
SUPPLEMENTARY INFORMATION FORM

1. Site details

Site Name	Ferring	Site Address	Existing Telecomms Installation, Southern Water Pumping Station, off Ambereley Drive, Ferring, Worthing BN12 4QJ
NGR	510106 101827		
Site Ref Number	20709	Site Type ¹	Macrocell

2. Pre Application Check list

Site selection

Was a local planning authority mast register available to check for suitable sites by the operator or the local planning authority?		No
if no explain why N/A, Upgrade		
Was the industry site database checked for suitable sites by the operator?		No
if no explain why N/A, Upgrade		

Annual Area Wide Information to local planning authority

Date of information submission to local planning authority	October 2016
Name of contact	Director of Planning
Summary of issues raised: None known	

Pre-application consultation with local planning authority

Date of written offer of pre-application consultation	11 th January 2017 & subsequent correspondence	
Was there pre-application contact	Yes	

¹ Macro or Micro

Date of pre-application contact	Various, but concluded 16 th June 2017
Name of contact	Anita Gardener
An original formal pre-application enquiry was submitted on 11th January 2017, in relation to a proposal to replace the existing telecommunications 'telegraph' pole. This is essential in order to provide significantly improved coverage and capacity, to allow for 4G services, and critically to allow the deployment of the new Emergency Services Network (ESN). On 3rd February, Arun Council responded (enquiry reference PAA/1/17). Although accepting the need to upgrade, and that an increase in height would be acceptable, concern was expressed in relation to the overall width of the new structure. These comments were relayed back to the operator, and further consideration was given to a possible alternative design. On 19th May, a revised scheme was submitted, with the following comments: <i>"I refer to the above original enquiry, and the concerns expressed in your formal response dated 3rd February.</i> <i>The major concern was the increase in width of the pole and overall structure, and this has been fed back to my clients to investigate a better solution. The result of this is as per the attached.</i> <i>In considering this, I would be grateful if you could take the following into account:</i> <i>• The revised replacement pole design is slimmer than the original proposal, both in terms of the support structure and the antennas clustered at various points around the new structure. We believe the overall impact should thus be significantly decreased</i> <i>• This revision is termed a 'Mini Macro 4' design, and is only deployed where it essentially a last resort, as there are some technical drawbacks. It represents the least obtrusive structure available to EE in this case.</i> <i>• The site is being upgraded from 2G/3G only (2100) to 3G/4G (800/180/2100/2600). In addition (and this is something I did not appreciate previously), the site will also accommodate ESN (see below). As such there is a requirement to install 18 feeders through the column where only 6 were previously required. There is no design solution available similar to the current replica telegraph pole that could carry these technologies on the required antenna bearings to achieve the required coverage. The Mini-Macro solution is the only 'lightweight column' that can provide the necessary solution</i> <i>• ESN is the new Emergency Services Network, which is replacing the Airwave network. Coverage to a significantly wide area (and generally wider than might be required for simple commercial purposes) is essential. This is one of the reasons why a height of 15m is required. I have attached some information regarding the new ESN network</i> <i>I would be most grateful for your early feedback in this matter, and am happy to supply any further information that you might require."</i> Arun Council commented that the revised scheme represented a visual improvement, but enquired as to whether the location of the new pole could be amended, in order to take advantage of the existing tree cover, particularly when viewed from the south. Following further consultation with the operators, this has now been agreed and actioned, and the resultant further revised scheme is as per this application	

Ten Commitments Consultation

Rating of Site under Traffic Light Model		Amber	
Outline Consultation carried out: As above, together with pre-application mails to Ward Councillors, Ferring Parish Council and the local MP.			
Summary of outcome/Main issues raised On the 19th January, Ferring Parish Council, commented, and in particular were concerned in relation to the overall height, and whether this could be overcome by reducing the trees adjacent. On the same date, a response was issued as follows: <i>While I need to take up some of these matters with my clients, the following might help to clarify some issues.</i> <i>While the height of the trees is undoubtedly an issue, there is also a need to ensure greater coverage, capacity and reach, particularly as 4g is planned. My understanding is that this requires a height increase.</i> <i>In terms of the trees, I think both my clients and the council would be keen to maintain as much screening as possible, and would thus be reluctant to make any substantive changes to the trees on site.</i> <i>The nature of the new structure is a function of the need to support the new, more modern antennas. These are necessarily larger than those that currently exist on site, given their need to serve two operators across all technologies, thus the support structure needs to be more robust.</i> The type and location of the pole has been amended since this correspondence, following discussions with Arun District Council (as above)			

School/College

Location of site in relation to school/college (include name of school/college) None in proximity
Outline of consultation carried out with school/college (include evidence of consultation) -
Summary of outcome/Main issues raised -

Civil Aviation Authority/Secretary of State for the 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:		

**Developer's Notice
(only required for an application for prior approval)**

Copy of Developer's Notice enclosed	See planning application	
Date served	See planning application	

3.0 Proposed Development

The proposed site

This scheme represents a critical upgrade of an existing site in order to provide improved network coverage and capacity, to expand EE's and 3 UK's services, notably in the provision of broader 4G services. At the same time, there is a requirement to bring the new Emergency Services Network (ESN) on to site.

