its sensitive context, the historic environment and the significance of the heritage asset and its setting.*
>
> *The Council expects that development not only conserves and avoids harm but also takes opportunities to enhance or better reveal the significance of heritage assets and their settings. Development must respect local character and context and seek to enhance the character of an area where possible".*

The guidance has not been written with specialist telecoms infrastructure in mind and the design of the proposed equipment cannot be altered due to the technical requirements. The antennas have been positioned on the building to enable their effective operation, and have been set back from the roof edge at the lowest possible height to minimise their appearance. An expectation that all development affecting heritage assets 'avoids harm' is a high threshold and not reflective of the requirement to

[8] https://www.camden.gov.uk/documents/20142/4823269/Design+CPG+Jan+2021.pdf/086b8201-aa57-c45f-178e-b3e18a576d5e?t=1611580522411

provide connectivity to all areas, including heritage areas, via suitably designed and functional infrastructure which is simply not addressed by these policies. When considering the appropriateness of telecommunications development proposals, it is imperative that Decision Makers give precedence to telecommunications specific policy where it exists. If it does not exist at a local level, or if the policy is out of date, then the NPPF must prevail. One must also appreciate that it is extremely unreasonable to expect niche infrastructural development to strictly adhere to more general policy criteria.

Camden Planning Guidance Amenity (Draft July 2020)

The Draft planning guidance document is intended to support the policies of the Local Plan and is a material consideration in determining planning applications but makes no reference to telecommunications.

The section on outlook is the only section that can relate to the proposed development and states:

> *"Outlook is the visual amenity enjoyed by occupants when looking out of their windows or from their garden. How pleasant an outlook is depends on what is being viewed. For example, an outlook onto amenity space is more pleasant than an outlook across a servicing yard. Particular care should therefore be taken if the proposed development adjoins properties with a single aspect. Any unpleasant features should be screened if possible, for example with permanent landscaping.*
>
> *Developments should ensure that the proximity, size or cumulative effect of any structures avoids having an overbearing and/or dominating effect that is detrimental to the enjoyment of their properties by adjoining residential occupiers. The location of bin or cycle stores, for example, should be carefully considered if they are in close proximity to windows or spaces used by occupiers.*
>
> *It should be noted that the specific view from a property is not protected as this is not a material planning consideration".*

Area Planning Framework for Tottenham Court Road Station and St Giles High Street Area (Adopted July 2004)[9]

The planning framework set out a vision for the development of the area over a ten-year period or so from 2004. The Framework covers an area of 6.35 ha. It includes those sites within the vicinity of Tottenham Court Road Underground Station and St Giles High Street where major change has occurred in line with the planning framework. Image 3 above shows that many buildings that are protected by Conservation Area and listed building designation are included within the Area. The framework state '*this is inevitable given the large number of historically and architecturally important buildings in this part of London. The fact that a particular building is included in the Area does not in any way imply that the Council considers that it is a candidate for redevelopment or that appropriate Conservation Areas or Listed Building policies will not apply*'.

One of the spatial objectives of the Plan is '*Development of the Area will bring a richer and more balanced mix of uses that will regenerate the area and make it a better place to live and work in or to visit or pass through*'.

Para. 4.15 recognises that a major increase in residential provision will create a substantial increase in the demand for community services, particularly for schools, health and leisure facilities. Para. 4.16 states *"While the Area's good accessibility makes this is a highly suitable location for new community facilities they are likely to require long term planning and major capital expenditure. The timing and delivery of such facilities will be a major challenge as it is likely that new developments leading to growth in the residential population may be quite piecemeal compared with the provision of any new facilities, which will draw from different and normally wider catchment areas. However development of a number of major sites in the area provides a unique opportunity to accommodate some of these facilities, and the Council will seek their inclusion as appropriate".*

[9] https://www.wecanmove.co.uk/documents/20142/3797089/tottenham-court-road.pdf/36746fe3-8ab1-5194-050e-9bf91143fbe3

Reflecting on the above, the applicant is confident that the proposed development does not conflict with local guidance and policies, is strongly supported by Government policy statements and will assist with the delivery of local and national policy aspirations.

Planning Assessment

The following paragraphs set out how the application complies with the NPPF, The Code of Best Practice and the Camden Local Plan. The requirement for the replacement and new capacity and coverage is urgently required (as clearly evidenced in the attached coverage plots). As already explained earlier, the removal of the former site at Castlewood House has instigated the need for a replacement installation for the operator Telefonica as part of a joint 3 site split cell solution with Vodafone.

