Agenda Item	7.7
Report No	PLN/086/24

HIGHLAND COUNCIL

Committee: North Planning Applications Committee

Date: 29th October 2024

Report Title: 24/01091/FUL : Sutherland Spaceport Ltd

Land 2600M SW Of Dunbuie, Talmine

Report By: Area Planning Manager – North

Purpose/Executive Summary

Description: Construction and operation of a vertical launch spaceport with launch operations control centre, launch site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure. At land 2600m South West of Dunbuie Talmine and summit of Ben Tongue (adjacent to existing telecommunications mast)

Ward: 01 – North, West and Central Sutherland

Development category: Major

Reason referred to Committee: Major and over 5 objections

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

Recommendation

Members are asked to agree the recommendation to **GRANT** the application as set out in section 11 of the report

1. PROPOSED DEVELOPMENT

1.1 The applicant seeks an amended planning permission to the original consent ref. 20/00616/FUL granted on 5th August 2020 for the erection of a vertical launch facility to allow for the launch of small satellites into space. The intention is that the site would facilitate use by several launch service providers using different launch vehicles. The launch vehicles from the site would launch at a trajectory of between 83º and 98º north, carrying earth monitoring satellites at a frequency of no more than 12 launches per calendar year. The purpose of the Spaceport is to launch small satellites into space to monitor climate change and thus also contributes to ensuring climate resilience in that regard, with it noted that it will deliver a positive biodiversity solution through the restoration of currently degraded peatland.

1.2 The Applicant is seeking planning permission for a major development of the construction of a vertical launch spaceport with launch operations control centre (LOCC), launch site integration facility (LSIF), launch pad complex, antenna park, access road, fencing, services and associated infrastructure (collectively 'the Sutherland Spaceport'), as shown on the plans submitted with the planning application for this. Notably, the proposed development is broadly similar to that approved previously pursuant to planning application reference 20/00616/FUL ('the 2020 Permission'), in terms of which planning permission was granted for what was then known as Space Hub Sutherland ('the Original Project'), with the consent now being implemented. However, changes have subsequently been made to satisfy operational requirements, and to minimise the environmental impact.

1.3 The amended application seeks the construction and operation of a vertical launch spaceport with launch operations control centre, launch site integration facility, launch pad complex, with the relocation of the antenna park, access road, fencing, services and associated infrastructure. At land 2600m South West of Dunbuie Talmine and the antenna park close to the summit of Ben Tongue (adjacent to an existing telecommunications mast and ancillary infrastructure). The Applicant has stated that amended location of the antenna park is an integral part of the Spaceport.

1.4 The vertical launch facility comprising a Launch Service Integration Facility (603m2), Launch Operations Control Centre (547m2), launch pad complex (10,425.6m2), antenna park (527.6m2), access road (2.26km on Spaceport site and 2.25km on Antenna Park site), services, fencing and associated infrastructure. The Spaceport site covers an area of approximately 33.6 hectares, which is contained entirely within the site of the 2020 proposal.

1.5 The design amendments have been identified in response to ground conditions onsite and a refinement of operational requirements. These necessitate minor changes to the infrastructure proposed as part of the development, namely:

- Relocation of the launch pad complex approximately 20 m to the west of its originally proposed position, along with the road between the Launch Service Integration Facility (LSIF) and the launch pad (already accepted through the non-material variation process);
- Internal reconfiguration of the infrastructure within the launch pad complex (relocation of east commodity area, relocation of lightning mast and tightening up of the road around the launch platform);

- Realignment of the road immediately to the south of the LSIF;
- Removal of the step in LSIF roof; and,
- Change in dimensions of the roller doors in the LSIF.

1.6 In summary, the differences between the Original Project and the development as now proposed comprise:

- Tightening up of the application site boundary, such that this is drawn more closely round the land needed for the proposed infrastructure, and the extent of additional land included within this is minimised;
- reduction in the footprint and height of the LSIF, and the area of the associated yard, together with a reduction in the number of parking places, due to the smaller size of the building;
- relocation of the antenna park from the Spaceport site to a site adjacent to the existing telecommunications mast on the summit of Ben Tongue (including the creation of a small section of new access track);
- reduction in the overall scale of the launch pad and changes to the layout of that, including reducing the amount of hard standing and making the lightning tower and lighting columns fully retractable in non-launch state (this being as per what has been approved under Non-Material Variation 1 to the 2020 Permission, as highlighted above);
- rationalisation of the access road and rail track between the LSIF and the launch pad into a single access road;
- re-alignment of the access road between the A838 and the launch service integration facility (LSIF) to avoid deeper peat (this being the alignment to which the road is currently being built, as also highlighted above, with this having been agreed in principle by THC by email dated 3 July 2023, following discussions with THC, SEPA and NatureScot); and
- changes to the design of the watercourse crossings, (with there to be bridge crossings of Allt Alasdair Chattaich and Feith an Laisg, rather than culverts) to increase the mammal migration paths beneath them and to fit with the realignment of the access road.

1.7 The above changes from the Original Project are considered to have a reduced environmental impacts. This includes:

- the total volume of peat that would need to be excavated for the construction of the Spaceport would be reduced from 24,046 m3 to 9,895 m3 (as set out in Chapter 5: Ecology of the EIA Report and the Peat Management Plan (PMP)
- the reduced height of the LSIF, the increase in the fully retractable elements of the launch pad and the reduction in the amount of hard standing means that the overall visual impact of the Spaceport site will be reduced;
- the relocation of the antenna park to Ben Tongue also reduces the overall visual impact of development on the Spaceport site, while its location adjacent to an existing mast on Ben Tongue will minimise the visual impact there;
- the change to the design of the water course crossings means less disturbance to those, as well as increasing the width of mammal migration paths; and,

- the revised layout and design mean that the construction period will be shorter, with less vehicle movements.

1.8 The applicant previously stated in the original application (Reg. 20/00616/FUL) that the North of Scotland is one of the only suitable areas of the UK for the location of a vertical launch facility. It further set out that the north of Scotland is one of few suitable areas in Europe for the location of such a development. The applicant also explained that the locational suitability of a vertical launch facility is dictated by geography and physics of a vertical launch. The matters considered by the applicant include:

- Launches require to have a northerly ground track to access sunsynchronous and polar orbits efficiently. These are the most commercially desirable orbits for small satellites; and,
- Launch vehicles are not permitted to fly over permanently populated areas for safety reasons; As a result of these factors, the location for a vertical launch facility requires to have a north facing coast.

1.9 Given, the size of the application site means that the development is still classed as a major development in terms of the planning hierarchy and, that being the case statutory pre-application consultation was carried out for this application in accordance with the Proposal of Application Notice (PAN) dated 2 November 2023 (23/05374/PAN).

1.10 Access to the launch site would still be via the new junction on the A838 and via the A836 for the Antenna Park.

1.11 The Applicant utilised the Major Pre Application Consultation advice in 2017 and 2018. The summary of the advice is provided below:

"The unique UK level development of the UKVL facility near Melness, is considered to present very significant potential development opportunities for the economy and skills base of the population of north west Sutherland, as well as also impacting on larger centres such as Dounreay/Thurso, and Inverness.
The proposal is also very likely to have unique challenges within an area notable for its natural heritage interests and wild and largely undeveloped landscape. The development of this facility has the potential to create numerous jobs in the area both directly and indirectly and could have other positive impacts on the entire north Highlands area, helping to consolidate"

1.12 The application is supported by an Environmental Impact Assessment Report (EIAR) which contains chapters on:

- Design of the Project
- Site Selection, Design Evolution and Alternatives
- Seascape, Landscape and Visual Impact Assessment
- Ecology
- Water Resources
- Air Quality
- Noise and Vibration
- Air Quality
- Cultural Heritage and Archaeology

- Traffic and Transport
- Climate Change
- Major Accidents and Disasters
- Transboundary Considerations
- Summary and Schedule of Mitigation and Monitoring

1.13 The application is also supported by the following information:

- Access Road Alignment Statement
- Antenna Park Drainage Statement
- Community Liaison Group Terms of Reference
- Construction Traffic Management Plan
- Design and Access Statement
- ECOW Terms of Reference
- Interim Restoration and Decommissioning Plan
- Lighting Strategy
- Nature Conservation Management Plan
- Navar Bridge Scheme of Mitigation
- NCMP Appendix A – Peat Restoration Plan
- Spaceport Site Topographic Surveys
- Watercourse Crossing Check
- Written Scheme of Investigations
- Noise Monitoring Method Statement
- Construction Environmental Management Plan
- Bird Protections Plans

1.14 During the determination of the application further amended drawings were submitted on 29th August 2024 to respond to ground conditions onsite and a refinement of operational requirements.

These minor changes to the infrastructure proposed as part of the Project, include:

- Relocation of the launch pad complex approximately 20 m to the west of its originally proposed position, along with the road between the Launch Service Integration Facility (LSIF) and the launch pad;
- Internal reconfiguration of the infrastructure within the launch pad complex (relocation of east commodity area, relocation of lightning mast and tightening up of the road around the launch platform);
- Realignment of the road immediately to the south of the LSIF;
- Removal of the step in LSIF roof; and,
- Change in dimensions of the roller doors in the LSIF.

A further Environmental Clarification Report was also provided in relation to Updated Peat Restoration Plan, Updated Drainage Impact Assessment, Updated Design and Access Statement, Updated Construction Environment Management Plan, Updated Water Quality Management Plan, Updated External Lighting Strategy, Updated Stage 1 Conservation Management Plan, Updated Shadow HRA Addendum, Updated Interim Decommissioning and Restoration, and Updated Planning Statement.

1.15 As set out in the original application the proposed development does not have a pre-determined operational life, although it is indicated that it could be operational up to 50 years. However, the applicant has stated that following a period of 5 years of inactivity at the site, the site would be decommissioned. The applicant acknowledges that these matters related to decommissioning will not be confirmed until the time of the submission of the decommissioning and restoration plan.

1.16 The revised layout and design means that the construction period will be shorter, with less vehicle movements. As construction works have started it is understood that a further construction period of 6 moths is anticipated. The updated Construction Environmental Management Document sets this out. It is anticipated that for the Antenna Park construction works will be around 4 months

1.17 To allow the proposed development to operate several licences require to be granted under the provisions of The Space Industry Act 2018. Between the owner and operator of the vertical launch facility the following licences will may be required:

- Operator licence – this will cover launch vehicle(s) and an operator license will also be required for the payload(s)
- Spaceport licence – this will cover the operation of the spaceport site itself
- Range services licence – this will cover the area of land, sea or air that will require to be cleared prior to a during the launch to enable the launch to take place safely.

These licences will be regulated by the United Kingdom Space Agency (UKSA).

1.18 Further to licences under the Space Industry Act 2018, several other licences would be required, including but not limited to:

- Marine Licence – this would consider the deposit of objects from space vehicles in the marine environment. This is regulated by Marine Scotland
- Approval of a Planned and Permanent Redistribution of Air Traffic - will be required though what is known by as the CAP1616 process which is regulated by the Civil Aviation Authority.
- Controlled Activities Regulations Licences – an amended license may be required in relation to discharges to the watercourse and temporary abstraction through SEPA.

2. SITE DESCRIPTION

2.1 The application site comprises two parts; the Spaceport site and the antenna park site. The application site covers an area of 35.5ha, comprising:

- the Spaceport site (33.6ha), which is wholly contained within the site of the 2020 Permission; and
- a small area of land adjacent to existing telecommunications infrastructure on the summit of Ben Tongue, together with the access to that (1.9ha).

2.2 The Spaceport site is located in the north of Scotland approximately 4km to the southwest of Melness, on the A'Mhoine Peninsula in Sutherland. The site is owned by the Melness Crofters Estate and is wholly contained within the site of the Original Project, on which development is currently underway pursuant to the 2020

Permission. The site is bounded to the south by the A838. To the north and east of the site it is predominantly grazing pasture and open peat moorland. The nearest occupied homes are 2.4km to the east of the site boundary, with the settlement of Tongue 6km away.

2.3 Although works have progressed the site itself and wider area comprised of undeveloped sweeping moorland which varies in vegetation cover with underlying peat. There are a number of watercourses which run through the site including: Feith an Laisg, Alltan Dubh, Allt Unnis Choinnich and Allt an Loin Chaoil.

2.4 In terms of sites designated for ecological value, the application site contains part of the Caithness and Sutherland Peatlands Special Area of Conservation and Ramsar site as well as the Ben Hutig and A' Mhoine Sites of Special Scientific Interest. It should however be noted that the built infrastructure of the proposed development lies outwith the designated sites. The Inverhope Site of Special Scientific Interest lies to the west of the site.

2.5 Sites designated for ornithological interest within the application site include Caithness and Sutherland Peatlands Special Protection Area and Ramsar site as well as the Ben Hutig Site of Special Scientific Interest. It should however be noted that the built infrastructure of the proposed development lies outwith the designated sites. The North Sutherland Coastal Islands Special Protection Area lies to the north west of the site.

2.6 The Kyle of Tongue National Scenic Area (NSA) is located approximately 1.7 km to the east of the site at its closest point and also extends north east of the site. The Eriboll East and Witten Head Special Landscape Area is located to the north and east of the site. The Ben Hope and Ben Loyal Wild Land Area (WLA) lies approximately 0.4 km south of the site boundary.

2.7 The site access lies within a small part of Scotland's newest world heritage site The Flow Country given UNESCO status. The Flow Country is considered the most outstanding example of a blanket bog ecosystem in the world. The application was submitted prior to the Flow Country's status being confirmed. Further to this there original application includes the site access which has been implemented. It was therefore considered that a World Heritage Assessment was not required in this instance. Had significant works not been undertaken the Council's position would be different.

2.8 The space port site and the surrounds accommodate valued habitats including: ground water dependent terrestrial ecosystems (GWDTEs); bog; heath; and flush. The site is used by protected species, including but not limited to otter, reptiles and water voles. The site and wider area also carries a number of ornithological interests including but not limited to merlin, white tailed eagle, golden eagle, greenshank, red-throated diver, greylag goose, golden plover, green shank, peregrine, pink footed goose, hen harrier, barnacle goose, short-eared owl, and dunlin.

2.9 Much of the application site is covered in peat. The original application noted peat depths on the site varying between 0.35m to 4.45m in depth. The majority of the infrastructure on the site was to be located on areas of peat less than 1.5m in depth.

2.10 The site is within an area which contains a number of tourist and recreation assets. These include but are not limited to walkers upon Munros and Corbetts and local hill tops as well as promoted routes on the local road network. The Land Reform (Scotland) Act also allows for significant access rights for walkers across this countryside.

2.11 The surrounding area contains a number of historic environment features. The applicant has carried out an assessment based on an Inner Study Area (i.e. within 2km of the application site) and outer study area (i.e. within 10km of the application site). The inner study area includes Moine House as a listed building and a number of other assets that are non-designated. The outer study area contains further listed buildings, scheduled monuments and other assets that are non-designated, including comprising 3 shielings, a large area of historic peat cutting and a shepherd's cairn.

2.12 The Antenna Park site is located on Ben Tongue, approximately 2.5km north east of the settlement of Tongue. The site is approximately 1.05 ha. The antenna park will be located adjacent to existing telecommunications infrastructure. The site is comprised of acid grassland and heather mosaic, an existing track, improved and semi-improved grassland and dense/continuous shrub. Habitats adjacent to the site include existing infrastructure, heathland, improved grassland, hedgerows, scrub, farm infrastructure, lochans, broadleaved woodland, plantation woodland, roads and Tongue Bay.

2.13 The access track to the Antenna Park runs from an existing junction with the A836 to the west of the site. The existing site access and mast compound is currently used for telecommunications infrastructure. The nearest occupied homes are 0.6km to the north west of Ben Tongue. The Antenna Park will provide infrastructure for the Range Control Centre (RCC), equipment to assist with launches at the Spaceport site, along with equipment and welfare containers to assist with the operations.

2.14 The site access from the A838 to the Spaceport has been designed in accordance with The Highland Council Roads and Transport Guidelines for New Developments. A swept path analysis has been carried out to ensure that the junction can be safely negotiated by a 16.5m long articulated HGV, Orbex have confirmed the LV will be delivered on large vehicles of this type. The access road within the site comprises three types of construction - asphalt, unbound road, and floating road. A significant portion of the road is floating to minimise the amount of peat excavation required. The access track with floating road construction will be a width of 4m, with 1m strips either side (6m total width). The width of the access road where the construction type is unbound road will be 4m. The width of the access road has been increased at bends to ensure that the bend can be safely negotiated by larger vehicles. Passing places shall be provided at 300m intervals to allow vehicles to pass safely. The track surrounding the Launch Pad is a loop therefore eliminating the need for passing areas and turning circles for service and delivery vehicles. The new road is approximately 2.5km long.

2.15 The access road to the LOCC building and car park has been designed to accommodate buses, service vehicles, emergency vehicles, cars and vans. The LOCC car park is to be used as a turning area for vehicles with the car parking

managed to ensure that vehicles can turn safely and as indicated in the swept path analysis. The swept path analysis has been undertaken for the following vehicles:

- 10.5m Rigid Bus
- 9m Three Axle Refuse Vehicle
- 7.2m Rigid LGV
- 7.9m Two Axle Fire Pumping Appliance.
- 16m long lorry tanker

The access road to the LSIF and service yard has been designed to accommodate a 16.5m long articulated HGV and a 16m long lorry tanker. A swept path analysis has been carried out to ensure that HGVs can access the service yard, manoeuvre to the LSIF service bays at the entrance of the hangar, and safely exit the service yard, the service yard, manoeuvre to the LSIF service bays at the entrance of the hangar, and safely exit the service yard.

2.16 There is an existing SSE access track from the A836 that leads to the existing mast compound on Ben Tongue. The current track runs from the A836 to the summit of Ben Tongue. The track is in good condition and the majority of the track is suitable for access to the Antenna Park. Given the type of vehicle now required to access the Antenna Park, a new section of track is proposed between the landlords shed and the crofters house heading northeast and arcing round to rejoin the existing track. The new section of track will be roughly 120m in length and has an incline of 9m in height from point to point. It is considered that the proposed route offers the most economic and expedient route to the site due to utilising an existing commercial access from the A836 and the shortest development of new track thus minimising tis impact.

2.17 At the Antenna Park there are six statutory designated sites identified within 5km of the site boundary: River Borgie SAC; Caithness and Sutherland Peatlands SAC; Caithness and Sutherland Peatlands SPA; Caithness and Sutherland Peatlands Ramsar; West Borgie SSSI; A'Mhoine SSSI and Eilean nan Ron (Tongue) DSHS. These sites have been designated for the scale and diversity of blanket bog and freshwater loch habitats, and associated vegetation and surface pattern types, their diverse range of breeding wildfowl and their geological features. The Kyle of Tongue Natural Scenic Area (NSA) extends the length of the access track at the Antenna Park site.

