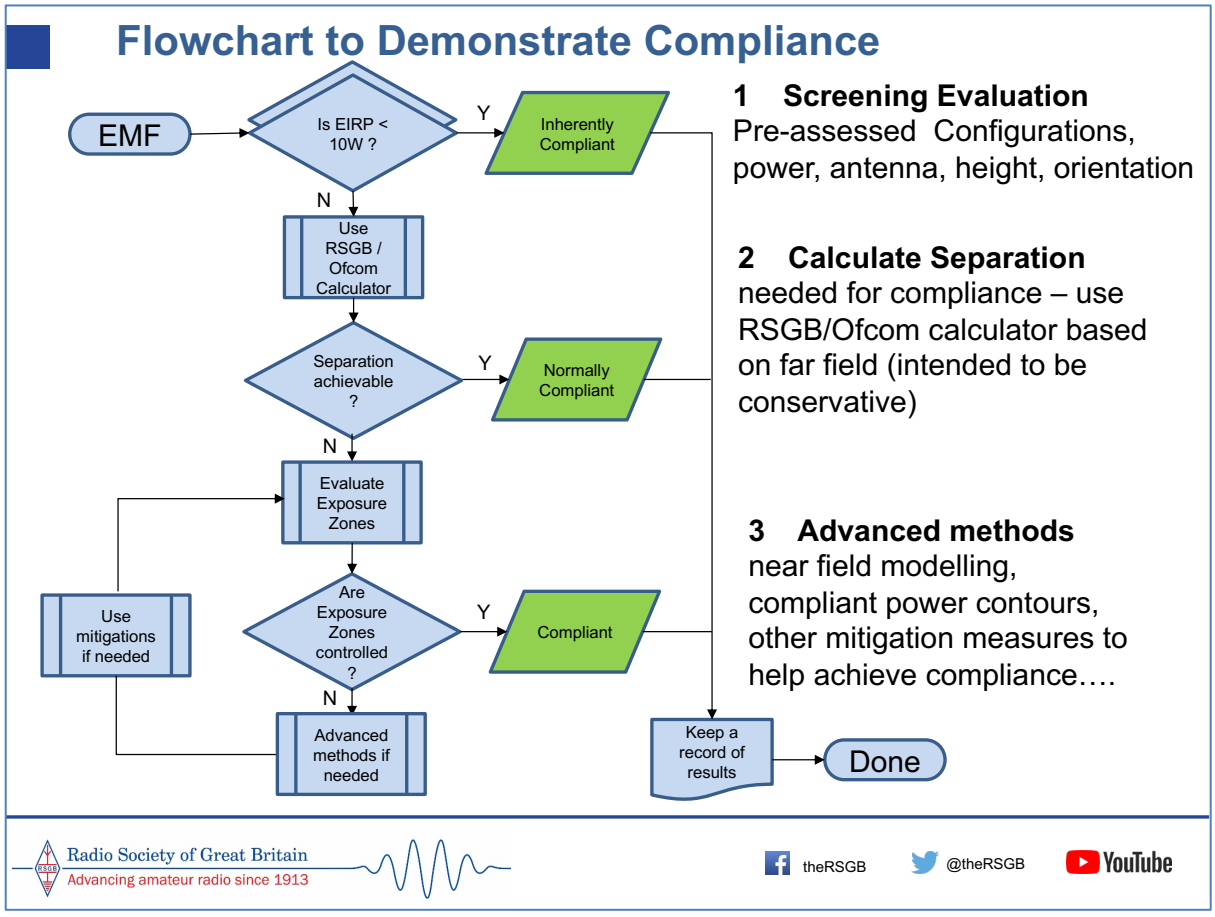
Your response

Question	Your response
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 in our October 2020 Statement, giving reasons for your response.	Confidential N I fully endorse the RSGB response and want to emphasise the points which are most important to me personally. A simpler obligation and better guidance and training rather than the proposed new licence condition would be a more proportionate action for Amateur Radio users who undergo training on EMF exposure. Ofcom should also consider exempting Foundation licensees, who are permitted to transmit up to 10W PEP. Added guidance that any antenna, (not provided integral to the radio equipment) should be "out of reach" of anyone when transmitting, should be sufficient for compliance.
Question 2: Please provide feedback on the additions and clarifications to our 'Guidance on EMF Compliance and Enforcement', giving reasons for your response.	Confidential N a) Ofcom should avoid the use of categorical words such as "safe". This is widely recognised as bad practice in the management of controversial issues because, by over-claiming, it allows others to counterclaim that exceeding the ICNIRP reference levels is categorically "unsafe". For this issue, the correct and neutral word would be "compliant". b) Requirement to keep records is not proportionate for an experimental service which involves many temporary changes in configuration. c) Standards do not exist that cover the range and depth of amateur service use. d) Need to include considerations for near-field compliance assessment which EIRP cannot address. e) Compliance with either ICNIRP 1998 or ICNIRP 2020 should be "deemed satis-

	factory” f) Any amateur using a given installation should only have to comply with occupational exposure levels not general public. The goal should be to demonstrate amateur radio equipment compliance. We recommend a three stage process: • First - by using pre-assessed configurations of antenna, height and averaged transmit power, so that reference levels will not be exceeded in any practically accessible location. To use additional mitigation measures like defining where people should not be present and ensuring that no-one is there while transmitting. • Second - the Ofcom EMF tool can be used subject to calculate a compliant separation. • Finally - apply more advanced methods to specific cases to establish compliance and to extend the available pre-assessed configurations. The flow chart below presents such a framework; and is an interpretation of ITU Recommendation K.52, applied to the Ofcom consultation and the amateur service:
Question 3: Please provide feedback on the trial version of our EMF calculator, giving reasons for your response.	Confidential N **The EMF calculator should be presented as a screening tool, with a warning that it should NEVER be interpreted as a demonstration of non-compliance.** Any indication that the tool is related to “safety” should also be avoided in order not to raise unjustified concerns. The user needs to compute EIRP before submission to the Ofcom EMF calculator. Many amateurs have requested practical help in deriving the EIRP. Good practice is to support inputs that are an existing part of the station design: antenna gain in desired direction,

	power from transmitter, transmission mode, % time transmitted and feeder length/loss. The computation and assumptions in determining these factors for the purpose of evaluating exposure can be more complicated than the implementation of the Ofcom EMF calculator formula. Example given below and spreadsheet forwarded to Ofcom.



Name	Callsign		Date of Assesment		Station Address
Radio Make	Model		Notes Fill in the beige squares as a record of assessment. Click on yellow boxes to select from your station setup and operating conditions. If Ofcom recommended separation is less near field limit, nearfield analysis is advised		

Radio Setup	Band	2m
Transmit mode	FM	
Frequency MHz		
Transceiver	**Linear**	**dB**
Power in Watts	100.0	20.0
Mode factor	100.0%	0.0
Tx % in 6 minutes	70.0%	-1.5
Average power from Transmitter	70.0	18.5
Maximum Power from Transmitter	100.0	20.0

Feeder		
Cable Type	RG213	
Feeder	**Linear**	**dB**
Loss per 100m		-7.7
Cable Length m	20.0	
Other losses dB		-0.5
Feeder loss dB		-1.5
Average power into Antenna	43.7	16.4
Peak power into antenna	62.4	18.0

Antenna		
My Antenna		
Antenna type	8 element Yagi	
Frequency MHz	145.5	MHz
Antenna	**Linear**	**dB**
Gain in dBd	12.6	11.0
Antenna ERP	550.2	27.4
Height of Antenna feed m	7.0	
Sidelobe loss		0.0
EIRP	902.6	29.6
Peak EIRP	1289.4	31.1

Near field zone	0.3	m
Ofcom Separation	9.6	m
Vertical separation	5.0	m
Horizontal Separation	8.2	m

Example of front end to Ofcom spreadsheet to allow amateurs to input more familiar parameters and to more reliably estimate EIRP. Spreadsheet prototype forwarded to Ofcom.

Please complete this form in full and return to EMFImplementation@ofcom.org.uk.