The proposed equipment relocated from Castlewood House fully complies with the objectives of the NPPF. Government guidance states that in order to limit visual intrusion the number of radio and telecommunication masts and the sites should be kept to a minimum consistent with the efficient operation of the network. Existing masts, buildings and other structures should be used unless the need of a new site has been justified.

This radio base station will enable Telefonica to maintain services in the New Oxford Street area, in line with the NPPF. The Code of Best Practice also acknowledges that new sites are necessary when existing sites are no longer available. The operators' license obligations requires them to meet customers "reasonable demand". Reasonable demand would be to provide indoor coverage as customers expect to be able to use their handsets indoors. The operators also have a competitive market driven "requirement" to provide a high-quality service.

The main matter for consideration is whether the proposed siting, size and design of the telecommunications equipment would be out of keeping with the character and appearance of the mixed-use area, resulting in significant harm to the character and appearance of the Bloomsbury Conservation Area and adjacent listed buildings. Would this harm outweigh the significant social and economic benefits associated with the replacement and increased service provision attributed to the proposal and other valid material considerations as outlined within NPPF regarding a reduction in mast proliferation through mast sharing.

Siting and Appearance:

Policy D1 of the Local Plan relates to large scale developments but and requires development to be of a high standard. The proposal accords with Policies D1. The height and position of the antennas on the building are so that they can be justified from a technical perspective as the antennas need to clear the immediate roof so as not to create signal clipping and reflection. The height of a proposed antenna has to be offset against its positions on the roof, whereby the closer to the centre of the roof of the building the more height that is needed to clear the immediate roof space in front of the antenna. Furthermore, the additional height is required in order to avoid ICNIRP issues, which would sterilise a large part of the rooftop at lower levels. The pole mounted antennas enable the operators to provide the multiple technologies and meet their full coverage requirements to the target area within the permitted ICNIRP guidelines. As such, they have been designed and sited to minimise the visual impact on the character and appearance of the area.

Telecommunications antennas are essential infrastructure to enable the mobile network to function. Similarly, plant rooms and air conditioning units are essential infrastructure but will not necessarily create places that are locally distinctive, people friendly, provide natural surveillance, nor improve the built character and quality of an area and the way it functions. Indeed, few if any essential rooftop infrastructure in the vicinity of the site enhance the character, quality or function of the area.

The installation of 6 no. pole mounted antennas designed to be as similar as possible to other roof top infrastructure found in the immediate area, will be no more at odds with the streetscene and character of the area than other existing equipment located on rooftops such as plant rooms and air conditioning units.

Image 13: Proposed view along Earnshaw Street looking North.

It is accepted that the height of the proposed installation is taller than the plant room level of the host building however the equipment will be read against the plant room level. Telecommunications apparatus by its very nature must be taller than surrounding built and natural form to ensure its efficient operation.

Reasonable consideration of the proposal in the context of adjacent rooftops can only conclude that the presence of other rooftop equipment in the immediate area only seeks to provide a setting wherein a base station may appear more congruous from which to provide an important service to a wider area.

Image 14: Proposed view from the junction of Tottenham Court Road and New Oxford Street,

The proposal accords with Policies D1 in that the antennas are located in pairs in three locations, wall mounted the plant room thus avoiding the use of free standing 'scaffolding rigs'. Given their distance above ground level, the antennas would not be visible from ground level. This point is demonstrated by the Line of Site plans and photomontages which form part of this submittal pack. As such, they have been designed and sited to minimise the visual impact on the character and appearance of the conservation area. Consequently, they will preserve the character and appearance of the Bloomsbury Conservation Area. This is in full accordance with Policy D1 and D2 of the Local Plan. As such, it is considered that the proposal will cause less than substantial harm (lower end) to the significance of the Conservation Area.

5G Coverage – Material Consideration

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

Mobile digital connectivity is an essential service rather than a luxury, for all sorts of reasons including working from home, home schooling, accessing services online, shopping online, virtual medical advice, and keeping in touch with friends and family amongst other things as well as potentially over 50% of over 60 million passengers per annum utilising the Tottenham Court Road Crossrail Station who wish to access their mobile devices will continue to suffer from significantly compromised digital connectivity and in turn a very poor user experience should the application not be approved and part replacement coverage provided.

