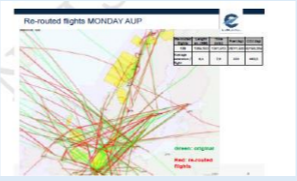


Representative Organisation:	DP 1. DP 1. The safety of other airspace users and the public is the paramount design principle to be used in the Airspace Change Process (ACP)2. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 2. DP 2. The environmental and noise effects of rocket launch should be minimised by the design of the airspace change. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 3. DP 3. The airspace volume should be as small as possible to minimize the impact on and ensure the safety of other airspace users. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 4. DP 4. The duration of the airspace activation should be the minimum required to minimize the impact on and ensure the safety of other airspace users. The possible impact of concurrent operations of other airspace should be considered. Please rank this in	DP 5. DP 5. Airspace notification should be timely and accurate with an established method for rapid notification. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 6. DP 6.		
1	OK, so what is the specific question you want a reply to	Yes	No	No	No	No		
2	██████████	Yes A	No	Yes A	Yes B/C	Yes A		
3	██████████	Yes A Above all other aspects. If a design option is not safe, it is not viable.	Yes YES/NO ██████████ do not comment on environmental/noise aspects of ACPs.	Yes B ██████████ are keen to understand priorities in national airspace between GAT, MOD activity and Space Launches.	Yes B	Yes B Are you planning to utilise the Airspace Management Cell (AMC) at NATS Swanwick? Currently, the AMC are the single point of truth for airspace management with RAF(U) Swanwick personnel providing on the day, level 3 management for military bookings. Deconfliction of military exercises as per point 4 also apply.		
4	██████████	Yes A	Yes B	Yes B. Since you only mention the airfields in the vicinity, I wonder how big the airspace volume will be. The Icelandic airspace lies along 61N and ODL to the west and north. There is always trans-Atlantic commercial air traffic in the area north of Unst all the way up to at least 65N. Will that airspace be affected? If so, I guess you will have to request a closing of that airspace with a NOTAM (Notice to airmen). The southeast corner is controlled from Iceland, Scotland, and Norway so I guess the matter calls for a coordination with those ANSPs and regulators. The traffic is at its minimum late night and early hours (22-02) so I would suggest to use that time if abel.	Yes B same as above	No	The notifications methods regarding airspace has already been established by ICAO and EASA. You need to follow those rules.	
5	██████████ ██████████ ██████████ Statutory Body	Yes A	Yes B	Yes A	Yes A	Yes A	Yes	
6	██████████ ██████████ ██████████ ██████████ Aid to Navigation (AtoN) Provider in the area covered by the Airspace Change	Yes A	Yes B	Yes A- Please note ██████████ have three assets in the Airspace Change area (Muckle Flugga, Holm of Skaw and Balta Sound Lighthouses), and access them by air (helicopter) at irregular intervals, there is also a requirement for ship based support whilst under-slung loads are delivered to these sites. We also have a requirement for Maintenance staff to be in residence for periods up to two weeks at Muckle Flugga. If further information is required please get in touch ██████████	Yes A- Please see note in DP3 above.	Yes A- Please note the ██████████ also have requirements for short notice and weather dependant access to our assets in the Airspace Change area, for the safety of the Mariner.	Yes	
7	Private individual	Yes A	Yes A	Yes A	Yes A	Yes A	Yes	
8	Private individual	Yes	Yes	Yes	Yes	Yes	Yes	
9	Private individual	Yes	Yes	Yes	Yes	Yes	Yes	
10	XXX	Yes A	Yes b	Yes b	Yes a	Yes b	Yes	
11	Private individual	No C	No E	No C	Yes	No C	Yes	
12	Unst resident	Yes	Yes	Yes	Yes	Yes	Yes	
13	Private individual	Yes	Yes	Yes	Yes	Yes	Yes	
14	██████████	Yes A To think such a facility as the Shetland Space Centre can be situated so close to a nearby Village beggars belief	Yes A Something you don't mention is Hermaness and the North of Unsts wildlife. You can't compare a space centre in the USA with one situated right next door to Europes largest colony of Gannets, around 40,000 birds and not to mention all the other wildlife. The noise of rockets taking off will scare them from their nests never to be seen again and drive sheep over the Cliffs	Yes A This question is also of paramount importance although You fail to give any mention or consideration towards Vessels at sea in the vicinity of the Launch Site and the impact this will have on them	Yes A Of course this is of huge consideration, not just for other Airspace users but ships and vessels as well	Yes A What about Surface users? I cannot operate my business on a month by month or week by week basis during launch windows and not have clear concise notification . My customers are booking their trips up to a year in advance, such is the popularity of them. Customers travel from all over the UK and beyond. To have customers arrive in Shetland for their holiday only to be told - sorry we can't do the trip today, is unacceptable	Yes	
