

Innovation and trial licence application form – OfW225

Guidance for completing this form

Who should use this form

You may use this form to apply only for a non-operational innovation or trial licence.

What is innovation and trial licensing?

This enables the use of radio spectrum to promote the development and trialling of innovative uses of the radio spectrum in the UK. It covers:

- development / research of innovative spectrum systems, applications or services;
- scientific research and experimentation; and
- test, trial or demonstration of a new system, application or service (that does not fit within current licence categories).

It does not permit any sort of commercial or operational use. There are two licence classes:

- Innovation and Research (i.e. those largely used for academic or research purposes); and
- Demonstration and Trial (i.e. those largely used on a non-commercial, non-permanent basis to trial a new system or radio concept or demonstrate a new radio system or concept).

Conditions

Under the Wireless Telegraphy Act 2006, you must have a licence issued by Ofcom before you establish or use any Wireless Telegraphy apparatus. Licences, if granted, are issued on a non-interference and non-protected basis. This means that the equipment must not cause harmful interference to any other authorised services and that no protection will be given from harmful interference received from authorised services. The granting of a licence does not imply that any spectrum authorised would be available in future, whether for an operational application or for a further period of testing.

Communication preference

Where possible, we send correspondence to licensees electronically. This is quicker for you. By providing your email address, we assume that you wish to receive correspondence and notifications relating to Wireless Telegraphy Act licences electronically and not on paper. If you do not wish to receive documents electronically, please indicate this by ticking the relevant box on the application form.

Completing this form

When completing this application either electronically or on paper please refer to the notes. If you are applying by paper, please complete in dark ink in BLOCK CAPITALS.

Please provide as much relevant information as possible. If you do not provide a telephone number and email address, it may delay the processing of this form. If you need to supply further information or clarification, please provide in the section 'Additional information' at the back of this form.

General information

The Office of Communications (Ofcom) is responsible for regulating the use of the civil radio spectrum in the United Kingdom. Regulation is necessary to ensure optimal use of the limited radio spectrum.

The regulations governing radio are, in general, derived from the International Telecommunication Union (ITU) Radio Regulations, relevant EU Directives and the Wireless Telegraphy Act 2006.

Wireless Telegraphy Act

Under the terms of the Wireless Telegraphy Act 2006, it is an offence to install or use radio apparatus, unless:

- you do so in accordance with a licence issued by Ofcom; or
- the apparatus is specifically exempt from licensing.

Responsibility for obtaining and paying for a licence rests with the user of the system, not with the supplier of the equipment. Submitting a licence application form does not permit you to install or use any equipment – you must wait until we have issued the licence to you.

Ofcom may refuse to grant, or may revoke a licence to a person where evidence provided to Ofcom by the police indicates that the applicant is involved (or has been involved) in organised crime or other criminal activity.

Radio Equipment Directive (RED)

The Radio Equipment Directive (2014/53/EU) has superseded the Radio and Telecommunications Terminal Equipment (R&TTE) Directive (99/5/EC). As licensing covers the development and trialling of innovative equipment it is feasible for the equipment not to be CE or RED compliant. Please note that equipment will need to be compliant with the Radio Equipment Directive before it can be placed on the UK market.

Frequencies

There is no specific spectrum set aside for testing and development, however Ofcom has a duty to secure the optimal use of spectrum. For this reason, coordination with existing users may be required before we are able to assess whether to grant a licence.

Applications may need to be coordinated with other official bodies including the Ministry of Defence and Civil Aviation Authority, who will conduct assessments on the risk of harmful interference to existing services.

We may also need to contact (without disclosing an applicant's identity) existing civil spectrum users in order to carry out our assessment of whether a licence can be granted. For guidance, a range of information and tools about current use of spectrum and licensees is available on the Spectrum Information page of our website: <https://www.ofcom.org.uk/spectrum/information>.

Payment

We will only request payment of a licence fee when we have assessed that it is possible to grant a licence. Payments must include all bank charges. If Ofcom does not receive full payment, it will return any partial payments received.

