

RE: IX WIRELESS LTD'S WIRELESS COMMUNICATION NETWORK
AND PERMITTED DEVELOPMENT RIGHTS

ADVICE

1. I am asked to advise IX Wireless Ltd ('IX') with regard to the roll out of its electronic communications network. IX is a Code Operator within the meaning of the Electronic Communications Code ('the Code'). I am asked to advise on the permitted development provisions relating to IX's infrastructure.

2. IX is in the process of rolling out its own electronic communication network in towns across England. Currently five towns across the North West are served with 150,000 premises within service range¹. IX delivers its network through a combination of wireless and fibre technologies which deliver gigabyte broadband connections. Through the technologies deployed and IX's control of its own network, IX is able to guarantee a high level of service and speed.

¹ May 2022

3. A typical network deployment in a town comprises two principal elements:
 - a. A full fibre backhaul/distribution network supported by telegraph poles (a **distribution ring**); and
 - b. A **local access network** that can either be created wirelessly, through the deployment of pole mounted radio antenna, or by using aerial GPON (gigabit passive optical network) fibre (lines) supported by wooden telegraph poles.
4. The local access network delivers connection to individual premises and forms the branches off of the distribution ring. The local access network can employ wireless technology to serve individual premises or groups of premises as it does not require the same infrastructure as the core distribution ring.
5. Wherever the distribution ring and local access network connect, infrastructure is needed. The apparatus requires an electricity connection and is typically housed in ground-based cabinets that one commonly sees on the pavement at the edge of the highway. Such cabinetry is required whether the local access network is delivered via wireless or fibre lines on telegraph poles. However, if wireless technology is used then additional equipment is required to be mounted above ground. This apparatus is mounted on a street pole of up to 15m in height. The deployment of street poles at the intersection between the distribution ring and the local access network is required whether the local access network has a wireless component or is solely fibre.
6. Where wireless technology is deployed the street poles are performing two functions:
 - i. Supporting the aerial fibre cables that form the distribution ring; and,
 - ii. Hosting the radio antenna necessary to provide the wireless local access network.
7. The wireless antennae which form the wireless local access network operate in the 5GHz range. They are fully certified for the purposes of the International Commission on Non-Ionizing Radiation Protection and have a range of up to 1km. To establish a connection there must be a line of sight between the antenna and the premises being served. The signal can be disturbed by vegetation or walls and by

movement. The 15m street poles are therefore needed for both elevation and their rigidity against high winds and deflection.

8. IX is enabled to install infrastructure in the highway through the exercise of rights as a code operator under the New Roads and Street Works Act 1991. All passive infrastructure is sited in accordance with the Pole Siting and Cabinet Siting Code of Practice, Issue 2, 2016 ('the CoP').

9. IX's preference is to deploy its local access network via wireless antennae as it significantly reduces the amount of infrastructure required, ie the antennae remove the need for telegraph poles and cable to support the 'branches' of the local access network.

10. Less infrastructure is preferable as it allows the deployment of the network more quickly and saves on the costs and disruption of the erection of the telegraph poles and fibre cabling required in a non-wireless local access network. The antennae sited on a street pole are deployed to serve at least 1000 premises. The number of telegraph poles and the amount of cabling necessary to provide a non-wireless connection for the same number of premises is considerable.

11. The combination of technical requirements and the threshold of at least 1000 premises served per street pole result in a highly constrained area of search for the placing of street poles.

DISCUSSION

12. I am asked to advise upon how IX's network infrastructure falls within permitted development rights. I am instructed that IX's infrastructure roll out often involves the erection of street poles to form the distribution ring with the local access network spurs created by adding antennae later. I have been asked to advise upon whether the addition of antennae to street poles falls within the prior approval process of the permitted development regime or the addition of antennae to an existing street

pole supporting fibre cable falls within simple permitted development rights to which the prior approval regime does not apply.

13. I do not think that the development IX wish to carry out is caught by the prior approval process: ie it is simply ‘normal’ permitted development under Class A.

14. I will address the GPDO provisions in detail, but it is worth considering the issue from a wider perspective.

15. It is entirely understandable that the significant permitted development rights granted to code operators are subject to control: code operators can interfere with the highway and have to erect apparatus proximate to everyone’s homes.

16. However, the antennae which are the subject of this development are small pieces of equipment (smaller than a shoebox²) and in the context of the 15m street poles they are installed upon, are in fact tiny.

17. Code operators have ‘simple’ permitted development rights, ie not involving prior approval, to erect large structures including cabinets, telegraph poles, cabling, and even 15m street poles. If that degree of development latitude is granted there is no sensible reason why the installation of antennae which, in comparison, are barely noticeable should be the subject of prior approval processes.

