Question 1: Please provide feedback on the additions, amendments and clarifications we have made to the wording of the licence condition to implement our decisions on the scope of the licence condition

1.		
2.1 – 2.4	Introductory remarks Non-confidential	Noted – see later comments. Considering comments is to be welcomed.
2.5	• Define general public Non-confidential	This clarification is helpful to radio amateurs.
2.5	• Accessible to the general public Non-confidential	The literal meaning and implications of this phrase are concerning because they are far too open-ended and will lead to restrictions where none are actually necessary. Every occurrence of *"…in any area that is accessible to the general public"* should be amended to: *"...in any area where a member of the general public is present when transmissions are taking place."* This specific wording supports compliance through two different and equally justifiable means of mitigation. For EMF exposure to exceed the relevant basic restrictions, at least two conditions must apply concurrently: • The EMF levels (subject to appropriate time/spatial averaging) exceed a threshold at a location of interest • One or more persons, General Public or Occupational, must be physically present at the location of interest. It is logically implicit in all ICNIRP guidance that if no person is present, no human exposure takes place. Regulations should therefore recognise that compliance may be achieved through mitigation and/or management of either of these conditions. From the viewpoint of controlling human exposure to EMF, each is equally valid, and it is not necessary to control both. The assessment of compliance should consider both aspects. This is especially relevant to radio amateurs where transmitter operation is intermittent and is almost always directly supervised by the licensee who is a trained person. The concepts of "risk assessment", "risk management", "mitigation" and "supervision" should all be acknowledged in this paragraph – see suggested modified A2.23
2.5	• Shared site exemptions Non-confidential	Noted
2.5	• Taking into account Non-confidential	Noted
2.5		

2.5	• Reference to ICNIRP 1998 Non-confidential	Good change. Initially, the guidance should deem it acceptable to assess compliance based on either ICNIRP 1998 or ICNIRP 2020 with an indication that it is the intent to move to ICNIRP 2020 pending availability of suitable standards. It should be noted that the requirement to assess compliance with the ICNIRP basic restrictions always implies that the full set of applicable reference levels needs to be considered in an assessment scheme; simply comparing a field strength at a point with a corresponding field reference level may not be sufficient in all cases. Also note that ICNIRP use a "z" in "ionizing" when spelling out the organisation name - see https://www.icnirp.org/
2.5	• Electromagnetic field exposure levels Non-confidential	This change is consistent with the aim to manage human exposure to EMF, as distinct from the fields themselves.
2.5	• Compliance with basic restriction Non-confidential	This change is consistent with ICNIRP guidance and a useful regulatory clarification.
2.5	• Records to be kept Non-confidential	The practicalities of this should be explored and defined for radio amateurs where there is a presumption that the "self-training" aspect is quite likely to include frequent experimentation with radio equipment configuration. Further, for Foundation licence holders at least, this is an unreasonable expectation and disproportionate to realistic potential risks at their 10W licensed power level.
2.5		

Question 2: Please provide feedback on the additions and clarifications to our 'Guidance on EMF Compliance and Enforcement', giving reasons for your response.

2.6	• EMF calculator Non-confidential	In principle this is welcomed however see specific comments in response to Question 3.
2.6	• Additional standards Non-confidential	There are a wide range of standards that are relevant to EMF evaluation, however the range of radio amateur activities is so wide and the type of use so different to many commercial or military applications that there is a requirement for new standards or at least guidelines endorsed by Ofcom to clarify compliance assessment. The IEEE C95.3 [2021 – TBD] recommendation that is currently under voting may offer general assistance to licensees (it cites a whole range of IEC and other references) but there remains a gap in standardised assessment methodology for radio sites in the domestic environment. The amateur service covers a frequency range of 136 kHz to 250 GHz – a factor of two million spanning a huge range of different and changing technologies. No commercial comms licence has such range or diversity.
2.6	• Clarify expectations on re-assessment Non-confidential	The continual experimentation inherent in the objectives of amateur radio indicates that this aspect should be considered further and guidance provided that clarifies proportionate risk management requirements.
2.6	• Non-permanent location Non-confidential	Such guidance is useful but needs to be reviewed in the context of amateur radio to be made practical.
2.6	• Shared site exemptions Non-confidential	Noted – most likely to impact amateur repeaters or remotely-operated stations.
2.6	• Third party breaches • Additional factors Non-confidential	Noted
2.6	• 6 months before enforcement Non-confidential	Consider: a) The amateur service covers a frequency range far greater than any commercial communications licence. b) The absence of standards pertinent to assessing EMF exposure from the range of amateur activities. c) Commercial communications facilities have been covered by worker legislation on EMF exposure management for some time and licensees have applied their extensive resources to establish appropriate compliance protocols and mitigations. This has taken time and resources to complete. Indeed, at the time that cellular operators were expected to transition from NRPB 1993 to ICNIRP 1998, a two-year period was permitted to complete the relevant changes. d) The acknowledged absence of any significant risk arising from amateur radio; in the 348-page report, HPA RCE-20[1], amateur radio is not even considered worth listing as a source of RF EMF exposure. Therefore, requiring radio amateurs to establish analysis protocols, agree them with Ofcom/PHE and then implement assessments within a 6-month period is unreasonable and disproportionate to the actual risks. The timing and practical expectations for amateur compliance assessment should be considered further.

[1] "Health effects from radiofrequency electromagnetic fields", https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/333080/RCE-20_Health_Effects_RF_Electromagnetic_fields.pdf