

My wife and I object strongly to this planning application for multiple reasons:

THE BENEFITS OF THE PROPOSED DEVELOPMENT ARE TRIVIAL AND MASSIVELY OUTWIGHED BY THE ADVERSE IMPACTS AND POTENTIAL RISKS AND HAZARDS TO LOCAL RESIDENTS AND THEIR CHILDREN.

- The application contains misleading statements and assertions, that minimise the size of the development and its adverse impact on the local population while overstating any public benefit.
- The proposed development will fail to achieve its stated purpose i.e. “To provide seamless cellular internet, mobile phone reception and fibre services along the entire length of the Brighton Main Line route”.
- Any benefit to the travelling public will be trivial and fleeting
- The developer has completely ignored, and failed to evaluate, the very substantial detrimental impact the development will have on local residents.
- This is the wrong location for this development

1. The application provides misleading information:

Application DM/25/1495 is for “The installation of a 22.5 meter lattice mast, mounted with 9No. antennas, 12No. cabinets, 1No. Electrical meter cabinet located within a compound comprised of 2.4 meter high chain-link fence topped with 3 strands of barbed wire and the creation of a new access from Rocky Lane and ancillary development thereto.”

However, inspection of the West Elevation plan of the structure shows that although the proposed lattice mast is 22.5m tall, this will be surmounted by 9 antennae that will extend the height to 23.8m. Moreover, each antenna will be surmounted by an ariel extending another 1.2 meters. The height of the structure will therefore be at least 25m (not 22.5m as stated).

Although, the proposal talks extensively about the 22.5m mast, it fails to mention the size and appearance of the large array of 9 antenna that will sit on top of the mast and will be many times larger than the mast top. This is the structure that everyone will see and be most concerned about. Yet this is not mentioned or described in the application (other than ‘9No. antennas’). The scale ‘elevation plans’, however, indicate this will appear as a large boxlike structure 4.5m long x 4.5m wide x 3.5m tall extending above the top of the mast. Moreover, unlike the lattice structure of the mast, this will have a relatively solid appearance caused by the 9 solid 3.5m tall by 600mm wide antennae, and their supporting brackets and equipment. The photomontages suggest these will be silver in colour (although the documentation only mentions the colour of the mast and not the antennae). Thus, the antenna array will occupy a 71 cubic meter volume above the top of the mast – only slightly smaller than the volume of a standard shipping container (74.8 cubic meters). The antenna package will not be as long as a shipping container (12m v 4.5m) but will be considerably wider (2.4m v 4.5m) and taller (2.5m v 3.5m).

2. The proposed development will not achieve its stated purpose.

The Technical Support Statement (TSS) provided by Cellnex states the principal objective of the Brighton Main Line (BML) project is “to provide seamless fourth generation (4G) connectivity to passengers using the railway line.” However, the developers own TSS clearly demonstrates that the proposed development DM/25/1495 on land adjacent to Rocky Lane, Haywards Heath will not achieve this.

TSS Annex A shows the extent of the BML in the Haywards Heath area where the existing network coverage is sufficient (i.e. where new infrastructure is not required) and where coverage is insufficient. This shows it is sufficient North of Haywards Heath Station and South from the station as far as where Brooklands (in the Bolnore Village estate) abuts the West side of the railway track, and Pinewood Way abuts the East side of the track despite the track being in a deep cutting over this stretch. This point is approximately 100 meters North of the old Rookery Lane railway bridge VTB3 151 that crosses the BML. Annexe A then shows the signal to be insufficient from this point south until Burgess Hill.

TSS paragraph 3.2 says “The radio propagation plot in Annexe B – shows the geographical extent of the expected coverage from the proposed site to the Brighton Main Line and the area either side of it.” It says, “The plot has been produced by computer modelling to predict the likely extent and quality of the signal provided by the base station.” It goes on to point out that the computer modelling prediction may be affected by many local factors that may not be included in the modelling including the height of the antennas above ground, the surrounding topography and the presence of buildings trees and other structures that can cause reflections or absorb the radio signals causing blind spots where no line of sight coverage between the antenna and the railway exists.

The antennae are to be place ~22.5m above the ground. However, the proposed location is only 120m south of the concrete road bridge that carries the main A272, over the BML track. A 100m North of this bridge is another substantial bridge - the Victorian Rookery Lane railway bridge VTB3 151. The height of the proposed antenna installation is significantly higher than either bridge. Simple geometry shows that radiation from the antennae will be prevented from reaching trains on the BML from the southern aspect of the A272 road bridge northwards to beyond the point where Annexe A shows the existing signal to be adequate. i.e. The proposed development will only provide BML cover in a northerly direction for the 120 meters of track from the base of the mast to the A272 road bridge. Thus, there will be a gap in cover North of the proposed development of 200m between the northern extent of the cover the proposed transmitter can provide (obstructed by the bridges) and the southerly extent of the existing cover. A much lower tower (lower than the height of the A272 road bridge) might be able to project a signal northwards under the bridges to the point where the current signal is sufficient or Cellnex could use the DSS system they say is specifically designed for cuttings bridges and tunnels. Alternatively, the tower could be located much further south along the BML track, where the ground elevation is lower. This would likely enable radio waves to pass under the bridges to access trains on that section of track. It is notable that an earlier

planning application DM/24/0880 made exactly this proposal. This proposal located the mast further South in field near Clearwater Lane where it would have achieved much better signal coverage along the track in both a northerly and southerly direction, and would not have been subject to the same signal obstruction from the bridges that afflicts the current proposal.

TSS Annex C – shows the location and extent of signal coverage of the BML provided by the proposed Burgess Hill mast as well as that of the current proposal (near Rocky Lane). The orange shaded areas show the extent of coverage anticipated from these two masts. Annex C (and Annex B) clearly show coverage from the Rocky Lane site extends for only 580 meters (1/3 mile) south towards Burgess Hill from the proposed mast. Thus, the entire length of BML track that will be provided with signal by this proposal is just 700m long (120m to the North and 580m to the South). That is less than ½ mile (0.44 miles). Annex C shows that heading South from the proposed development there is then a long stretch with no signal coverage before reaching the cover provided by the Burgess Hill Mast. Annex C shows this will result in an 850m (0.53 miles) gap in cover between the two transmitters.