15	Local house owner	No	No A	Yes	No	The exclusion zone could mean that that the area can not be entered for days. The Weather window might change. In New Zealand the Zone could be closed for up to 12 days. The Zone in New Zealand was Smiles and 12 miles out to sea.	Fishing boats use the area all times of the year. How long will the area be closed? New Zealand are gearing up for 100 launches a year.	Yes
16	Private individual	Yes	Yes	Yes	Yes	Yes	Yes	
17	██████████	Yes A	Yes B	Yes B	Yes B	Yes A	Yes	
18	██████████ (conservation body)	Yes	Yes B. The natural environmental is our remit but we accept that they should be the primary consideration in planning for rocket launches.	N/A	N/A	N/A	N/A	
19	██████████	Yes A SSC will be required to articulate and prove the requirement for any airspace that inhibits or impacts upon other airspace users, demonstrating that it is the minimum required to ensure their safety. It remains the responsibility of the originator of such activity to take all reasonable precautions to ensure the safety of others as required by the Space Industry Act 2018 (SIA) which requires that licence holders minimise third party risk to an acceptable level and demonstrate this through a safety case. Constraints are therefore placed on the originator of dangerous activity to ensure that only the minimum airspace required to support the safety of others is required.	Yes C The ability of SSC to minimise the noise and environmental impacts associated with the launch of rockets by the design of the airspace is questionable and would therefore be difficult to demonstrate within subsequent design options. The minimisation of environmental impact associated to the airspace design should therefore focus on the effects to other airspace users who would be required to circumvent the area during periods of activation. ██████████ would expect such an assessment to be undertaken by SSC to quantify the impact associated to re-routing traffic in support of this ACP. These figures would then be used by ██████████ to offset its CAA regulated environmental targets associated to fuel burn and CO2 emissions. As a result ██████████ would recommend this design principle be re-worded, such that: The environmental effects of rocket launch upon other airspace users should be minimised by the design of the airspace change.	Yes B ██████████ fully supports this design principle; however, the explanation for its inclusion does not take into account the potential effect on high level transitory aircraft. Instead the rationale makes the assumption that; "the airspace above Unst and to the North is fairly quiet". In section 7, reference is made to international participation given that Unst lies 11nm south of the Reykjavik FIR; it should therefore also be noted that the airspace immediately to the North of Unst has significant amounts of high-level commercial aircraft transiting between the Reykjavik and Stavanger FIRs, crossing between 61N 00E and 62N 00E. The Eurocontrol slide provided below illustrates traffic flows crossing via these points. It also highlights the level of re-routing required as a result of existing SUA activation.	Yes B ██████████ supports the principle that segregated airspace should only be active for the minimum required to undertake activities requiring segregation. In addition, and as stated, the accumulative effect of multiple segregated airspace activations has the potential to produce a significant detrimental impact to commercial aviation. Therefore ██████████ welcomes the inclusion of this design principle. However, whilst SSC have noted other potential Spaceport airspace constructs, where co-ordinated activation would need to be introduced, the primary user of segregated airspace within the UK remains the MoD. As such ██████████ would expect SSC to consider the concurrent activation of segregated airspace in the round, reaching agreements with the MoD in respect of activity prioritisation. Please also see response to DP 10 for airspace management.	