At present, during the COVID 19 pandemic it is paramount that digital connectivity is supported and maintained throughout the country. In particular the current massive shift in user demand from city centres and places of work to residential areas and suburbs requires an improvement in coverage and capacity throughout the whole network. The current proposal therefore provides such additional capacity to the network whilst still promoting the improved 4G technology and new 5G technology.

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

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

Economic and Social Benefits

Para. 190 of the NPPF requires that Local Planning Authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise.

In considering the potential impacts of any development, Local Planning Authorities are required to quantify the level of harm to heritage assets. As set out above the applicant considers that any harm arising from the proposal is at the lower end of less than substantial.

The Town and Country Planning Act requires that planning applications are determined in accordance with the development plan unless material considerations indicate otherwise. Paragraph 196 of the Framework states that where a development would 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.

As has already been presented, there is a clear and demonstrable need for a replacement radio base station in the area to reinstate 2G, 3G, 4G services which have been lost following the removal of the former site at Castlewood House. Similarly, the equipment proposed to achieve this is not greater than what is required. The same applies to the height of the proposed antennas. The selected location and design are a compromise between technical requirements and the impact on the wider views and heritage assets.

Being able to use smartphones and other mobile devices such as tablets whenever and wherever is essential for the community as a whole. Indeed, there are some users who rely solely on their mobile devices as their form of communication and do not have a land line.

NPPF clearly acknowledges the benefits of advanced, high quality and reliable communications infrastructure citing it as '*essential for economic growth and social well-being*'. It enables people to

connect and interact with each other, either in person or electronically, to increase prosperity. It enables effective communication between people and businesses and provides a place for people to work and enjoy our natural and cultural assets. Poor infrastructure can be both a disincentive to investment and growth, and have a detrimental impact on quality of life, prosperity and the well-being of communities and is contrary to Policy GG1 of the London Plan and G1 of the Camden Local Plan which aim to build strong and inclusive communities.

The NPPF strongly supports sustainable development, as does the London Plan 2021 and Camden Local Plan 2017 The Mayor of London acknowledges the London Plan 2021 that '*the provision of digital infrastructure is as important for the proper functioning of development as energy, water and waste management services and should be treated with the same importance'* (Policy SI 6). The proposed replacement radio base station will connect positively to the community as a whole and although local is part of national networks and will help deliver the Mayor of London's and Camden's aspirations of having the digital infrastructure in place to ensure Camden's competitiveness. It will allow access to faster connection and enhanced data services, the benefits of which have been widely publicised. The key benefits include connecting with family, friends and colleagues at any time around the world. This benefit has never been more important, understood and relied upon than during the COVID-19 pandemic as set above. The l proposals are therefore in full accordance with policies GG5, GG 6 and SI 6 of the London Plan and G1, C2 and C6 of the Camden Local Plan.

Mobile communication plays a significant role in sustainable development. Being able to access the internet via a mobile device allows people to access a wide range of central and local government services buy groceries, manage finances, apply for jobs/university, and carry out school projects, send emails, download applications, send and receive instant messages, participate in social media, streaming and downloading data, plus virtual medical appointments to name just a few of the benefits of being able to use an internet enabled handheld device. It also allows people to work from home or on the move without needing to return to the office. Residents and businesses will enjoy better accessibility, assisting home-base working by improving the electronic means of communication and the roll-out of high-speed mobile broadband helping to promote live-work development. This reduces travel time, carbon emissions and increases the speed at which information is processed/shared. The proposals are therefore in full accordance with policies GG5, GG 6 and SI 6 of the London Plan and G1, C2 and C6 of the Camden Local Plan.

In such instances, as described above, the NPPF supports development that improves the economic, social and environmental conditions in the area. Part replacing the 2G, 3G and 4G coverage and capacity in this area and providing new 5G services will fully meet this national policy objective. Continuing to transform the digital connectivity of Camden to drive economic growth and innovation, working to meet national targets of full roll-out of 5G technology and the Mayor of London's aspirations to be a truly global and competitive region as well as Camden's growth aspirations. Without the infrastructure in place, reliable digital connectivity cannot be provided and growth aspirations cannot be realised which is contrary to Policy SI 6 of the London Plan.

These factors are all significant material considerations which should be taken in to account by the Local Planning Authority when determining this planning application.

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

The issue of benefits and planning balance was also considered in Appeal Ref APP/X5990/W/16/3162918, 55 – 59 Oxford Street, London, W1D 2EQ. The Inspector found at Paragraph 20:

'Whilst I have paid special attention to the desirability of preserving or enhancing the character and appearance of the conservation area, the above factors lead me to conclude that there is less than substantial harm to the character and appearance of the existing building and the Soho Conservation Area'.