2.18 In terms of cultural heritage a Category C Listed Building (Moin House) is located approximately 1.3km from the Antenna Park site.

3. PLANNING HISTORY

3.1	06.03.2017	17/00124/PREAPP Project aims to launch satellites into Earth orbit from the territory of the United Kingdom. The project comprises a new junction off the A838 road, a 70m diameter concrete launch pad with an associated access road, approximately 2km in length, security and assembly buildings, hard standing areas, security fencing and surface water drainage	Advice Pack Provided

		facilities. Major Pre-Application Advice Service Meeting contact Kellie Kotze for further details.	
3.2	05.02.2019	18/05855/PREAPP Project aims to launch satellites into Earth orbit from the territory of the United Kingdom	Advice Pack Provided
3.3	23.07.2019	19/02703/SCOP Proposing to develop a space hub	Scoping Response Issued
3.4	19/04008/PAN	19/04008/PAN Erection of vertical launch space port Erection of vertical launch space port comprising assembly building with ancillary structures, launch operations and control centre, access roads and car parking, antenna farms, commodity farms, launch pad complex, launch towers, safety and security fencing and associated infrastructure	Closed
3.5	05.08.2020	20/00616/FUL Construction of vertical launch space port with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure	Planning Permission Granted
3.6	25.03.2024	23/05374/PAN Construction of vertical launch spaceport with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure.	Closed

4. PUBLIC PARTICIPATION

4.1 Advertised: Unknown Neighbour / Schedule 3 and EIA Adverts

Date Advertised: EIA Advert 29.05.2024 and Unknown Neighbour / Schedule 3 Advert 31.05.2024

Representation deadline: 14th June 2024

Timeous representations: 2 letters of representation from 2 households

Late representations: 7 letters of representation from 6 households

Late Support Comments: 7 letters of support from 7 households

Late General Comments: 1 (RSPB)

4.2 Material objection considerations raised are summarised as follows:

Third Party Procedural Concerns:

a) Concerns were raised in relation to the procedure taken to address this application, in particular that the new planning application has been submitted on the basis of a single application with two red line boundary areas some 7.5km apart. Furthermore, having the two sites may appear to dilute the impacts, compared with what would have been expected from a standalone development proposal at the hill summit.

Planning Officer Response – There is provision that a planning application can have two red line boundaries if the application is for different but connected sites. This is clearly the case with the submitted proposal as the antenna park is considered an integral part of the spaceport. It is not clear what is meant by having 2 sites would dilute the visual impacts. The visual impact for both elements of the proposal will be assessed. However, this will only include the amendments not already considered previously that principally relate the antenna park as it has been relocated.

Further, under Schedule 2 of the EIA Regulations, the Original Project is considered to be 'EIA development' and as such the application for the 2020 Permission was accompanied by an EIA Report (the 2020 EIA Report). Paragraph 13 of column 1 (description of development) in paragraph 2 of Schedule 2 of the EIA Regulations states "Any change to or extension of development of a description mentioned in paragraphs 1 to 12 of Column 1 of thus table where that development is already authorised, executed or in the process of being executed". The Project therefore constitutes 'EIA development'.

b) Concerns were raised with the PAC Report not declaring individual's personal details, which gives the impression of community support.

Planning Officer Response – it should be noted that within the support comments some refer to their attendance at the public consultation event.

Third Party Concerns in relation to the Spaceport site:

c) Debris falling in the sea after a launch (this could affect orcas and other marine animals)

Planning Officer Response – The principle of launches from the site has already been established. Any associated debris with such launches is covered under separate legislation.

d) Impacts on archaeological assets

Planning Officer Response – A Written Scheme of Investigation has been submitted to support this application and this can be approved. The WSI describes the necessary mitigation as being the marking-out and avoidance of three recorded sites within the application boundary and the inclusion of cultural heritage issues in the Construction Environment Management Plan (CEMP). No additional mitigation is considered necessary for the spaceport site by the Council's Archaeologist.

e) Visual Impacts, including nighttime visual effects

Planning Officer Response – The visual effects were dealt with in some detail for the spaceport site within the original report of handling from paragraphs 10.93 – 10.127. It was not disputed that there would be some significant effects which is not

unusual for a major planning application, these were also identified in the LVIA. In terms of the nighttime visual effects this was previously addressed. The applicant considers that the vertical elements and the buildings of the development would have an impact on the perceived remoteness and wildness of the area. This is not disputed. Of particular concern is the artificial lighting required on the site and the effect that this could have on these qualities due to the general lack of lighting in the vicinity of the development. While lighting is required during launch scenarios, the lighting shall be minimised as much as possible in both scenarios to minimise the impact on the sense of remoteness and wildness in hours of darkness. The mitigation by design of the retractable elements, the design, reduction in scale of the spaceport and location of buildings is considered to reduce the landscape and seascape impacts.

f) Impact on ecology, and ornithology

Planning Officer Response – Both the current and previous application have been supported an Environmental Impact Assessment Report (EIAR) which contains chapters on Ecology and Ornithology. Furthermore, a Marine Environmental Risk Assessment (MERA) was also undertaken by the applicant. This identified a number of risks to the marine environment, such as debris impact on marine ecology, collision risk to marine users and release of unspent fuel from deposited rocket parts. It was accepted that on the basis of 12 launches per year, 5 tonnes of carbon fibre reinforced plastic and 7 tonnes of metal alloy would be dropped into the sea per annum. The MERA sets out that the level of unspent fuel would likely be limited and would be diluted by the volume of water. The deposit of objects from space vehicles in the marine environment would require a marine licence in the following circumstances:

- Within 12nautical miles under article 21(1) of the Marine Scotland Act 2010
- Between 12and 200nm under article 66(1) of the Marine and Coastal Access Act 2009
- Outwith 200nm under article 21(2) of the Marine Scotland Act 2010

The risk to mariners would be regulated by the UK Space Agency through their licencing procedures.

Given the route of the rocket over international waters, these effects on the Marine Environment are transboundary effects. While the effects were not identified as significant, the Council nevertheless previously notified Scottish Ministers in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. In doing so the Council were required to come to a conclusion on matters related to Transboundary Effects. In doing so the following effects were considered during the original application:

- Unspent fuel – the planning authority agreed with the findings of the EIAR that this will not have an impact based upon the content of the MERA.
- Marine debris impact of marine ecology – the planning authority consider that space debris poses a risk to marine life through direct collision and through ingestion of macro and microplastics. The planning authority note that as a result of the proposed 12 launches per annum a minimum of 5 tonnes of carbon fibre reinforced plastic and 7 tonnes of metal alloy will be dropped into the sea. The planning authority can not conclude from the information within

the EIAR whether this is a significant increase on current level of debris but note that the risk is proportional to the number of launches. The planning authority intend to condition that no more than 12 launches can be undertaken per annum.

Furthermore, Collision risk of marine debris to marine users - The MERA states that it is 'likely that a mariner notice will be issued' to mitigate the risk of this collision. Also the predicted debris corridor communicated in notice should be specific to each launch and should ideally represent a much higher resolution than the predicted debris corridor described in the MERA. The planning authority are currently considering whether this is a matter which can / should be controlled via the planning system or by the license required under the Space Industry Act. It was previously acknowledged that whilst there are transboundary effects, these are not considered significant in EIA terms and the Council retains this view.

The EIA Reports identified and assessed impacts on protected species, ornithology, ecology and designated sites. The site contains elements of the Caithness and Sutherland Peatlands Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site. These are European designated sites, however it should be noted that through mitigation by design the site infrastructure does not infringe on the boundaries of these designations. In addition, elements of the Ben Hutig and A' Mhoine Sites of Special Scientific Interest (SSSI) are within the site boundary but not affected by site infrastructure. The Inverhope SSSI lies to the west of the site.

It should be noted that the original decision considered that the proposed mitigation resulted in no significant environmental effects on the European designated sites in addition to effects on the associated SSSIs within the application site boundary.

The proposal's site access now lies within the World Heritage Site (WHS) for the Flow Country that will be discussed in the main report as a new constraint.

g) Impact on natural resources (including peat)

Planning Officer Response – Due to the reduction in the effects on peat, this will be discussed in the main body of this report.

h) Cumulative effects from other developments

Planning Officer Response – The cumulative effects were addressed in the determination of the original application at paragraph 10.35 and 10.54. It noted that without significant traffic and visitor management this impact would not be acceptable. It was considered that the provision of parking at suitable locations to view the launch (including provision for parking of campervans), park and ride facilities, and the use of more sustainable forms of travel would reduce the impacts. This will require significant investment by the applicant and potentially require further planning applications. A Visitor Management Plan (VMP) can secure details of such mitigation, however certain interventions may require their own standalone planning permission. Representations have set out that the cumulative impact of this and other potential developments in the area could be significant. This is not disputed, however

no other proposal is as advanced as this project that is currently under construction. Therefore, it would be for the remaining developments to ensure that the cumulative effects are fully taken into account. For this proposed development it is considered that, on balance, the carbon release can be managed by the use of an appropriate Peat Management Plan and through an augmented Habitat Management Plan.

i) Concerns over the impact on Naver Bridge

Planning Officer Response – As previously noted with the 2020 report of handling the Naver Bridge on the A836 near Bettyhill may not be suitable for significant numbers of HGV vehicles in its current form due to the design and strength of the bridge. It is programmed to be replaced by the Council. Pre commencement works for the replacement bridge have now begun. Notwithstanding this it was recognised at the time given the nature of the structure and the lifeline link it provides for communities, it was hugely important that the proposed development does not have an adverse impact on either the safety or undue deterioration of the bridge. At the time the applicant was made aware that it is possible that the structure could be assessed as not suitable to support the short-term increase in HGV loading required for construction of the Space Hub. It is understood that the local principal road's engineer is satisfied with the assessment of Naver bridge. Furthermore, the Naver bridge scheme of mitigation has been agreed.

Antenna Park:

j) Erection of the mast and visual impacts on Ben Tongue.

Planning Officer Response – no mast is being erected at Ben Tongue, there is however an existing 29m mast and associated equipment unrelated to this development. It is considered that the proposed antennas and infrastructure will be subservient to the existing mast and infrastructure. As the site is adjacent to an existing 29m mast, it is not considered that the development would significantly alter the character of the area, given that the antenna park infrastructure is much lower in height and from many views is seen behind the mast. The antenna park is also on lower ground away from the peak of Ben Tongue. The proposed antennae are collapsable and will only be upright when launches are proposed. It is not considered that the development would significantly alter the character of the area.

k) Visual Impacts from Talmine will be affected with the Antenna most visible.

Planning Officer Response – The existing mast will still be the most visible element on Ben Tongue, the Antenna's will only be visible when in use. When not in use the antenna's are collapsible which will lessen any visual impact. Furthermore, the equipment is of a temporary nature and has limited visibility.

l) Concerns in relation to wildlife at Ben Tongue

Planning Officer Response – during critical periods where there may be disturbance there will be an Ecological Clerk of Works (ECoW) on site to ensure appropriate mitigation is adhered to. Furthermore, the survey works did not identify any significant impacts on habitat or protected species.

m) Concerns that there would be an increase in traffic at Ben Tongue, including concerns to why other routes were not utilised as alternative and construction noise impacts.

Planning Officer Response – it is not considered that there would be a significant increase in traffic given what is already on the site and the number of launches proposed per year is limited. Furthermore, the remaining construction period is temporary. It is considered that the construction traffic will be minimal as most of the infrastructure is temporary structures other than the fencing. The construction traffic will also be controlled through the Construction Traffic Management Plan (CTMP) and a Construction Site Management Plan can be conditioned to minimise any impacts on the residential properties at the site access point.

n) Traffic Safety at the Antenna Site with the A836.

Planning Officer Response – TP response are confident any concerns can be managed through and amended Construction Traffic Managenent Plan (CTMP) that will include mitigation for the access junction between the antenna site and the A836.

o) Impact on Residential Amenity (noise and vibration)

Planning Officer Response – A condition will be imposed to ensure good practice is followed and that residential properties are not significantly impacted during the construction and operation of the antenna park.

p) Impact on Tourism, lack of local employment opportunities (no socio economical benefits)

Planning Officer Response – As per the 2020 planning application the EIAR presented figures presented in relation to the Economic Impact Assessment. The Applicant also highlighted other potential socio-economic benefits of the proposed development including, benefits to young people and wider community benefits such as the potential to facilitate a reversal of the population decline in the area and how this can help sustain local services.

q) Impact on outdoor recreational users

Planning Officer Response – the planning consent can be conditioned to ensure a Recreational Management Access Plan is provided to the satisfaction of the Council in consultation with the Access Officer to ensure there are no significant impacts.

r) Risk of Flooding at Ben Tongue, Land Contamination, Impacts on watercourses (Tongue Burn emerging from Loch Craisg) and public water supply.

Planning Officer Response – The Council's Flood Risk Management Team were consulted they are satisfied that flood risk to the development is low. They have requested a condition is attached to any permission to ensure that all of the site infrastructure, with exception of the required crossings, is located a minimum of 10 from the top of the bank of any of the watercourses. Furthermore, the watercourse crossings shall be designed to ensure that they do not impede a 1 in 200 year plus climate change flow and include an appropriate level of freeboard. In terms of the Drainage Impact Assessments (DIAs) provided for the Launch site and the Antenna

Park they are content with the drainage proposals. A condition that the final drainage design is submitted for review and approval should be imposed.

SEPA did not response on Food Risk, therefore it is understood that they are satisfied that there is no risk of flooding. SEPA were also consulted and did not raise any concerns in relation to flooding at Ben Tongue. The Construction Environmental Management Plan that will be secured via a planning condition will ensure that there are no land contamination issues and that the watercourses and public water supplies are protected.

s) Operational use, including launch, visitor management plan and the possibility of utilising Ben Tongue as a vantage point.

Planning Officer Response – A Visitor Management Plan will secure details of such mitigation, however certain interventions may require their own standalone planning permission. These will be judged on a case by case basis, however the cumulative effects of these will need to be considered.

t) Potential interference to the existing masts coverage

Planning Officer Response – Similar to windfarm applications a condition can be applied to any consent to ensure that there is no loss of signal due to the antennal park.

u) Community Liaison Group not open to the public

Planning Officer Response – The information provided to date demonstrates that the Community Liaison Group is open to the public and other interested stakeholders.

4.3 Non- Material planning objection considerations raised are summarised as follows:

a) Councillors should visit both sites. If the Councillors have any concerns regarding the logistics of a detailed site visit, then it is recommended that they continue the consideration of the application and instruct an independent party to provide a detailed drone generated video of the access, the antenna park, and the surrounding area. The resultant video can then be viewed before the consideration of the application.
b) The Council should request an open technical analysis from Orbex as to why they need to use the Ben Tongue site and commission an independent technical report into the case set out by Orbex.

Planning Officer Response – this would be a matter for the Committee to consider however no site visit was undertaken in relation to the original application. Additional reports or information are requested when deemed appropriate or necessary for the consideration of the proposal.

c) Damage to residential properties due to construction and the undertaking of a structural survey to be carried out on a residential property
d) Third party concerns that unauthorised work will be undertaken to their property.

Planning Officer Response – this would be a civil matter, however the developer should follow good practice to minimise any concerns. The developer would also require permission to carry out works to a private property not within their ownership

e) Possible future expansion of the development.

Planning Officer Response – the Planning Authority can't anticipate or pre-empt any further planning permissions. Any future proposals which may be submitted would require to considered on their merits at that time having regard to all relevant material planning considerations. As such it is only the existing application that is being assessed.

f) Concerns that there would be a significant numbers of staff at the Ben Tongue site rather than it simply being a remote unmanned antenna site.

Planning Officer Response – The Antenna Park will provide infrastructure for the Range Control Centre (RCC), equipment to assist with launches at the Spaceport site, along with equipment and welfare containers to assist with the operations. There will be two parking spaces provided for the staff required to monitor launches and maintenance which seems reasonable given the number of launches per year;

g) Conditions still to be discharged in relation to the original application

Planning Officer Response – the conditions to be discharged are not pre-commencement conditions, therefore they will be carried forward with this proposal.

4.4 Material support considerations raised are summarised as follows:

a) There would be minimal visual effects as the antenna development would be sited beside existing communications telecoms and the antenna park development is much smaller than the existing mast.
b) Consideration has been given to the local residents in particular neighbouring properties with Orbex diverting a small section of the road so as to bypass a local resident's house at their expense. This demonstrates an admirable degree of consideration for residents.
c) If the work carried is carried out on Ben Tongue it would create employment opportunities for a fragile community, create tourism and other socio economic opportunities.
d) Only upgrading an existing right of way, not creating a new access.
e) The antenna park is integral for the Spaceport to meets Orbex's operational and environmental requirements, and it becomes the first carbon-neutral spaceport in the world, a review of the Spaceport infrastructure has been carried out, with several changes needed as set out in the revised planning application.
f) This development is not only of significant local and regional importance, but nationally and internationally and we hope that this planning application will be successful to enable the company to progress to first launch and achieve a momentous milestone for the United Kingdom's space programme and the North Highlands.
g) An Environmental Clerk of Works has been appointed to oversee the work being carried out, thus ensuring that the mitigations in place to safeguard our land and wildlife are being enforced. Given this it is considered the same care and attention will apply to the work being done on Ben Tongue; where consideration for residents and wildlife will be first and foremost in their plans for employment opportunities to rejuvenate the local communities.

4.5 Non Material support considerations raised are summarised as follows:

a) Construction traffic for Wildland projects has run past people's front doors in this area for years now and in general it has been supported for the greater good of the area.

4.6 Material general considerations raised are summarised as follows:

a) RSPB Scotland notes that the proposed changes in design generally involve a downsizing of infrastructure and footprint, although they understand the amount of peat to be excavated remains the same.
b) The likely impact on qualifying species and habitat features of adjacent designated sites are also considered by Applicant to be as set out in the 2020 EIA Report. Therefore, although RSPB have outstanding concerns, regarding the impact on birds and designated sites, in their opinion the current application is not expected to increase these compared to the consented development.
c) Antenna Park, it has recently been brought their attention, that White-tailed Eagles may be breeding in the vicinity of this part of the proposed development. They therefore recommended that surveys were undertaken to locate the nest so that appropriate mitigation can be put in place to protect them from disturbance during construction and operation.

