**Written evidence submitted by Professor Trevor Taylor, RUSI (DIS0010)**

# Defence in Scotland

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In the light of the possibility of future referendum vote in favour of independence, the British Government, in its defence stances, has seemingly sought to reduce the probability of such an occurrence rather than taking steps to mitigate its impact should it come to pass. Not surprisingly, the Integrated Review and its related documents stressed the security benefits of the Union for all its members.

## Government installations

However, there is no avoiding the stresses generated by the basing of the UK's nuclear attack and bomber submarines at Faslane on the Clyde. The Scottish National Party vehemently and consistently opposes the presence of these facilities but re-location would require very significant expenditure and time. It is not easy to discern a middle ground compromise should Scotland one day elect to leave the Union.

Moving to less sensitive matters, in terms of military installations, all of which employ civilian and private sector staff, while Leuchars north of St Andrews was closed as an airbase once the Tornado fleet was retired, it has been transformed into an army base for the Royal Scots Dragoon Guards and the REME. The Army also has its national postings branch in Glasgow. Clearly Scottish infantry regiments have been merged and lost their prominence in the British Army, but this was at least partially linked to their recruitment problems.

RAF Lossiemouth, much further north, and which had lost its Nimrod maritime patrol aircraft, has been chosen as the base for the incoming P.8A fleet but also for the three Wedgetail aircraft which will fill the capability gap left by the retirement of the UK's E3A aircraft. Lossiemouth is also the home of four Typhoon squadrons which provide the quick reaction capability for the defence of the northern part of the UK.

The MoD has five test and evaluation ranges operated by QinetiQ in Scotland, some of which are devoted to underwater and other maritime capabilities but in the Hebrides there is the range for test firing of complex weapons.

A novel addition for Scotland and the UK was the announcement that the planned space ports and a space hub would be located in Scotland. Space is obviously a civil domain but with multiple and increasing defence applications.

The MoD also has four key training areas in Scotland (Barry Buddon on the Tay Estuary, Cape Wrath in the far north, Castlelaw south of Edinburgh, and Kirkudbright on the Solway Firth). The Ministry has sought to make these sites as available to the public for recreational use when they are not in use. [1]

In all, the MoD, which has been trying but struggling to reduce the size of the defence estate since at least 2015, has 136 establishments in Scotland, covering 11,700 hectares of the built environment

[1] The defence training estate - GOV.UK (www.gov.uk)

and 22600 hectares of the rural environment.  While these areas are large, in total they are only about three-fifths of the MoD land in the South West.[2]

Viewing these sites and installations as a whole, two things stand out: the first is the strategic importance of many of them for the defence of the UK and the UK's contribution to NATO and the second is the location of several in remote areas where generating sustained economic development is challenging.

**Defence industry**

However, the defence footprint in Scotland is much more than governmental, reflecting the fact that the MoD spends more than 60% of its budget with the private sector. Excluding facilities management activities and other service provision on government defence sites, Scotland's involvement in the UK defence industrial base can be divided into three tiers: prime contractors, major sub-system providers and less prominent providers of sub-sub-systems and components.

**Prime Contractors**

The obvious prime contractors are BAE Systems, with their ship-building yards at Govan and Scotstoun west of Glasgow on the Clyde, and Babcock International, with their facilities north of Edinburgh on the north side of the Firth of Forth.  BAE Systems, responsible for the Queen Elizabeth class carriers and the Type 45 destroyers, dominates UK experience in the design, development of the most complex warships with multiple sensors and weapons, and the combat management systems to go with them.  Until recently Babcock focussed on final ship assembly, including uniting the modules on the Queen Elizabeth class, and the upgrading and refit of existing vessels. However, in 2019 it won the competition to develop and build the Type 31e, a capable but less complex/less expensive frigate than the Type 26 which is BAE Systems responsibility.

How these companies' relationship fits into the National Shipbuilding Strategy is not clear. Are they expected to be near peer competitors as they appeared in the Type 31 procurement competition or close collaborators as they were on the Queen Elizabeth class? They have submitted a joint bid in the Future Support Ship competition so perhaps the term 'co-opetition' can be used for the moment. The platform design and project management expertise of both firms is largely  based in Scotland.

A smaller prime contractor operating primarily in the civil domain but with strong defence implications is AAC Clyde Space, which specialises in small satellites fitted with an array of sensors, and which is backed by the UK Space Agency. [3]  The Scottish small satellite capability is a key element of Whitehall's extensive ambitions for the space sector.