The proposal related to the installation of 9 no antenna inside a 'replica' GRP extension to the plant room. Mobile connectivity is essential to the future success of the economy.

In October 2020, the decision of the London Borough of Islington to refuse planning permission for the installation of a replacement base station, consisting of 6 no antennas and 2 no 0.3m dishes and associated development on 74-76 St John Street, London, EC1M 4DZ, to reinstate coverage lost following a Notice to Quit requiring the former site to be removed (ie exactly the same situation as in the current proposals),was overturned (APP/V5570/W/20/3246770). As with the current situation, the main issues related to whether or not the proposed development would preserve or enhance the character or appearance of the setting of the conservation area and nearby listed buildings including the Grade I listed Charterhouse, and whether or not the harm identified to the significance of designated heritage assets would be outweighed by the proposal's public benefits. The Inspector concluded at Para 24: "*I am content that the minor level of less than substantial harm that I have identified to multiple designated heritage assets, even when considered in a cumulative sense, would be outweighed by the significant public benefits that would be achieved by the proposal. Therefore, the proposal accords with the relevant heritage provisions of the Framework and with Policy DM2.3 of the DMP in so far as it offers the opportunity for harm to the significance of designated heritage assets to be offset by clear and convincing justification*".

In another decision made by the London Borough of Islington, planning permission was refused for the installation of 12 no antennas, 3 no dishes and 3 no antennas and 6 no cabinets at 127 Chiswell Street, Islington, to replace the loss of an existing site due to redevelopment, similar to the current proposals (APP/V5570/W/20/3251047) The Inspector stated:

Para. 10: "*I consider that the development would fail to preserve or enhance the character or appearance of the Bunhill Fields and Finsbury Square Conservation Area. The harm would be limited by the siting and relatively small scale of the development, and in the Framework's terms the harm to the significance of the Conservation Area as a designated heritage asset would be less than substantial. I find that the setting of the Grade II Listed Buildings within Finsbury Square would be preserved*".

Para.17: "*The Council states that any benefits arising from the scheme would be 'not entirely public in the manner of, for example, a fire station'. As a statement of bare fact this is not inaccurate, inasmuch as the scheme is being brought forward on behalf of two network operators, presumably in anticipation of it contributing to their business revenues. The Council also asserts that 'any harm to a conservation area [...] is only acceptable in extraordinary circumstances, usually in order to secure the optimum viable use of an asset or better reveal its significance' and its expectation that there should necessarily be an 'accompanying heritage benefit'. In my view this is a misinterpretation of the requirements of the Framework. Paragraph 196 is quite clear about the balancing exercise which must be carried out in cases where less than substantial harm to heritage assets is found, which is not that any benefits should be entirely public, but that such public benefits as can be identified are weighed against any harm to the significance of the heritage asset. In this case, there would be a considerable public benefit arising from the provision of improved digital communications networks in this busy commercial area, and I consider that this carries significant weight*".
Para. 19: "*I have found that the proposal would fail to preserve or enhance the character or appearance of the Bunhill Fields and Finsbury Square Conservation Area, and would cause less than substantial harm to the significance of the Conservation Area as a designated heritage asset. In this respect I have also found conflict with planning policies, and indeed the proposal would conflict with the development plan as a whole*".

Para. 20: "*However, I have also found that a significant public benefit would be delivered through the provision of improved mobile communications networks, which would outweigh the limited harm to the heritage asset which I have identified. The material considerations therefore indicate that, in this case, the proposal should be determined other than in accordance with the development plan*".

Mobile connectivity is essential to the future success of the economy. The combined value of 4G and 5G mobile connectivity is estimated to add £18.5bn to the economy by 2026 (Councils and Connectivity Sept 2018). Mobile connectivity is essential to creating a better society. Digital inclusion can help people gain employment, become more financially secure and improve health and well-being. Mobile connectivity is essential to fulfilling the potential of new technologies. Innovations such

as artificial intelligence and connected cars will change how we work, spend our leisure time and run our public services.