Planning Officer Response –

In response to this comment by RSBB pertaining to the possible presence of White Tailed Eagles near Ben Tongue, the Highland Raptor Study Group (HRSG) were contacted by the Applicant.

The HRSG confirmed that following a recent survey which was prompted by an enquiry received by them, they found no evidence of White Tailed Eagles in the vicinity of Ben Tongue. In addition to which, the Preliminary Ecological Appraisal for Ben Tongue includes records from the National Biodiversity Network (NBN) Atlas (2023) for all birds within 4km of the site within the last 10 years, with no record of White Tailed Eagles identified in that.

The proposed location for the antennas is directly adjacent to an existing telecoms mast that is visited and worked on regularly by the respective telecoms operators.

It is therefore considered that the Applicant demonstrated that there is no evidence of White Tailed Eagle being present in the vicinity of the proposed infrastructure on Ben Tongue and that no further action is required in this regard.

d) NPF4 acknowledges that the climate and nature crises are intrinsically linked and recognises the importance of the planning system in tackling these issues. RSPB Scotland believes that developments should leave nature in a better state than before and welcomes the requirement in Policy 3 of NPF4 that all developments must deliver biodiversity enhancement. As such the Nature Conservation Management Plan recommend that new guidance1 regarding developments adjacent to the proposed World Heritage Site boundary are followed.

Planning Officer Response –

As the infrastructure is already in place at the boundary it is considered that there is no requirement that a World Heritage Site Impact Assessment. However, should further works be planned within the World Heritage Site then and Impact Assessment would be required.

e) RSPB Scotland objected to the original approved proposal (Space Hub Sutherland ref:20/00616/FUL) due to concerns that the proposal would have adverse impacts on the internationally and nationally important wildlife and habitats of this area and the numerous rare and threatened species that it supports. However, RSPB accepted the offer to attend the Community Liaison Group set up following consent and continue to sit on this group, providing advice and guidance.

Planning Officer Response –

The previous permission has been granted and is being implemented subject to consideration of this revised application. The attendance of RSPB at the Community Liaison Group is noted.

4.7 All letters of representation are available for inspection via the Council's eplanning portal which can be accessed through the internet www.wam.highland.gov.uk/wam.

5. CONSULTATIONS

5.1 **Access Officer –** does not object to the proposed development. Fig 05 in the design and access statement suggests the access to the LOCC and beyond it will have vehicle barrier to control unauthorised vehicles entering the site. This is acceptable but the track from the public highway to the LSIF will be accessible to the public as per rights provided by the Land Reform (Scotland) Act 2003, unless otherwise restricted by order or statute. The barriers therefore shall be designed to be accessible by the public for non-motorised use.

It is unclear if the LSIF will be enclosed by any fencing, this should be clarified in any fencing layout. Ideally the buildings will be secured by fencing but the track will remain accessible to the public.

The Launch pad complex is secure by a security fence and it is accepted that this enclosure will not be accessible to the public.

Antenna Park and Access Track, Fig 23 in the design and access statement shows the fencing for the dish compound directly abutting the compound for the existing mast. This will block off access from the core path to the actual summit of Ben Tongue. There should be a gap between these two compounds of minimum 2m.

There is no detail how the new access track will lead off the Blaran road, a layout should be provided and should show how the public will be able to access the track for non-motorised use.

Further details can be secured through the Recreational Access Management Plan (RAMP) via a condition.

It is also noted that The Visitor Management Plan (VMP) and Consented Scheme 20/00616/FUL where works have already started on the development under the consented application 20/00616/FUL. This application requires a Visitor Management Plan to be approved by the planning authority in consultation with NatureScot, Transport Scotland and the emergency service, condition 11. This condition should be carried forward to this application if consented.

To be clear condition 11 of the consented application (ref. 20/00616/FUL) the VMP is to be submitted "no later than 6 months prior to the first launch from the site, a

visitor management plan (VMP) shall be submitted to and approved in writing by the Planning Authority in consultation with SNH, Transport Scotland, and emergency services". As such the applicant is not in breach of this condition and it will be carried forward to any new consent.

5.2 **Contaminated Land –** do not object to the amended proposal, having checked the database, historical Ordnance Survey maps and aerial photos, there does not appear to be a potential source of contamination onsite. Therefore, further information is not required to support the application.

5.3 **Crofting Commission –** do not object to the amended proposal, and provided a generic response. However, the 2020 consultation response noted that the spaceport land is more suitable from a crofting perspective for other developments than that of better quality croftland. It that the land has been classified as 6.3 in terms of Land Capability for Agriculture in Scotland which entails it is only suitable for rough grazing and not capable of agricultural improvement. It notes that as it is common grazing land it is used for traditional stock rearing of sheep and cattle, and there may be continuation of some traditional peat cutting for domestic purposes. It explained that there are 82 croft holdings that have shared grazings rights on the common grazing but a minority of these will currently be used for traditional grazings purposes. It considers that based on current grazings use, the proposed development would not appear to have a major impact upon customary crofting practices. It recognises that there will be loss of land but explains that the use of land for traditional pastoral purposes has declined. It set out that one crofters use of the common grazings will be directly affected by the development. The Crofting Commission consider that any loss of land is outweighed by the wider social and economic benefits that will be derived from the potential development. It recognises that the land requires to be utilised in a manner that enables the continuity and development of the community. Employment opportunities and the development of the wider economy are important for crofting and enabling the 24 retention of active crofters and crofting families within crofting communities. It explains that it understands that the proposed development will offer employment opportunities. It considers that the proposed development has the potential to assist the retention of an active crofting population to invest in croft housing and the management of croftland.

It noted the potential disturbance to livestock and considers that consultation should

be undertaken with an appropriate veterinary authority. It concludes that in terms of sustaining active crofting communities in economically fragile areas, sometimes the loss of some croft land and its associated environmental benefits has to be countenanced and effected.

The applicant has since entered into discussions with crofters in relation to livestock management with regard to launch events. Further to this Melness Crofters' Estate has provide a letter of support for the Sutherland Spaceport's revised planning application.

5.4 **Environmental Health –** do not object to the application.

5.6 **Flood Risk Management Team –** do not object to the amended proposal subject to appropriate conditions as they are satisfied that flood risk to the development is low. They have requested a condition is attached to any permission to ensure that all of

the site infrastructure, with exception of the required crossings, is located a minimum of 10 from the top of the bank of any of the watercourses. Furthermore, the watercourse crossings shall be designed to ensure that they do not impede a 1 in 200 year plus climate change flow and include an appropriate level of freeboard. In terms of the Drainage Impact Assessments (DIAs) provided for the Launch site and the Antenna Park they are content with the drainage proposals. A condition that the final drainage design is submitted for review and approval should be imposed. The developer believes that the conclusions reached in Chapter 7 of the 2020 EIA Report, and the summary provided in Table 7.5, are applicable to the proposed development at the Antenna Park site, with the likely significant effects on water resources, proposed mitigation and residual effects

5.7 **Forestry Team –** do not object to the amended proposal as the development does not appear to impact on existing trees or woodland.

5.8 **Transport Planning** – do not object to the proposed application provided appropriate conditions are applied to any application granted consent.

5.9 **Historic Environment Scotland –** do not object to the amended development. Historic Scotland in their role as a consultee under the terms of the above regulations and for our historic environment remit as set out under the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013. Their remit is world heritage sites, scheduled monuments and their setting, category A-listed buildings and their setting, and gardens and designed landscapes (GDLs) and battlefields in their respective inventories.

Sufficient information is provided in the EIA report for Historic Environment Scotland to access the level of impact on heritage assets in their interests. It concludes that the proposal does not raise issues of national significance sufficient to warrant and objection for our historic environment interests.

Further Consultation given the World Heritage Site and further information submitted:

After reviewing the additional information and considered the proposed development in terms of our historic environment interests there are no further comments to make.

July 2024 Response:

The original proposal comprised two launch pads; a launch site integration facility building; vehicle access and parking; a launch control centre building; two commodity farms; antenna farms; welfare buildings; a meteorological mast and other associated infrastructure.

Historic Environment Scotland were content with the methodology used to undertake the assessment and with the conclusions that there would be a minor effect on the settings of Caisteal Bharraich, Tower (SM1896), Tongue House (LB18458), Tongue House (GDL375), Tongue Parish Church (C of S) and the Burial Ground and Gatepiers (LB18456). We also welcomed the conclusion from the Noise and Vibration assessment that the predicted noise levels would have no adverse effect on the designated heritage assets in the applicant's study area. We confirmed that sufficient information was provided in the EIA report for us to come to a conclusion as to the level of impact on heritage assets covered by our interests. Historic Environment Scotland concluded that the development proposal did not raise issues

of national significance sufficient to warrant an objection for our historic environment interests.

Historic Environment Scotland's Interests:

There are a number of scheduled monuments in the vicinity of the proposed development with the potential for impacts on their setting, which have been addressed by the information provided by the applicant.

- Caisteal Bharraich, Tower

  (Scheduled Monument SM1896)

- Stone rows, 665m S of road junction of A836 and minor road to Skerray

  (Scheduled Monument SM13762)

The proposed development, 'Spaceport Site' and 'Antenna Park', would be variously visible from the above monuments. The low profile of the buildings at the 'Spaceport Site' north-west of Talmine, Tongue mean that they would not be visible from either monument when constructed. The launch of satellites would be visible from both monuments during operation but would not have an impact upon the setting of the monuments as it would be clearly readable as the modern operation of the spaceport, would be a significant distance from each monument, would be a rare occurrence and would be brief.

The construction of the 'Antenna Park' on the summit of Ben Tongue would sit next to an existing lattice telecommunications tower, which would be taller than the proposed array, and would be visible from both monuments. However, the intervening distance between the monuments and the proposed array (circa 3km in each instance) and the low profile of the proposed array would limit the setting impact upon these monuments to a minimal level. In addition, the proposed development is unlikely to have an adverse impact on the setting of the Category A listed Tongue House (LB18458), its Inventory Garden and Designed Landscape (GDL00375) or the Category A listed Tongue Parish Church (C of S) and the Burial Ground and Gatepiers (LB18456).

The proposed development, either during construction or operation, would be unlikely to have a significant level of impact upon any of the assets identified above. Following our review of the submitted application and the accompanying EIA report we are satisfied that impacts on those assets are below the level which would raise issues in the national interest.

Historic Environment Scotland welcome that a full assessment has been provided within the application for their cultural heritage interests and the range of visualisations which have been produced to support the assessment. We are satisfied that the chapter provides a detailed assessment of assets and the potential impacts from the proposed development, and this has allowed us to come to a view on the application.

Historic Environment Scotland conclude that the proposals do not raise historic environment issues of a national interest and therefore do not object.

5.10 **Marine Directorate – Licensing Operations Team** - does not intend to comment on the planning application. If any part of the project is to be located or deposited

below Mean High Water Springs, a marine licence may be required under the Marine (Scotland) Act 2010.

5.11 **Ministry of Defence (MOD)** – do not object to the amended proposal. The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the Ministry of Defence (MOD) as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System.

The applicant seeks full planning permission to construct a vertical launch spaceport, the development would incorporate a launch operations control centre, launch site integration facility, launch pad complex, access road, fencing, services and associated infrastructure. In addition, located approximately 7.5km to the east, an extension to an existing antenna farm is proposed.

The vertical launch spaceport has been designed to minimise its visual impact and therefore includes features such as a collapsible lightning mast (maximum height of 40m above ground level [agl] for/around launch), strongback (maximum height of 22m [not including any launch vehicle] for/around launch), and lighting columns (maximum height of 15m agl for/around launch). Although the application falls outside Safeguarding Area it does fall within Low Flying Area 14 (LFA 14), an area within which military aircraft may conduct low level flight training. The addition of a development which may, whether permanently or temporarily, feature tall or narrow profile structures such as the lightning tower, strongback and any launch vehicle, and lighting columns, along with actual vertical launch events in this locality has the potential to introduce a physical obstruction/hazard to low flying aircraft operating in the area.

However, having reviewed the associated documents for this consultation, the MOD can confirm their requirements as stated in our response letter dated 19 June 2024 remain extant. The MOD must emphasise that the advice provided within this letter is in response to the data and information detailed in the developer's documents. Any variation of the parameters (which include the location, dimensions, form, and finishing materials) detailed may significantly alter how the development relates to MOD safeguarding requirements and cause adverse impacts to safeguarded defence assets or capabilities.

In the event that any amendment, whether considered material or not by the determining authority, is submitted for approval, the MOD should be consulted and provided with adequate time to carry out assessments and provide a formal response.

5.12 **NatureScot** do not object to the amended proposal. The proposed development will be located at A' Mhòine, approximately 4 km south-west of the settlement of Melness. As such the proposal has the potential to affect internationally important natural heritage interests to support the proposal it has to be made subject to the recommended conditions so that the works are done strictly in accordance with the mitigation detailed NatureScot's appraisal (viewable online submitted 01.07.2024 https://wam.highland.gov.uk/wam/simpleSearchResults.do?action=firstPage).

NatureScot also note the potential significance of the proposal to the fragile economy of north Sutherland and the strategic importance of the proposal in a Scottish and UK context.

5.13 **NATS** – do not object to the amended proposal. The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

5.14 **SEPA** – do not object to the amended proposal. The following advice is based on the understanding that the planning authority is of a view that the development falls within one the exceptions outlined in Policy 5c of NPF4. As you know we are streamlining our approach to consultations concerning peat and carbon rich soils. We are focusing our planning advice on the avoidance, minimisation, and use of peat in areas disturbed by construction activities and no longer provide advice on peatland restoration; developers should refer to NatureScot guidance for advice on restoration. We ask that the absolute planning conditions laid out below be attached to any consent, if granted. If these will not be applied, then please consider this representation as an objection.

1. To ensure that the works are carried out in a way the minimises the impact on the environment, including on peat, a condition should be applied requiring all works to be carried out in line with the submitted Construction Environmental Management Plan (Document no DC-CEMP-001 Revision no 2 dated 28 August 2024).
2. To ensure that the footprint of the works is minimised and impacts on peat and peatland controlled a condition that no works or development (with the exception of the surface water drainage infrastructure, foul drainage, nature conservation and habitat anagement works) should be undertaken outwith the areas identified for construction works on the Extent of Works Plan (drawing EXT-WORKS-001 Revision 5.0).
3. To ensure that the impact from watercourse crossings is minimised a condition requiring the watercourse crossings to be designed in line with the requirements outlined on drawings SHS-WHL-XX-XX-DR-C-9220 Revision P03 and SHS-WHL-XXXX-DR-C-9221 Revision P03.
4. To ensure that any discharge from the launch pad area is suitably controlled a condition or conditions should be applied (1) requiring no development to commence until a programme for monitoring the potential effect of the discharge from the launch pad on the watercourse is agreed by the Planning Authority in consultation with SEPA. Should the monitoring show that the

discharge includes contaminants above a concentration which could cause pollution then a modification to the treatment approach will be required, and (2) requiring water from maintenance or cleaning works to be removed from the site and disposed of to a suitability licenced facility.

5. For all other planning matters, please see our triage framework and standing advice which are available on our website: www.sepa.org.uk/environment/land/planning/

Advice for the applicant

- Details of regulatory requirements and good practice advice, for example in relation to private surface and foul drainage, can be found on the regulations section of our website. Proposals for discharge of surface water from the launch pad should be discussed directly with our water permitting team via waterpermitting@sepa.org.uk to determine the level of authorisation required.
- Excavated peat will be waste if it is discarded, or the holder intends to or is required to discard it. Further guidance on this may be found in the document Is it waste - Understanding the definition of waste. If there are any proposals to make use of excavated peat that do not meet the above requirements the developer should contact SEPA's waste permitting team via wastepermitting@sepa.org.uk to discuss potential regulatory controls of use of excavated peat.

5.15 **Scottish Water** – do not object to the amended proposal Scottish Water. The applicant should be aware that this does not confirm that the proposed development can currently be serviced.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should refer to our guides which can be found at https://www.scottishwater.co.uk/Help-and-Resources/Document-Hub/Business-and-Developers/Connecting-to-Our-Network which detail our policy and processes to support the application process, evidence to support the intended drainage plan should be submitted at the technical application stage where we will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will typically require surface water to be eliminated from any new discharges of trade effluent.

Drinking Water Protected Areas

A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water

Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.

Next Steps:

Non Domestic/Commercial Property:

Since the introduction of the Water Services (Scotland) Act 2005 in April 2008 the water industry in Scotland has opened to market competition for non-domestic customers. All Non-domestic household customers now require a Licensed Provider to act on their behalf for new water and waste water connections. Further details can be obtained at www.scotlandontap.gov.uk

Trade Effluent Discharge from Non-Domestic Property:

- Certain discharges from non-domestic premises may constitute a trade effluent in terms of the Sewerage (Scotland) Act 1968. Trade effluent arises from activities including; manufacturing, production and engineering; vehicle, plant and equipment washing, waste and leachate management. It covers both large and small premises, including activities such as car washing and launderettes. Activities not covered include hotels, caravan sites or restaurants.

If you are in any doubt as to whether the discharge from your premises is likely to be trade effluent, please contact us on 0800 778 0778 or email TEQ@scottishwater.co.uk

Trade effluent must never be discharged into surface water drainage systems as these are solely for draining rainfall run off.

The Waste (Scotland) Regulations which require all non-rural food businesses, producing more than 5kg of food waste per week, to segregate that waste for separate collection. The regulations also ban the use of food waste disposal units that dispose of food waste to the public sewer. Further information can be found at www.resourceefficientscotland.com

6. DEVELOPMENT PLAN POLICY

The following policies are relevant to the assessment of the application

6.1 National Planning Framework 4 (2023) (NPF4)

Policy 1 - Tackling the Climate and Nature Crises
Policy 2 - Climate Mitigation and Adaptation
Policy 3 - Biodiversity
Policy 4 - Natural Places
Policy 5 - Soils
Policy 7 - Historic Assets and Places
Policy 12 - Zero Waste
Policy 13 - Sustainable Transport
Policy 14 - Design Quality and Place
Policy 22 - Flood Risk and Water Management
Policy 23 - Health and Safety
Policy 25 - Community Wealth Building
Policy 26 - Business and Industry
Policy 29 - Rural Development

6.2 **Highland Wide Local Development Plan 2012 (HwLDP)**

28 - Sustainable Design
29 - Design Quality and Place-making
30 - Physical Constraints
31 - Developer Contributions
36 - Development in the Wider Countryside
47 - Safeguard Inbye/Apportioned Croftland
55 - Peat and Soils
56 - Travel
57 - Natural, Built and Cultural Heritage
58 - Protected Species
59 - Other important Species
60 - Other Importance Habitats
61 - Landscape
63 - Water Environment
64 - Flood Risk
65 - Waste Water Treatment
66 - Surface Water Drainage
72 - Pollution
73 - Air Quality
77 - Public Access

6.3 **Caithness and Sutherland Local Development Plan (2018) (CaSPlan)**

No specific policies apply.