The location of the proposed transmitter at Rocky Lane will therefore utterly fail “to provide seamless fourth generation (4G) connectivity to passengers using the railway line.” There will be a 200m gap in cover North of the transmitter and an 850m gap south of the transmitter. Indeed, the current location proposed for the transmitter will result in more track not receiving signal (850m) than receiving it (700m). What is the point of that? The mast location near Clearwater Lane that was proposed in the earlier planning application DM/24/0880 by ICON Tower Ltd, provided much better coverage of the entirety of the track between Haywards Heath and Burgess Hill. Being located approximately 385m further south along the BML track (in a field immediately to the east of the track). This location means the coverage to the South will either reach or come much closer to the cover from the Burgess Hill transmitter. The lower elevation of this location also means the northward’s projected signal is more likely to extend under the bridges as far as the southern extent of the existing Haywards Heath coverage. Thus complete, or near complete coverage from Haywards Heath to Burgess Hill is likely.

It is notable that one of the main objectors to the DM/24/0880 proposal (which was submitted by ICON Tower Ltd), came from Cellnex who are responsible for submitting the current proposal (DM/25/1495). Correspondence with DM/24/0880 shows that ICON Tower Ltd and Cellnex are competitor companies in this field and have a history of objecting to each other’s proposals. The DM/24/0880 proposal makes clear that the landowner for the proposed development site was Clearwater Farm who had been notified by ICON Tower Ltd of the proposal. Proposal DM/25/1495, however, does not make clear who owns the land where the mast is to be erected, if they have been informed of the proposal or what relationship exists between the landowner and Cellnex. This is important since the Cellnex application indicates they only considered three alternatives to the proposed development site (ICON Tower Ltd considered 9 widely distributed different locations before identifying the site near Clearwater farm as the best).

The first of the 3 alternatives (Discount 1) considered by Cellnex was on the same plot of land as the current proposal but further West (more distant to the track and closer to the roundabout on the A272) – not surprisingly it was dismissed for having greater visibility from the A272 and worse track side coverage. Discount 3 – is the same location proposed in DM/24/0880 by ICON Tower's and strongly objected to by Cellnex. Cellnex don't mention any of this in their current application and even note that this was the local planning authorities preferred location. However, they go on to provide spurious, misleading and non-evidence-based reasons (discussed in more detail below) for discounting this option – even though it has many advantages over the currently proposed location. Their third alternative (Discount 2) is at the northern end of field in which Discount 3 is located but right up against the ancient woodland and stream at the north end of that field. They discount it because of the longer access required (than Discount 3), closeness to ancient woodland and the poor signal North from this location (due to the trees immediately North of the mast location). It should be noted that Cellnex seem to have made no significant effort to identify potential alternative sites for their development. Discount 3 is by far the best site for the purpose (it would be better still if moved 50m East to place it immediately adjacent to the BML), but has been rejected for spurious, misleading and non-evidence-based reasons (probably because it was a competitor's site). Discounts 1 and 2 appear to be ridiculous suggestions thrown in to make it appear some effort has been made to evaluate alternative sites – when it has not.

Cellnex give the reasons for Discount 3 (the site of proposal DM/24/0880) being rejected as:

1. 'Careful siting would be required to avoid root protection areas of trees amongst the hedgerow.' This is an open field. The southern boundary of which is hedge with three small trees. In contrast the application site is immediately in contact with a much longer boundary hedge (bordering the track) with 8 small trees and 4 much larger trees. Moreover, any disturbance of the roots of the small tree and hedge roots at the Discount 3/DM/24/0880 site is much less likely since the location (shown on page 14 of the Planning Design and Access Statement) is more distant from the boundary than the location of the DM/25/1495 mast, which is immediately adjacent to the boundary. As the Discount 3/DM/24/0880 site is an open field, the mast could be moved further from the small boundary trees and hedge if further root protection were needed. i.e. this poses a bigger problem at the currently proposed site than the discounted one.
2. 'A new access road would need to be created to either Rocky Lane or Clearwaters Lane.' There is already a track leading off Clearwater Lane into the field where the Discount 3/DM/24/0880 mast location is proposed. No new access road would be needed. Clearwater Lane is a quiet road. In contrast Rocky Lane is very busy but since Rocky Lane lies on the opposite side of the railway track to the Discount 3/DM/24/0880 site, it is plainly ridiculous to suggest an access road be created off Rocky Lane (this would require a bridge or tunnel across the BML). In contrast, the current proposal (DM/25/1495) requires the construction of a completely new access off the very busy Rocky Lane. Moreover, this access is shown running for more than 450m along the southern

and eastern boundaries of the field where the mast is to be sited. This is in direct contact with the ancient woodland and large number of mature Oaks and other trees that form the southern boundary, and parts of the eastern boundary, of that field. In addition, these trees enclose the clearwater stream that runs through these ancient woods and will be just a few feet from the proposed access route. Indeed, the Planning, Design and Access Statement details some of the difficulties the stream will pose in constructing the access from Rocky Lane into the development site. It is obvious therefore, that the access difficulties and potential damage to the environment are much greater at the DM/25/1495 site than the DM/24/0880 site discounted by Cellnex, and it is patently not true for Cellnex to say the access to Discount 3/DM/24/0880 would have a greater impact on the area than the application site.