A non-operational Innovation & Research licence may be authorised for periods up to 12 months for which the licence fee is £50.00 for each station or apparatus per location.

A non-operational Demonstration & Trial licence may be authorised for periods up to twelve months and charged at £50.00 per location per each month of use.

How we use your data

We require this information in order to carry out our licensing duties under the Wireless Telegraphy Act 2006.

Please see Ofcom's General Privacy Statement for further information about how Ofcom handles your personal information and your corresponding rights: www.ofcom.org.uk/about-ofcom/foi-dp/general-privacy-statement

For help contact:

Ofcom
Innovation & Trial Licensing
Riverside House
2a Southwark Bridge Road
LONDON
SE1 9HA

E-mail: innovation.licensing@ofcom.org.uk

Website: www.ofcom.org.uk

Telephone: 020 7981 3157 or 020 7981 3857

Website: www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/non-operational-licences

The remainder of these guidance notes provide guidance on customer details in Section B.

Question B.1 – Existing customers

If you already hold an Ofcom radio licence, you should write your customer reference number in the box provided. Your customer reference number will be quoted in licence documentation or correspondence that we have previously sent to you.

Question B.2 – New customers

A Wireless Telegraphy Act licence can only be issued to a legal entity. You should tick one of the options provided. For a partnership, please give the full name of one partner and supply a list of all other partners. The main partner is also required to sign the declaration in Section E.

Question B.3 – Licensee name and address

If you are applying on behalf of a Limited Company, a Public Limited Company or a Registered Charity, the registered address of the organisation must be used.

Question B.4 – Licence contact name and address

This is the preferred contact to receive licensing documentation and correspondence.

A. Application purpose

A.1 Tick the type of non-operational licence. A separate application must be used for each project.

- ☒ Non-operational innovation and research licence
- ☐ Non-operational demonstration and trial licence

B. Applicant details

B.1 Customer reference number:

If you are an existing licensee, please provide your customer reference number and go to question B.4.
If not, please complete all sections.

B.2 Who is the licence to be issued to?

A licence can only be issued to a legal entity. Ofcom recognises the following types of entity.

Please tick the relevant box:

- | | | |
|--|---|--|
| <input type="checkbox"/> Individual or sole trader | <input type="checkbox"/> NHS Scotland | <input type="checkbox"/> Government |
| <input type="checkbox"/> Incorporated association | <input type="checkbox"/> Non-UK company/PLC | <input type="checkbox"/> Unincorporated association |
| <input type="checkbox"/> Limited company/PLC | <input type="checkbox"/> Non-UK government/administration | <input checked="" type="checkbox"/> University/educational |
| <input type="checkbox"/> Local government | <input type="checkbox"/> Partnership | <input type="checkbox"/> Community interest |
| <input type="checkbox"/> NHS England and Wales | <input type="checkbox"/> Public body | <input type="checkbox"/> Royal charter |
| <input type="checkbox"/> NHS Northern Ireland | <input type="checkbox"/> Registered charity | <input type="checkbox"/> Religious body |
| <input type="checkbox"/> Crown | | |

If **individual or sole trader**, please provide full name:

If a **partnership**, please provide the full name of one partner (who must also sign the declaration of this form and supply a list of all the full names of all the other partners in the declaration):

If a **limited company, public limited company (PLC) or incorporated association** please provide:

Company name

University of Southampton

Company registration number

RC000668

If a **registered charity** please provide:

Charity name

Charity registration number

Does the registered charity have as its objective, the safety of human life in an emergency?

- ☐ Yes
- ☐ No

If any **other legal entity** please provide:

Name

Registration number (where applicable)

B.3 Licensee contact details

- Companies should use the registered address from [Companies House](#)
- Registered charities should use the address from the [Charity Commission](#)

For all other Licensees, please use your main business address

Name	University of Southampton		
Trading name			
Address	Highfield Southampton	Telephone	
		Mobile	
		Fax	
Postcode	SO17 1BJ	Email	
Country	United Kingdom		

Please indicate your communication preference:

☒ Email

☐ Letter

B.4 Licence contact details (where different from above)

Licensing documentation and correspondence will be sent to this address.

