



The  
Scotland  
**5G** Centre

# Guide to Applying for an Ofcom Spectrum Licence

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## Spectrum Definitions

- 1 Who controls it?** Controlled use of Radio Broadcast frequencies under Ofcom Licence.
- 2 How is it managed?** Managed through allocation of Spectrum Frequency to applicants on a case by case basis. You will not automatically be granted a licence and this can take up to 3 months from point of application to active licence.
- 3 What types of licence?** There are 3 types of licence: Innovation and Trial –for which 2 versions exist; Innovation & Research and Demonstration & Trial, then there are Shared Access (Low & Medium Power) and Commercial Licence.
- 4 Standalone / Non Standalone** - Standalone Solution is pure 5G – this is the future of deployments. Non Standalone Solution uses 4G technology for Governance with 5G Throughput – the first wave of 5G.

## Innovation and Trial Licence

- 1 For the use of testing applications or products on a 5G Private Network. Not for commercial or operational use.
- 2 This is managed in a consultative manner by a specialist Ofcom Team:
  - a) Gordon Drake (Assessor) & Dave Parsons (Administration)
- 3 Two types of licence exist under Innovation and Trial:
  - a) Innovation and Research Licence – for testing a solution or product on 5G PN for up to 12 months, costs £50.00 for each station.
  - b) Demonstration and Trial Licence – for testing of new 5G PN radio equipment for up to 12 months, costs £50.00 per location per month.
  - c) New application required each year (not a renewal). [Innovation and trial licensing – Ofcom](#)
- 4 Allow 3 months for the licence application, there is no guarantee that the licence will be granted.
- 5 Maximum coverage is likely to be up to 1KM, limited by power restrictions within the licence.
- 6 For larger coverage Requirements you will need specialist licence planning to avoid potential conflict with MNO owned spectrum.

## Shared Access Licence

- 1 Managed by a central Ofcom team, this is a non consultative approach. The spectrum is provided or not if there is a conflict with other operational broadcasts.
  - a) [spectrum.licensing@ofcom.org.uk](mailto:spectrum.licensing@ofcom.org.uk)
  - b) [Shared access licences - Ofcom](#)
- 2 Can operate at Low Power in urban and rural locations.
- 3 Can operate at Medium Power in rural locations only.
  - a) Check the [Technical Frequency Assignment Criteria](#)
- 4 Medium Power Shared Access provides coverage up to of 1KM and is suited to outdoor deployments.

## Shared Access Licence

- 5 Low Power Shared Access provides coverage less than 500M and is suited to indoor deployments.
- 6 Licence application process takes up to 3 months.
- 7 Once approved this licence can be renewed yearly by paying the subscription fee.
- 8 Priced at £80 per Mhz of spectrum per annum, the maximum of 100Mhz is therefore £800 per annum.
- 9 Can operate commercially under:
  - a) 1.8-2.3GHz
  - b) 3.8-4.2GHz
  - c) 24.25-27.5 GHz\*\*

*priced at 320 per annum\*\**

## Commercial Licence

- 1 Commercial licences are normally not the business of a Private Network Operator.
- 2 Spectrum Auctions run and managed by Ofcom are bid upon and the winners are normally Major Network Operators (MNO's).
- 3 The purchase of these frequencies is managed strategically and investment in the specific spectrum frequencies is in the Millions of £(GBP).
- 4 A commercial spectrum licence allows large coverage at high power.
- 5 Access to use this licence would come from the MNO directly and would require a partnership agreement.

## Application Information Requirements

*(gather this information ahead of beginning any application for Innovation & Trial or Shared Access Licences)*

- Organisation name
- Responsible/Technical Contact for application queries
- 6 figure grid reference of broadcast location
- Power level, Height and Gain of Antenna\*\*
- Central Frequency of radio/antenna\*\*
- Provide detail of intended use of the network\*\*
- Manufacturer and Model of Radio/Antenna\*\*