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

The Cornerstone Local Authority Engagement Brochure September 2020 further emphasises the benefits of high-quality mobile connectivity. *"Access to a reliable mobile network has become a necessity for many of us. Some of the key benefits it provides are:*

- *Connecting with family, friends, and colleagues at any time around the world*
- *Giving the ability to manage our personal information 24/7*
- *Keeping us always entertained and informed with the latest news*
- *Creating more productive and cost efficiencies for businesses*

The economic benefit

- Businesses offering online services can extend their products to a broader audience
- Local areas and businesses can benefit from tourists and visitors as hotels, attractions, and restaurants can be booked online from anywhere in the world
- Business owners and services like doctors can provide a faster and more cost-effective service by offering both online appointments and ordering
- Digital connectivity facilitates economic growth, something which the Government is keen to progress and promote

The social benefit

- Mobile communications can help people to stay in touch wherever and whenever, which can help improve social wellbeing
- Contacting emergency services is easier, especially in remote areas
- Using a mobile wherever you go can provide better personal security
- Having access to social networking sites and applications can keep people entertained with their lifestyles and interests
- Mobile connectivity helps promote smarter and productive ways of working. For example, working from home can help minimise commuting which can provide better work and home life balance
- Access to personal information 24/7, e.g. bank accounts, can offer efficiency and convenience

The benefits that the provision of shared mobile connectivity provides now and in the future and the need to reinstate connectivity is vital and is instrumental to the delivery of Camden's ambitious growth aspirations for the CAZ and Tottenham Court Road Opportunity Area and are clearly in full accordance with Policy GG1, GG5 and GG6 of the Camden Local Plan.

The applicant has identified an existing building on which to locate their replacement equipment. Section 3 above sets out the design philosophy and confirms the current design proposals is the 'best available' to reinstate connectivity in one of London's most economically vital areas – Tottenham Court Road Opportunity Area, adjoining the Oxford Street District which is an 'International Centre'.

Paragraph 38 of the revised NPPF states that:

*'Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available, including...*permission in principle*, and work proactively with applicants to secure developments that will improve the*

economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible'.

Maintaining high quality 2G, 3G and 4G coverage and capacity as well as providing new 5G technology in this area fully me this part of the NPPF. The social and economic benefits are a significant material consideration which should be weighed against the visual impact associated with a radio base station in this location. HM Treasury outlined such benefits in its report '*Fixing the Foundations: Creating a More Prosperous Nation*' – July 2015. Paragraph 7.1 of the plan stated that reliable and high quality fixed and mobile broadband connections support growth in productivity, efficiency and labour force participation across the whole economy. They enable new and more efficient business processes, access to new markets and support flexible working and working from home.

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

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

Indeed, MPs have noted in parliament that the UKs Superfast Broadband connectivity was 'relatively poor'. As such, there is continuing and growing strong national support for high quality communications infrastructure. Further to the Government's commitment to improve connectivity, on 24th November 2016 the new permitted development rights for telecommunication operators came in to force, designed to lift the restrictions on mobile operators such is the significance and weight the Government place upon the benefits attached to modern connectivity.

In October 2016, there was also the BIG Infrastructure Group (as Chaired by MP Grant Shapps) Report release calling on operators to improve their network. This is signed and has comments from numerous MP's nationally.

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

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

The Assessment goes on to note that '*Universal digital connectivity would serve as an equaliser of economic opportunity in that it enables participation in a modern digital economy'*. Therefore, this Needs Assessment further explains the consequences of a lack of coverage and the effects this has on social and economic prosperity. This clearly highlights the importance of providing new 5G services to this very busy area of the capital, where the social and economic benefits outweighed the environmental considerations.

Ministers from the DCMS and MHCLG wrote to all CEOs of Council's in England (March 2019) setting out its position in respect of supporting investment in high-quality, reliable digital connectivity. The Government acknowledges that such infrastructure is essential for communities to benefit from faster economic growth and greater social inclusion. Ministers state:

'It is essential to keep pace with growing demand for internet bandwidth and mobile data from local businesses, residents and those who visit our communities. As outlined in the Future Telecoms Infrastructure Review, the Government would like to see nationwide full fibre coverage by 2033. We

would also like the UK to be a world leader in 5G, with the majority of the population covered by a 5G signal by 2027. We are writing to ask for your help in supporting the investment necessary to achieve these objectives.

Recent years have seen substantial investment in mobile and fixed digital infrastructure across the UK.

While mobile coverage across the UK has been significantly improving, there are still too many areas where coverage is poor. The UK has now achieved 95% superfast broadband coverage but still only 6% full fibre coverage.

We need to create the market and policy conditions necessary to support the large-scale commercial investment required to extend and future-proof digital connectivity. A key part of this is making it easier for operators to deploy infrastructure. To help to achieve this, the Government recently reformed the Electronic Communications Code - the statutory framework which underpins agreements between communications network providers and those in both the private and public sector who can provide sites for the installation of network equipment. The purpose of the reforms was to make it easier and more cost effective for communications network providers to deploy and maintain digital infrastructure.