Name			
Address	ECS University of Southampton Highfield, Southampton	Telephone	
		Mobile	
		Fax	
Postcode	SO17 1BJ	Email	
Country	United Kingdom		

Please indicate your communication preference:

☒ Email

☐ Letter

B.5 Contact details for payments or account queries:

NB: This is the person who will receive invoices and reminders when payments are due.

- Do not include payment with this form, as you will be invoiced later

☒ Tick if details are the same as those in question B.4 (Licence contact details)

Name			
Address		Telephone	
		Mobile	
		Fax	
Postcode		Email	
Country			

Please indicate your communication preference:

☒ Email

☐ Letter

B.6 Contact name and address for site and technical enquiries (where different from above)

☒ Tick if details are the same as those in question B.4 (Licence contact details)

Name

Address

Telephone

Mobile

Fax

Postcode

Email

Country

Please indicate your communication preference:

☒ Email

☐ Letter

C. Project overview

If necessary, add any additional details in the space at the back of this form under 'Additional information' or as supplementary information attached with your application

C.1a Provide a description of the project, including any relevant technical information:

This project will involve setting up a test GSM base station and using the implementation as part of scheduled laboratories for our "Security of Syber Physical Systems" module; this is part of our GCHQ-accredited Cyber security MEng and MSc degrees. As part of this module, we will be teaching a variety of techniques involving hardware security; part of this involves exploring radio protocols. We are applying for a non-operational innovation and research license to allow us to run a simple low-power GSM network in the lab.

C.1b In case of need for release to external spectrum managers, provide a description of the project, including any relevant technical information details (if different from C.1a):

C.2 If this application is in support of a Ministry of Defence project, then provide the contact details of the sponsor (if possible)

Name	<input type="text"/>		
Address	<input type="text" value="This programme is GCHQ accredited: Foreign Office rather than MoD."/>	Telephone	<input type="text"/>
		Mobile	<input type="text"/>
		Fax	<input type="text"/>
Postcode	<input type="text"/>	Email	<input type="text"/>
Country	<input type="text"/>		

Please indicate your communication preference:

☐ Email

☐ Letter

C.3 Provide the project timescales:

Start date (DDMMYYYY)	<input type="text" value="1-Jan-2020"/>
End date (DDMMYYYY)	<input type="text" value="31-Dec-2020"/>

C.4 Provide details of how the transmitter will be operated:

Intermittent operation as required for laboratories.

Details of timings	<input type="text" value="24 hours per day"/>
Duration of transmissions	<input type="text" value="24 hours per day"/>
Days per week in operation	<input type="text" value="7 days per week"/>

D. Station details (required for each transmitting station)

For the first transmitting station you should ensure all sections of this application are completed.

For each subsequent transmitting stations, an additional section D must be completed. This can be done either by photocopying pages 7 to 9 of this form or **downloading an additional section D** from the Ofcom website.

Any additional sections should be attached with the completed main application when submitting.

D.1 Site location and address of transmitting station

GB National Grid Reference (e.g. TQ 300 800)

SU 424 154

Address Building 59, University of Southampton
Highfield
Southampton

Postcode SO17 1BJ

Country United Kingdom

D.2 Frequency details:

Frequency of operation

Bandwidth

Class of emission

1805 - 1880 MHz

271 KHz

271KF7W

925 - 960 MHz

271 KHz

271KF7W

For guidance, refer to information sheet [OfW84 providing guidance on 'class of emission'](#).

Applying only for the frequencies required will help reduce turnaround as unduly large requests may lengthen the processing time of this application.