IX infrastructure considered against Class A³ – in detail

18. The proposal is the installation of antennae on 15m street poles to enable the local access network. The street poles have already been erected to form the fibre-based distribution ring. Following the High Court judgement in Mawbey⁴ (endorsed by the Court of Appeal⁵), a mast is a structure that supports equipment that receives and transmits. A street pole without such equipment cannot be a mast and antennae in themselves cannot be masts.

² 279mm x 208mm x 286mm

³ Class A, Part 16, Schedule 2 of the GPDO 2015

⁴ R (Mawbey) v Lewisham Council [2018] EWHC 263

⁵ [2019] EWCA Civ 1016

19. Turning to the terms of the GPDO at Part 16 of Schedule 2, the installation of an antenna by IX is:

‘Development by ... an electronic communications code operator for the purpose of the operator's electronic communications network ... over ... land ...in accordance with the electronic communications code, consisting of—

- (a) the installation, alteration or replacement of any electronic communications apparatus,
- (b) ...’ (Class A)

The development falls within Class A.

A.1

20. Thereafter, para.A.1 is ‘Development not permitted’ and is therefore a list of exclusions from the general permission under Class A for ‘(a) the installation, alteration or replacement of any electronic communications’ apparatus. It is necessary to consider each exclusion of PD right in turn.

21. **A.1(1)** relates to installation, alteration or replacement of electronic communications apparatus other than on a building. The street poles are not buildings and therefore this appears the correct sub-provision of A.1 (all of A.1 will be considered for completeness).

A.1(1)(a) – excludes installation of apparatus other than antennae above 15m, ie antennae are excluded from this exclusion. So antennae are not prevented from being PD by this provision. This is the provision that limits the height of the street poles to 15m.

A.1(1)(b) – relates to alterations or replacements other than masts. This is an installation of antennae and does not alter or replace any.

A.1(1)(c) – relates to the installation of a mast. This is not a mast but the addition of antennae. In any event the PD still is not excluded so long as the heights of 25m (Article 2(3) land) and 30m (unprotected land) are not exceeded. The installed antennae would be at 15m or below.

A.1(1)(d) – relates to the alteration or replacement of a mast. This is an installation of antennae and is not a mast. Again, even if it were claimed that a mast was being altered in this case (which is illogical when what is currently there is not a mast) then PD rights are only lost if the alteration exceeds the existing mast in height, or the 25m and 30m limits. The installed antennae would be at 15m or below.

A.1(1)(e) - There is a further exclusion of PD rights in Sites of Special Scientific Interest (SSSIs) where in the case of an altered or replaced mast the resulting mast would exceed the width of the existing mast by more than a third. From the photographs I have been provided with there is no question of that 1/3 tolerance being breached.

The installation of the antennae is not excluded by para.A.1(1).

22. **A.1(2)** is entitled ‘building-based apparatus...’. The street poles are not buildings. The provision is not relevant.

23. **A.1(3)** relates to apparatus on masts and excludes antennae (ie antennae are excluded from the exclusion from PD). The street poles are not masts but even if it might be argued that with the installation of antennae they become masts and as such this provision applies, this provision explicitly excludes antennae.

24. **A.1(4)** applies to antennae but only on article 2(3) land and SSSIs. This may be of limited relevance to IX in cases where the local access network is to expand into a conservation area. The exclusion is not a blanket one, IX’s development could still be acceptable on article 2(3) and SSSIs depending upon limitations specified at para.A.1(4)(a)(iv) and (b)(ii).

25. Since this specific provision on antennae is drafted only for Article 2(3) land and SSSIs it would indicate that control of antennae installation under Class A was only intended and is only applicable on Article 2(3) land and SSSIs.

26. This provision has exclusions relevant to ‘small antenna’ and ‘small cell system’ but I am instructed these terms do not capture the antennae for the IX wireless local access network.

27. **A.1(5)** applies to apparatus on a dwellinghouse and therefore is not relevant to IX.

28. **A.1(6)** applies to small antenna installed on buildings which are not dwellinghouses. I am instructed the antennae in this case do not fall within the ‘small antenna’ definition in the GPDO.

29. **A.1(7)** this provision excludes antennae from the exclusion.

30. **A.1(8)** this provision excludes driver information systems from the PD rights.

31. **A.1(9)** and **(9A)** apply to radio equipment housing.

32. **A.1(10)** – this provision excludes public call boxes.

33. From the foregoing it is apparent that the Class A right to install electronic communication apparatus does not have an exclusion specific to the installation of IX’s antennae outside Article 2(3) land and SSSIs.