Local authorities have an essential role to play as site providers. As Chief Executives, you can support investment in digital communications infrastructure by ensuring your organisations have policies and procedures in place that promote effective engagement with the digital communications industry and minimise barriers to deployment'.

At present, during the COVID 19 pandemic it is paramount that digital connectivity is supported and maintained throughout the country. In particular the current massive shift in user demand from city centres and places of work to residential areas and suburbs requires an improvement in coverage and capacity throughout the whole network. The current proposal therefore provides such additional capacity to the network whilst still promoting 5G technology.

In respect of 'Connectivity and COVID 19, the Major of London has provided guidance on 'London's access to mobile and broadband networks', stating:

We know that with lots of Londoners now having to stay at home, people have lots of questions about whether mobile and broadband networks will be able to cope as more of us are now working from home.

Both mobile and fixed networks are built to support peak times. The types of application that people use heavily at peak times, during evenings at home, such as Netflix, Amazon Prime, Sky Go and other streaming or gaming services, use much more bandwidth than typical working tools like emails, voice and video calling.

There is enough capacity in the system to cope with many more people working from home, even with the significant increases in home working we are seeing due to coronavirus (COVID-19) impacts.

If many engineers are ill or required to isolate, broadband providers may have to prioritise repairing faults over new connections. However, operators have been considering this for some time and have been developing plans for coping with such a situation'.

The Major for London, listed various guidance including:

Below we have provided a list of guidance from various operators:

Operator guidance

On 10 April, through a joint statement with Government, the UK's major internet and mobile companies have agreed to work with NHS England and NHS Improvement, and NHSX to:

- *Offer identified NHS frontline staff, who are existing customers, the mobile data access, voice calls and text they need, at no extra cost, on their personal mobiles used for work purposes, to enable the staff to work remotely without fear of extra charges and limitations;*

- *Ensure NHS clinicians working from home have, wherever possible, prioritised broadband upgrades to superfast or other improvements they might need, in order to perform tasks, such as consultations carried out via video conferencing and to download/upload large medical files. Clinicians with slow or standard broadband speeds, for example, would be eligible to be upgraded to superfast speeds where their current connections are insufficient. Some providers will upgrade customers who are NHS workers on to faster speeds without any extra charges.*

- *Improve connectivity in care homes that have slow, or no, broadband connections, wherever possible; and*

- *While patients having remote consultations will get the best experience on a fixed broadband connection, there are a small proportion of mobile-only households. Operators have already agreed generous data allowances for their vulnerable mobile customers, so that patients that can only use a mobile connection for their video consultations will have sufficient data available*.

Online Nation is an annual research report, published for the first time in 2019. Using research produced both by Ofcom and others, it looks at what people in the UK are doing online, how they are served by online content providers and platforms, and their experiences of using the internet, alongside business models and industry trends. As well as looking at long-term trends, this year's report includes more recent data looking at online behaviour in the UK during the coronavirus (Covid-19) pandemic.

The Report sets out its findings:

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

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

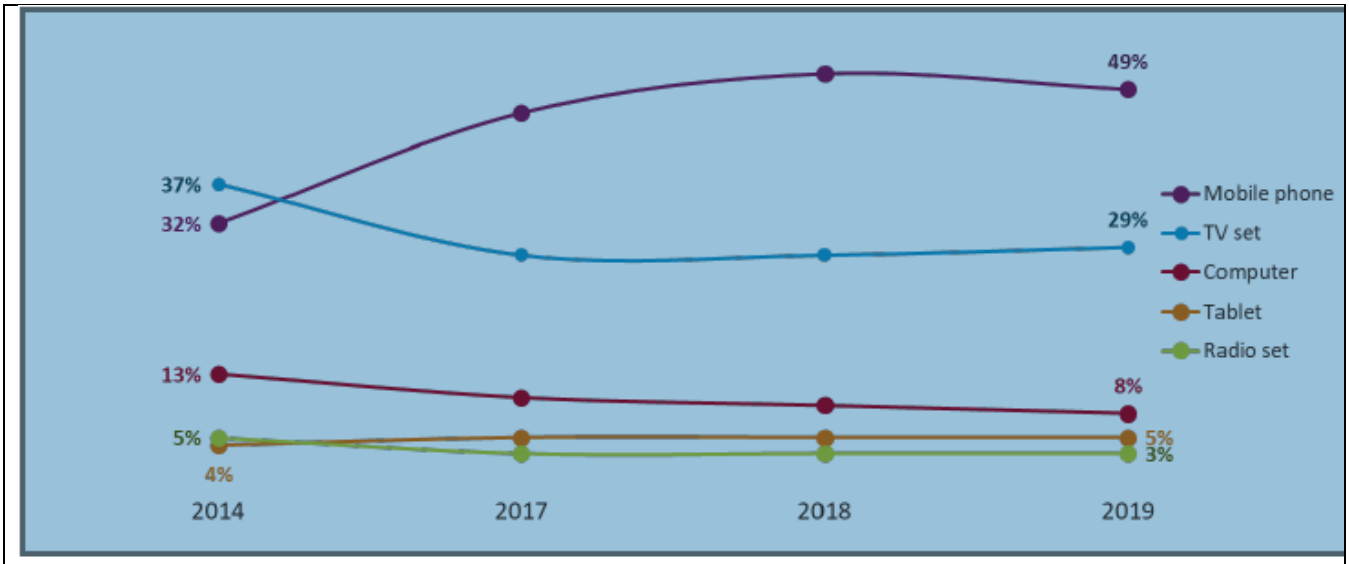
Key Matrics Online Consumer Market

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

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

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

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



Source: Ofcom Adults' Media Literacy Tracker 2014-2019

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

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

The Ofcom Connected Nations 2019 Report (published December 2019 and reissued in March 2020) measures progress in broadband and mobile services in the UK and highlights the work Ofcom is doing, alongside UK and devolved governments and communications companies, to improve the availability of these services. Ofcom has aspirations for people in the UK to be able to easily access good broadband and mobile connections wherever they live, work and travel.

The report notes that over the last few years, the availability and take up of superfast and ultrafast broadband and the coverage and take-up of 4G mobile services have dramatically increased. The UK holds a leading position on current 4G mobile network coverage compared with other large European countries. It highlights that this demonstrates that policy and regulatory decisions made in the past few years have supported investment in new networks and technology and delivered a good outcome for consumers.

The Report goes on to state in the Overview that '*emphasis must now turn to the initiatives needed to ensure that the next wave of network deployment can meet future needs as quickly as possible by further extending the reach of full fibre and mobile networks*' (emphasis added).

The Connected Nations Report 2019 found that 5G services have been launched by all four mobile network operators over the past year and are now operating in over 40 towns and cities across the UK. Initial offerings are focused on densely populated areas. As well as providing improved broadband services for consumers via public networks, future 5G networks could provide specialist services to organisations and businesses.

The report highlights that the UK is a 5G leader in Europe, because it is one of the first countries where all of the Mobile Network Operators have started 5G deployment. These initial 5G networks target mobile broadband services, providing several enhancements over 4G networks, including higher speeds and the capability to deliver extra capacity where needed, such as in urban areas or sports stadiums. It goes on to state that future evolutions of these initial 5G networks will enable additional services that rely on a near instantaneous network response and need high reliability, with applications in sectors such as manufacturing, logistics, agriculture, transport/automotive, energy, media and entertainment and healthcare. Examples include controlling vehicles at distance e.g. in mines, or enabling robots in automated factories to communicate with each other.

The Report acknowledges that 5G roll out has so far focused on areas with higher populations, where capacity demands are likely to be greatest. In the near term, operators are likely to continue rollout in areas where 5G will deliver significant quality of service improvements needed to meet consumer demand.

The Report highlights the benefits of 5G for organisations and businesses noting that Public mobile networks, in addition to providing broadband services for consumers, could also be used to provide specialist services to organisations and businesses. Organisations and businesses could also decide to access 5G services via a local private 5G network, either self-deployed or deployed by a third party.

The Report also notes that 4G carries 90% of data traffic, but only 21% of voice traffic, with 3G and 2G carrying 73% and 6% of voice traffic respectively. The vast majority of traffic (82%) is generated in urban areas, and data growth in these urban areas is continuing rapidly, up 35% on 2018.

The Connected Nations 2020[10] (December 2020) report is published as the UK continues to address the challenges of the coronavirus (Covid-19) pandemic; a time when people, families and businesses have come to rely on their phone and broadband connections as never before. We report on how the networks have performed during this period and how the availability of services has evolved.

