

- What are the future prospects for Scottish aerospace and marine manufacturing based on defence contracts?

The future of the UK's defence policy, particularly in terms of procurement, is by no means clear. There will be a Strategic Defence and Security Review in 2015, after the next Westminster election. An exchange of views between the current Chief of Defence Staff (CDS) and a former First Sea Lord gave an insight into the internal battles taking place within the Ministry of Defence (MoD). In a speech to the Royal United Services Institute on 18 December, General Sir Nicholas Houghton, CDS, argued that there was a need to rethink defence policy in a way that would have major implications for defence procurement. He reiterated the assessment of future threats identified in the National Security Strategy – terrorism, international crime, energy resources, critical national infrastructure, climate change and cyber warfare. He recognised the need to look at wider threats to human security. State-based asymmetric threats, which much of current procurement policy aims to address, are, at least in the short term, absent. Houghton argued that the MoD needs to “better prioritise its money towards things which are most relevant to the security demands and capability needs of the future”.¹ He was particularly concerned about the implications of acquiring exotic new equipment. Houghton warned that the MoD, especially the Navy, was in danger of having “exquisite equipment, but insufficient resources to man that equipment or to train on it”. This he described as a “hollow-force”. The CDS was particularly critical of skewing defence procurement in order to sustain particular sectors of industry.

If Houghton's approach is adopted this would not mean a curtailment of all high tech development, but rather a change in focus. Rather than building large sophisticated land, air and naval platforms which are designed for conflict with a nation with similar capabilities to our own, the focus would be on developing technologies to assist with communications, logistics, intelligence, etc.

The CDS's approach also recognised that public concern about conflict meant that it was more difficult for the MoD to obtain the funding that they would like. In contrast, Admiral Lord West, in an article in the Daily Telegraph on 21 December 2013, shouted out that the military need more money. In a rebuttal of Houghton he claimed, “I cannot think of any current naval platforms that are profligate”. The transparent

¹ Annual Chief of Staff Lecture, General Sir Nicholas Houghton, RUSI, 18 December 2013. rusi.org

squandering of billions of pounds on Trident and two aircraft carriers, leaves West's argument unconvincing and outdated.

The exchange between these military heavyweights took place in the aftermath of George Osborne's budget statement on 5 December 2013, which indicated that the defence budget will face further substantial cuts. Commenting on this debate, Malcolm Chalmers of RUSI pointed out that Trident and its replacement would consume 10% of the defence budget by around 2020. In this context he said, "it must be asked whether it is being proposed that the UK should abandon plans to upgrade, and ultimately replace, other major systems, such as the Royal Navy's Type 23 frigates or the RAF's Typhoon aircraft".²

West emphasised that it was important to retain a sovereign capability to produce key items of defence equipment. However military production today is so internationalised that this is no longer significant. For example, even the Trident nuclear warhead contains three major and fundamental components which are purchased off-the-shelf from the US. The argument about the need for sovereign capability is only made by politicians when they are trying to protect defence jobs in their own constituency, or by military chiefs trying to protect their own pet project.

- What are the future prospects for Scottish aerospace and marine manufacturing based on civilian and other non-defence contracts?

There is substantial overcapacity in global shipbuilding and 80% of major cargo vessels are built in Japan, China and South Korea. Nevertheless, the European shipbuilding industry is continuing, largely by focusing on the production of specific types of vessels. One of the recommendations in the European Commission's Leadership 2015 strategy for Maritime Technologies was "competitiveness through excellence".³ The subsequent Leadership 2020 report lists the different sectors of the industry and the potential of each.⁴

There is interest in "green ships" and in the introduction of green technologies in the maritime sector. Currently shipping is responsible for 3% global CO2 emissions. Design changes can be made and technology introduced which increases the energy efficiency of vessels. In addition emissions from ships can be reduced and

² Let Debate Commence: Key Strategic Questions for the 2015 SDSR, Malcolm Chalmers, RUSI, January 2014

³ http://ec.europa.eu/enterprise/sectors/maritime/files/shipbuilding/leadership2015_en.pdf

⁴ http://www.industriall-europe.eu/database/upload/pdf/leadership2020-final-report_en.pdf

improvements made to reduce the potential for accidental discharges to the environment.

Leadership 2020 includes four security-related areas. These may be suited to sites with experience of military work:

1. The production of patrol vessels which are designed to be able to carry out a range of modular mission packages including disaster relief and oil spill recovery.
2. The incorporation of Unmanned Aerial Vehicles (surface or air) on civil vessels for use in fishery protection or other detection activity.
3. Development of equipment to improve the safety of passengers and crew in the event of accidents.
4. Development of integrated anti-piracy systems including sensors and non-lethal weapons.