As part of EE's and 3 UK's network improvement program, there is a specific requirement for an improved radio base station at this location to:

- Critically, to increase the height of the installation in order to prevent signal blocking from surrounding trees
- Provide improved 2G and 3G services for EE
- Provide for forthcoming 4G services
- Provide for the new ESN network

There is an essential need here to retain the existing site, while in upgrade terms, given the ability to utilise an existing site, no other options were realistically considered. As such, the preferred EE and 3 UK option is as follows:

- The replacement of an existing 12m monopole with a new 15m monopole, together with the installation of 3 no. replacement antennas, and 1 no. replacement small equipment cabinet and associated ancillary development at Ferring Pumping Station, Amberley Drive, Ferring (NGR: 510106, 101827)
- This is the preferred option as the scheme will utilise the existing site. The current installation accommodates an outmoded range of antennas, which have limited range, and penetration, and are not capable of hosting modern 3G and 4G services. In addition, the scheme seeks to prepare the installation for 4G services due in the near future.
- More critically, the increase in height is required to ensure proper performance and coverage by the new antennas, and to overcome any blockage by trees in the area.
- Still further, there is a requirement to bring the new Emergency Services Network (ESN) on to site

The design is the slimmest solution available, given the increased height, wind loading and need to accommodate antennas to serve all 3 technologies and ESN

Enclose map showing the cell centre and existing sites within the cell and adjoining cells

N/A, as upgrade to an existing site

Type of Structure (e.g. tower, mast, etc):

Description:	
Existing monopole ('telegraph' pole) of 12m AGL	
Overall Height: New monopole will be 15m AGL	
Height of existing building (where applicable)	
Equipment Housing – 1 no.	
Length	770mm
Width	770mm
Height	1650mm
Materials (as applicable)	
Tower/mast etc – type of material and external colour	Antennas and pole; steel and GRP – proposed to be painted brown, but can be finished in any colour to suit the LPA
Equipment housing – type of material and external colour	Steel/grey

Reasons for choice of Design This scheme represents a critical upgrade of an existing site in order to provide improved network coverage and capacity, to expand EE's and 3 UK's services, notably in the provision of broader 4G services. At the same time, there is a requirement to bring the new Emergency Services Network (ESN) on to site. The only feasible, practical and available solution is to significantly increase the height and capacity of the installation, given the technology and services that it needs to support. This can all be achieved at a location that is an established telecommunications site. The design is the slimmest solution available, given the increased height, wind loading and need to accommodate antennas to serve all 3 technologies, together with the need to bring ESN on to site
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4.0 Technical information

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

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

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

In order to minimise interference within its own network and with other radio networks, EE (UK) Ltd and 3 UK Ltd operate their networks in such a way the radio frequency power outputs are kept to the lowest levels commensurate with effective service provision

As part of EE (UK) Ltd and 3 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.		
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Frequency	800/1800/2100/2600
Modulation characteristics ²	GSM/UMTS/LTE
Power output (expressed in EIRP in dBW per carrier) In order to minimise interference within its own network and with other radio networks, EE UK and 3 UK operate their networks in such a way that radio frequency power outputs are kept to the lowest levels commensurate with effective service provision. As part of EE's and 3 UK's networks, the radio base station that is the subject of this application will be configured to operate in this way.	56 dBm
Height of antenna (m above ground level)	14m (mean height)

4.0 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

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

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

This scheme represents a vital upgrade of an existing site in order to provide improved network coverage and capacity, and to expand EE's and 3 UK's services, notably in the provision of 4G. Still further, the replacement installation will ensure that the new ESN network can be brought on to site.

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).

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

N/A – Upgrade of existing site/installation

Additional relevant information
See Supporting Statement

Contact Details

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Operators	EE (UK) Ltd & 3 UK Ltd	Fax no	
Address	Holly House, Anstey, Buntingford, Herts SG9 0BP	Email address	alan.nps@btinternet.com
Signed	<u>Alan Neale</u>	Date	<u>25th August 2017</u>
Position	<u>Director</u>	Company	<u>Neale Property Services</u>
			For and on behalf of MBNL, EE (UK) Ltd & 3 UK Ltd