Yes B Given the expected nature of airspace segregation requirements associated with a vertically launched space rocket, as well as the overall launch campaign, NATS would expect initial notification of any segregated airspace requirements for the campaign to be provided by at least D-21 for a launch to the UK Airspace Management Cell. With confirmatory airspace segregation activation provided no later than D-1. This would allow onward notification to the EU Network Manager via the UK Airspace Usage Plan (AUP) and thus the manipulation of Flight Plans to avoid the area. To ensure that segregated airspace is only instigated for the minimum time necessary ██████████ would also expect notification of cancellations or early completion of activity, this would allow for an update to the AUP (Update Usage Plan (UUP)) to be promulgated. 15:00 at D-1 is the latest deadline for the notification of required activation for the following day. This deadline allows for the implementation of flight plan re-routing and fuel load calculations to be made as well as promulgation of activity via the NOTAM system. It would be highly advantageous if such notification were to be provided to the UK Airspace Management Cell (AMC) via an automated process using the Eurocontrol Airspace management tool LARA (see LINK). The use of LARA would also allow SSC to view other proposed airspace activations and thereby allow for the timely coordination of such activations in line with agreed prioritisations (see DP4 comments). Please also see response to DP 10 for airspace management.	Yes	
20	██████████	Yes	The proposed airspace change area includes nationally and internationally protected natural heritage sites. These are: Hermaness, Saxa Vord and Valla Field Special Protection Area (SPA) designated for fulmar, gannet, great skua, gullinmot, kittiwake, puffin, shag, breeding seabird assemblage and red-throated diver. Hermaness Site of Special Scientific Interest (SSSI) designated for fulmar, gannet, great skua, puffin and the seabird colony Hermaness National Nature Reserve (NNR)A number of other birds breed within the airspace change area including species listed in Annex 1 of the EU Birds Directive (red-necked phalarope and golden plover) and species such as curlew, dunlin, snipe and skylark. All the above species have the potential to be disturbed/displaced during their breeding season by noise from launches. Although the main breeding season is April till August, gannets are present on their nests from March to early October. A robust assessment of the potential impacts of the rocket launches on these species should be undertaken and any impacts minimised through the design process.					
21	██████████	Yes	It is said that "This ACP relates to airspace only. SSC is fully engaged with all other necessary planning processes and these may result in further stakeholder engagement in due course." In that regard we have no further comments at this time.					
22	██████████	yes A	C- (See also comment at DP8)	Yes B- Smaller airspace will increase its availability for launch operations, because clearing aircraft from it and monitoring that it remains clear will be easier. Also, additional fuel burn by other users routing around the airspace will be minimised.	Yes B- This an important aspect and the airspace should be 'switchable.' i.e. It should be possible to turn it on at relatively short notice, commensurate with launch preparation progress, and turn it off immediately on either launch postponement for any significant period or launch cancellation. Spaceports will be judged by other airspace users largely on the efficiency of the activation/deactivation process.	Yes- But... As above - this is fundamental requirement but as a principle it is better to describe it within part of DP4. We suggest the project to combine current DP4 and DP5 into a single principle; minimum duration (for other airspace users) depends on rapid notification of activation/deactivation!	Yes	



DP 6. A process to allow some special airspace users to enter the airspace safely and halt launch operations should be established. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 7. Other International airspace agencies should be included in the airspace design process. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 8. Airspace design should meet duties and requirements of other public agencies placed upon SSC. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 9. Letters of Agreement and Memoranda of Understanding will be developed, if required, between relevant parties. Please rank this in order of importance, 'A' being highest and 'E' being lowest.	DP 10. The airspace change will take account of ongoing and continuing airspace management and policies. Please rank this in order of importance, 'A' being highest and 'E' being lowest.				
