

News story: To boldly go where no Bill has gone before

The Space Industry Bill to regulate commercial spaceflight from the UK has just had its third reading in the House of Lords. It has provided many opportunities for Star Trek jokes and, for members of the House of Lords during second reading, references to Dan Dare. For those of us lucky enough to have been working on it, it has been exciting, high-pressured and with plenty of scope to stretch yourself – not unlike space exploration, come to think about it.

Although commercial interplanetary travel is many years away, the government hopes this Bill will boost the UK space industry by enabling small satellite launches from UK spaceports. The Bill also regulates 'sub-orbital activities', such as flights of spaceplanes that go to high altitudes to give paying tourists a near-space experience, but do not go into orbit.

In case you don't know your USS Enterprise from your Virgin Galactic, a spaceplane is a vehicle that acts as an aircraft in the atmosphere (deriving lift from the air) but has a rocket motor too, so that it can operate where there is little or no atmosphere. Early flights will start and end in the same location but many years in the future spaceplanes will probably be a standard means of transport: a design proposed by one operator would take passengers from London to Sydney in 2 hours.

The UK Space Agency (UKSA), an executive agency of part of the Department for Business, Energy and Industrial Strategy (BEIS), the Department for Transport (DfT) and the Civil Aviation Authority (CAA) are all working together on the Bill. The intention is that the CAA will regulate sub-orbital spaceplanes and UKSA will do likewise for space activities.

UKSA already does this under the Outer Space Act 1986. In practice it only regulates launches by UK nationals from overseas and operation of satellites once in orbit; there have been no launches to space from the UK. So the task was to set up a completely new legislative regime, including licensing, safety, security and enforcement. Not many countries regulate commercial spaceflight yet, but we looked at the legislation in those that do. Policy officials studied how the US does things, because it has the most advanced commercial spaceflight industry. New Zealand has just passed legislation regulating spaceflight and high altitude activities and Sweden is also working on it.

The Bill draws heavily on aviation legislation precedents. Many provisions are closely based on the Civil Aviation Act 1982.

GLD legal advisers in BEIS and DfT worked with policy colleagues to clarify the legal implications. We then instructed Parliamentary Counsel to draft the legislation. A back-and-forth process with drafts and responses followed. Working with 2 sets of policy clients, who had slightly different angles on

the policy decisions, added another layer of complexity.

Technology, of course, changes all the time and one of the challenges with the Bill was to future-proof the legislation by leaving the technical details to secondary legislation.

We also had to anticipate scenarios or problems that no one had thought of yet by asking experts a series of 'what if' questions, such as: "What if a rocket goes away from the Earth but not into orbit?" and "What if a spaceplane goes off course?"

Bill work such as this not only gives the lawyers advising the department a close-up view of the fascinating process of making legislation, but the chance to shape that legislation. Sitting in the House of Lords watching peers debate provisions you have worked on and having the opportunity to assist policy colleagues in answering tricky legal issues which come up has been amazing.

Those of us who have worked on the Bill have now learned far more than we ever expected to about spaceflight. Rockets go really, mindblowingly fast for starters. Although the Bill has not yet become law, there is every hope that it will touch down in early 2018. The Space Industry Act ... another small step for mankind.