3. 'The site is also adjacent to ancient woodland'. This is simply untrue. The Discount 3/DM/24/0880 site is at the southern boundary of a large open field. The northern boundary of this field is 235 yards North of the mast site proposed in Discount 3/DM/24/0880. In contrast, the northern aspect of this same ancient woodland forms the southern boundary (and part of the eastern boundary) of the proposed DM/25/1495 mast site. Indeed, the proposed mast site is within a few meters of that ancient woodland, and the proposed access from Rocky Lane to the mast site runs immediately adjacent to it, along its entire 450m length. It is completely untrue to say that the nearness of the ancient woodland would favour rejecting the Discount 3/DM/24/0880 site in favour of the DM/25/1495 site – when the facts demonstrate the opposite is true.
4. 'The coverage from this site was not as good because coverage could not be achieved in the deep cutting to the North or Rocky Lane.' As already demonstrated above using the information from their own TSS document, this is patently not true. Due to the height of the proposed mast, the bridge at Rocky Lane (A272) and the Rookery Lane railway bridge VTB3 151 100m further North would obstruct any signal from the DM/25/1495 site reaching the deep cutting North of Rocky Lane. This statement also implies a problem with signal in the deep cutting North of Rocky Lane when in fact Cellnex's TSS document (and Annexe A) shows there is sufficient existing cover for almost the entire length of this cutting except that bit close to the bridges. Their documents also show that if there is a particular problem at that location it would be better solved using Cellnex's Distributed Antenna Systems (DAS) technology which is specifically designed for this sort of situation and uses much smaller scale equipment entirely contained within the cutting and/or under the bridges on Network Rail land – using network rail access to those locations. This would cause absolutely minimal disturbance to the surrounding area and the signal would be confined to the BML track and not affect people or equipment.

3. Potential benefits of the development.

The proposed benefits are: “The principal objective of the Brighton Main Line project is to provide seamless fourth generation (4G) connectivity to passengers using the railway line.”

We have never experienced any signal/reception problem when using cellular or internet services on the BML between Burgess Hill and Haywards Heath stations and talking to others who regularly make this journey none have expressed any concern or issue about the current service.

As shown by the applicants own Technical Support Statement, this development will fail to achieve “seamless 4G connectivity to passengers using the railway line”. The proposed development will only provide signal coverage to a 700m length of the BML track, with gaps in connectivity both to the North (200m gap) and south of the development (850m gap). Coverage will therefore be far from seamless. Given that trains average 60 miles per hour over this stretch of track, this means the maximum benefit any passenger would receive, if any, would be a 26 second exposure to improved signal with interruptions to service either side of this.

The applicants claim the development “will also provide the important secondary benefit of providing 4G coverage and capacity to the areas either side of the railway line.”

However, their Technical Support Statement shows the cover to areas either side will be minimal with the only residential or work-related properties covered being; Roundway and Kingfisher Drive (on the Bolnore village estate) and those on Old House Lane and some properties on Rocky Lane (in the Beeches and Foundry Gardens estates). However, this will not provide any benefit to those residents since these properties already have good 4G service cover (both indoor and outdoor) as confirmed by all the major service providers (Vodafone, Three, EE, Smarty, Lebara, Voxi, ID Mobile, Talkmobile, Asda, O2 and Lycamobile). Indeed, these areas already also have good 5G service provision as confirmed by those providers currently providing 5G service (EE, O2 and Lycamobile).

So, apart from any commercial/financial benefit to the applicant from the development at this location, there will be only fleeting and interrupted benefit, if any, to passengers on the BML (certainly not seamless) and no secondary benefit to the areas either side of the railway.

As discussed above, a different location (such as that in the previous planning application DM/24/0880) would substantially improve the benefit to passengers on the BML particularly if any issues with signal around the Rocky Lane and Rookery Lane bridges and cutting were dealt with using the DAS technology, Cellnex say is specifically designed for such purpose.

4. The developer has completely ignored, and failed to evaluate, the very substantial detrimental impact the development will have on local residents.

In Cellnex's 32-page Planning, Design and Access Statement, local residents receive scant acknowledgement of their existence. Just one sentence in Section 2.1 of the document says, "The nearest residential properties are located to the West of the site on the other side of the railway tracks located on Rocky Drive and are located approximately 110 meters from the site, other properties are located to the north of Rocky Lane approximately 220 meters from the site."

The nearest properties are in fact on Rocky Drive, Old House Lane, The Holt, Northern Platt, Southern View and Buckeridge Way – indeed all of the properties in the recent Beeches and Foundry Gardens developments (particularly those in the Western half of the estates) will be adversely affected. All these properties are to the East (not the West) of the site. With the proposed mast immediately adjacent to the BML rail track (on its West side) and the nearest properties immediately adjacent to the track (on its East side). Indeed, the nearest part of these two estates to the proposed development is the children's play area and exercise equipment which are located to the West of Rocky Drive immediately abutting the railway. These serve the whole of the Beeches and Foundry Gardens estates and are only 40 meters from the base of the mast (immediately the other side of the track). They will be completely dominated by the 25m mast with its large shipping container size antenna array towering over the site – particularly as this location is at a lower elevation than the mast site. For comparison, the distance between the mast and the play area is considerably less (10m) than the length of a swimming pool (50m). Next nearest is the well-used public footpath that runs from Rocky Lane down through the Beeches and Foundry Gardens estates toward the ancient woodlands area and stream on the southern boundary of these two estates. Next nearest are a large number of private and housing association family occupied properties on Rocky Drive and Old House Lane. Several of these will be within 100m of the site.

Additionally, there are 3 new 3-storey apartment developments on Rocky Lane (on North side of Rocky Lane) - the Kilnwood apartments. Because of their elevated position they will have direct, horizontal line of sight with the top of the mast – particularly the large antenna array. Many properties at the southern end of the Bolnore Village estate, will also have direct line of sight with the antenna array due to their elevated location above Rocky Lane and the track. This includes the large and heavily used children's Play area and Kingfisher Toddler Play area located on Kingfisher Drive but serving the whole Bolnore Village estate. Also, affected are all the residential properties on Kingfisher Drive, Roundway and Highbank. Some of these properties are just 130m from the antenna array and will be in direct, horizontal line of sight of this shipping container size object in the sky, due to their elevated position compared to the base of the mast.

VISUAL IMPACT

The Planning, Design and Access Statement, Section 2.1, goes on to say – "However, only the upper sections of the tower would be visible from some of the properties due to the intervening trees." This is a disingenuous and misleading statement and explains why they have focussed on the describing the lattice mast while neglecting to mention the size and very substantial visual impact of the large (shipping container size) antenna

array that will surmount it. Those properties close to the development will have the ominous presence of the very large antenna array (4.5m x 4.5m x 3.5m) literally hanging over their heads – particularly the children's play area closest to the development and the nearest properties on Rocky Drive and Old House Lane. This impression will be exaggerated further for some properties on Rocky Drive because they are at a lower elevation than the base of the tower.