This questionnaire is all leading to positive responses rather addressing the real issues of the space port to the both people in the isles and the natural environment	No	This questionnaire is all leading to positive responses rather addressing the real issues of the space port to the both people in the isles and the natural environment	No	This questionnaire is all leading to positive responses rather addressing the real issues of the space port to the both people in the isles and the natural environment	No	I would want to see a full, independent environmental impact study, which if anything like Viking Energy, cannot be classified as "independent"	Yes	A
A	Yes	A	Yes	A	Yes	A	Yes	A
A Air defence of national airspace remains a top priority for [redacted]. Ability to offer Air Defence assets a crossing service of the airspace, whilst keeping assets safe, would need to be identified throughout. Procedures will need to be in place to allow for unforeseen circumstances such as the transit of priority aircraft including Category A (e.g. aircraft in emergency), Category B (e.g. Search and Rescue) and, in addition, Defence Operational Taskings (e.g. Air Defence Priority Flights). Procedures will also need to be in place for communicating with adjacent units e.g. RAF(U) Swanwick, ASACS and D&D.	Yes	E It would be the [redacted]'s belief that national requirements should be considered a priority. The [redacted] would be interested to understand if this would imply any reciprocal airspace access? Also as above, what is the priority?	Yes	E	No	Whilst the CAP1616 process may involve agreements, [redacted] do not believe that this specifically a design principle in its own right. However, the [redacted] do acknowledge the potential requirement for LoA/MoU and anticipate that some formal agreements may be required to cover, but not limited to, primacy/priority of airspace and activities, notification, activation and deactivation protocols, management of priority aircraft (e.g. CAT A, Emergency or on a Defence Operational Tasking) and co-ordination with adjacent units.	Yes	B
The notification methods regarding airspace has already been established by ICAO and EASA. You need to follow those rules	Yes	The Reykjavik Oceanic Control Area is controlled by Isavia the ANSP in Iceland. You can find all the information you need on the airspace in AIP ICELAND ENR 2.1 and Charts in ENR 6 on http://eaip.samgongustofa.is/ You need to coordinate with Isavia for both the climb and descend. Nuuk FIC provides traffic information over Greenland below F195. You can find all the information you need on the airspace in AIP Greenland ENR 2.1 and Charts in ENR 6 on https://aim.naviair.dk/en/ . You need to coordinate with Nuuk FIR for the descend into Arctic Ocean. Sumburgh Radar see AIP United Kingdom ENR 1.6.4.5.2.2. You need to coordinate with Sumburgh Radar for the climb. Faeroe Island is just north of 61N. FAY AFIS needs to be coordinate for the climb. Regarding the descend onto the Arctic Ocean there are many ANSPs that are responsible for the airspace in that area. All of those affected needs to be coordinated.	Yes	YES/NO - No comment	Yes	I'm not sure if I agree on the statement that the airspace is relatively quiet. Perhaps that is correct below a certain altitude, but the higher levels are not so quiet.	Yes	As mentioned above there are other rules that the UK rules that must be followed.
A	Yes	YES/NO Not applicable to [redacted], as it isn't our area of responsibility.	Yes	B - [redacted] are a Statutory Consultee for any Marine Scotland licence applications and will have sight for any EIA that is submitted as part of that process.	Yes	A	Yes	B
YES - Consideration for [redacted] to be included as a Special Airspace User [redacted] are open to discuss this with SSC, please contact us via the contact details given in DP3 above. A	Yes	YES/NO Not applicable to [redacted], as it isn't our area of responsibility	Yes	B - A [redacted] are in effect a neighbour to the Spaceport at Skaw please include us in any licensing or approval notification lists to ensure we are consulted as necessary by the associated agencies (CAA, UKSA, SIC etc).	Yes	A - As previously mentioned in the answers above, [redacted] welcome any discussion with SSC regarding their activities, please contact us to initiate dialogue.	Yes	B - Please see previous comments above.
A	Yes	A	Yes	A	Yes	A	Yes	A
	Yes		Yes		Yes		Yes	
	Yes		Yes		Yes		Yes	
b	Yes	c	Yes	b	Yes	b	Yes	b
	Yes		No	C	Yes		Yes	
	Yes		Yes		Yes		Yes	
	Yes		Yes		Yes		Yes	
A Of absolute importance, Emergency Services should have the right to access the area when needed	Yes	A No stone should be left uncovered in the consultation and design process	Yes	A, everyone has to work together	Yes	A This is of huge importance to me as a Boat Tour Operator. I operate in the waters from Hermaness around to Lamba Ness on a daily basis from May to October. I cannot object strongly enough to the proposals as it will have a direct impact on my business. It seems to me as if the design process has taken place with no consultation to other surface users. I and other boats and companies I work alongside have never been consulted in any part of this process. We all will be raising strong objections as this will have direct impacts on all of us. There is no way we could allow ourselves to sit on the sidelines and do nothing while this project goes ahead to potentially ruin our already thriving Businesses	Yes	A what a stupid question. You can't expect to set off rockets and not consult and liaise with other users
	Yes		Yes	A	Yes		Yes	
	Yes		Yes		Yes	Who will decide on the "if required" criterion? This design principle is meaningless if parties that wish to avoid such agreements and memos have the last say.	Yes	
A N/A This issue doesn't affect our area of concern.	Yes	A N/A This issue doesn't affect our area of concern.	Yes	B	Yes	A	Yes	A
	N/A	N/A This issue doesn't affect our area of concern.	Yes	C - transparency and common understanding should minimise duplication of effort and potential for conflicting decisions.	N/A	N/A This issue doesn't affect our area of concern.	N/A	N/A This issue doesn't affect our area of concern.
