Appendix 7 - Comprehensive Stakeholder Responses

DP 1. The Safety of other airspace users and the public is the paramount design principle that ensures the safety of launch operators and neighbours at all phases of the launch procedure.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes A (Trinity House) Yes A (NATS) Yes A

DP 2. Airspace design will be of the smallest possible volume to safely segregate activities from other airspace users. Airspace volume should be designed to minimise impact on air traffic.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes A *MOD would like to see 'minimise impact on air traffic', replaced with 'minimise impact to other airspace users, including the MoD'. Or words to that effect as this is a more all-encompassing statement.* (Trinity House) No Comment N/A (NATS) Yes A *The Design should include appropriate flexibility to accommodate the different trajectories that may be required whilst utilising the minimum amount of airspace. To this end the design should include/consider the use of segmentation of the overall area to ensure only those areas required are activated.* *The proposed launch area is within an area of intense oil and gas activity with multiple fixed and mobile assets, access to these assets means that rerouting may not always be possible.*

DP 3. Gravitilab will design the trajectory such that risk and disturbance to marine and air users are effectively minimised.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes B

(Trinity House)	Yes	A
(NATS)	Yes	B

The Design should include appropriate flexibility to accommodate the different trajectories that may be required whilst utilising the minimum amount of airspace. To this end the design should include the use of segmentation of the overall area to ensure only those areas required are activated.

DP 4. Factors such as launch frequency and time of day will be chosen to best accommodate existing airspace users. The duration of the airspace activation should be kept to a minimum.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.		
(DAATM (MOD))	Yes	A
(Trinity House)	No Comment	N/A
(NATS)	Yes	B

Whilst most operators will have the option to "not fly" this is only tenable for short periods.

DP 5. Give priority to all emergency vehicles needing our airspace for as long as possible and establish communications to be informed where needed. This requires the ability to halt launch operations at any point during countdown.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.		
(DAATM (MOD))	Yes	A
(Trinity House)	Yes	A

This will also need to include marine emergency vessels like lifeboats or vessels engaged in search and rescue operations in the vicinity of the operations. Also SAR aircraft so a process for communicating with HM Coastguard will be required.

(NATS) Yes A

Search and Rescue and Safety of Life flights must have priority and robust procedures will be required to allow access.

This Design Principle should not be limited to just emergency vehicles but also include aircraft in emergency meaning that comms and procedures with all affected ANSPs will be required too

It will be of the upmost importance to any relevant stakeholder to halt the launch in an emergency situation.

DP 6. Gravitilab will investigate and produce a report on the noise and environmental impacts resulting from regular operation of our sea launch platform in the North Sea.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes B (Trinity House) No Comment N/A (NATS) No N/A *This is not a design principle; it is a deliverable in the ACP process.* *The DP would need to be reworded. Suggestion as follows for 3 separate additional Design Principles* 1. *Airspace Capacity - The Design and operation should sustain or enhance airspace capacity or NATS ATM performance.* 2. *Economic - minimise the adverse economic impact to other stakeholders e.g commercial airline fuel burn.* 3. *Environmental – The design and operation should not have a negative impact on NATS environmental performance or targets.*

DP 7. A system should be established to inform all air and marine users of our launch windows far in advance of the launch, and also a confirmation of launch time a few hours before. They should be timely and accurate with an established method for rapid notification.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes B *This DP could be re-worded, to better reflect current airspace management and notification processes to something similar to below:* *Safe, efficient and standardised management, notification and activation of airspace, utilising Flexible Use of Airspace (FUA) principles will be used.* (Trinity House) Yes B (NATS) No N/A *There is already a system in place to do this. The pre-amble and words are confusing in that it talks about a 3 month notification period, which we presume relates to the AIRAC cycle. Airspace is not 'activated' in this period but planned to be. There is much emphasis on deconfliction with other Military activities and not enough on the overall Network performance.*

The cumulative impact on the route network may have implications on what areas the military can activate at the same time as your proposal; therefore, more information and engagement will be required along these lines.

Impact on the UK Network will need further consideration in the context of the proposal.

Providing a launch 'time' as opposed to a (refined) launch window even a few hours before might remain aspirational

Suggestion: It would be better to state, "planning and notification times will be agreed with all air and maritime stakeholders" rather than talking about months and launch times confirmations a few hours beforehand.

Currently spaceflight has no declared priority within the airspace management protocols which are the defined basis for the airspace management cell decisions. These protocols are defined by the UK CAA for UK airspace. The AMC then manages the airspace bookings in accordance with the protocols. NATS would expect that these protocols will be agreed between the stakeholders and discharged through a signed Letter of Agreement

A SUA will need to be created. For first use, it should be noted by the Sponsor that this involves working with the European Network Manager and carries a lead time of a minimum of 3 months.

A clear mechanism is required to cancel the NOTAM should the launch be cancelled.

DP 8. Gravitilab will continue to monitor all changes to airspace policies and, if needed, adapt operations accordingly.

Do you agree that this constitutes a reasonable design principle?

Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.

(DAATM (MOD)) Yes D

(Trinity House) No Comment N/A

(NATS) No N/A

This is a requirement, the language of the DP as written, diverges from the intent of the paragraphs which precede it.

It would be better worded as "The Design accords with CAA CAP1711 and current and future plans associated with it".

See further comments in DP11, should changes to Policy require modification to Airspace and or operating procedures.

DP 9. Gravitilab will ensure launch and recovery operations will not affect another organisations assets in anyway and will design the activity area accordingly to avoid this.

Do you agree that this constitutes a reasonable design principle?

Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes C (Trinity House) Yes B *If this can be achieved as described it would be extremely advantageous. Any control of objects falling to earth under a parachute would be welcome to avoid other assets in the area.* *If there was damage to a TH asset I doubt it would lead to a "lawsuit" but there would definitely be a claim through insurers and our legal team.* (NATS) No N/A *We do not believe that this is a design principle.* *We expect safe operations as per DP1.*

DP 10. Gravitilab will look to increase job opportunities in and around Norfolk to help local communities as well as the UK economy.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes E (Trinity House) No Comment N/A (NATS) No N/A *NATS does not believe that this is a design principle for Airspace Change as written (business strategy)*

DP 11. Gravitilab will analyse the future potential of the business and keep in regular contact with everyone involved to ensure the potential of our growth can be approved without facing issues.

Do you agree that this constitutes a reasonable design principle? Please rank this design principle in order of its importance, 'A' being highest and 'E' being lowest.
(DAATM (MOD)) Yes D (Trinity House) Yes C *Any expansion of the project would need to reassess the impact on all activities affected and we would always want to be consulted and informed as the project develops.* (NATS) No N/A *NATS does not believe that this is a design principle for Airspace Change as written (business strategy)*

Unless future growth is designed and scoped into this change it cannot be approved as it would change what is being asked for as part of the ACP. The Sponsor needs to state what airspace is required, with appropriate justification. If the requirement changes, a new ACP will be required, and the appropriate CAA process will need to be followed.