The statement mentions the intervening trees blocking the view of parts of the tower. However, the trees in question are randomly spaced and of varying height so in some area they will provide limited screening but in others none. However, all the trees in question are deciduous trees and lose their leaves for half the year. For much of the year there will be no screening of the mast and its antennae. Moreover, many of the properties, particularly those on Rocky Lane, the Kilnwood apartments and in the Bolnore Village Estate, occupy elevated positions that place them above any tree cover and in direct line of sight of the antennae array. So even for those living more distant to the site, it will have a very substantial visual impact, particularly in autumn and winter. Moreover, the plans show that tallest tree near the mast is 12m tall, less than half the height of the mast and antenna array at 25m so it will be widely visible above the trees for an extended distance even when they are in full leaf.

Cellnex has provided a series of photomontages to demonstrate how minimal any visual impact would be. However, these were clearly set up to minimise any visual impact with no attempt to demonstrate the real impact the antenna array will have on those most adversely affected. Hence, they are extremely misleading.

- (a) All the images are taken with the trees in full leaf to hide the visual impact of the development. Where are the photomontages to show the impact when the trees are bare?
- (b) None of the locations from which shots were taken (these are shown on page 2 of the photomontage document) are in the residential areas closest to, and most affected by the visual impact of, the antenna array. i.e. they fail to represent the impact on residents.
- (c) Figure 2 was taken from a very low angle (close to pavement height), which minimises any view of the antennae, at what they call Sandrocks roundabout. This photo is taken at a point 500m distant from the site, i.e. much further away than any of the directly affected properties. Nonetheless, the size and solidity of the antenna array is almost entirely visible above the tree cover at this distance (it is visible above the white car). Many of the affected properties and the children's play area are 10 times closer to the array than this.
- (d) Figure 4, is taken from a little closer, but again from a very low angle and a position that ensures the tallest trees hide the structure. These trees will be without leaves for most of the year when the array will be very evident. Moreover, if you move a yard or two either side of the precise point where the photo was taken, the antenna array becomes extremely obvious between the trees. The photo label says it was taken from the Kilnwood apartments, but it is not. It is taken from the pavement on Rocky Lane. The 3-storey Kilnwood apartments are immediately behind this viewpoint but occupy an elevated position 5-20m above

the point where the photo was taken. Consequently, all these apartment (including ground floor apartments, but particularly upper floor apartments) will have a direct line of site of the entire antenna array and the upper sections of the mast – even when the trees are in full leaf. Each apartment has a balcony with large patio doors – most of which will be perfectly aligned with the Mast. Why wasn't this picture taken from the Kilnwood apartments to show what they would actually see, rather than from a low angle and a much lower elevation location near the road, both of which serve to hide the view the apartments would actually have of the mast and antenna array?

- (e) Figure 6, is, again taken for a very low angle (just above pavement height) at the roundabout junction between Rocky Lane, Traunstein Way and Highbank. Even in this location and with the trees in full leaf, the antenna array is visible above the trees. Much more of it will be evident for the majority of the year when the trees are not in leaf. Just behind and to the left of this location are many of the affected properties on Highbank, Roundway and Kingfisher Drive (including the two large children's and toddler play areas). However, as the name Highbank suggests, these properties are at a much higher elevation than the roundabout and the point where the photo was taken (as well as being closer). They will therefore be in highly impactful direct line of site of the large antenna array all year round. Why wasn't this photo taken from the location of the affected properties?
- (f) Figure 8 represents the view from a more rural location much further south on Rocky Lane (near the junction with Bridleway 92CR) – 750m from the site. This photo has been taken to hide the array behind the single large tree at the centre of the photo, although it can still be made out behind this tree. If the picture were taken from a position a yard or two either side of where it was taken from, the array would be in full view even with the trees in full leaf. And in autumn and winter it would be in full view regardless. Nonetheless, this photo demonstrates that even from a long distance, this development will have significant visual impact because of its size and height.

Thus, the visual impact on the local area will be considerable and for those living, playing or working close to, or in direct line of site of the large antenna array, it will have an ever present (24 hours a day, 365 days a year), overpowering and ominous visual impact. Even when trees are in full leaf, they will provide little screening for nearly all those affected (the west elevation plan shows the antenna array will be 12m taller [twice the height] of the largest nearby trees). But the obtrusive, ugly, and overshadowing presence will be even worse in the autumn and winter. In addition, it will be completely incongruous and out of character with the existing visual beauty of the area.

SUNLIGHT

The height (twice the height of any nearby trees), size (nearly the size of a shipping container) and closeness (less than a swimming pool length) of the antenna array will block sunlight to the children's play/exercise area and properties closest to the structure. It will literally cast a shadow over them for significant parts of the day, all year

around. This is particularly the case for properties on Old House Lane, and Rocky Drive. In the autumn, winter and early spring, when the sun is lower, and the trees are not in leaf, this effect will extend to even more houses in the Beeches and Foundry Gardens estates and, at certain times of the day, houses in the Bolnore Village estate and Kilnwood apartments.

The photomontages show the antenna arrays are silver in colour (so that they are hidden against the sky). However, the silver colour and multiple facets of the antenna array will produce distracting reflections and glaring flashes of light for all properties in direct line of sight of the antenna array and will be a major distraction hazard for drivers on the A272.

NOISE IMPACT

Very little information is provided about any noise pollution emitted from the installation. Will there be any electrical noise or hum from the 9 antennae, 12 radio equipment cabinets or meter installation? The Planning, Design and Access Statement says, “The radio equipment housings will need to be mechanically ventilated to avoid overheating of the equipment”. There will be 12 of these on the site. The mechanical noise they emit is clearly significant since they also say, “If it is considered specific noise attenuation measures to be necessary, we would be pleased to discuss practicable solutions.” Given the extreme closeness of the children’s play area (less than a swimming pool length) and residential properties in the closest parts of the Beeches and Foundry Gardens estates, much more detailed information should be provided about the level, type and extent of the noise pollution that will emanate from this site, with a clear mapping of the noise impact on these nearby locations. They go on to say, “the location of the equipment and surrounding trees will dampen any noise”. However, the plans show no installation of sound proofing barriers between the equipment and the affected locations (only a chain link fence). Indeed, the noise generating equipment immediately faces these locations, and it is at the same level. Furthermore, the bushes and trees along side the railway track are all deciduous and lose their leaves for much of the year – when there will be minimal noise dampening for the play area and nearby houses.