However, through the preparation of CaSPlan the Council consulted on the revision of SLA boundaries to better reflect the landforms identified, to avoid severing landscape features, and to ensure any extensions reflected similar special landscape characteristics.

The CASPlan states that Special Landscape Areas (SLAs) are regionally valuable landscapes which are intended to protect and enhance unique and important landscape qualities and encourage the enjoyment of these areas. The boundaries of the SLAs are set out in the CASPlan. Policy 57 of the HwLDP provides for the protection of these areas and is accompanied by a background paper “The Assessment of Highland Special Landscape Areas” - both of these are used to assess the landscape impact of any proposal on the integrity of an SLA.

The CASPlan Vision and Spatial Strategy for the area sets out a series of outcomes related to communities, employment, connectivity, and environment and heritage. The contribution of the proposal will be considered through the material consideration pertinent to the determination of the application.

It also notes that peatland is a vital carbon store and Caithness and Sutherland’s peatland resource is of international importance. Through the policies in the Highland-wide Local Development Plan (HwLDP) we can help safeguard important peatland resources.

6.4 **Highland Council Supplementary Planning Policy Guidance**

Construction Environmental Management Process for Large Scale Projects (August 2010)

Developer Contributions (March 2018)
Flood Risk and Drainage Impact Assessment (Jan 2013)
Highland Historic Environment Strategy (Jan 2013)
Highland's Statutorily Protected Species (March 2013)
Managing Waste in New Developments (March 2013)
Physical Constraints (March 2013)
Public Art Strategy (March 2013)
Special Landscape Area Citations (June 2011)
Standards for Archaeological Work (March 2012)
Sustainable Design Guide (Jan 2013)

7. OTHER MATERIAL POLICY CONSIDERATIONS

7.1 Scottish Government Planning Policy and Guidance

- Planning Advice Note (PAN) 1/2021: Planning and Noise
- Circular 1/2017 – Environmental Impact Assessment
- PAN 60 – Planning for Natural Heritage
- PAN 68 – Design Statements (Aug 2008)
- National Space Policy (UK Government)
- Historic Environment Policy for Scotland (Apr 2019)

8. PLANNING APPRAISAL

8.1 Sections 25(1) and 37(2) of the Town and Country Planning (Scotland) Act 1997 (as amended), collectively require that this application be determined in accordance with the development plan unless material considerations indicate otherwise. Section 24(1) requires that all planning applications must now be determined in accordance with the provisions of NPF4 and those of any the relevant, extant Local Development Plan unless material considerations provide justification otherwise. Section 24(3) states that in the event of any incompatibility between a provision of the National Planning Framework and a provision of a local development plan, whichever of them is the later in date is to prevail.

Determining Issues

8.2 This means that the application requires to be assessed against all policies of the Development Plan relevant to the application, all national and local policy guidance and all other material considerations relevant to the application.

Planning Considerations

8.3 The principle of the spaceport development has been established through the granting of the planning permission (ref. 20/00616/FUL) for construction of vertical launch space port with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure on 5th August 2020. It should be noted that in the interim, the 2020 Permission has been implemented. The project commenced development in May 2023, and it is anticipated that the amended proposal would result in the completion of works in April 2025.

8.4 However, to enable works to continue pending the submission and determination of this application, an application for a Non-Material Variation to the layout of the launch pad complex was submitted in February 2024 and approved on 8 March 2024 (Non-Material Variation 1). The changes were focused on the launch pad complex and included:

- reduction in overall scale of the launch pad;
- access track and rail track rationalised to a single access road;
- lightning tower and lighting columns now to be fully retractable in non-launch state;
- reduction in areas of hardstanding;
- reduction in height of earth berms; and
- relocation of commodities within the launch pad complex.

It was considered during the non-material variation process that the amendments to the launch pad complex design would consolidate the location of hardstanding and pad services compared to the previously approved design. Furthermore, the launch pad is sited well to the north within the wider spaceport complex and as such, raised no further issues at the time with respect to visual amenity. The launch pad layout for which planning permission is still sought for is as per that approved pursuant to Non-Material Variation 1.

8.5 This means that the launch pad layout for which planning permission is again sought is as per that approved pursuant to Non-Material Variation 1. As such it is only the following design changes that form part of the assessment for this application :

- Changes to the Launch Pad Complex;
- Reduction in size of the Launch Site Integration Facility;
- Minor re-routing of the access road;
- A different technique for two watercourse crossings; and
- Relocation of the Antenna Park to the summit of Ben Tongue outside the bounds of the Original Project.

Most of the changes are considered minimal and will reduce the environmental impacts of the originally approved scheme. The assessment within this report of handing will principally be focussed on the key elements of the proposed amendments, and the relocation of the antenna park to Ben Tongue.

8.6 The current application was presented for consideration at a time of policy transition, since the original application was approved the National Planning Framework 4 (NPF4) has been adopted. It must be noted that whilst the planning content has been updated since the 2020 application was submitted, elements of NPF4 were already under consideration and embedded in the development which had regard to the associated environmental constraints.

8.7 As planning permission has been implemented, with the non-material variation (No. 1) approved, only the further amendments to the development at the spaceport site and the proposed relocation of the antenna site will be assessed against policy.

8.8 As set out in the original report of handling (ref.20/00616/FUL) when considering specific sites for a vertical launch facility in the north of Scotland, the National Space Technology Programme undertook a series of five reports which considered sites for

a vertical launch facility. One of the reports, known as the SCEPTRE Report, was published in 2017. This considered a range of issues including environmental impacts. The report identified the Mhoine peninsular as one of three of the most promising sites. This list also included the Shetland Isles and Scolpaig, North Uist.

8.9 Given the route of the rocket over international waters, these effects on the Marine Environment are transboundary effects. While the effects were not identified as significant, the Council nevertheless notified Scottish Ministers in 2020 in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. In doing so the Council were required to come to a conclusion on matters related to Transboundary Effects. The following effects were considered:

- Unspent fuel – the planning authority agree with the findings of the EIAR that this will not have an impact based upon the content of the MERA.
- Marine debris impact of marine ecology – the planning authority consider that space debris poses a risk to marine life through direct collision and through ingestion of macro and microplastics. The planning authority note that as a result of the proposed 12 launches per annum a minimum of 5 tonnes of carbon fibre reinforced plastic and 7 tonnes of metal alloy will be dropped into the sea. The planning authority can not conclude from the information within the EIAR whether this is a significant increase on current level of debris but note that the risk is proportional to the number of launches. The planning authority conditioned that no more than 12 launches could be undertaken per annum. Collusion risk of marine debris to marine users - The MERA states that it is 'likely that a mariner notice will be issued' to mitigate the risk of this collision. Also the predicted debris corridor communicated in notice should be specific to each launch and should ideally represent a much higher resolution than the predicted debris corridor described in the MERA. It is acknowledged in the original application (re. 20/00616/FUL) that whilst there are transboundary effects, these were not considered significant in EIA terms. There has been no evidence to date that would change this conclusion.

8.10 In 2020 the Scottish Government set out that the Council’s conclusions were reasonable. The Scottish Government notified the UK Government (UKSpace Agency) about the application. It set out that the UK Space Agency were in discussions on spaceports with the Icelandic, Faroese, Danish and Norwegian governments. It confirmed that there was no requirement to consult them at this stage. The UK Space Agency set out to the Scottish Government that the Space Industry Act (SIA) 2018 establishes public safety as the primary duty of the regulator with regards to spaceflight activities and extensive regulations and guidance will be put in place to secure this.

Economic Development

8.11 An Economic Impact Assessment was prepared on behalf of Highlands and Islands Enterprise for the Original Project, which demonstrates the contribution that the proposed development will make to the economic and social development of the community, that has been supplemented with a Note on socio-economic impacts for this application. The Spaceport development will also provide opportunities to the local economy in terms of jobs and training.

8.12 The Spaceport development will provide opportunities to the local economy in terms of jobs and training, as set out in the Economic Impact Assessment and Socio-economic Statement. As well as figures presented in the Economic Impact Assessment, the applicant has highlighted other potential socio-economic benefits of the proposed development including, benefits to young people and wider community benefits such as the potential to facilitate a reversal of the population decline in the area and how this can help sustain local services. This is particularly welcomed as the development will support a fragile community in a rural area with the site and much of the surrounding area identified on the Fragile Area Map associated with the HwLDP.

Construction

8.13 As significant works have been undertaken with the expectation of them being completed by April 2025. The project has deployed a Construction Environmental management document (CEMD) that has been approved and is being implemented by the contractor. This will be updated to include all the amendments should planning permission be granted.

8.14 A Community Liaison Group has been set-up as per the previous planning permission, this should continue to ensure the community council and other stakeholders are kept up to date and consulted during the construction period.

Design Changes

8.15 No reasonable alternatives as set out in the 2020 EIA Report were found. Therefore it indicated that the north of Scotland as the only region in the UK able to support a vertical launch site, in addition to which it should be noted that development is already underway on the Spaceport site pursuant to the 2020 Permission, the relocation of the antenna park to Ben Tongue is the only option that would not require a second down-range system on the Faroe Isles (with additional impacts associated with that), and there would be visual and other impacts associated with the construction and operation of a spaceport at any location, such that there is no reasonable alternative likely to have any lesser environmental effects than this site.

8.16 The main site access includes a new junction with the A838, leading to the spaceport site which has been implemented through the 2020 planning permission. It should be noted that the access was implemented before the Flow Country gained recognition as a world heritage stie as noted above. As you enter the site there is a turning head to the left, then a vehicle barrier to control access to the space port site. The first building after the vehicle barrier is the Launch Operations Control Centre (LOCC) building and surrounding infrastructure. It is located close to the site access, just past a turning head on the west site of the access road. The access road to the LOCC building and car park has been designed to accommodate buses, service vehicles, emergency vehicles, cars and vans. The LOCC car park is to be used as a turning area for vehicles with the car parking managed to ensure that vehicles can turn safely

8.17 For personnel safety purposes, the LOCC building requires to be located outwith the restricted access boundary for during a launch. In order to achieve this the LOCC has been slightly re - located to the southern section of the site, closer to the A838.

Due to the proximity to the site entrance the LOCC building can also facilitate and operated secure access control for the entire Spaceport site. The LOCC building footprint is 547sq.m (19.6m x 27.9m) and 7m high at the highest point. The LOCC building contains the control room, offices, meeting rooms, a viewing room, basic amenities to support a 15 to 20 person during launch operations, plant room (providing for heating, cooling, ventilation, hot water generation and cold water storage plant and equipment) and reception area. The LOCC will also accommodate hard wired electrical interfaces and connections (power and data) to the LSIF and Launch Pad. There are no changes to the location of the LOCC building from the consented 2020 scheme (approval reference 20/00616). As such the LOCC 2020 assessment is accepted as there will be no new significant effects resulting from the LOCC building.

8.18 The site access continues north, it consists of three types of construction - asphalt, unbound road, and floating road. A significant portion of the road is floating to minimise the amount of peat excavation required. The access road to the Launch Site Integration Facility (LSIF) and service yard has been designed to accommodate a 16.5m long articulated HGV and a 16m long lorry tanker.

8.19 The design of the LSIF building has been amended. The footprint and scale of the building has been reduced. Furthermore, with the relocation of the antenna park there has been a reduction in the external footprint of the LSIF compound, along with the addition of a small external satellite. Parking has also been reduced from 19 to 12 given the reduction of the building and compound.

8.20 The design of the LISF building is now more representative of an agricultural building in terms of design and scale. Furthermore the building is some 1.4km from the public road, and will fit in well with the character of the surrounding area, particularly when viewed from a distance.

8.21 There have been amendments to the launch pad since the 2020 application was approved, however as these have been assessed as part of a non-material variation, the amendments have already been accepted.

Antenna Park

8.22 As noted in para 1.3 the Antenna Park has been relocated to Ben Tongue, located to the north west of the summit, with the closest antenna lying approximately 3m below the summit and the other elements between lying around 3 to 10m below the summit. The existing communication mast sits approximately 5m below the submit but is highly visible due to its 29m in height. The Antenna Park site comprises predominantly heather moorland with a mosaic of semi-improved and unimproved grassland as well as the access track that leads to the telecommunication mast.

8.23 The access road to the Antenna Park is within the catchment of the Tongue Burn, which discharges to the Kyle of Tongue approximately 620m north-west. The proposed location of the Antenna Park itself is within the catchment of an unnamed drain that also discharges to the Kyle of Tongue approximately 1 km north-west of the site. The Hydrogeological Map of Scotland classifies the Morar Group and Lewisianoid Gniess Complex as a Low Productivity aquifer likely to contain small volumes of groundwater in near surface weathered zones and secondary fractures.

As noted previously the DIA did not raise any concerns with the Council's flood team in relation to flooding or making the area more susceptible to flooding.

8.24 The key landscape designations and classifications of relevance to the Antenna Park comprise:

- The Kyle of Tongue National Scenic Area;
- The Eribol East and Whiten Head Special Landscape Area (SLA); and
- Tongue House (Inventory Garden and Designed Landscape (GDL00375).

However, given the existing infrastructure and that the proposed Antenna Infrastructure is much smaller with a maximum height of 9m when fully operational (the height is reduced as the antennas fold down when not in use) with a diameter of 5.4m it is not considered that they would have a significant visual impact. It is noted that there are also portacabins for welfare and storing equipment but they are well integrated within the existing infrastructure that it is not considered they would have a significant visual impact. The antenna infrastructure is also tucked in to form park of the existing infrastructure, reducing any visual impacts.

8.25 It should be noted, however, that whilst the ZTV (Figure 4.5) indicates potential views of the Antenna Park from the Eribol East and Whiten Head SLA, such visibility would be highly constrained and any views from this designation would be distant and inland and are considered unlikely to represent even localised significant effects on the special quality of this designations. Consequently, the integrity of the SLA would not be compromised. On this basis no further assessment of the effect of the Antenna Park of this designation was required.

8.26 It is also the case that the ZTV indicates some theoretical visibility of the Antenna Park from Tongue House. Field reconnaissance suggests that such visibility of the access track and the Antenna Park itself would be obscured by intervening topography and vegetation. Consequently, no further assessment of effects on this classified landscape has been undertaken.

8.27 It is noted that the applicant has adopted a number of measures to minimise potential effects on seascape, landscape and visual. These include utilising an established access road, position of the infrastructure immediately north of the existing telecommunications mast compound, on the north facing slope to mitigate potential effects on the Kyle of Tongue NSA while also avoiding sky lining these features from the majority of sensitive receptors to the west of Ben Tongue.

8.28 A core path does run between the existing mast and proposed antenna park, as such an amended plan was submitted to ensure that pedestrian access is not affected. A condition will also be applied to ensure that the core path remains open to the public during and after construction works.

8.29 Generally, the potential effects associated with the Spaceport Site, that were assessed within the 2020 application, including within the EIA Report remains valid. In terms of the effects of relocating the Antenna Park to the summit of Ben Tongue, there is one new proposed watercourse crossing of a minor agricultural drain on the proposed Antenna Park access road. The crossing at this location would require a circular culvert designed in accordance with parameters set out in the 2020 EIA

Report for crossing minor watercourses, and would be in line with applicable SEPA licensing requirements.

8.30 Ecological surveying has confirmed that no potential GWDTE habitats have been identified at the site of the relocated Antenna Park. Nor are there any private or public water supplies been identified in potential hydraulic connectivity implementation of the CEMP, and the principles for surface water management during the operational phase set out in the 2020 EIA Report are also applicable to relocation of the Antenna Park. The management of potential effects on the water environment during construction through Park. As such it is concluded that the likely significant effects on water resources, proposed mitigation and residual effects associated with the Project as a whole being as set out therein in the EIAR.

Carbon Rich Soils, Deep Peat and Priority Peatland Habitat

8.31 NPF4 Policy 5 is to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development. As such an amended assessment was submitted in relation to the amended application. Indirect impacts from a proposed development would include temporary or permanent changes, or 'loss of function' to peatland which may arise as a result of 'knock on' impacts such as excavations or pollution events through construction traffic etc. To calculate direct losses, the direct footprint of the proposed infrastructure area has been calculated. To calculate an indirect loss, NatureScot suggests a buffer of 30m should be used from excavations/drains etc. However, given the condition of the peatland at present, it is proposed that a 10m buffer on both sides of the track is applied for the entire length of road construction and a 20m buffer is appropriate for all buildings, launch pad, service yards, bridges and car parks, this method was agreed by NatureScot on this occasion.

8.32 NatureScot advised that further clarification was provided by the applicant on the 10th October 2024 in relation to direct and indirect impacts on peatland, carbon-rich soils and priority peatland habitat. This has now been assessed and the impact of this proposal in accordance with our published guidance on Peatland, carbon-rich soils and priority peatland habitats in development management.

8.33 Based on the additional information supplied by the applicant to clarify the points raised, Nature Scot advise that the proposal exceeds the 1:10 (lost to restored) ratio and therefore consider that the proposal meets the requirements of this guidance. NatureScot note that most of the peatland restoration proposed falls out with the application area. As such the peatland restoration areas outside of the application boundary will need to be secured an appropriate condition. The proposed restoration now aligns with NPF4 whilst previously the 1:10 ratio was not required. Therefore, the amended application has secured significant biodiversity gains.

Natural Heritage including Ornithology

8.34 The EIA Report has identified and assessed impacts on protected species, ornithology, ecology and designated sites. Concern has been raised in representations in relation to the impact on all of these matters as noted above and within the 2020 application. However, in this case the assessment is focused on the relocation of the Antenna Park to Ben Tongue.

8.35 The proposed development on the Spaceport Site is considered to be within the parameters of what was proposed and assessed in the 2020 EIA Report and, in the absence of any changes to the baseline conditions, the likely indirect impacts on qualifying habitat features are thus also considered to be as set out in the 2020 EIA Report. The applicant also found that there would be no significant effects on qualifying habitat features. This is accepted provided works are carried out under the supervision of a qualified ECoW.