D.3 Antenna details:

Antenna type 1/4 Wave Monopole

Polarisation Vertical

D.4 Antenna gain: dBd

or

 dBi**D.5 Provide the antenna height above ground level:** metres**D.6 Provide the ground height above mean sea level:** metres**D.7 Confirm if the antenna is directional:**☐ Yes☒ No**For a fixed antenna beam provide the direction of maximum radiation:**a. Horizontal 3dB beam width in degrees b. Vertical 3dB beam width in degrees c. Antenna tilt d. Azimuth in degrees East of True North e. Elevation in degrees from the horizontal

(state whether above or below horizontal)

D.8 Indicate the proposed peak power: (choose one of the following possibilities to input the data)Effective Radiated Power (ERP) dBW

or

Effective Isotropically Radiated Power (EIRP) dBW

Note that ERP (in a given direction) is the product of the power supplied to the antenna and its gain relative to a half wavelength dipole. The maximum ERP is that in the direction of maximum radiation and is expressed in watts. The power supplied to the antenna is expressed in the form of peak to peak envelope power (PX or pX). The peak envelope power is defined as the average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operation conditions.

EIRP (in a given direction) is the product of the power supplied to the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain).

Ofcom will ultimately decide on the permitted ERP or EIRP as appropriate.

D.9 Indicate the peak RF power supplied to the antenna or load: dBW**D.10 If applicable, indicate the mean radiated power for pulsed transmissions:**

(choose one of the following possibilities to input the data)

Effective Radiated Power (ERP) dBW

or

Effective Isotropically Radiated Power (EIRP) dBWThe relevant measured bandwidth The pulse duration The pulse repetition rate

D.11 Indicate whether the transmission is planned to occur outdoors:

☐ Yes

☒ No

D.12 Describe what method, if any, will be used to suppress any radiated emissions giving details of the likely attenuation from the suppression or a clear overview of the suppressed

D.13 It is advisable to consider the potential interference risk of your application to other users of the radio spectrum.

In the event where there are concerns due to the risk of interference, it would be helpful to know what compromises you may be able to undertake in your testing to reduce this risk.

Provide any details that may increase the likelihood of a licence being granted, or could help ensure a more efficient co-ordination process:

For each subsequent transmitting stations, an additional section D must be completed. This can be done either by photocopying pages 7 to 9 of this form or [downloading an additional section D](#) from the Ofcom website.

Any additional sections should be attached with the completed main application when submitting.

E. Declaration

By signing this form, I confirm that I have read and understood all the notes. Any information provided is correct and complete to the best of my knowledge and I have the authority to make this declaration and sign this application.

I understand and accept that:

- The body (if any) I represent will be responsible for compliance with the licence and has the control and supervision of the station;
- It may be an offence to knowingly make a false statement in support of this application and may lead to the licence being refused or revoked under the Wireless Telegraphy Act;
- Ofcom will not share your personal data except in accordance with the law;
- Ofcom will not give anyone my information except where it has permission or is permitted to do so by law.

Full name

Position in organisation

Signature of applicant

Date of application (DDMMYYYY) 13/11/19

For self and partners (tick if applicable) ☐

- Partnerships must be applied for by one partner signing 'for self and partners'. A director or authorised person must sign for public limited companies, limited companies and other legal entities;
- If the number of partners exceeds the space, then for each additional partner please provide the name and signature.

Partner 1 name

Partner 3 name

Partner 1 signature

Partner 3 signature

Partner 2 name

Partner 4 name

Partner 2 signature

Partner 4 signature

Where to send this form

Please do not include payment with this form, as you will be invoiced at a later date.

Ensure that you enclose all relevant certification and attachments with your application and email innovation.licensing@ofcom.org.uk or send to:

Ofcom
Innovation Licences
Riverside House
2a Southwark Bridge Road
LONDON
SE1 9HA

If you need assistance, then please email innovation.licensing@ofcom.org.uk.

Alternatively you can phone us on 020 7981 3157 or 020 7981 3857.

There is also information available on our website at: <https://www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/non-operational-licences>