This location is clearly unsuitable for this development. The Discounted site 3 (the site of planning application DM/24/0880) would be far preferable from a noise pollution perspective. This is an open field site, hidden by trees and hedges from all sides. The nearest residence is 200m from the site – and protected from it by 3 separate rows of hedges/trees. If the currently proposed development goes forward, then extra noise attenuation measures will be needed to protect the open space play area and the nearby houses.

ELECTRICAL POWER SUPPLY ISSUES

The applicant’s documentation provides no information on the power consumption of the proposed development. However, a typical street level 4G single antenna cellular transmission site has a consumption of ~120 kWh of energy per day. However, this is a

much larger system with 9 antennae plus 12 mechanically ventilated radio equipment cabinets. So, a rough estimate could be ~1,500 kWh per day. This is significant and would be of concern to local residents since the Bolnore Village estate, Kilnwood, Beeches and Foundry gardens estates, and surrounding roads, have a fragile electricity supply, and frequently experience power loss. Any exacerbation of this must be avoided. Any loss of supply would also interrupt the signal from the antennae and should therefore be of concern to the developer. The previous application (DM/24/0880) noted that the location of that development was close to an existing 50m tall electricity pylon that would dwarf the telecommunications tower. They pointed out this would also provide them with a readily accessible source of electrical power for their installation. No information is provided in this application (DM/25/1495) about the power consumption of the development, how the electrical supply would be sourced or what impact it would have on the supply to local residents – but this information is essential to any decision made by the planning office.

ENVIRONMENTAL / WILDLIFE IMPACT

I am no expert on this, and leave further comment to those who are, however, I would point out two things:

- (a) This development is very closely located to an ancient woodland and the stream that runs through it (just a few meters). Moreover, the proposed access road is located as close to both as it is possible to get – so appropriate protective measures will be needed. This is not an issue however (despite Cellnex's assertion to the contrary) at the site 3 they discounted (also the site of the DM/24/0880 proposal).
- (b) Separated by only the railway track from the proposed mast location, are the Beeches and Foundry Gardens estates. During their construction, the developers were required to erect newt protection barriers all along the boundary of the estate with the railway – to prevent newts from accessing the building site from the field, stream and ancient woodland where the DM/25/1495 development is located. They were also required to install nesting boxes for owls and other bird species to encourage them back to the area. There is therefore a flourishing wildlife presence, including newts and wild birds, in the proposed site. Some of which may potentially be protected species. Will measures be taken to evaluate this properly and provide appropriate protection? The environmental plan provided with the application discusses tree root protection but appears to offer no proper consideration of wildlife.

4G & 5G NON-IONISING RADIATION EFFECTS

The development is designed to accommodate 4G and 5G services that will simultaneously transmit and receive at multiple wavelengths for multiple network operators (MNO) – initially 20 wavelengths across 4 operators. It is also designed to accommodate quick upgrade to future developments including faster 5G speeds and 6G. This arrangement will substantially increase the intensity and exposure effects of the electromagnetic radiation. Most data and guidance are based on single frequency, single operator sites using 4G. The International Commission on Non-Ionising Radiation Protection (ICNIRP) guidelines, point out that “in situations of simultaneous exposure to

fields of different frequencies, these exposures are additive in their effect". So, the exposure intensity from this site is likely to be 20 times greater than from a single operator single frequency site.

Importantly this installation is specifically designed to focus coverage on the Brighton Main Line (BML) and not to broadcast it to the widest possible area, as most systems do. This is very important for two reasons:

- (a) It means the 9 antennae will not be distributed evenly around the mast but will be clustered in three groups of three. One group pointing North along the track towards Haywards Heath, one South towards Burgess Hill and the other East directly towards the children's play and exercise area and the houses on Old House Lane, Rocky Drive and the Holt. Some of which are only a swimming pool length (50m) distant. This array will also direct radiation along the length of Southern View, Buckeridge Way, Kilnwood Avenue, Pennyfather Lane and much of Pullman Avenue, i.e. much of the Beeches and Foundry gardens estates.
- (b) Because the proposed location of the antenna array is so close to the BML track (just 10m) and so high (25m), the radiation from the 3 East facing antennae will have to be angled steeply down to focus the signal on the trains. Otherwise, the beam would simply pass into the distance, well over the top of the trains, and provide them with no signal. This means that the electromagnetic radiation from these antenna will also target the children's play and exercise area and all the closest properties described above. This is an exceptional situation. Most cell phone antennae are positioned to provide the widest cover. With tall masts, this means properties nearest the mast receive little exposure (get poor cover) as the beam passes over their heads and signal reception and any deleterious effects are only detected at greater distances from the mast. Since, signal strength decreases rapidly with distance (particularly with higher frequencies and shorter wavelengths such as 5G), the effects of electromagnetic radiation with most mast arrays (usually aimed at the horizon) are greatest some distance from the mast –where distance has substantially reduced the intensity of the radiation. Hence many governing/regulatory/safety bodies often point out that people living close to such masts are at low risk (and often get poor reception).

That is not the case here though. In this case, the properties closest to the mast will be directly in the crosshairs of the beam targeting the BML. Because these properties are so close to the radiation source, and it is targeted directly at them, they will be exposed to very much higher levels of radiation than would normally be the case. Moreover, because the antennae emit multi-frequency, multi-operator radiation, the beam being targeted at them will also have an exposure intensity around 20 times greater than normal. This exposure will also continue indefinitely, 24 hours a day, 365 days a year (Cellnex have a 25-year renewable contract to provide this service). In comparison, the exposure of BML passengers will be miniscule – just 26 seconds per journey.

In this particular location, therefore, the normal rules and guidelines do not operate effectively to safeguard people, and much greater care needs to be taken to protect them. The problem arises because the mast is located so close to the BML track and

directly opposite and extremely close to a residential area. Again, site 3, considered but discounted by Cellnex (the same site as in the earlier DM/24/0880 planning application by ICON Tower Ltd), would be a much better location for the mast. The exceptional issues outlined above, would not apply at that location since the area is sparsely populated, with the nearest property 200m distant and on the opposite side of the mast to the BML. Thus, the beam would be directed away from the property.