8.36 At the Antenna Park there are six statutory designated sites identified within 5km of the site boundary: River Borgie SAC; Caithness and Sutherland Peatlands SAC; Caithness and Sutherland Peatlands SPA; Caithness and Sutherland Peatlands Ramsar; West Borgie SSSI; A'Mhoine SSSI and Eilean nan Ron (Tongue) DSHS. These sites have been designated for the scale and diversity of blanket bog and freshwater loch habitats, and associated vegetation and surface pattern types, their diverse range of breeding wildfowl and their geological features.

8.37 The main habitats on the Antenna Site were dry heath/acid grassland mosaic, semi-natural broadleaved woodland, improved grassland and running water; these habitats are considered common and widespread in the local area. There were no features suitable for bats roosting identified. No features suitable for roosting bats were identified within the site. Planting of the site is expected to have a negligible impact on foraging and commuting bats as the majority of the site comprises open ground. Planting has the potential to enhance the site for foraging and commuting bats by increasing the availability of sheltered edge-habitats. The site provides potential foraging and sett creation habitat; however, the site is considered unlikely to be used by badger.

8.38 The site provides some potential foraging and commuting habitat for otter and may support temporary resting places. To avoid impacts on otter, it is recommended that a check of all burns within 250 m of any planting is undertaken by a qualified and experienced Ecologist prior to works being undertaken. The site and adjacent area is also likely to support a population of common lizard and may potentially support adder. Initial vegetation clearance works should take place when reptiles are active and are phased to allow their dispersal outside of works areas.

8.39 In terms of otters the text in 2020 EIA Report remains valid with regards to potential impacts on otter associated with proposed development on the Spaceport Site. However, at the Antenna Park site, as it consists of the construction of a watercourse crossings through culverting of the watercourse along the proposed access road there is the potential to impact on habitat connectivity for otter should they attempt to use culverts during periods of high-water flow or if they are forced to divert away from the river bank on to the access road, to navigate an impassable culvert. It should be noted that killing or injury of an otter would constitute a slight adverse effect on otter as a feature of Caithness and Sutherland Peatlands SAC. This effect would not be significant but killing or injury of an otter could constitute an offence under the Wildlife and Countryside Act 1981 (as amended).

8.40 If planting is to be undertaken within 10 m from the burn, a check should be undertaken for evidence of water voles by the on-site ECoW prior to works commencing.

Furthermore, a Pollution Prevention Plan (PPP) should be developed to prevent adverse impacts on the aquatic environment local to the site.

8.41 The Project would be constructed under the CEMP which sets out the required controls regarding the excavation, transport, storage and reuse of peat, including the methods used to strip vegetation and peat, locations of areas suitable for temporary peat storage, measures to maintain the structural integrity of peat during transportation and the methods used to prepare the receptor sites. The Project also involves a re-alignment of the Spaceport Site access road, with more of this to be floating road, compared to the Original Project. Related to this, documentation has been submitted with the application ('Peat Slide Confirmation') to confirm that the proposed alignment and construction has been informed by a survey of the proposed route and hand vane testing, and that the gradient and nature of the peat layer along the route of the proposed floating road is such that there should be no peat slippage or movement. Thus, the findings of the 2020 EIA Report with regards to the potential significant effects associated with the construction of the access road (and, in particular, in relation to the risk of peat slippage) remain valid. Taking the above into account, together with the embedded mitigation measures of the CEMP and PMP, no significant effects on peat are predicted.

8.42 It is not expected that there would any significant effects during the operational phase, with any effects outlined within the 2020 EIAR. Similarly, as the baseline conditions at both the Spaceport Site and Antenna Park site are similar or of lesser value of those taken into account in the 2020 EIA Report, with decommissioning of the Antenna Park is not considered likely to give rise to any additional effects over and above those associated with decommissioning of the Spaceport Site, the potential effects during the decommissioning phase are considered to be the same as those outlined within the 2020 EIA Report.

8.43 On the basis that the potential effects and mitigation to be applied at both the Spaceport Site and Antenna Park site are as set out in the 2020 EIA Report, the residual effects will also be the same as those outlined within the 2020 EIA Report with an amended mitigation plan secured via a planning condition.

Other material considerations

8.44 All elements of the 2020 planning application (ref. 20/00616/FUL) were considered in detail, the report of handling has been attached as an Appendix 1 – 20/00616/FUL Report of Handling. Furthermore, all planning conditions that were attached to the original planning permission 20/00616/FUL will be attached to any further planning permission unless the condition has been satisfied.

8.45 Whilst the principle of the development is accepted a review of the conditions has been undertaken to ensure appropriate conditions are attached to address the additional elements proposed at Ben Tongue. In addition, there have been some revisions of the original conditions to take account of the amendments to the Spaceport Site.

9. CONCLUSION

9.1 The principle of the spaceport development has been established through the granting of the planning permission (ref. 20/00616/FUL) for the vertical launch space port in August 2020. It should be noted that in the interim, the 2020 Permission has been implemented with the completion of works due in April 2025.

9.2 The development has attracted several objections but also a similar level of support has been demonstrated. Consultee comments have been addressed in the report and subject to a number of conditions and development of the proposals in accordance with the required conditions there are no outstanding objections to the proposed development from consultees.

9.3 This is a scheme that will also be significantly regulated by other authorities including SEPA, NatureScot, Marine Scotland, CAA and the UK Space Agency.

9.4 This application seeks minor amendments to the construction and operation of a vertical launch spaceport, with the relocation of the antenna park, access road, fencing, services and associated infrastructure. The design amendments are considered minor changes to the infrastructure proposed as part of the development, namely:

- Relocation of the launch pad complex approximately 20 m to the west of its originally proposed position, along with the road between the Launch Service Integration Facility (LSIF) and the launch pad (already accepted through the non-material variation process);
- Internal reconfiguration of the infrastructure within the launch pad complex (relocation of east commodity area, relocation of lightning mast and tightening up of the road around the launch platform);
- Realignment of the road immediately to the south of the LSIF;
- Removal of the step in LSIF roof; and,
- Change in dimensions of the roller doors in the LSIF.

With application of the required mitigation, it is considered that, on balance, the amendments to the development can be considered to accord with the polices of the Development Plan.

9.5 The Council is satisfied that environmental effects of this development can be addressed by way of mitigation. The Council has incorporated the requirement for an updated schedule of mitigation within the conditions of this permission. Monitoring of operational compliance has been secured through Condition 27 of this permission.

9.6 All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

10. IMPLICATIONS

10.1 Resource: Not applicable

10.2 Legal: Not applicable

10.3 Community (Equality, Poverty and Rural): Not applicable

10.4 Climate Change/Carbon Clever: The proposed development will likely release carbon as a result of construction and operation. Conditions are proposed to minimise release of carbon through the construction period and secure peat land and blanket bog restoration to sequester carbon.

10.5 Risk: Not applicable

10.6 Gaelic: Not applicable

11. RECOMMENDATION

Action required before decision issued	N
Notification to Scottish Ministers	N
Conclusion of Section 75 Obligation	N
Revocation of previous permission	N

Subject to the above actions, it is recommended to **GRANT** the application subject to the following conditions and reasons;

1. Planning permission is hereby granted for the construction of vertical launch spaceport with launch operations control centre, site integration facility, launch pad complex, antenna park (at Ben Tongue), access road, fencing, services and associated infrastructure to be constructed. The application site comprises two parts; the Spaceport site and the antenna park site. the application site covers an area of 35.5ha, comprising:

    - the Spaceport site (33.6ha), which is wholly contained within the site of the 2020 (ref. 20/00616/FUL of ground covering 307ha) Permission; and
    - a small area of land adjacent to existing telecommunications infrastructure on the summit of Ben Tongue, together with the access to that (1.9ha).

    For the avoidance of doubt, no more than 12 launches may take place in any calendar year.

    Reason: To clarify the terms of the permission granted.

2. The Operator shall, at all times after the first launch campaign, record information regarding the details of each launch, inclusive of dates and times of each launch and length of each stage of launch campaign, from the site and retain the information in perpetuity. For the avoidance of doubt the applicant shall also record and retain information in relation to aborted / scrubbed launches. The information shall be made available to the Planning Authority within one month of any request by them. In the event that no launch

activity takes place from the site for a period of 5 years, or the operator, leaseholder and / or landlord advises that the development is no longer going to be operated, whichever is earliest, an updated scheme shall be submitted to the Planning Authority for its written approval detailing how the development will be decommissioned. The scheme shall be prepared in accordance with legislative requirements and published best practice at time of decommissioning. The scheme shall include details about how all elements of the development are to be decommissioned, including where necessary details of:

a) justification for retention of any relevant elements of the development;
b) the treatment of disturbed ground surfaces;
c) management and timing of the works, with confirmation of the progress of the construction of the main site at Talmine, including an estimate of remaining programme and HGV movements outstanding;
d) environmental management provisions;
e) a traffic management plan to address any traffic impact issues during the decommissioning period.

Thereafter the scheme shall be implemented in accordance with the approved details and timetable.

Reason: To ensure that should the spaceport no longer be required an appropriate mechanism is in place for decommissioning of the development.

3. The Operator, and Leaseholder and/or Landowner, shall:

i. Ensure that the guarantee, bond or other financial provision is maintained throughout the duration of this permission; and,

ii. Pay for the guarantee, bond or other financial provision to be subject to a review five years after the commencement of development and every five years thereafter until such time as the wind farm is decommissioned and the Site restored.

Each review shall be:
a) conducted by a suitably qualified independent professional;
b) published within three months of each five year period ending, with a copy submitted upon its publication to both the landowner(s) and the Planning Authority; and,

c) approved in writing by the planning authority without amendment or, as the case may be, approved in writing by the Planning Authority following amendment to their reasonable satisfaction.

Where a review approved under part (c) above recommends that the amount of the guarantee, bond or other financial provision should be altered (be that an increase or decrease) or the framework governing the bond or other financial provision requires to be amended, the Operator, and Leaseholder and/or Landowner shall do 59 so within one month of receiving that written

approval, or another timescale as may be agreed in writing by the planning authority, and in accordance with the recommendations contained therein.

Reason: To ensure that there are sufficient funds to secure performance of the decommissioning and restoration conditions.

4. No building shall be erected on the site until full details of materials for all buildings and structures on the site have been submitted to and approved in writing by the Planning Authority. For the avoidance any metal cladding of the buildings shall be of a matt or semi-matt non-reflective finish. Thereafter, development shall progress in accordance with these approved details.

   Reason: In the interests of the character and appearance of the area.

5. None of the buildings or structures on the site shall display any name, logo, sign or other advertisement (other than health and safety signage) unless otherwise approved in advance in writing by the Planning Authority.

   Reason: In the interests of the character and appearance of the area.

6. Any and all permanent cables, with the exception of final connections, between the Launch Operations Control Centre, Launch Pad Complex, Launch Site Integration Facility and Antenna Park on site shall be installed and kept underground.

   Reason: In the interests of visual amenity.

7. Construction of the Launch Operations Control Centre, Launch Site Integration Facility and Launch Pad Complex or ancillary infrastructure shall not commence until final details of:

   a) any and all external lighting to be used during the operation of the site. For the avoidance of doubt this shall ensure that the use of lighting within the site is minimised in terms of lighting intensity and duration of lighting for both launch and non-launch scenarios;
   b) fencing;
   c) paths; and,
   d) any other ancillary elements of the development,

   have been submitted to, and approved in writing by, the Planning Authority.

   Thereafter, development shall progress in accordance with these approved details.

   Reason: In the interests of the character and appearance of the area.

8. No development shall commence until an updated Construction Environment Management Document (CEMD) for both sites has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot and SEPA. Thereafter the construction of the development shall only be carried out in accordance with the approved CEMD, subject to any variations approved in writing by the Planning Authority. The CEMD shall include:

a) details of the phasing of construction works;
b) details of the formation of temporary construction compounds, access tracks and any areas of hardstanding;
c) details of the temporary site compound including temporary structures/buildings, fencing, parking and storage provision to be used in connection with the construction of the development;
d) details of the maintenance of visibility splays on the entrance to the site;
e) details of the method of construction of the launch pad and all foundations;
f) details of the method of working cable trenches;
g) details of the method of construction and erection of the buildings;
h) details of dust management;
i) details of pollution control: protection of the water environment, bunding of fuel storage areas, surface water drainage, sewage disposal and discharge of foul drainage;
j) details of temporary site illumination during the construction period;
k) details of timing of works;
l) details of surface treatments and the construction of all hard surfaces and access tracks between each element of the proposed development This shall include details of the tracks in a dark, non-reflective finish with details of the chemical properties of any and all imported stone provided;
m) details of routeing of onsite cabling;
n) details of emergency procedures and pollution response plans;
o) siting and details of wheel washing facilities;
p) cleaning of site entrances, site tracks and the adjacent public highway and the sheeting of all HGVs taking spoil or construction materials to/from the site to prevent spillage or deposit of any materials on the highway;
q) details and implementation and a timetable for post construction restoration/reinstatement of the temporary working areas, and the construction compound;
r) details of working practices for protecting nearby residential dwellings, including general measures to control noise and vibration arising from onsite activities, to be adopted as set out in British Standard 5228 Part 1: 2009;
s) details of the location of fencing to be erected around designated features within and adjacent to the site inclusive of areas of blanket bog;
t) a Species Protection Plan
u) a Breeding Bird Protection Plan;
v) details of areas on the site designated for the storage, loading, off-loading, parking and manoeuvring of heavy duty plant, equipment and vehicles.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process.

9. Development shall not commence until an independent Environmental Clerk of Works ("ECoW") has been appointed, such appointment to be approved in writing by the Planning Authority. The terms of appointment shall:

a) Impose a duty to monitor compliance with the ecological, ornithological and hydrological commitments provided in the Environmental Impact Assessment Report dated February 2020 lodged in support of the application and the Construction Environmental Management Plan, Species Protection Plan, Breeding Bird Protection Plan, Water Quality Management Plan, Peat Management Plan Habitat Management Plan, and other plans approved in terms of the conditions of this permission ("the ECoW Works");
b) Require the ECoW to report to the nominated construction project manager any incidences of non-compliance with the ECoW Works at the earliest practical opportunity and stop the job where any breach has been identified until the time that it has been reviewed by the construction project manager; and
c) Require the ECoW to report to the appropriate statutory body any incidences of non-compliance with the ECoW Works at the earliest practical opportunity.

The ECoW shall be appointed on the approved terms throughout the period from commencement of development, throughout any period of construction activity, and during any period of post construction restoration works approved as part of the Updated Construction Environmental Management Document and the establishment of the Updated Habitat Management Plan.

Reason: To protect ecological interests.

10. No development shall commence at the Antenna Park until pre-construction surveys have been carried out by a suitably qualified person, in accordance an updated Species Protection Plan (SPP) and the submitted Nature Conservation Management Plan (NCMP) comprising:

a) in the spring before construction commences at the Antenna Park, raptor, diver and breeding bird surveys of the site plus appropriate buffers (2 km for breeding raptors, 500 m for breeding waders and 1 km for breeding divers)
b) an otter survey along all watercourses within 250 m of the works area;
c) a water vole survey along all watercourses within 50 m of the works area;
d) a Breeding Bird Survey;
e) a pre-works check for adder along all riverbanks within 30 m of water crossings.

Thereafter Nature Conservation Management Plan (NCMP) and Species Protection Plans (inclusive of a Breeding Bird Protection Plan) for the species surveyed shall be submitted to and approved in writing by the Planning Authority, in consultation with NatureScot and the Ecology Team, prior to the commencement of development. Thereafter, the approved Nature Conservation Management Plan (NCMP) and species protection plans shall be implemented in full.

Reason: In the interests of nature conservation.

11 No later than 6 months prior to the first launch from the site, a visitor management plan (VMP) shall be submitted to and approved in writing by the Planning Authority in consultation with NatureScot, Transport Scotland, and emergency services.

The VMP shall be based on the principles set out in the Visitor Management Strategy submitted with the Environmental Impact Assessment Report as clarified by the Scenario Planning with Supporting Planning Assumptions document (May 2020) and shall set out the proposed management of visitors to the site and the launch exclusion zone for the period of the launch campaign. The approved VMP shall include:

a) The period of the launch campaign;
b) Details of how visitors will be managed during launch and non-launch scenarios across the application site and the Launch Exclusion Zone, having particular regard to the impact of visitor management on the qualifying features of the Caithness and Sutherland SAC, SPA and Ramsar site;
c) The estimated visitor numbers, proposed viewing areas, visitor traffic routes to these areas and the traffic generation on these routes;
d) The size, layout and location of the car, campervan and coach parking required to accommodate the estimated visitors at or close to the viewing areas and details of suitable accessible routes for pedestrians from the parking to the viewing areas;
e) Provision of the agreed visitor facilities (including parking facilities) prior to launch;
f) Measures to encourage sustainable transport to the site including remote park and ride and provision of public transport services from rail stations and larger settlements within Caithness and Sutherland;
g) Proposals for a suitable Traffic Regulation Order mechanism to control stopping and waiting on the A838 (and at other locations which are identified as likely to be impacted by uncontrolled parking in the vicinity of the launch site). This shall include any associated signage;
h) Proposals for any byelaws (not relevant to the Space Industry Act 2018) to establish the Launch Exclusion Zone which will impact on the public road network;
i) Security measures which may affect the free flow of traffic on the public road;
j) Proposals of road signage to inform and warn road users on the main visitor routes and within the settlements of Melness, Talmine and Tongue and to redirect road users where required, including any signage on the public road required for the Launch Exclusion Zone; and,
k) Proposals for a public information protocol and a communications strategy (including a website) to provide information on the traffic management proposals.

Thereafter the approved VMP shall be implemented in full. The VMP will also include provision for monitoring of visitor management and a review of the

VMP shall be undertaken, in consultation with the Council, NatureScot, Transport Scotland, and emergency services following each launch during the first year of launches. Thereafter, monitoring and review of the visitor management plan will take place at the end of the 2nd and 5th year of operation and thereafter every 5th anniversary of the first launch from the development or 6 months in advance of the first launch by any new Launch Site Operator. Following each review of the VMP, the revised VMP shall be submitted for the written approval of the Planning Authority in consultation with NatureScot, Transport Scotland, and emergency services. Thereafter the revised VMP shall be implemented in full.

Reason: To ensure that visitors are managed in a manner which would not have an adverse effect on the qualifying features of Caithness and Sutherland Peatlands Special Protection Area and Caithness and Sutherland Peatlands Special Area of Conservation, or on the local road network. To ensure the principles in the Visitor Management Strategy submitted with the Environmental Impact Assessment Report as clarified by the Scenario Planning with Supporting Planning Assumptions document (May 2020) are carried forward to the detailed Visitor Management Plan and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying 63 habitats and species is required to inform, and where necessary change, future visitor management. Changes may be required in response to predicted effects and effects which have not been predicted due to the novelty of the proposal, the evolution of technologies, changes in visitor behaviour and unforeseen factors.

