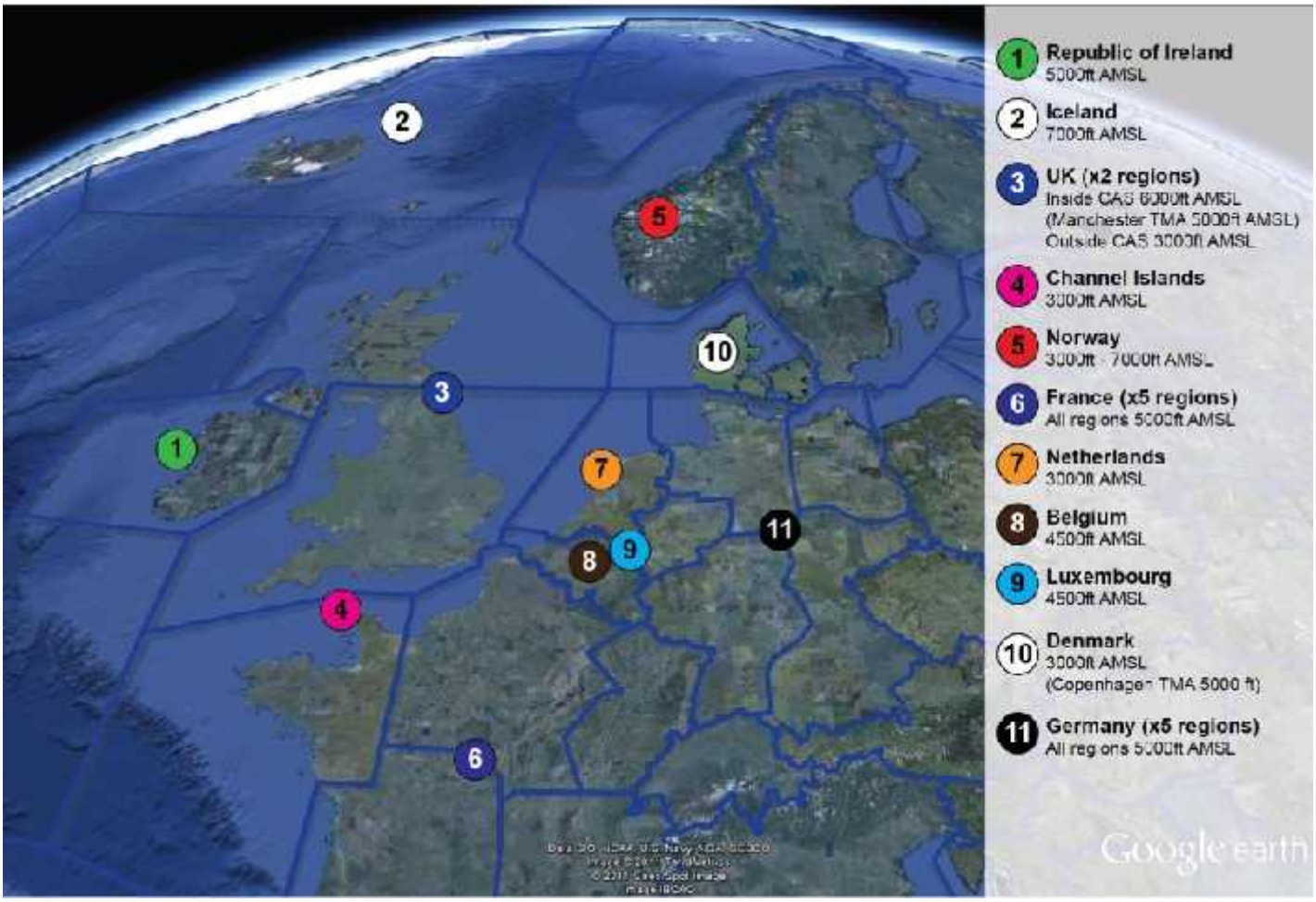
Transition Changes

In the UK alone there are currently three different transition altitudes (TAs) employed; 6000ft in controlled airspace, 5000ft in the Manchester TMA and 3000ft outside controlled airspace. There had been four, until the 4000ft TA in the Midlands region was changed in spring 2011. Across Europe the problem is even more fragmented, with different countries using various altitudes. Some estimates place the actual number at 400 different TAs, with some aerodromes changing the local TA based on their runway in use.

As a result potential exists for confusion and errors on the flight deck. Additional risk exists, due to the requirement to change altimeter settings during critical departure and approach phases of flight, and the fact that some TAs do not adequately take into account terrain clearance and minimum safe altitudes. This increases the possibility of level busts, loss of separation and increased danger of Controlled Flight into Terrain (CFIT). Raising the TA would address these risks and also benefit the majority of General Aviation outside of controlled airspace, as they will no longer need to factor in the TA when calculating the base levels of adjacent controlled airspace; this should consequently help reduce infringements.

The ICAO guidance for the determination of TAs was written in the late 1950s and does not reflect modern flight procedures. Another factor is a historic lack of coordination between neighbouring countries when determining the TA. The diagram below shows the various TAs in neighbouring states with significant interfaces with the UK. The commercial air transport community has long indicated the current situation is undesirable. Both the International Federation of Air Line Pilots' Associations (IFALPA) and the European Cockpit Association (ECA) have declared the current situation is unacceptable. Both organisations are looking for a harmonised TA; at or above 10000ft.



Transition Altitudes in North West Europe

Here in the UK, the 'Directorate of Airspace Policy' has agreed that all UK airspace should have a single harmonised TA at an appropriate higher level. An essential requirement of the CAA's 'Future Airspace Strategy' is harmonisation of the prevailing Air Traffic Management (ATM) procedures and structures. The 'Future Airspace Strategy' identifies a common higher TA along with a 'Performance Based Navigation Policy', as a key enabler to its success. It would be extremely difficult to make full and flexible use of airspace, when moving between different ATC providers and countries, if the TA value has to change at the same time.

Within the UK TMA environment, raising the TA has the potential to simplify the operation. There will be no loss of holding levels due to changing minimum stack levels, minimum levels for overflying a TMA will not change and descent gradients remain consistent as there will be no resetting of altimetry within TMA airspace. This helps with continuous descent and climb operations, RNAV arrivals and descent planning from hold to initial approach fix. Overall the greatest benefit should come from standardisation and harmonisation removing a significant difference between regions and countries.

Changing the TA is a significant undertaking as it is one of the core foundations of the airspace, carrying with it both cost and risk. It will impact on all areas of aviation and will require some degree of adaptation by all aviation stakeholders. The change will be subject to a CAA Aviation Consultation on the proposed policy position of an 18,000ft TA; this will be followed by a 'Regulatory Impact Assessment'. Additionally any changes to the airspace will probably require

progression through the ‘Airspace Change Process’ thus ensuring all the safety requirements of airspace change is met.

The UK and Ireland are working together on this project and any decision and implementation, will be joint between these two countries. It is likely to take a few years to complete all the necessary studies and preparations required if the proposal is accepted. No exact time scale can be given as yet, but for the benefit of flight safety, it is good to know raising the TA is being actively considered and is likely to happen in the UK and Ireland. In addition the idea is also in the early stages of consideration across Europe. Hopefully other countries will also join the UK and Ireland when they make the change.

Assistance for this article kindly provided by, CAA Head of Controlled Airspace Section. Article written by, Thomson Airways Aviation Safety.