A.2

34. **A.2** of Class A imposes conditions upon the PD rights. Under the conditions in **A.2(1)(a), (b), and (c)** require that the siting and appearance of installations minimise ‘so far as practicable’ their visual impact. Condition **A.2(1)(d)** requires that the siting of development not impede the footway for pedestrians both able bodied and disabled.

35. The street poles are not masts (**A.2(1)(a)(i)**) but this provision seems the most readily applicable compared to the other items listed.

36. **A.2(2)** requires any apparatus' removal timeously upon it no longer being required.

37. **A.2(3)** requires observance of the prior approval process (para.A.3) in cases involving Article 2(3) land, SSSI, and where the development is the installation of mast or alteration/replacement of a mast where the replaced is taller or is over 25m (or 20m when on a highway as IX's generally are).

38. The installation of the antennae is not the installation of a mast as following Lang J in Mawbey a mast is a support to transmitting equipment. If it were suggested that somehow the addition of the antennae made the street pole into a mast then it would seem to me that at most it would fall in the 'alteration' provisions and would only require prior approval if the antennae would increase its height, which they will not. It follows that I do not think the installation of the antennae requires prior approval by virtue of A.2(3).

39. **A.2(4)** applies to article 2(3) land.

40. **A.2(5)** excludes prior approval requirements from certain electronic communication apparatus in connection with the provision of fixed-line broadband on article 2(3) land. **A.2(5A)** and **A.2(5B)** apply to civil and defence safeguarding areas.

41. **A.3(4)** specifies that the prior approval process will apply to development described in A.2(3) for the purposes of siting and appearance. If development is not within A.2(3) it is not within the prior approval process. For the foregoing reasons I do not think that the installation of antennae on street poles (even if they by that installation altered to become masts) falls within A.2(3) and therefore does not require prior approval.

42. IX's right to install wireless antennae on the street poles in the distribution ring is a 'simple' permitted development right which is not encumbered by the prior approval process. If it were considered prudent, IX could apply for a Certificate of Lawfulness on the basis that the installation of the antennae is PD under Class A of Part 16 of Schedule 2 and does not require consent.

Fall back

43. To provide wider context, I would note there is a very clear fall back position for IX's networks. IX is committed to the expansion of its business through establishing new networks. IX is capable of implementing a fibre-based local access network via permitted development rights and without recourse to prior approval.

44. In the circumstances it is clear that a lawful planning alternative exists and that alternative is a realistic prospect. Therefore IX's implementation of a fibre-based local access network supported on additional telegraph poles is a material consideration which must be considered by any council. Further, it is a material consideration of significant likelihood: IX will implement such a network if they cannot implement a wireless network. Therefore there is not only a fall back a council **must** consider but one of considerable weight.

45. In addition, when considering that fall back it is necessary to consider the margin of planning harm between the proposed wireless network and the fall back fibre network. The fibre network is significantly worse than the wireless network in planning terms:

- i. It requires infrastructure that is significantly more visually intrusive in terms of cabling and additional telegraph poles to form the branches of the local access network;
- ii. The additional telegraph poles will obstruct parts of the highway (pavement) for so long as they are needed for the network;
- iii. The erection of the infrastructure would be significantly more disruptive than the installation of antennae: the highway will have to be dug up for many more telegraph poles and the process of stringing cable between those poles will disrupt the use of the highway;
- iv. The disruption caused by the installation will have some economic effect, even if limited, through temporary closures of the highway;
- v. The installation of a fibre network will cause needless additional expense to a business seeking to deliver high speed internet connection

to local residents thereby delaying or jeopardising the delivery of that connection;

- vi. The installation of a fibre network involves the use of significantly more embodied energy⁶ by way of the many hundreds of metres of both wooden telegraph poles and fibre cabling necessary to complete the local access network. The manufacture of the cabling in particular involves significant embodied energy. The fibre network is markedly less environmentally sustainable than the wireless network.

46. The fallback in this case is stark (as described in bullet points above) and offends against the economic, social and environmental components of sustainable development. I understand that illustrations of the differences in impact between the fallback and the wireless local access network are being prepared.

47. There are multiple ways to illustrate these including plans which show the extent of operational development and erection of cabling necessary to deliver the fallback. The simple distribution ring and wireless local access network would, I think, contrast strongly with an illustration of the fibre local access networks and all of its physical branches.

48. Similarly, the difference between environmental impacts of the two local access networks in terms of materials used and embodied energy are stark.

49. Finally, in terms of social impact it would be relevant how much longer and how much more disruptive to local residents the implementation of a fibre-based local access network would be.

50. I advise accordingly. If I can assist further please do not hesitate to contact me.

ANTHONY GILL

KINGS CHAMBERS

1st June 2022

MANCHESTER, LEEDS, AND BIRMINGHAM