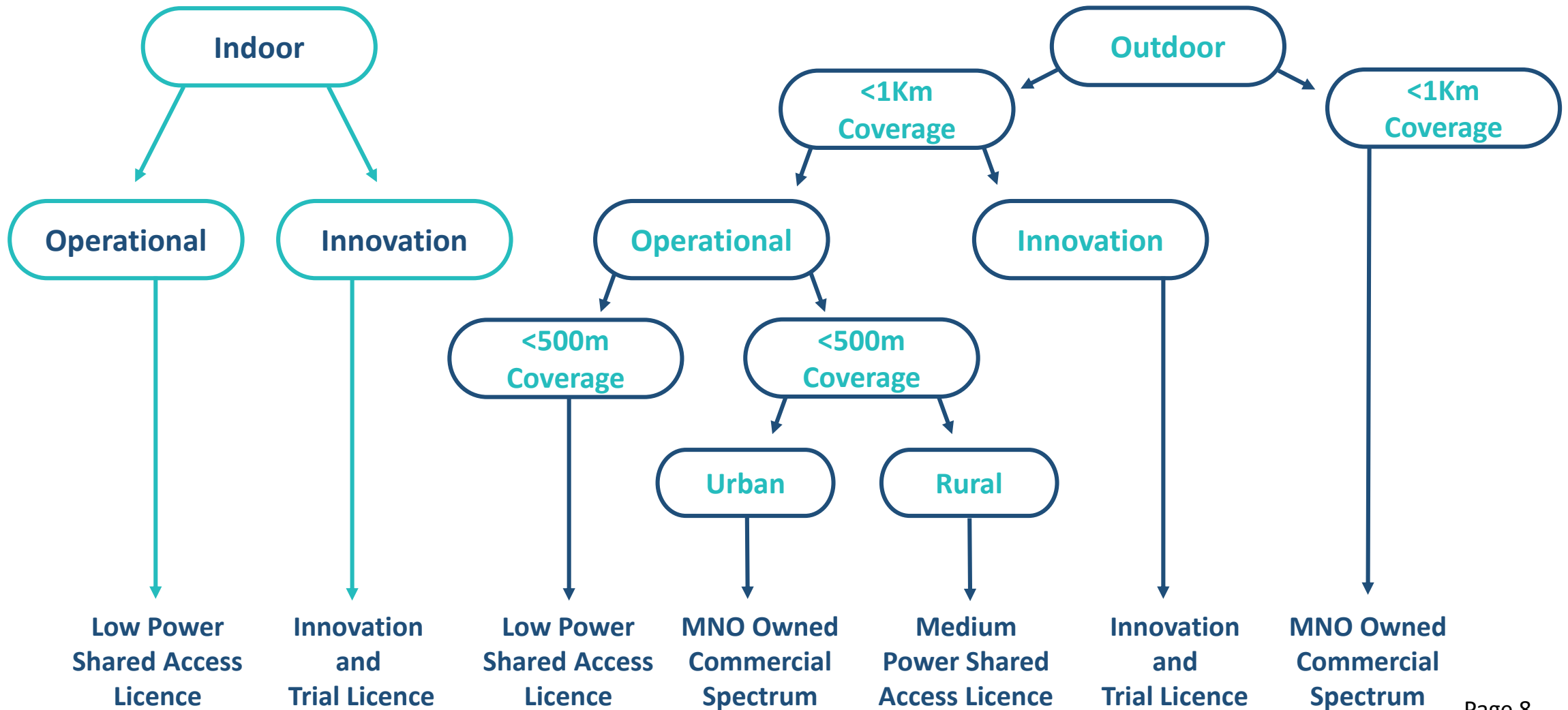
*Info provided in the Network LLD\*\**



## Licence Comparison Table

	Innovation & Trial	Shared Access Low Power	Shared Access Medium Power	MNO Commercial/Public
<b>Managed/Owned by</b>	Specialist Ofcom Team	Central Ofcom Team	Central Ofcom Team	Major Network Operator
<b>Licence Length</b>	Up to 12 Months	Not limited once granted	Not limited once granted	Limited to agreement
<b>Application Process Time</b>	2 Months	2 Months	2 Months	Limited to agreement
<b>Coverage</b>	Up to 500M	Up to 500M	Up to 1000M	5-10KM
<b>Cost</b>	£50/year or £50/month	£80/10Mhz/year, max 100Mhz	£80/10Mhz/year, max 100Mhz	Limited to agreement
<b>Power</b>	Low	Low	Medium	High
<b>Use</b>	Research & Development	R&D and Operational	R&D and Operational	Any
<b>Risk</b>	Medium	Very Low	Very Low	High (no control)

# Spectrum Licence Application- Selection Tool



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[info@scotland5gcentre.org](mailto:info@scotland5gcentre.org)