INTERFERENCE

Electromagnetic radiation can interfere with TV reception, and sensitive electronic devices (as acknowledged by Mobile UK – the body representing all UK mobile network operators). This is a particular problem with electronic medical devices – as warned in the Medicines & Healthcare products Regulatory Agency (MHRA) guidance on ‘Medical devices: sources of electromagnetic interference (17th January 2020)’. This lists particularly sensitive medical devices including: implanted and external cardiac pacemakers or defibrillators, implanted neurostimulators, programmable hydrocephalus shunts, cochlear implants, ECG monitors and infusion pumps.

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) also warns “that metallic implants (e.g. prosthetic joints, dental implants etc) may alter or perturb electromagnetic fields (EMFs) in the body, which in turn can affect the body both directly (via direct interaction between field and tissue) and indirectly (via an intermediate conducting object).” Even more importantly it warns that “radiofrequency EMFs can directly cause harm by unintentionally interfering with active (i.e. electronic) implantable medical devices (see ISO 2012) or altering EMFs due to the presence of conductive implants.” As such, it goes on to say that any effects on patients with such implants or devices is beyond the scope of the ICNIRP guidelines i.e. the guidelines do not cover such situations.

It is acknowledged that because radiation intensity reduces by the distance squared, interference becomes less problematic the further you are from the source. However, as discussed above, because of the closeness, targeting and beam intensity associated with this development, properties closest to the mast in the Beeches and Foundry Gardens estates will be exposed to exceptionally high levels radiation and a very high likelihood of interference. This would not be the case at the DM/24/0880 site discounted by Cellnex.

HEALTH IMPACT

I am clinician, medical research scientist and Professor in the Faculty of Medicine & Health Sciences at the University of Sheffield with 50-years’ experience. I have more than 200 publications in high impact medical and scientific journals including the New England Journal of Medicine, the Lancet, British Medical Journal etc. As well as being Principal Investigator for many clinical and epidemiological research studies in the United States and UK, I have also sat on research ethics committees in both countries. I am therefore very well placed to evaluate the medical and scientific research on this subject, as well as the potential health impacts, in a well informed and considered way.

Much of the research in this area is of poor quality and out of date. Very little of it has assessed the impact of exposure on human health (it is mainly laboratory based, cell and tissue based, theoretical or in silico research). And most of it addresses only short-

term exposures – usually to handsets. This is because most research ethics committees would consider the deliberate long-term exposure of human subjects of all ages and disabilities (including pregnant women and fetuses) as wholly unethical and would not provide approval for the study to proceed. Thus, there is a complete lack of real-world clinical trial data on the long-term effects of exposure to the type of electromagnetic radiation that people living as close to the proposed development as those in the Beeches and Foundry Gardens estates will be exposed to. The only other data we can look at to inform our knowledge of the health effects on the general population are large scale retrospective epidemiological studies. The problem is that they are retrospective and take many years to perform. Most such studies therefore relate to 2G or 3G technology, with a few short-term studies relating to 4G (first introduced in the UK by EE in October 2012). Nearly all of these studies relate to exposure from handset use. The very few that relate to base stations are almost entirely based on single network operator, single (or few) frequency radiation. And none relate to the intensely focussed high exposure radiation that will be experienced by those using the children's play area or living closest to the mast.

Although, Cellnex have an ICNIRP certificate, this does not mean that those closest to the installation or with medical conditions/devices will not be seriously adversely affected. ICNIRP guidelines and certification explicitly exclude applicability to individuals with metallic implants or electronic medical devices. This would not be regarded a problem at greater distances and lower exposure intensities but is a very significant problem when it comes to the somewhat exceptional situation faced by many close residents and the children of the Beeches and Foundry Gardens estates, because of their closeness to the radiation source and direct targeting by intense multi-frequency/multi-operator radiation.

The ICNIRP guidelines are now 5 years out of date and the research on which they are based are very out of date coming mainly from the 1990s and early 2000s (the most recent study included was published in 2019 and related to data collected 5 years earlier). There is very little data related to 4G and nearly all the 5G related data is laboratory or theoretical). Moreover, ICNIRP clearly point out that the only data used to set guidance relates to the effects of electromagnetic radiation in raising surface or core body temperature. Other non-thermal health effects have not been taken into account in setting the guidance and ICNIRP acknowledge this. They also acknowledge that compliance with ICNIRP guidance does not preclude the possibility of other non-thermal damaging health effects.

The failure of ICNIRP to take account of other non-thermal health effects when setting guidance has raised major concerns with scientists and many regulatory and governmental bodies around the world. For example, the European Parliament recently commissioned a review of the Health Impact of 5G (available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/690012/EPRS_STU\(2021\)690012_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/690012/EPRS_STU(2021)690012_EN.pdf)).

Regarding the ICNIRP guidance, they concluded, “ICNIRP guidelines refer only to thermal effects caused by 6 minutes and 30 minutes of exposure to radiofrequency-electromagnetic field, so the guidelines concern only short-term exposure. Safety guidelines for the currently deployed 5G technology have been established, though insufficient scientific research has yet been performed, while peer-reviewed science on

non-thermal health effects of radio frequencies already in use has not been evaluated in ICNIRP guidelines.”

Consequently, they commissioned a systematic review of the non-thermal health effects and concluded:

- Cancer – at 450 to 6,000MHz (this covers all frequencies that will be emitted from this site) “electromagnetic fields are probably carcinogenic for humans, particularly in relation to gliomas and acoustic neuromas” (this conclusion is backed by many other cancer organisations including the International Agency for Research on Cancer).
- Reproductive developmental effects – frequencies between 450 to 6,000MHz “clearly affect male fertility and possibly female fertility as well”.
- Other non-thermal health effects are reported for frequencies between 45 to 6,000MHz, including neurological disturbance, sleep disturbance, visual disturbance (cataracts), hearing disturbance, cardiovascular effects, nausea, loss of appetite, discomfort, anxiety and depression. However, the quality and quantity of this research is often insufficient to directly attribute these effects to electromagnetic field effects. They may however be caused by worry and concern about the effects posed by the presence of radio masts nearby.
- No adequate studies have yet been performed on the non-thermal health effects posed by higher frequencies (24-100MHz) including the higher frequencies used by 5G and 6G.