C The ability to cease activities in the event of higher priority airspace usage requirements is a fundamental obligation on a danger area operating authority.	Yes	C The term 'should' in the description of this design principle implies an optional component to this requirement. As set out in the response to DP3, the location of Unst and the intended northerly launch vector will produce a significant impact upon commercial traffic crossing the Reykjavik / Stavanger FIR boundary. The publication of Danger Areas within an FIR is an obligation on the State nominated by ICAO as responsible for that FIR. As such, and without prejudice to the UK CAAs ACP requirements, SSC must consider that the vast majority of its airspace requirement will lie outside of the UK CAAs authority to introduce. Resultantly, engagement with the Icelandic Transport Authority is an essential component associated to the overall implementation of its airspace requirements. Should airspace requirements extend as far as the Nuuk FIR (Greenland) then the Danish Ministry of Transport should also be engaged.	No	Whilst it is understood that SSC will have regulatory obligations placed on them by other bodies, the CAA remains the regulatory body responsible for airspace usage and changes within the UK. Should a conflict in regulatory requirements become apparent during the ACP process this should be clearly articulated to the CAA for consideration; therefore, this proposed principle could be more clearly articulated as a potential constraint. As set out in DP 7, engagement with other airspace regulatory bodies responsible for adjacent FIRs may also elicit constraining factors. However, the primary design principle: "The safety of other airspace users and the public is the paramount design principle to be used in the Airspace Change Process," would allow SSC to set out its requirements associated to any other regulatory obligations that impact upon the airspace dimensions required to achieve this principle.	Yes	B [redacted] is working with the UK Space Agency and CAA to provide them with a template LOA as [redacted] expects that due to the anticipated dimensions and activation cycles that all ranges as defined by the SIA will require LOAs in respect of notification principles and methodologies. Dependant on size, precedent agreements for airspace activation may be required as described in the response to DP4. Additionally, given the location of Unst, International LOAs will be required.	Yes	C [redacted] supports this design principle as it aligns with its operating practices as regulated by the CAA. Furthermore, the introduction of Free Route Airspace as set out in CAP 1711 will impact upon the design of associated Flight Planning Buffer Zones (FPZ) and subsequent notification requirements, related to the activation of segregated airspace structures. See Eurocontrol design requirements for Free Route Airspace (LINK) Moreover, given the potential variation in launch vehicle size, possible sub-orbital sounding launches for test and differences between sun-synchronous vs polar launch trajectories the airspace should be designed in a mosaic such that only the area required for a given launch is requested rather than a single larger area as a default. Additionally a small zone within the immediate vicinity of the launch pad might be required as commissioning activities near launch, i.e. during and once fuelling has completed, but the danger area for the range has not yet been activated as the launch window is not imminent. In all circumstances the calculation of co-ordinates associated to the dimensions of airspace structures, including FBZs, are to conform to European Regulation (EU) No. 73/2010 & (EU) No. 1029/2014 as set out in the CAAs Aeronautical Information Management policy document CAP 1054.
B - Agreement and co-ordination with both the RAF and RN will be essential and arguably the ability to achieve safe access in an emergency fall under DP1. However, given Shetland's location military QRA operations would need to priority in scenarios of airspace/water infringement by international vessels.	Yes	C - Given the location, it would be difficult, if not impossible, to achieve DP1 without the involvement of non-national aviation agencies. However, rather than simply state, "International airspace agencies" it might be better to change this to "Other National and International airspace agencies should be included in the airspace design process" (see comments under DP9)	No	The designated airspace must meet the needs of the airspace regulatory authority. We would expect the whole operation to be viable from a safety and local community/non-aviation regulatory perspective. Therefore, rather than specify airspace design directly from other local requirements (e.g. building regulations) it would be more logical to ensure the intended mode of operation met those requirements then design airspace that would accommodate the operation.	No	To meet DP1, the airspace design must take account of the needs of adjacent ANSP (and other airspace users). LoA and MoU will be required to define the interfaces/interdependencies. It would be better to change DP7 to "Other National and International airspace agencies should be included in the airspace design process" then delete DP9	Yes	DUK airspace is a national asset that must be shared amongst those who need access. This includes military and civilian manned and unmanned fixed and rotary wing air vehicles and space vehicles. Shetland and other Spaceport airspace should remain compliant with developing national airspace standards as and when they occur.