12. The development shall proceed in accordance with the mitigation set out within the Written Scheme of Investigation (WSI) submitted on 3rd March 2022.

Reason: In order to protect the historic interest of the site.

13. The Community Liaison Group that has been established, shall continue to engage with community to ensure the community are kept informed of project progress, with advanced dialogue on the provision of all transport-related mitigation measures and other mitigation measures and keep under review the timing of the delivery of components during construction and launch events. This should also ensure that local events and tourist seasons are considered and appropriate measures to co-ordinate activities on the site during construction and operation of the development with these and any other major projects in the area to manage conflict between construction traffic, operational traffic and the increased traffic generated by such events/seasons/developments. The scheme shall be implemented as approved**.**

Reason: To assist project implementation and operation, ensuring community dialogue and the delivery of appropriate mitigation measures for example to minimise potential hazards to road users, including pedestrians, travelling on the road networks.

14. Within 3 months of this permission full details of all surface water drainage provision within the application sites as they relate to new elements approved under this permission have been submitted to and approved in writing by the Planning Authority. The details shall:

i. be based on principles outlined on the Surface Water Plan (Drawing SK-CSW001)
ii. accord with the principles of Sustainable Drainage Systems (SUDS) and be designed to the standards outlined in The CIRIA SUDS Manual any superseding guidance prevailing at the time,
iii. include final details of the drainage feature to the east of the LOCC;
iv. make provision for the flush habitat north of the LSIF building to be treated like a watercourse and be crossed by a series of closed culverts to minimise impacts on it and maintain local hydrology.

The submission shall be supported by revised a Drainage Impact Assessment (inclusive of any revised modelling) for both sites to ensure the final design does not have an adverse impact on flood risk, drainage and M6 flush habitat with all discharge rates not exceeding greenfield run off rates.

Thereafter, only the approved details shall be implemented and all surface water drainage provision shall be completed prior to the first occupation of any part of the development.

Reason: To ensure that surface water drainage is provided timeously and complies with the principles of SUDS; in order to protect the water environment.

15. No development shall commence at the Antenna Site until the Planning Authority has approved in writing the terms of appointment by the Company of an independent and suitably qualified to assist the Planning Authority in monitoring compliance with the terms of the deemed planning permission and conditions attached to this consent ("PMO"). The terms of appointment shall;

a) Impose a duty to monitor compliance with the terms of the deemed planning permission and conditions attached to this consent throughout the construction and operation of the proposed development;
b) Require the PMO to submit a monthly report to the Planning Authority summarising works undertaken on site during construction of the development and then provide an annual report of activities on the site and compliance with conditions; and,
c) Require the PMO to report to the Planning Authority any incidences of non-compliance with the terms of the terms of the planning permission and conditions attached to this consent at the earliest practical opportunity. The PMO shall be appointed on the approved terms throughout the period from Commencement of Development to the time which the development is no longer in operation.

Reason: To enable the development to be suitably monitored to ensure compliance with the planning permission granted.

16. No development shall commence on the Antenna Park until a further Construction Traffic Management Plan (CTMP) has been submitted to and approved in writing by the Planning Authority.

Detailed information regarding the use of the U1450 as an access to the antenna site is required from the developer and the CTMP shall include:

a) What is the proposed number and type of HGV movements;
b) submit an outline programme for these works.
c) confirm the achievable visibility at the junction with the A836 and if any improvements (such as trimming vegetation) are proposed
d) A pre-start inspection of the route (this shall be a video inspection with a method for establishing location by GPS coordinate and/or chainage). Any areas of significant deterioration shall be recorded photographically with an accurate location and suitable written commentary. Ideally all inspections should be undertaken jointly with The Council and at least 7 days notice shall be given to enable this;
e) Monthly inspection reports of the agreed routes;
f) A method of reporting and repairing defects found on the agreed routes;
g) A final inspection and report on the condition of the agreed routes within 1 month of completion of development;
h) Provision of suitable measures to remove the depositing of debris on the public road, which may include use of a vacuum road sweeper (or a wheel wash within the site) if required by The Council due to problems with mud on the road;
i) A scheme of temporary signage and other temporary mitigation traffic management or works such as a voluntary 20mph speed limit required for the construction HGVs. Proposals for the following settlements shall be considered – Tongue, Bettyhill, Reay and Thurso;
j) A suitable point of contact for The Council and for members of the public regarding construction traffic movements and any impacts on the public road; and
k) Details of how complaints regarding construction traffic and damage to the road will be dealt with and how the community and wider public will be kept informed of any significant traffic movements. Thereafter the approved CTMP shall be implemented in full prior to the commencement of the development.

Thereafter the approved CTMP shall be implemented in full prior to the commencement of the development.

Reason: To ensure the free flow and safety of the local and trunk road networks during the construction period.

17. The development shall not be brought into use as a spaceport until a practicable Workforce Travel Plan has been submitted to and approved in writing by the Planning Authority. The Plan shall detail the following measures:

a) The name and contact details of an appointed Travel Plan Co-ordinator;

b) The proposed objectives and targets for staff travel, including targets to reduce access being taken to the development by staff and visitors in private cars, encourage practicable access options to the development by sustainable and active transport and for avoiding parking overspill onto the adjacent public roads;
c) Details of measures to be taken to meet the proposed targets;
d) Details of monitoring that will be undertaken to measure the success of the Travel Plan against the approved targets;
e) Details of the reporting of the monitoring of the Workforce Travel Plan, which shall be annually from the date of the first use of the development as a spaceport. This report shall include details of any further mitigation measures required to ensure the targets in the Workforce Travel Plan can be met.

Thereafter the Workforce Travel Plan shall be implemented prior to first use of the development as a spaceport.

Reason: To reduce the reliance on private cars and encourage modal shift to sustainable and active transport.

18. No development shall commence on the car park or parking at the Antenna Park until a detailed parking strategy, has been submitted to and approved in writing by the Planning Authority. The approved scheme shall be implemented prior to first occupation of the phase of the development to which it relates, thereafter being maintained for this use in perpetuity.

Reason: To ensure adequate provision of car parking.

19. The development shall not be brought into use as a spaceport until a Launch Event Visitor Management Group is established by the Launch Site Operator in collaboration with The Council, SEPA, NatureScot, Sutherland Access Panel, Emergency Services, and local Community Councils. The group shall act as a vehicle to develop and review the effectiveness of the Visitor Management Plan to avoid conflicts in launch campaign visitor management which may lead to damage to the Natura 2000 sites, disturb protected species and / or create parking and traffic management problems. The Launch Event Visitor Management Group, or element of any combined liaison group relating to this development, shall be maintained in perpetuity with the first meeting to take place within 6 months of commencement of development and meetings then being held at least once every three months prior to the first launch campaign to develop the Visitor Management Plan; after the first launch and after every third launch thereafter within the first year of operation.

Thereafter the Launch Campaign Visitor Management Group shall meet at least once every six months.

Reason: To assist with the provision of mitigation measures to minimise the potential for conflict of events which may lead to traffic management problems.

20. Within 3 months of this planning permission the applicant shall submit an amended foundation plan has been submitted has been submitted to and

approved in writing by the Planning Authority in consultation with SEPA. The plan will include, but not limited to, pile foundations for the Launch Operations Control Centre, the Launch Pad and the rail track. Thereafter the foundation plan shall be implemented**.**

Reason: To limit the impact of the proposed development on the peat resource and minimise carbon loss.

21. Prior to the commencement of the development at the Antenna Park (including any engineering works) of the development, an updated Peat Management Plan shall be submitted to and approved in writing by the Planning Authority in consultation with the SEPA and NatureScot. The Peat Management Plan shall include:

    a) the volume of peat disturbed by the development (re-estimated following any further ground investigations and any further measures to reduce peat disturbance);
    b) the volume of peat to be reused during reinstatement works, and in restoration and remediation of damaged and degraded peat within the site and within the vicinity of the site;
    c) a plan identifying where and how disturbed peat can be reused in site reinstatement works; Thereafter the approved peat management plan shall be implemented in full.

    Reason: To ensure the development of the site limits impact on the peat resource and minimises carbon loss.

22. No development shall commence on the Antenna Park until a Stage 1 Nature Conservation Management Plan (including Habitat Management Plan and restoration) has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot and SEPA. The Nature Conservation Management Plan shall set out proposed long term management for the application site and immediate vicinity and shall provide for the management, monitoring and reporting of terrestrial and aquatic habitats on site. Specifically this shall include management, monitoring and reporting of:

    i. the agreed peatland restoration, with the first phase of works to be completed within one year of the operation of the site;
    ii. water quality (across the whole site but with a focus on water quality following launch events in the vicinity of the launch pad and the watercourse into which the overflow from the deluge water will discharge);
    iii. impact of the proposed development on blanket bog. This shall be based on the principles of the Outline Habitat Management Plan and shall ensure that any and all management, monitoring and reporting shall be undertaken with the aim to protect and enhance the habitat and biodiversity of the site and the surrounding area, with a particular view to maximising sequestration of the carbon released as a result of the construction and operation of the proposed development. The HMP within the conservation management plan shall include:

a) a summary of the baseline habitat conditions on site including sensitive habitats and/or designated sites;
b) a summary of the protected species survey data and review of any species most likely to be impacted by the development;
c) a summary of the relevant legislation, planning policy and best practice guidance related to the development;
d) detailed management and mitigation measures for habitat reinstatement and enhancement; and
e) detailed monitoring measures and reporting prescriptions.

The approved Nature Conservation Management Plan will be reviewed and updated by the Developer to reflect ground condition surveys undertaken during construction and prior to the first launch campaign and shall be submitted to the Planning Authority for its written approval in consultation with NatureScot and SEPA prior to the first launch campaign, as the Stage 2 Nature Conservation Management Plan. In furtherance of the aim and for the better implementation and review of the Nature Conservation Management Plan Steering Group (NCPM SG) shall be formed prior to the commencement of any development. The membership of this NCMP SG will include representatives of the Developer, the Planning Authority and NatureScot. The NCMP SG will meet annually but it is expected that its consideration of relevant matters will be primarily by exchange of correspondence.

The Stage 2 Nature Conservation Management Plan shall be further reviewed by the Developer at a frequency of no longer than the 5 year anniversary of the first launch date, and no longer than every 6 years thereafter until the Development is no longer in operation. The Developer shall submit a stage reviewed Nature Conservation Management Plan following each such Nature Conservation Management Plan monitoring year as provided for in the Nature Conservation Management Plan for approval in writing by the Planning Authority in consultation with NatureScot and SEPA. Mitigation identified through the reviewed Nature Conservation Management Plans shall be implemented in full by the Developer, unless otherwise agreed in writing by the Planning Authority in consultation with NatureScot and SEPA.

NCMP monitoring shall be carried out by the Developer in operational years 1, 5, 10, 15 and 25 and shall be reported to the Planning Authority, the NCMP Steering Group in writing by the Developer.

The Developer shall submit a monitoring report to the Planning Authority, NatureScot and SEPA on the ongoing implementation of the approved Nature Conservation Management Plan which will be provided no later than 6 months after the end of each NCMP monitoring year. The monitoring report shall present an assessment of the implementation of the Nature Conservation Management Plan, including –

a) an assessment of the implementation of the Nature Conservation Management Plan, and any reviewed such plan, in relation to the aims and objectives of the plan;
b) the levels, of habitat restoration delivered on site, and
c) the results of any monitoring and surveys required in compliance with the conditions of this deemed planning permission.

If a monitoring report identifies that the implementation of the Nature Conservation Management Plan is not meeting the aims and objectives of the Habitat Management Plan then this shall be reported by the Developer to the HMP SG along with details of the proposed mitigation and any other works considered to be required to ensure the aims and objectives of the approved Habitat Management Plan will be met within 6 months of the relevant monitoring report being so submitted. The HMP SG will review such proposals and make recommendations thereon. The Developer shall then finalise proposed mitigation and other works, incorporate changes into an updated Habitat Management Plan which shall be submitted to the Planning Authority within 12 months of the relevant monitoring report for written approval in consultation with NatureScot and SEPA.

Unless otherwise agreed in advance in writing with the Planning Authority after consultation with NatureScot and SEPA, the approved Habitat Management Plan, each approved reviewed Habitat Management Plan and updated mitigation and works to achieve same shall be implemented in full by the Developer.

23. All watercourse crossings shall be designed in line with the requirements outlined on drawings SHS-WHL-XX-XX-DR-C-9220 Revision P03 and SHS-WHL-XXXX-DR-C-9221 Revision P03.

Reason: In the interests of ensuring the risk of flooding is not increased as a result of the development.

24. For the avoidance of doubt when the water deluge system is being maintained (inclusive of drainage or cleaning) the water shall not be discharged to a local watercourse and shall be removed or disposed at a suitably licenced facility.

Reason: To ensure that the quality of the water environment is protected**.**

25. No development shall commence on the Antenna Park until a Foul Drainage Plan is submitted to and approved in writing by the Planning Authority in consultation with SEPA.

Foul drainage shall be implemented in line with Drawing SK-C-FW001 “Foul Drainage Plan” unless an alternative solution, which is demonstrated to have less impact on the environment, is agreed by the Planning Authority in consultation with SEPA.

Thereafter the approved foul drainage solution shall be implemented prior to the development being brought into use as a spaceport**.**

Reason: To ensure that the quality of the water environment is protected.

26. Within 3 months of this decision notice a programme for monitoring the potential effect of the discharge from the launch pad on the watercourse shall be been submitted to and approved in writing by the Planning Authority in consultation with SEPA.

Should the monitoring show that the discharge includes contaminants above a concentration which could cause pollution then a modification to the

treatment approach will be required, and (2) requiring water from maintenance or cleaning works to be removed from the site and disposed of to a suitability licenced facility.

Reason: To ensure that any discharge from the launch pad area is suitably controlled.

27. No development shall commence until an updated Schedule of Mitigation has been submitted to and approved in writing by the Planning Authority in consultation with NatureScot and SEPA. The document shall include provision for :

    b) An updated Schedule of Mitigation (SM) including all mitigation identified in the Environmental Impact Assessment Report and any additional mitigation otherwise included as conditions on this planning permission;
    c) A timetable for the implementation of each element of mitigation;
    d) Processes to control / action changes from the agreed Schedule of Mitigation.

    Thereafter all mitigation identified in the approved document shall be implemented in full in accordance with the timescales included in the schedule of mitigation.

    Reason: To ensure the delivery of required mitigation to ensure the impacts of the proposed development on the receiving environment are managed.

28. No development shall commence until a programme for monitoring the effect of discharge of deluge water from the launch pad on the watercourse is agreed by the Planning Authority in consultation with SEPA. Should the monitoring show that the discharge includes contaminants above a concentration which could cause pollution then a modification to the treatment approach will be required.

    Reason: To ensure no adverse environmental impacts arise from the operation of the water deluge system.

29. No development shall commence on until a scheme for monitoring noise from launch vehicles during the first year of operation has been submitted to, and agreed in writing by, the Planning Authority. Within six months of the first anniversary of the first launch from the space port, a report that compares the predicted effects contained with the EIAR submitted in support of this application and identifies any further mitigation deemed necessary to protect sensitive receptors, including a programme for implementation, shall be submitted to, and agreed in writing by, the Planning Authority. Any agreed mitigation shall be implemented in accordance with the agreed programme.

    Reason: To protect the amenity of sensitive receptors from operational noise that was not predicted.

30. No development or works shall commence until an Operational Environmental Management Plan (OEMP) has been submitted to, and approved in writing

by, the Planning Authority. The OEMP shall include, but will not necessarily be limited to:

a) an overview of the environmental conditions attached to the planning permission and the measures which will be implemented to ensure the proposal is operated in accordance with the terms of the planning permission;
b) A description of all key operating procedures for the site with reference to environmental management and control;
c) A site log sheet for emissions showing which items of plant will be operational at each stage of operation, anticipated sources of emissions, associated emissions points that will be in use and details of abatement which will be applied during operation;
d) Description of controls that will be in place during operation of the site and monitoring regimes which will be implemented during the operating period to record activities, emissions and any activities requiring information to be generated to meet planning permission or licencing requirements;
e) Processes to control / action changes as a result of unexpected events during operation.

The Operational Environmental Management Plan shall be implemented as approved, ensuring all on site staff are familiar with and adhere to its terms.

The OEMP shall be reviewed every 5 years from the date of the approval of the permission to ensure that it remains in line with good practice. The reviewed and updated documents shall be submitted and approved in writing to the Planning Authority by 01 March of any review year.

Reason: In order to enable the Planning Authority to adequately control the development and to minimise its impact on the nature conservation and amenities of the local area.

31 At all times outwith a launch event, which for the purposes of this condition is defined as the period of time when the launch vehicle is required to be in a vertical position within the Launch Pad Complex for operation reasons, the lightning tower, strongback and lighting columns within the antenna park shall be retracted to their lowest height.

Reason: To ensure visual impacts are minimised.

32. No development shall commence on the Antenna Park until a detailed Recreational Access Management Plan of public access across the sites (as existing, during construction and following completion) has been submitted to, and approved in writing by, the Planning Authority. The plan shall include details showing:

i. All existing access points, paths, core paths, tracks, rights of way and other routes (whether on land or inland water), and any areas currently outwith or excluded from statutory access rights under Part One of the Land Reform (Scotland) Act 2003, within and adjacent to the application site;

ii. Any areas proposed for exclusion from statutory access rights, for reasons of privacy, disturbance or effect on curtilage related to proposed buildings or structures;
iii. All proposed paths, tracks and other routes for use by walkers, riders, cyclists, canoeists, all-abilities users, etc. and any other relevant outdoor access enhancement (including construction specifications, signage, information leaflets, proposals for on-going maintenance etc.);
iv. Any diversion of paths, tracks or other routes (whether on land or inland water), temporary or permanent, proposed as part of the development (including details of mitigation measures, diversion works, duration and signage).

The approved Recreational Access Management Plan (RAMP), and any associated works, shall be implemented in full prior to the first occupation of the development or as otherwise may be agreed within the approved plan.

Reason: In order to safeguard public access during the construction phase of the development.

33. Public access to any Core Path within, or adjacent to, the application site shall at no time be obstructed or deterred by construction-related activities, unless otherwise approved in writing by the Council's Access Officer as a temporary measure required for health and safety or operational purposes. Under such circumstances, any temporary obstruction or determent shall cover only the smallest area practicable and for the shortest duration possible, with waymarked diversions provided as necessary.

