

# Calibre, Cartridge and Quarry: Advice for Enquiry Officers

The Cartridge; rimfire or centrefire.

Only four cartridges are commonly found in rimfire; .17 HMR (Hornady Magnum Rimfire), .22 LR (long-rifle), .22 WMR (Winchester Magnum Rimfire), and 9mm rimfire, the latter appearing in shotguns. Rimfire cartridges are easily recognisable by the head of the cartridge (opposite end to the bullet) which is smooth and flat. The priming compound is contained within the rim (hence the name) and is ignited by the firing pin crushing the rim of the case against the rifle's chamber. Naturally, the brass must be thin to allow the firing pin to crush it. This design limitation means rimfire cartridges will be low pressure compared with centrefire cartridges. Due to the relatively low muzzle energies produced, rimfire cartridges are seldom used for any quarry larger than rabbit/hare, and fox at close range. Ease of manufacture also makes rimfire cartridges cheaper than their centrefire counterparts. This adds to their attractiveness to vermin controllers.

Centrefire cartridges have a separate primer which is pressed into a cup in the centre of the cartridge head. The .223 Remington is a common example of a centrefire cartridge. The brass is substantially thicker than its rimfire counter parts which allows much higher pressure (and therefore, muzzle energy) to be safely generated. The primers are usually replaceable allowing the brass to be reused.

Which Calibre?

Calibre describes the bore diameter of a firearm. The rifling is usually measured from *land* to *land* as per British military convention, but this can vary on rifles of other origin.

It should be noted that calibre is distinct from cartridge; the former describes bore dimension, whereas the latter describes ammunition.

Both calibre and cartridge are largely a matter of personal choice, provided the applicant's choice meets any minimum legal requirements. As section 10.40 of Home Office guidance says:

*“Most firearm certificate holders possess firearms for reasons of their profession, sport recreation, or collecting, study or research and may properly wish to exercise discretion as to what types of firearms they choose for these purposes.”*

The Home Office also provide a table at the end of Chapter 13 to assist with judging the suitability of rifle cartridges for different quarry species. The examples given are limited. An extended version has been produced below to assist with decision making. Data is drawn from *Cartridges of the World, 13<sup>th</sup> & 15<sup>th</sup> editions*.

Green fields indicate the cartridge is capable of killing the quarry humanely and legally. Amber fields indicate the cartridge may or may not meet the required standards depending on the load used. For example, .243 is usually acceptable for shooting large deer species, but some loadings may contain bullet weights that are too light. Likewise, some cartridges, such as .303 British, may not meet the required velocity for Roe Deer in Scotland (2,450 ft./sec.). Red fields indicate the

cartridge is unsuitable. In the case of .22 LR, the Home Office advise it should only be used on fox at close range and when controlling fox around farm buildings.

Cartridge	Ft/lbs Energy	Quarry Species							
FAC air rifle	12+	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.17 HMR	250	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.17 Remington	800-900	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.17 Hornet	500-600	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.204 Ruger	1100-1300	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.218 Bee	600-800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.22 LR	100-200	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.22 Hornet	600-800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.222	950-1150	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.22-250	1200-1600	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.220 Swift	1250-1800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.223 Remington (5.56x45)	950-1350	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.243 Winchester	1600-2100	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.244 Remington (6mm Remington)	1750-2100	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.25-06	2000-2400	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game

6.5x55 Swedish	1800-2400	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.270 Winchester	2500-2900	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.270 WSM	3000-3300	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
7x57 Mauser (.275 Rigby)	2000-2600	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.280 Remington	2500-2900	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
7.5x55 Swiss	2400-2800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.30-30	1400-2000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
7.62x39	1400-1600	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
7.62x51 (.308 Winchester)	2400-2800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
7.62x54R	2600-2900	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.30-06	2500-3000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.303 British	1800-2500	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.300 WSM	3400-3600	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.300 Winchester Magnum	3100-4000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
8x57 Mauser	2200-3000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.338 Lapua Magnum	4500-4800	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game

9.3x62 Mauser	3500-3900	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.375 Holland & Holland Magnum	4000-4700	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.444 Marlin	2450-3000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.45-70	1300-3000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game
.458 Winchester Magnum	3000-5000	Small vermin	Fox	Muntjac & Chinese Water	Roe (Scotland)	Roe (England & Wales)	Fallow, Sika & Red	Wild Boar	Dangerous game

### Sound Moderators.

As the name suggests, sound moderators are an accessory for reducing the noise produced by firing. This might be desired to protect the hearing of persons nearby, to prevent livestock becoming panicked, or to reduce the dispersing effect gun fire has on quarry in the area.

As per section 13.77 of Home Office guidance, *good reason* for a rifle usually implies *good reason* for a sound moderator.

Licensing officers should also note that integral sound moderators do not require a separate authority (Broome v Walter, 1989). Sound moderators for sub-12 ft./lbs. air rifles and section 2 shotguns are not caught by section 57(1)(d), and therefore, do not require any authority to purchase or possess.

### Land Inspections.

Land should be passed for the maximum calibre it can safely sustain, not what the applicant has applied for. Maximum calibre should be entered onto the land register within NFLMS.

Chapter 13.12 of Home Office guidance gives some guidance on land inspections and what factors should be considered. Where the officer inspecting the land lacks appropriate expertise, input from local shooters, stalkers and game keepers should be sought.