**Major Sub-systems suppliers**

Three companies fall prominently into this category

Leonardo's successful airborne radar business is based in Edinburgh and is built on the Ferranti firm whose products were chosen for the Harrier and the Typhoon.  A failed investment in the US took Ferranti into liquidation, when it was bought by the then-GEC.  When GEC opted to leave the defence sector and was taken over by BAE Systems, control eventually was passed to Italy and what

[2] National Audit Office, June 2021m Optimising the defence estate (nao.org.uk)
[3] 10 new satellites to be built in Glasgow in next three years as part of new innovative constellation service - GOV.UK (www.gov.uk)

is today Leonardo.  Throughout all these ownership changes, the expertise and facilities and airborne radar expertise continued to be sustained and developed in Edinburgh.  Leonardo is a major partner in the Tempest Programme.

Thales is a French company which has bought defence-related businesses across the UK since the end of the Cold War when first it took over defence-related, UK firms own by the Dutch company Philips.  Its purchase of Barr & Stroud in Glasgow made it the owner of the enterprise that had supplied all the periscopes for UK submarines since 1917.  Today that company develops and produces the periscopes for the UK's submarine fleet but also a range of optical systems for all three services.

Raytheon is a US-based defence company with facilities across the UK including installations in Glenrothes north of Scotland which make advanced specialised integrated circuits and the guidance systems for Paveway IV bombs. Raytheon has been in the UK since soon after the end of the Second World War when it took over the Cossor electronics firm in Essex that specialised in Identification Friend and Foe equipment but its Glenrothes site.  It exports from its Scottish factory.

**Sub-systems and components**

Until recently the Ministry of Defence has made little effort to map let alone understand the detail of its supply base in the UK except in the particularly sensitive areas of nuclear weapons and submarines. It comprises firms which range from having a defence focus to those for whom defence is just an element in the wider civilian portfolio.

Preliminary research reveals that, beneath the defence primes and major sub-system providers, there are what was described to the author as  a 'swathe' of SMEs in Scotland, many with less than 500 employees, who support the defence sector but sell as well in civil markets. The civil aerospace and oil and gas markets are also served by many of these firms but, at the times of the oil and gas slump and most recently the COVID lockdown, defence work was central to many of their survival as other markets collapsed. These businesses had products that ranged from bespoke electronic devices, casting goods, metal unit fabrication for ships, and wiring looms and connectors. Perhaps of particular note is McTaggart Scott, a specialist engineering firm specialising in naval equipment including the elevation mechanisms for periscopes.  It provided the lifts with a capacity to carry 70 tones in the QE class carriers. It is an active exporter and has a subsidiary company in Australia.

Further information could be gleaned from trade association, especially Aerospace, Defence & Security (ADS) which includes all the major MoD suppliers as well as range of other firms large and small, and Scottish Engineering.  Make UK (Defence) which has only half a dozen members in Scotland, recognises that most SME interests in Scotland are promoted by Scottish Engineering.

**Defence employment**

Overall the Government finds that UK defence in Scotland supports 600 jobs per 100,000, which makes it the third highest region behind only the South East (830) and the South West (1680).[4] Clearly Scotland should be a major beneficiary of both the Combat Air Strategy and the National Shipbuilding Strategy.  It is difficult to calculate how many jobs in the 'dual-use' sector, when

[4] https://www.gov.uk/government/statistics/mod-regional-expenditure-with-uk-industry-and-supported-employment-201920/mod-regional-expenditure-with-uk-industry-and-commerce-and-supported-employment-201920#direct-jobs-supported-by-mod-expenditure-with-uk-industry-per-100000-fte-employment.

individuals sometimes do defence work but work on civil activities at other points, are captured by the MoD's calculations.

**Wider issues**

Given the prominence of the independence movement in Scottish politics, it is tempting to speculate what would happen to the defence governmental and industrial sites in Scotland if the country left the UK.  The estimate of how many jobs would be lost should also take into account how long it would take for the affected regions and the individuals concerned would take to adjust.  For individuals, movement from their region would be an option.

To host and develop defence firms, Scotland would also need to generate its own regulatory framework for the defence industrial sector, including arrangements for arms export policy, export controls and licences, the classification of information, the clearance of individuals and the protection of information.  All would need to be acceptable to the government of the major foreign firms that might wish to stay in Scotland (the US, France, Italy and of course the territory controlled from London). How quickly and easily a new Scottish regime could put these in place would be a significant variable.

*October 2021*