Reason: In order to safeguard public access both during and after the construction phase of the development.

34. No works or development, with the exception of surface water drainage infrastructure, foul drainage, nature conservation and habitat management shall be undertaken outwith areas identified for construction works on the approved Extent of Works Plan (drawing EXT-WORKS-001 Revision 5.0), the areas of which shall be marked out on the site.

For the avoidance of doubt storage of material may take place within 10m of the top of the bank of any watercourse or waterbody unless otherwise agreed in writing by SEPA and The Highland Council's Flood Risk Management Team.

Reason: To ensure that the footprint of the works is minimised and impacts on peat and peatland controlled.

REASON FOR DECISION

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

REASONED CONCLUSION

The Council is in agreement with the findings of the Environmental Impact Assessment Report that the amended development is unlikely to give rise to any new or other significant adverse impact on the environment. The Council is satisfied that all environmental effects of this development can be addressed by way of mitigation. The Council has incorporated the requirement for a schedule of mitigation within the conditions of this permission. Monitoring of operational compliance has been secured through Conditions 2, 8, 9, 11, 15, 17, 18, 22, 27, 28, 29, 30, and 31 of this permission.

INFORMATIVES

Initiation and Completion Notices

The Town and Country Planning (Scotland) Act 1997 (as amended) requires all developers to submit notices to the Planning Authority prior to commencing works at the Antenna Park, and upon completion of, development. These are in addition to any other similar requirements (such as Building Warrant completion notices) and failure to comply represents a breach of planning control and may result in formal enforcement action.

1. The developer must submit a Notice of Initiation of Development in accordance with Section 27A of the Act to the Planning Authority prior to work commencing on site.

2. On completion of the development, the developer must submit a Notice of Completion in accordance with Section 27B of the Act to the Planning Authority.

Copies of the notices referred to are attached to this decision notice for your convenience.

Accordance with Approved Plans and Conditions

You are advised that development must progress in accordance with the plans approved under, and any conditions attached to, this permission. You must not deviate from this permission without consent from the Planning Authority (irrespective of any changes that may separately be requested at the Building Warrant stage or by any other Statutory Authority). Any pre-conditions (those requiring certain works, submissions etc. prior to commencement of development) must be fulfilled prior to work starting on site. Failure to adhere to this permission and meet the requirements of all conditions may invalidate your permission or result in formal enforcement action.

Flood Risk

It is important to note that the granting of planning permission does not imply there is an unconditional absence of flood risk relating to (or emanating from) the application site. As per Scottish Planning Policy (paragraph 259), planning

permission does not remove the liability position of developers or owners in relation to flood risk.

Scottish Water

You are advised that a supply and connection to Scottish Water infrastructure is dependent on sufficient spare capacity at the time of the application for connection to Scottish Water. The granting of planning permission does not guarantee a connection. Any enquiries with regards to sewerage connection and/or water supply should be directed to Scottish Water on 0845 601 8855.

Septic Tanks and Soakaways

Where a private foul drainage solution is proposed, you will require separate consent from the Scottish Environment Protection Agency (SEPA). Planning permission does not guarantee that approval will be given by SEPA and as such you are advised to contact them direct to discuss the matter (01349 862021).

Local Roads Authority Consent

In addition to planning permission, you may require one or more separate consents (such as road construction consent, dropped kerb consent, a road openings permit, occupation of the road permit etc.) from the Area Roads Team prior to work commencing. These consents may require additional work and/or introduce additional specifications and you are therefore advised to contact your local Area Roads office for further guidance at the earliest opportunity.

Failure to comply with access, parking and drainage infrastructure requirements may endanger road users, affect the safety and free-flow of traffic and is likely to result in enforcement action being taken against you under both the Town and Country Planning (Scotland) Act 1997 and the Roads (Scotland) Act 1984.

Further information on the Council's roads standards can be found at: http://www.highland.gov.uk/yourenvironment/roadsandtransport

Application forms and guidance notes for access-related consents can be downloaded from:

http://www.highland.gov.uk/info/20005/roads_and_pavements/101/permits_for_working_on_public_roads/2

Mud and Debris on Road

Please note that it an offence under Section 95 of the Roads (Scotland) Act 1984 to allow mud or any other material to be deposited, and thereafter remain, on a public road from any vehicle or development site. You must, therefore, put in place a strategy for dealing with any material deposited on the public road network and maintain this until development is complete.

Construction Hours and Noise-Generating Activities

You are advised that construction work associated with the approved development (incl. the loading/unloading of delivery vehicles, plant or other machinery), for which noise is audible at the boundary of the application site, should not normally take place

outwith the hours of 08:00 and 19:00 Monday to Friday, 08:00 and 13:00 on Saturdays or at any time on a Sunday or Bank Holiday in Scotland, as prescribed in Schedule 1 of the Banking and Financial Dealings Act 1971 (as amended).

Work falling outwith these hours which gives rise to amenity concerns, or noise at any time which exceeds acceptable levels, may result in the service of a notice under Section 60 of the Control of Pollution Act 1974 (as amended). Breaching a Section 60 notice constitutes an offence and is likely to result in court action.

If you wish formal consent to work at specific times or on specific days, you may apply to the Council's Environmental Health Officer under Section 61 of the 1974 Act. Any such application should be submitted after you have obtained your Building Warrant, if required, and will be considered on its merits. Any decision taken will reflect the nature of the development, the site's location and the proximity of noise sensitive premises. Please contact env.health@highland.gov.uk for more information.

Protected Species – Halting of Work

You are advised that work on site must stop immediately, and NatureScot must be contacted, if evidence of any protected species or nesting/breeding sites, not previously detected during the course of the application and provided for in this permission, are found on site. For the avoidance of doubt, it is an offence to deliberately or recklessly kill, injure or disturb protected species or to damage or destroy the breeding site of a protected species. These sites are protected even if the animal is not there at the time of discovery. Further information regarding protected species and developer responsibilities is available from NatureScot: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species

Protected Species - Contractors' Guidance

You must ensure that all contractors and other personnel operating within the application site are made aware of the possible presence of protected species. They must also be provided with species-specific information (incl. guidance on identifying their presence) and should be made aware of all applicable legal requirements (incl. responsibilities and penalties for non-compliance).

Nesting Birds

Construction/demolition works have the potential to disturb nesting birds or damage their nest sites, and as such, checks for nesting birds should be made prior to the commencement of development if this coincides with the main bird breeding season (April - July inclusive). All wild bird nests are protected from damage, destruction, interference and obstruction under the Wildlife and Countryside Act 1981 (as amended). Some birds (listed on schedule 1 of the Wildlife and Countryside Act) have heightened protection where it is also an offence to disturb these birds while they are in or around the nest. For information please see: www.snh.org.uk/publications/online/wildlife/law/birdseggs.asp

Other Licences and Regulatory Procedures To allow the proposed development to operate a number of licences require to be granted. These include:

- Operator licence regulated by the UK Space Agency
- Spaceport licence regulated by the UK Space Agency

- Range services licence under regulated by the UK Space Agency 2018
- Marine Licence regulated by Marine Scotland 75
- Planned and Permanent Redistribution of Air Traffic (CAP1616) regulated by the Civil Aviation Authority.
- Controlled Activities Regulations Licences Regulated by SEPA The applicant will be required to ensure these and any other relevant regulatory regimes are followed and appropriate consents / licences in place prior to the operation of the proposed development.

Signature:

Designation: Acting Head of Development Management

Author: Claire Farmer – Acting Team Leader / Principal Planner

Background Papers: Documents referred to in report and in case file.

Relevant Plans: PLAN 1 - UKVLS-NOR-VF-00-DR-A-P0102 REV P03 - GENERAL PLAN - LAUNCH SITE INTEGRATION FACILITY - GA PLAN - LEVEL 00.pdf

PLAN 2 - UKVLS-NOR-VF-ZZ-DR-A-P0205 REV P04 - ELEVATIONS - N S

PLAN 3 - UKVLS-NOR-VF-ZZ-DR-A-P0204 REV P03 - ELEVATIONS - W E

PLAN 4 - UKVLS-NOR-VF-ZZ-DR-A-P0303 REV P05 - SECTION PLAN - N S

PLAN 5 - UKVLS-NOR-VF-ZZ-DR-A-00209 REV P03 - ELEVATIONS - N S

PLAN 6 -UKVLS-NOR-VF-ZZ-DR-A-00208 REV P03 - ELEVATION PLAN - LAUNCH PAD COMPLEX

PLAN 7 - UKVLS-NOR-VF-ZZ-DR-A-00207 REV P05 - ELEVATION PLAN - LAUNCH PAD COMPLEX - REDUCED POSITIONS

PLAN 8 - UKVLS-NOR-VF-ZZ-DR-A-00206 REV P05 - ELEVATION PLAN - LAUNCH PAD COMPLEX

PLAN 9 - UKVLS-NOR-ZZ-ZZ-DR-A-90165 REV P03 - PROPOSED SITE SECTION

PLAN 10 -UKVLS-NOR-ZZ-ZZ-DR-A-90157 REV P09 - PROPOSED SITE PLAN - LAUNCH PAD COMPLEX

PLAN 11 -UKVLS-NOR-ZZ-ZZ-DR-A-68101 REV P04 - GENERAL PLAN - LAUNCH PAD COMPLEX FENCING PROPOSALS

PLAN 12 -UKVLS-NOR-ZZ-ZZ-DR-A-90156 REV P06 - PROPOSED SITE LAYOUT PLAN

P PLAN 13 - UKVLS-NOR-ZZ-ZZ-DR-A-90154 REV P07 - PROPOSED SITE LAYOUT PLAN

PLAN 14 -UKVLS-ARUP-LC-FN-DR-S-032010 REV P02 - GENERAL PLAN - LAUNCH COMPLEX WEST

PLAN 15 - UKVLS-ARUP-LC-FN-DR-S-022010 REV P02 - GROUND FLOOR PLAN - LAUNCH COMPLEX EAST

PLAN 16 - UKVLS-ARUP-LC-FN-DR-S-012002 REV P02 - GENERAL PLAN - LAUNCH COMPLEX

PLAN 17 - UKVLS-ARUP-VF-F1-DR-S-102001 REV 05 - FOUNDATION PLAN - LSIF STRUCTURE

PLAN 18 -UKVLS-ARP-ZZ-XX-DR-C-0006 REV P09 - SWEPT PATH ANALYSIS PLAN

PLAN 19 -UKVLS-ARP-ZZ-XX-DR-C-0004 REV P09 - ROAD CONSTRUCTION DETAILS

PLAN 20 -UKVLS-ARP-ZZ-XX-DR-C-0002 REV P09 - ROAD LONG SECTIONS PLAN

PLAN 21 -UKVLS-ARP-ZZ-XX-DR-C-0003 REV P09 - ACCESS LAYOUT

PLAN 22 - UKVLS-ARP-ZZ-XX-DR-C-0005 REV P07 - ACCESS LAYOUT

PLAN 23 -UKVLS-ARP-ZZ-XX-DR-C-0001 REV P10 - ACCESS ROAD LAYOUT PLAN

PLAN 24 -UKVLS-ARP-ZZ-XX-DR-C-00010 REV P07- ACCESS LAYOUT PLAN - GWDTE

PLAN 25 - UKVLS-ARP-ZZ-XX-DR-C-00011 REV P05- SITE LAYOUT PLAN

PLAN 26 -UKVLS-ARP-ZZ-XX-DR-C-00013 REV P04 - SWEPT PATH ANALYSIS PLAN

PLAN 27 - UKVLS-ARP-ZZ-ZZ-DR-C-0510 REV P06 - PROPOSED DRAINAGE LAYOUT SHEET 1 OF 4

PLAN 28 - UKVLS-ARUP-LP-00-DR-E-2200 REV P04 - GENERAL PLAN - LAUNCH PAD COMPLEX - CCTV COLUMN AND LIGHTING LAYOUT

PLAN 29 - UKVLS-ARUP-LP-00-DR-E-1200 REV P04 - GENERAL PLAN - LAUNCH PAD COMPLEX - ELECTRICAL AND ICT DISTRIBUTION AND LAYOUT

PLAN 30 -UKVLS-ARP-ZZ-ZZ-DR-E-2102 REV P09 - GENERAL PLAN - LAUNCH SITE INTEGRATION FACILITY - EXTERNAL LIGHTING

PLAN 31 -UKVLS-ARUP-LC-FN-DR-S-002001 REV P02 - FOUNDATIONS PLAN - LAUNCH FRAME PAD

PLAN 32 - UKVLS-NOR-VF-ZZ-DR-A-P0304 P05 - SECTION PLAN - LAUNCH SITE INTEGRATION FACILITY - SECTIONS EAST WEST

PLAN 33 - UKVLS-NOR-ZZ-ZZ-DR-A-90155 P06 - PROPOSED SITE LAYOUT PLAN

PLAN 34 - UKVLS-ARP-ZZ-XX-DR-C-0007 P10 - ACCESS ROAD PEAT DEPTHS

PLAN 35 - UKVLS-ARP-ZZ-ZZ-DR-C-0514 P05 - PROPOSED DRAINAGE PLAN LAYOUT - LAUNCH PAD AREA - SHEET 5 OF 5

PLAN 36 - EXT-WORKS-001-REV 0.5 – EXTENT OF WORKS PLAN

Appendix 1 – Letters of Representation

OBJECTORS

1	Rachel And Ian Broughton / Ian Kelly MRTPI	52 Brae Tongue, Tongue, Lairg, IV27 4XN. Ian Kelly - On Behalf Of Rachael And Ian Broughton	07/07/24 09/07/24
2	Miss Rhoda Kennedy	4 Post Office Brae, Kiltarlity, Beauly, IV4 7HA	18/06/24
3	Margaret J. Idle	117 Rhitongue, Tongue, Lairg, IV27 4XW,	03/07/24
4	Mr John Williams	Mo Dhachaidh, Midtown, Talmine Tongue, Lairg, IV27 4YR	28/05/24
5	Mr Hamish Whittle	259 Tubeg, Skerray, Thurso, KW14 7TJ	26/06/24
6	Ms Tina Irving	Donlyn, Lyth, Wick, KW1 4UD	02/10/24
7	Mrs Amanda Moseley	105 Kirtomy, Bettyhill, Thurso, KW14 7TB	22/05/24
8	Wildland Ltd	C/o Ian Kelly MRTPI	26/06/24

SUPPORTERS

1.	Trudy Morris Chief Executive Caithness Chamber Of Commerce	Caithness Chamber of Commerce, Naver Business Centre, Naver House, Naver Road, Thurso,	16/07/24
2.	Mr Colin McDonogh	The Shieling, Tongue, Lairg, IV27 4XJ	17/07/24

3.	MCE Melness Crofters Estate Ltd	Estate Office, Cornhill Road, Talmine, IV274YS	16/07/24
4.	Mr Scott Coghill	16 Varich Place, Tongue, Lairg, IV27 4XG	09/07/24
5.	Mrs Mairi Gordon	145 Skinnet Talmine, Lairg, IV27 4YP	08/07/24
6.	UpNorth! Community Development Trust	Mrs Frances Gunn, 225 The Village, Tongue, Lairg, IV27 4XF	17/07/24
7.	Ms Anne Gordon	156 Skinnet, Talmine, Lairg, IV27 4YP,	15/07/24

GENERAL COMMENT

1.	RSPB	RSPB North Scotland, Inverness Office	25/07/24

Appendix 2 - Appropriate Assessment

Construction and operation of a vertical launch spaceport with launch operations control centre, launch site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure. At land 2600m sw of Dunbuie Talmine and summit of Ben Tongue (adjacent to existing telecommunications mast)

24/01091/FUL

CONSIDERATION OF PROPOSALS AFFECTING EUROPEAN SITES

Caithness and Sutherland Peatlands Special Protection Area

Caithness and Sutherland Peatlands Special Area of Conservation

North Sutherland Coastal Islands SPA Special Protection Area

The status of Caithness and Sutherland Peatlands Special Protection Area, Caithness and Sutherland Peatlands Ramsar, Caithness and Sutherland Peatlands Special Area of Conservation, and North Sutherland Coastal Islands SPA Special Protection Area means that the requirements of the Conservation (Natural Habitats, & c.) Regulations 1994 as amended (the 'Habitats Regulations') or, for reserved matters the Conservation of Habitats and Species Regulations 2017 as amended, apply.

This means that where the conclusion reached by the Council on a development proposal unconnected with the nature conservation management of a Natura 2000 site is that it is likely to have a significant effect on those sites, it must undertake an Appropriate Assessment of the implications for the conservation interests for which the areas have been designated. The need for Appropriate Assessment extends to plans or projects out with the boundary of the site in order to determine their implications for the interest protected within the site.

This means that the Council, as competent authority, must:

- Determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- Determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- Make an Appropriate Assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

The competent authority can only agree to the proposal after having ascertained that it will not have an adverse effect on the integrity of the sites. If this is not the case and there are not alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest, which in this case can include those of a social or economic nature.

Screening of Likely Significant Effects

It is evident that the proposal is not connected with or necessary to site management for conservation, hence further consideration is required. The proposed vertical launch facility has the potential to have a likely significant effect on the qualifying interests due to impacts arising from construction, operation and decommissioning of the Proposed Development. The Council is therefore required to undertake an appropriate assessment of the implications of the proposal on the above named European designated sites.

Caithness and Sutherland SPA

NatureScot has advised that the proposal is likely to have a significant effect on the following qualifying interests of the Caithness and Sutherland Peatlands SPA:

- Dunlin *Calidris alpina schinzii*
- Golden Plover *Pluvialis apricaria*
- Greenshank *Tringa nebularia*

The proposal has the potential to disturb/displace greenshank, golden plover and dunlin during both the construction and operation of the space hub. This will adversely impact on the following conservation objectives:

- Distribution of species within the site;
- Distribution and extent of habitats supporting the species; and
- No significant disturbance of the species.

As a result of the likely significant effects, as competent authority, The Highland Council is ***required*** to carry out an Appropriate Assessment in view of the site's conservation objectives for its qualifying interests.

Caithness and Sutherland SAC

NatureScot has advised that the proposal is likely to have a significant effect on the following qualifying interests of the Caithness and Sutherland Peatlands SAC:

- Blanket bogs
- Depressions on peat substrates of the *Rhynchosporion*
- Natural dystrophic lakes and ponds,
- Northern Atlantic wet heaths,
- Otter.

As a result of the likely significant effects, as competent authority, The Highland Council is ***required*** to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests.