Consequently, they recommended the European Parliament should set a much lower exposure limit (6 V/m) than that recommended in the current ICNIRP guidelines (61 V/m). Currently, this change is progressing through the European Parliament. Using the same rationale, several other countries have already adopted lower radiation safety limits (most at 5 or 6 V/m) than the 61 V/m set by ICNIRP. These include Italy, Switzerland, India, China and Russia.

STRESS, ANXIETY & DEPRESSION

Research clearly shows that many individuals living close to cell towers, particularly large masts like that currently proposed, complain of neurological effects, sleep disturbance, visual or hearing disturbance, cardiovascular effects, nausea, loss of appetite, discomfort, anxiety or depression. Although the evidence that this is linked to electromagnetic field effects is lacking, these symptoms clearly exist. Frequently, they exist because the patient is worried or stressed about the potential harmful effects of these transmissions. This anxiety is greater the closer someone lives to such a tower and the more visually impactful and oppressive it feels. Anxiety is heightened further in individual's who already have mental health issues, who are pregnant or trying to conceive, the parents of young children, and those with medical implants of all types but particularly those who depend on electronic medical devices for their wellbeing or to sustain life. People who are stuck at home close to a visually intrusive transmitter may feel they can't escape the effects, including the elderly, disabled and those working from home.

QUALITY OF LIFE

As a physician and given the extreme closeness and oppressive visual impact this transmitter will have for many, particularly those living, working and playing closest, I would expect a high incidence of stress, anxiety, depression and quality of life impacts on those individuals. Exacerbating any worry about the health effects will be concerns about the impact the transmitter will have on the value of their homes and their ability to sell and move elsewhere. Indeed, when severe, the symptoms resulting from such stress can destroy all quality of life, leading to feelings of worthlessness, inability to work and occasionally suicide. As a clinician, I would expect to see significant quality of life effects in some of those living closest to the mast.

If I lived in one of the houses/apartments closest to the proposed mast I would be extremely worried and concerned about the potential health impacts. Even more so if I were trying to conceive, pregnant, house bound, working from home, had a young family or had any implants or electronic medical devices. Effectively, those closest to the mast are being used as lab rats in an experiment.

As a clinical researcher, if I approached a medical ethics committee to ask for approval for a clinical trial directly targeting electromagnetic radiation from a shipping container size antenna array transmitting 20 different provider/wavelength signals directly at families living just 50m away, including children, pregnant women, the elderly, house bound and those dependent on electronic medical devices, continuously day and night for 25 years – they would dismiss it as completely unethical.

Why should these families be exposed to an experimental health hazard risk like this, when a more distant site, such as the proposed DM/24/0880 location, would remove this risk. It beggars' belief that Cellnex considered and discounted that site (Discount 3) in favour of the DM/25/1495 proposal despite its inherent risks and adverse impacts on local residents. Cellnex seems to have completely ignored the potential impact on those living close to this site.

THOSE WITH IMPLANTS AND ELECTRONIC MEDICAL DEVICES

As discussed above, and warned by the MHRA, these individuals are particularly vulnerable to the effects of electromagnetic radiation and are not covered by the ICNIRP guidelines or certification. I personally had an ECG recorder implanted ~4 years ago and we also have a defibrillator in the house. The MHRA says both are susceptible to electromagnetic interference. Indeed, I have experienced problems with the ECG recorder when a mobile phone is too close to the device. As a physician, I know I can easily address this by repositioning the phone away from the implant.

Although we live a little further from the mast (approx. 175m) than many on this estate, I am nonetheless concerned, that such a large antenna array transmitting multiple wavelengths for multiple network operators focussing its transmissions toward my house, could affect these devices. Since we cannot move the mast away from our devices, our health could be jeopardised, and we would have to consider moving.

I am very much more concerned, however, about anyone who has an implant or electronic medical device, or requires one in the future, who lives much closer to the mast than we do. I would be seriously concerned about the risk posed to them or to anyone else living on the estate with an implant or device who uses the public footpath next to the track or takes their children or grandchildren to play in the children's

play/exercise area. I believe the council owes a duty of care to such residents under the Health and Social Care Act 2012. To ensure they are not exposed to such an avoidable and unnecessary risk. Use the other site.

WHAT IS A SUITABLE DISTANCE FROM SUCH A TRANSMITTER

There is widespread consensus amongst scientists and many in the industry that transmitters of this size and configuration should not be placed close to schools, hospitals, public buildings and residential housing. Many suggest at least 500m from schools, play areas for children and hospitals and 150-200m from residential housing. Indeed, many States in the US and local authorities in other parts of the world have already instituted such ordinances or guidance. I understand that some local authorities in the UK have also done this.

An article entitled “Limiting liability with positioning to minimize negative health effects of cellular phone towers” was recently published in the highly respected ‘Environmental Research’ journal, by a leading scientist and adviser to the US mobile phone industry. It reviewed the established cancer and reproductive health effects that have been clearly linked to electromagnetic radiation and those effects where there is a demonstrable increase in incidence with increasing proximity to cell phone base stations, but where the effects may or may not be directly attributable to electromagnetic radiation, e.g. neuropsychiatric complaints such as headache, concentration difficulties, memory changes, dizziness, tremors, depressive symptoms, fatigue and sleep disturbance. 80% of these studies reported increased prevalence of adverse neurobehavioral symptoms and cancer in populations living <500m from base stations. The author points out that, like here, the current US standard is based on the ICNIRP guidelines and only takes account of thermal effects, and this could pose a trap for the cell phone industry and regulators – who are already starting to experience litigation relating to the non-thermal detrimental health effects associated with the proximity of cell phone base stations.

He argues that companies are ill advised to simply follow regulatory compliance on this front. He points out that medical research is progressing rapidly in this area, and data on the non-thermal adverse effects of electromagnetic radiation and base-station proximity is growing. As this data accumulates, he argues that companies will find themselves in a position of legal responsibility for causing widespread human health problems and premature death. He concludes, companies, and those permitting developments, should protect themselves by adopting voluntary minimum distance guidelines before government and regulatory bodies catch up with the science (Environmental Science 181 (2020) 108845).