The report sets out in its findings:

- **The UK's fixed and mobile networks have generally coped well with increased demands during the pandemic.** A shift to more people being at home drove increased demand on broadband networks during the day, although peak usage remained in the evening. Mobile networks also experienced increases in voice traffic.
- **The number of mobile base stations providing 5G services has risen ten-fold, to around 3,000 across the UK.** 87% of these are in England, 7% in Scotland and 3% in both Wales and Northern Ireland.
- **Mobile coverage is generally stable.** The four mobile network operators (MNOs) – EE, O2, Three and Vodafone - each estimate they provide outdoor coverage to 98%-99% of premises. Their networks' coverage of the UK landmass ranges from around 79% to around 85%. The Shared Rural Network programme agreed in March 2020 will extend coverage beyond this by 2025.
- **A small, but significant number of properties are still struggling to get connected.** We estimate that 43,000 premises cannot access either a decent fixed broadband service, or good 4G coverage, indoors.
- **Mobile data consumption continues to rise, increasing by 42% compared with last year.** 83% of the total data traffic was consumed in England with about 10% in Scotland, 4% in Wales and 3% in Northern Ireland (largely in line with UK population distribution). Reflecting this growth, the traffic carried in England in June exceeded that carried across the whole UK in February.

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

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

[10] https://www.ofcom.org.uk/research-and-data/multi-sector-research/infrastructure-research/connected-nations-2020/main-report

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

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

On the 1 October 2020, as part of the Speed up Britain Campaign, The Centre of Policy Studies Report published '*Upwardly Mobile: How the UK can gain the full benefits of the 5G revolution*'[11]. The report identifies what the 5G opportunities are and what the Government needs to do so we can all benefit from this vital new technology. It states that delays to the rollout of 5G could cost the country tens of billions of pounds in lost economic output. The former Government advisers Alex Jackman and Nick King argue that Government's 'levelling up' agenda and the UK's recovery from the COVID-19 pandemic is at risk without a faster 5G rollout – to the tune of £41 billion.

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

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

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

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

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

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

The report acknowledges that the gains are not just at national level. A more extensive digital infrastructure helps local areas to attract and retain businesses and talent, thereby playing a vital role in reducing regional inequalities. Providing a supportive environment for digital infrastructure is one of the few things the Government can do that costs little, boosts growth and helps level up the UK….the key is speed. **The faster a network is built, the bigger the regional gains** (emphasis added). The

[11] https://www.cps.org.uk/research/upwardly-mobile

telecommunications industry faces challenges on this front. The COVID-19 pandemic has increased demand on networks but delayed the availability of new spectrum to provide additional capacity.

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

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

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

Education

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

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

Health:

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

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

It is therefore considered that the wider public benefits ensuing from the installation of equipment will outweigh the very limited harm to the host building, street scene and less than substantial harm to the Bloomsbury Conservation Area.

Health and Safety

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

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

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

In this instance, Telefonica believes that it is not necessary to consider health effects further, as recommended by NPPF. The operator is committed to ensuring that all new and existing installations are ICNIRP compliant, and consequently it is considered that there is no basis for this application to be refused on health and safety grounds or for reasons relating to public concerns about health and safety. ICNIRP compliance certificates are enclosed for the operator with this application. If required, additional information regarding the operation of mobile telephone base stations and health and safety considerations can be provided.

Summary

The following conclusions have been reached:

The Applicant has demonstrated the need for the application proposal, which would provide part replacement coverage, reinstating high quality, reliable mobile digital connectivity within this area following the loss of an existing site within the Applicant's networks. Evidence of the benefits of high-quality communications connectivity in terms of growing a good economy, building strong and inclusive communities has been provided, along with central, regional and local government aspirations to provide infrastructure such as the application site, without which critical connectivity cannot be achieved. The proposed site will also bring 5G services to the area, the benefits of which are extensive now and, in the future, as well documented in this statement.

The Applicant has undertaken an exhaustive search of the area, during which the use of an existing building was identified to provide part replacement for coverage following the loss of the former Castlewood House. It has been demonstrated that no more suitable, feasible alternative sites have been identified and that the application site represents the optimum option in terms of balancing the technical and operational requirements for the provision of shared replacement coverage in the public interest with the need to minimise the impact of development as far as is practical given critical infrastructure must fulfill its function.

It has been demonstrated that the application proposals, by virtue of its scale, height and design would not cause harm to the host building, surrounding area and the Bloomsbury Conservation Area or other designated heritage assets including listed buildings.

I confirm that submitted drawings have been checked for accuracy.