Under the heading "offshore oil and gas" the report notes that the Anchor Handling Tug, Supply (AHTS) fleet is aging and that demand was increasing. New vessels should be more flexible with increased fuel efficiency.

Scotland's substantial potential for offshore wind projects creates a need for installation vessels. New vessels are likely to be more efficient and technologies will be developed for working in deeper water. Smaller vessels are required for support and in some cases these could also be able to support offshore oil and gas work. In addition there will be opportunities arising from the development of wave, current and tidal energy.

- What scope is there for diversifying manufacturing in the Scottish aerospace and marine sector towards other products (such as energy technologies)?

The UK government report Scotland Analysis: Defence identifies a range of companies and sites which are involved in work for the MoD.

Babcock employ 3,100 at Faslane and Rosyth and a total of 4,800 in Scotland.
- 1,500 at HMNB Clyde

BAE systems employ 3,000 on naval ship work, mostly at Scotstoun and Govan, but also at Rosyth (in support of carrier assembly), plus staff at Hillend and at Prestwick (regional aircraft division). Total BAE staff 3,600 in Scotland.

300 BAE jobs at Scotstoun on Type 26 Global Combat Ship.

Total carrier jobs – >2,000 Clyde, <2,000 Rosyth

Rolls Royce – 2,100 at East Kilbride, Inchinnan, Thurso and Dunfermline.
- 15% of RR group sales in 2005 were to MoD, US DoD is largest government customer worldwide. Production and assembly of Typhoon engines. 970 in Aero Engine repair in East Kilbride, 175 in Rosyth, 270 in Thurso, 980 at Inchinnan in manufacture of gas turbines for civil aerospace, defence, maritime and energy markets.

Selex ES – 1,300 at Edinburgh site hosting high tech capabilities for defence and security systems applications based on airborne radar, advanced laser and electro-optical systems.

£200m per annum to Selex ES from MoD for Typhoon Captor Radar equipment (M-scan and E-scan); 700 people in Edinburgh working on Typhoon related projects
- key strength is radar technology
- centre of excellence for laser and microelectronics, manufacturing high performance radar, early warning and mission systems. UK's foremost supplier of electronic systems for military platforms on land, sea and air. Want more US orders.

Thales – 700 at Govan, high tech skills including night-vision technology and optronics, plus other sites.

- periscopes

- also 129 in manufacture of microwave and electric components in Edinburgh

Over half of Thales UK business is in defence, non-defence includes telecoms and some Scottish site service these contracts. MoD contracts: carrier, prime contractor for Watchkeeper UAV and consortium partner for air tanker, prime contractor for future integrated soldier technology programme, systems integrator for future rapid effects system.

- in Scotland electro-optic night vision systems for all 3 services, sub periscopes, night vision for tanks and APCs, reconnaissance pods for typhoon. Exports 25% of sales in 2007.

Raytheon – 500 hi-tech engineering and advanced manufacturing at Glenrothes.

Strong capabilities in power and control mission systems in defence, national security and commercial markets, only silicon carbide manufacturing in UK.

£25m contract for Paveway IV bombs secured 300 highly skilled jobs at Glenrothes, plus subcontractors, including Chemring in Ardeer. Total MoD contracts to Raytheon for Paveway IV in 2012 - £100m.

- Raytheon are winning contracts in US

- design and manufacture electronics for a number of airborne systems for the MoD and US defence suppliers plus civil air traffic control radar

QinetiQ – 500 at 11 sites, incl Hebrides & St Kilda, Rona, Applecross, BUTEC and Rosyth.

MacTaggart Scott & Co Ltd - £26m for provision and support of hydraulic equipment

Scot defence exports £2.2 bn in 2007; 66% of UK def export is to US.

(written Malcolm)

Aerospace is exporting 69% of sales, defence exporting 44% and naval exported 59%

Def exports predominantly electronics

Babcock have diversified into modular construction – Heathrow Terminal 5, hospital ward modernisation ..

Proportion of UK aerospace procurement from UK industry has declined.

SBAC submission – growth of UK aerospace sales 1980-2006 greater in civil than defence. UK aerospace industry has moved to greater proportion on civil and less on defence, 1980-2006.

UK aerospace 2006 – defence domestic 25%, defence export 23%

civil export 40%, civil domestic 12%

- export 63%; civil 52%

In 2006 – growth – def dom 0.1%, def exp 6%, civ dom 13.8%, civ exp 6.6%

-Scotland 2006 – aero – 69% export, defence – 44% export, naval – 56% export

(Scot Aff Cmte – employment and skills for defence industry in Scotland)

- What impact (both positive and negative) on the above three scenarios do you believe might result from Scottish independence?