The current site clearly breeches the 500m and 150-200m guidance. The children’s play area is 1/10th of the recommended distance away from the Mast and many houses fall well within the 15-200m recommended distance for residential property (including our own), some are only 1/4 of this distance away.

In many parts of the US and Canada, where the 500m minimum distance has been adopted (particularly with regard to schools and hospitals), quite a few companies have been required to relocate existing masts to new locations at considerable cost to those companies. Most notably this has affected Verizon, which at one point paid schools to erect small single network antennae in school grounds.

If the site bizarrely discounted by Cellnex (Discount 3), and proposed in application DM/24/0880, was used instead of this site, this problem would be completely removed. There are no schools, play areas or hospitals in that area and the nearest residential property is more than 200m distant and shielded by three rows of hedges and trees. Moreover, at that location, the beam would be directed away from the closest residence, since the BML is located on the opposite side of the mast to the nearest property.

LEGAL & LIABILITY INSURANCE

Because of the evolving science and widespread concern about non-thermal health effects of 4G, 5G and 6G, many insurers now exclude cover for all electromagnetic radiation or cell phone mast associated health issues. This applies to insurance for network operators, tower developers/operators, and in some cases even for policy and planning decision makers. In other situations, and particularly since the 'Environmental Research' paper (above) was published, some insurers have started to insert distance requirements (like those above) as conditions into their insurance policies.

In view of this, can Cellnex confirm they have long-term legal and liability indemnity for this project, if it would cover any short- or long-term health-related adverse effects claims from the public, and if it sets any conditions or limits on any health-related effects claims? What period/duration does any insurance cover?

5. This is the wrong location for this development

This development will:

- Fail to meet its stated objective "To provide seamless cellular internet, mobile reception and fibre services along the entire length of the Brighton Mail Line route". The development will provide cover to only 700m of track with large voids in cover immediately North (200m gap) and South (850m) of this.
- Any benefit to BML passengers will be trivial – at most 26 seconds of improved cover, with breaks either side. But this will come at a huge cost and risk to the local residents, the environment and public.
- Any bystander signal spread to local residents will only reach a small number of houses (those most adversely affected by this development) but will provide no benefit since all current network providers confirm good existing signal to these properties.
- The development will have very significant visual impact for many living and travelling in the area. The visual impact for the play area, houses and apartments very close to the mast will be overwhelmingly close and cast a large shadow over them.
- The visual appearance and reflective flashes from the mast will be distraction hazards for drivers on the A272.
- The noise from the 12 cooling fans will disturb and annoy those living or playing very close to the site (the Beeches and Foundry Gardens estate is only 40m from these).

- There is a strong likelihood this development will exacerbate the already fragile power supply to local residents.
- The development will expose those living very close to the site (just 50m), or using the children's play and exercise equipment area (only 40m from the site) to constant, multi-frequency, multi-operator, electromagnetic radiation directly targeted in their direction.
- This poses significant quality of life threats and health hazards for those living/playing/working so close to the transmitter, including increased fertility and brain cancer (glioma and acoustic neuroma) risk.
- Those living close to the transmitter will suffer interference with TV reception and sensitive electronic equipment.
- Those living close to the transmitter that have implants or electronic medical devices will be exposed to a high-risk of interference effects that could seriously jeopardise their health or life. Such risk is not covered by ICNIRP certification and guidelines.
- The development will necessitate construction of a new 450m long access off the busy Rocky Lane, that will run along its entire length in direct contact with the ancient woodland and stream (and their wildlife) that bound the southern and parts of the eastern border of the proposed site

All of these problems are a direct result of choosing this location for the mast. The majority of the most severe adverse effects result from placing this mast so close to the Beeches and Foundry Gardens estate (just 40m away) as to jeopardise the health and quality of life of those who live there. Since the intensity of electromagnetic radiation fades quickly with distance, the solution to the majority of these problems is to locate the transmitter at a much safer distance from where people live, play and work. One such location was considered and discounted by Cellnex (Discount 3) and was the subject of an earlier planning application (DM/24/0880) by a competitor, ICON Towers Ltd, that Cellnex objected to. Nonetheless, and regardless of commercial rivalries, that site (or somewhere similar) would remove the vast majority of the most severe issues associated with the DM/25/1495 planning application caused by its extreme proximity and radiation targeting of the play area and residential housing of the Beeches and Foundry Gardens estates.

The location proposed in DM/24/0880 is a much more rural open field location close to an existing 50m electricity pylon. This site has many advantages over the DM/25/1495 site:

- It would result in better continuity of network cover for the BML between Haywards Heath and Burgess Hill, without the significant gaps in cover associated with the proposed site.
- According to the DM/24/0880 application it would permit easy access to electrical power from the nearby pylon and cables – solving the potential power issues at the DM/25/1495 site.
- The 25m mast would be visually dwarfed by the existing 50m electricity pylon, would be in line of sight of far fewer people than at the proposed location. Its size

would be visually reduced by the distance (200m v 40m) from the nearest property or public access.

- No properties would be directly overshadowed by the mast or visually dominated by it. The nearest residence is 200m away with 3 rows of hedges and trees between them.
- The site already has an access track running to the site from the quiet clearwater Lane.
- This site is much further away from the ancient woodland and stream, and its associated wildlife, than the DM/25/1495 location

Because there are no schools, play areas or hospitals in the area and the nearest residence is more than 200m distant, nearly all the major health risks and disadvantages of the DM/25/1495 site would also be addressed. This is further addressed by the fact that the nearest residence (200m) is shielded from the DM/24/0880 site by three rows of hedges and trees and the mast location is between it and the railway. This means any electromagnetic radiation directed toward the track is directed away from the property. This would solve or very substantially reduce the following health hazards:

- It would not have the overbearing visual impact and shading of play areas and properties that is a problem at the DM/25/1495 site
- With no one living so close, noise pollution would be a much less significant problem
- The detrimental health and quality of life effects of electromagnetic radiation or proximity to transmission masts reduce quickly as a function of distance from the mast. Thus the major adverse health and quality of life issues and risk associated with the DM/25/1495 site would be substantially resolved at the DM/24/0880 site.