North Sutherland Coastal Islands SPA

NatureScot has advised that the site is protected for its wintering population of barnacle geese which roost on the islands of Eilean Hoan and Eilean nan Ron. The birds generally feed on improved land around the Kyle of Tongue with the nearest feeding location being approximately 4.5 km from the proposed development site.

The surveys included in the EIAR did not record any barnacle geese flying through or feeding in the development area. Regarding feeding sites, disturbance due to noise was considered to be the only potential impact. It is concluded in the EIAR that due to the distance of the nearest feeding sites from the development and the low frequency of the launches that there will not be a significant effect. We are content with this assessment and therefore The Council concludes that the development is **not likely to result in significant effects**.

As a result of this conclusion that the proposal is not likely to result in significant effects, as competent authority, The Highland Council is ***not required*** to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests and can be scoped out if the appropriate assessment

APPROPRIATE ASSESSMENT

While the responsibility to carry out the Appropriate Assessment rests with the Council, advice contained within Circular 6/1995 is that the assessment can be based on the information submitted from other agencies. In this case, the Appropriate Assessment is informed by information supplied by NatureScot, the applicant and various published information.

Caithness and Sutherland Peatlands Special Protection Area (SPA)

It In its response to the Council of 01 July 2024, NatureScot advised that the proposal is likely to have a significant effect on the following qualifying interests of the SPA during the construction, operation, and decommissioning phases of development:

- Dunlin *Calidris alpina schinzii*
- Golden Plover *Pluvialis apricaria*
- Greenshank *Tringa nebularia*

And, that the proposal has the potential to disturb/displace greenshank, golden plover and dunlin during both the construction and operation of the space hub. This will adversely impact on the following conservation objectives:

- Distribution of species within the site;
- Distribution and extent of habitats supporting the species; and
- No significant disturbance of the species.

NatureScot's advice is set out below:

For the construction phase, a likely significant effect on the above species can be concluded but information provided shows that an adverse effect on site integrity can be avoided. Disturbance can be mitigated by the measures included in the CEMP and SPP that were developed under the previous proposal. These plans are carried through unaltered to this proposal. This includes necessary measures to avoid disturbance such as pre-commencement surveys, setting out exclusion zones and adherence to limitations on timing of works and that the ECOW has the authority to enforce measures identified to protect the breeding birds.

During the operational phase, most of the planned activities take place within the confines of the red line boundary and therefore avoid the protected area and its qualifying interests. However, here remains an uncertainty over the operation of the Launch Exclusion Zone (LEZ), which we understand extends to a radius of 1.8 km from the launch pad. Taking 1.8 km as the LEZ radius, the approximate area of the SAC it encompasses is approximately 625 ha, nearly two thirds of the extent of the LEZ.

The draft Visitor Management Strategy sets out the principles by which visitors will be managed. The principles follow a "Deter, Detect, Delay, Respond/Removal" model

which is focussed on the early stages, as well as providing and promoting offsite viewing alternatives. The additional information includes further detail on how individuals will be removed from the site including a commitment to do this on foot by suitably trained and equipped individuals. Vehicles will only be used in an emergency situation (where there is threat to life), an appropriate type of vehicle will be agreed through the final Visitor Management Plan and vehicle operators will be suitably trained. In the unlikely event that vehicles are deployed they will be carefully driven, avoiding soft, wet areas and not damaging the vegetation surface. Furthermore, in the unlikely event that a vehicle needs to be used, it will take the least damaging route in and out, informed again by operator training. All of this substantially reduces the likelihood of vehicle impacts to the vegetation and of repeat damage to the same locations.

If applied, this strategy will help protect the habitats supporting the SPA interests and are not re-assessed here. Specifically in relation to the bird species identified as being likely to be affected during the operational phase (dunlin, golden plover and greenshank) the following principles are relevant:

- *during the bird breeding season (15 March to 15 August) the location of "spotters" used to detect intruders would be chosen with input from ornithologists,*

- *during the bird breeding season any use of drones would be timed to avoid the most sensitive times of day and would not fly below 100m (above ground level),*

- *training would be provided to relevant individuals working on and adjacent to the protected areas to minimise impacts on breeding birds,*

- *the minimum number of security staff would be deployed onto the site to deal with intruders, and they would be trained to avoid the most sensitive areas where possible,*

- *vehicles of an agreed type would only be used in an emergency and by experienced and trained operatives.*

The combination of these measures will, if adopted fully, mitigate the likely impacts, including repeat impacts and would be sufficient to ensure the conservation objectives for the species are met.

Post launch reviews will be put in place to assess the effectiveness of the Visitor Management Plan after each launch event and a breeding bird monitoring protocol will be agreed to assess the levels of impact on the qualifying interests. We should have the opportunity to input to both the post launch reviews and the assessment of the annual monitoring to advise on the impacts, including cumulative impacts, and the measures required to further reduce any effects to a minimal level. If these measures are adopted into the final Visitor Management Plan at least six months prior to the first launch, to allow time for planning and implementation, then the combined measures would be sufficient to avoid an adverse effect on site integrity for the bird species listed

above.

The following mitigation should be conditioned to ensure impacts on the SPA (and SAC habitats see below) are appropriately mitigated:

Mitigation	Reason
A detailed Visitor Management Plan (VMP) should be agreed by The Highland Council, in consultation with SNH, at least six months prior to the first launch taking place. This should include an agreed post launch review arrangement and a monitoring protocol for the SAC and SPA qualifying interests. The VMP should also provide for the necessary changes in visitor management as identified by NatureScot, for the duration the site is in use.	To ensure the principles in the revised Visitor Management Strategy (May 2020) are carried forward to the detailed Visitor Management Plan (VMP) and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying habitats and species is required to inform, and where necessary change, future visitor management. Changes may be required in response to predicted effects and effects which have not been predicted due to the novelty of the proposal, the evolution of technologies, changes in visitor behaviour and unforeseen factors.

Further to the above, in its response to The Council of 12 March 2020, SNH (now NatureScot) advised that:

Disturbance can be mitigated [during the construction phase] *by the measures included in the outline CEMP & Species Protection Plans (SPP). The SPP contains reference to the intention to provide a Breeding Bird Protection Plan (BBPP). The detailed CEMP and BBPP, to be developed, should also be agreed with THC, in consultation with SNH, to ensure mitigation is followed through and, where necessary, clarified prior to commencement of works. This includes necessary measures to avoid*

disturbance such as pre-commencement surveys, setting out exclusion zones and adherence to limitations on timing of works.

[T]*he following mitigation measures should be conditioned:*

	Mitigation	Reason
1.	Implementation of a Breeding Bird Protection Plan (BBPP). The latter should be agreed with THC, in consultation with SNH prior to the commencement of works.	To ensure mitigation is followed through, and where necessary clarified prior to commencement of works. This includes necessary measures to avoid disturbance which may include restrictions to the construction period.

These measures should be implemented in conjunction with the requirement for a detailed Construction Environment Management Plan (CEMP), and for works to be carried out under the supervision of a suitably qualified Ecological Clerk of Works as set out for the Special Area of Conservation below.

It is concluded that the implementation of the mitigation described above during the construction and operational phases of the development is sufficient to avoid an adverse effects on the integrity of the SPA.

Caithness and Sutherland Peatlands Special Area of Conservation (SAC)

In its response to the Council of 01 July 2024, NatureScot advised that the proposal is likely to have a significant effect on the following qualifying interests of the SAC during the construction and operation phases of development.

- Blanket bogs
- Depressions on peat substrates of the *Rhynchosporion*
- Natural dystrophic lakes and ponds,
- Northern Atlantic wet heaths,
- Otter.

Their advice is set out below:

For the construction phase, a likely significant effect on the habitats above can be concluded but information provided shows that the adverse effect on site integrity can be avoided. The Construction Environment Management Plan (CEMP) provides adequate mitigation including the on-site Ecological Clerk of Works (ECOW) having the authority to intervene if environmental risks are being taken or damage caused. The CEMP plan is carried through unaltered to this proposal.

The mitigation measure set out for the SPA above should be conditioned to ensure the following habitat conservation objectives are met and avoid an adverse effect on site integrity for these habitats:

− Distribution of the habitats within site.

− Structure and function of the habitats.

− Processes supporting the habitats.

Regarding otter, a likely significant effect can be concluded but information provided shows that an adverse effect on site integrity can be avoided. An otter survey has been carried out and Species Protection Plan (SPP) produced. The SPP proposes mitigation including pre-construction survey, tool-box talks, presence of an ECOW and other suitable, good-practice measures. The survey appears competent and the mitigation in the SPP will ensure the following conservation objectives are met and will avoid an adverse effect on site integrity for this species:

- *Distribution of the species within the site.*
- *No significant disturbance of the species.*

During the operational phase, most of the planned activities take place within the confines of the red line boundary and therefore avoid the protected area and its qualifying interests. However, there remains an uncertainty over the operation of the Launch Exclusion Zone (LEZ), which we understand extends to a radius of 1.8 km from the launch pad. Taking 1.8 km as the LEZ radius, the approximate area of the

SAC it encompasses is approximately 625 ha, nearly two thirds of the extent of the LEZ.

The draft Visitor Management Strategy, as described above for the Caithness and Sutherland Peatlands SPA, sets out the principles by which visitors will be managed. The combined measures would be sufficient to avoid an adverse effect on site integrity for the habitats listed above.

- *the minimum number of security staff would be deployed onto the site to deal with intruders, and they would be trained to avoid the most sensitive areas where possible,*
- *vehicles of an agreed type would only be used in an emergency and by experienced and trained operatives.*

The combination of these measures will, if adopted fully, mitigate the likely impacts, including repeat impacts and would be sufficient to ensure the conservation objectives for the species are met. We should have the opportunity to input to both the post launch reviews and the assessment of the annual monitoring to advise on the impacts, including cumulative impacts, and the measures required to further reduce any effects to a minimal level. If these measures are adopted into the final Visitor Management Plan at least six months prior to the first launch, to allow time for planning and implementation, then the combined measures would be sufficient to ***avoid an adverse effect on site integrity*** *on peatland habitats.*

There remains a potential issue in relation to the effects of nitrogen deposition on the SAC habitats and SPA supporting habitats. As presented, the Environmental Impact Assessment contains insufficient information to assess the impacts and so it cannot be determined that an adverse effect on site integrity can be avoided. We understand that this issue will be examined in more detail at the licencing to operate stage and is more appropriately covered under the Space Industry Act (SIA). Similarly, although catastrophic accidents would have a severe impact we will rely on the SIA Regulations to ensure the likelihood is reduced to mitigate the likelihood and consequent risk that avoids an adverse effect on site integrity.

Further to the above advice SNH advised in its response of 12 March 2020 that the proposal should be subject to conditions so that the works are undertaken strictly in accordance with the mitigation below:

	Mitigation	Reason
1.	The detailed CEMP, should be agreed with THC, in consultation with SNH prior to the commencement of works.	To ensure suitable mitigation is included in the final, detailed CEMP to avoid damage to the qualifying interests.
2.	The ECOW should have the authority to intervene during construction including the powers to ‘stop the job’.	To ensure the CEMP and other relevant mitigation is being adhered to.

3.	Implementation of the Species Protection Plan should be a condition of planning consent.	To protect otter from disturbance.

It is concluded that the implementation of the mitigation described above during the construction and operational phases of the development is sufficient to avoid an adverse effect on site integrity for the habitats and species listed above.

HIGHLAND COUNCIL APPRAISAL OF THE PROPOSAL

- The proposal is not directly connected with or necessary to site management for conservation;
- The proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; therefore;
- An Appropriate Assessment of the implications (of the proposal) for the site in view of that site's conservation objectives is provided above and summarised below.

The impacts on the Caithness and Sutherland SPA and the Caithness and Sutherland SAC are considered in terms of the different phases of the development where different impacts would likely arise. i.e. the construction phase; operational phase and the decommissioning phase. The mitigation proposed by the applicant and NatureScot should be sufficient to address any significant risk and avoid an impact on the integrity of the designated sites and their qualifying features.

Overall, it can be therefore concluded that while likely significant effects have been identified during both the construction and operational phases of the development. there will not be an adverse effect on site integrity of either the Caithness and Sutherland SPA or the Caithness and Sutherland SAC if the mitigation set out within the appropriate assessment is applied.

Agenda Item	**4.1**
Report No	**PLN/024/20**

HIGHLAND COUNCIL

Committee: North Planning Applications Committee

Date: 26 June 2020

Report Title: 20/00616/FUL: Highlands and Islands Enterprise
Land 2600m South West of Dunbuie, Talmine, Tongue

Report By: Acting Head of Development Management – Highland

1. Purpose/Executive Summary

1.1 **Description:** Construction of vertical launch space port with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure

1.2 **Ward:** 01 – North, West and Central Sutherland

Development category: Major

Reason referred to Committee: Major development and more than 8 objections

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

2. Recommendations

2.1 Members are asked to agree the recommendation to Grant planning permission as set out in section 11 of the report.

3. PROPOSED DEVELOPMENT

3.1 The development comprises the erection of a vertical launch facility to allow for the launch of small satellites into space. The intention is that the site would facilitate use by several launch service providers using different launch vehicles. The launch vehicles from the site would launch at a trajectory of between 83º and 98º north, carrying earth monitoring satellites at a frequency of no more than 12 launches per calendar year.

3.2 The key elements of the development include:

- Launch Operations Control Centre – this is where launch and range control operations would take place and where a small viewing area would be located. The building would be 19.6m X 27.9m and have a maximum height of 7m. It will be finished in grey metal cladding and have a green roof which slopes to the ground to facilitate integration with the landscape. Ancillary infrastructure includes:
    - an outdoor plant area;
    - 20 car parking spaces;
    - buried bulk fire suppression tanks;
    - lightning protection; and
    - a solar photovoltaic installation.
- Launch Site Integration Facility – this is where the launch vehicles would be assembled, and the payload is loaded into the launch vehicle. The building would be 44,7 x 32.6m and have a maximum height of 11m. The walls will be finished in grey metal cladding and the roof will be finished in green metal cladding. The building would have ancillary infrastructure including
    - an outdoor plant area;
    - 19 car parking spaces;
    - buried bulk fire suppression tanks;
    - lightening protection; and
    - a solar photovoltaic installation.

  The service yard at the Launch Site Integration Facility would be enclosed with a 2.4m high fence.
- Launch Pad Complex – this is where the launch vehicles will take off from. The complex will comprise:
    - launch pad comprising of a 333m^2 area of concrete and a 1,500m^2 area of gravel;
    - fuel, oxidiser and chemical storage tanks and associated bunding (for the storage of liquid oxygen, BioLPG, Rocket Propellant, Liquid Nitrogen, and Gaseous Helium);
    - propellant conditioning plant;
    - water deluge system (comprising a 50,000 litre capacity steel tank, 5m l height);
    - strongback (comprising a 22m tower used to help erect and support the launch vehicle. This will only be in a vertical position on launch day);
    - flame diverter (approximately 2.6m in height);
    - lightening protection (comprising a 40m retractable lightning protection tower);
    - proprietary rail system (to carry the launch vehicle from the Launch Site Integration Facility to the launch pad);

- Mobile Heating, Ventilation and Air Conditioning System.

- Antenna Park – comprising an area of hard standing where telemetry and radar devices would be sited. The exact arrangement of this area would be subject to the requirements of the launch service operator. The area will be enclosed with a 2.4m high fence; and
- Access Road – this would be a 2.5km length of road. The road would generally be of 4m in width with localised widenings. 1.6km of the 2.5km road would be a floating road. The remainder of the road would comprise asphalt, concrete and unbound surfacing. The access road will require 3 watercourse crossings which will be via open bottom, half barrel culverts.

For the purposes of the assessment of the application it has been assumed that a launch vehicle of 19m in height and a diameter of 1.3m will be used. The site has been designed in a manner to allow launches of rockets fuelled by a mix of liquid oxygen (LOX) and bio-Liquified Petroleum Gas (BioLPG) or LOX and Rocket Propellant 1 (RP-1).

3.3 The applicant states that the North of Scotland is one of the only suitable areas of the UK for the location of a vertical launch facility. It further sets out that the north of Scotland is one of few suitable areas in Europe for the location of such a development. The applicant also explains that the locational suitability of a vertical launch facility is dictated by geography and physics of a vertical launch. The matters considered by the applicant include:

- Launches require to have a northerly ground track to access sun-synchronous and polar orbits efficiently. These are the most commercially desirable orbits for small satellites;
- Launch vehicles are not permitted to fly over permanently populated areas for safety reasons;

As a result of these factors, the location for a vertical launch facility requires to have a north facing coast.

3.4 When considering specific sites for a vertical launch facility in the north of Scotland, the National Space Technology Programme undertook a series of five reports which considered sites for a vertical launch facility. One of the reports, known as the SCEPTRE Report was published in 2017. This considered a range of issues including environmental impact. The report identified the Mhoine peninsular as one of three of the most promising sites. This list also included the Shetland Isles and Scolpaig, North Uist.

3.5 Access to the site would be via a new junction on the A838. There is no existing infrastructure on the site. It is proposed that potable water would be stored in 21,000 litre tanks within the Launch Operations Control Centre. A new electricity connection for the site will be required. New telecom connections will be required, and these would terminate at the launch control building. Waste water treatment will be via a private system discharging to a suitable watercourse or via groundwater.

3.6 The applicant held two public exhibitions to seek the views of the local community. These were held at Melness Community Centre on 02 October and 25 November 2019. Further to this the applicant carried out consultation events in Thurso (04 November 2019), Skerry (05 November 2019), Tongue (06 November 2019), and Durness (07 November 2019). Other consultation activities have also been undertaken.

3.7 The applicant utilised the Council's Pre-Application Advice Service for Major Developments twice in advance of the submission. The summary of the advice is provided below:

"The unique UK level development of the UKVL facility near Melness, is considered to present very significant potential development opportunities for the economy and skills base of the population of north west Sutherland, as well as also impacting on larger centres such as Dounreay/Thurso, and Inverness.

The proposal is also very likely to have unique challenges within an area notable for its natural heritage interests and wild and largely undeveloped landscape. The development of this facility has the potential to create numerous jobs in the area both directly and indirectly and could have other positive impacts on the entire north Highlands area, helping to consolidate the wider area's position as a leader in advanced technologies."

3.8 The application is supported by an Environmental Impact Assessment Report (EIAR) which contains chapters on Seascape, Landscape and Visual Impacts; Ecology; Ornithology; Water Resources; Air Quality; Noise and Vibration; Cultural Heritage and Archaeology; Traffic and Transport; Climate Change; Major Accidents and Disasters; Transboundary Considerations and a Schedule of Mitigation. The application is also accompanied by a Planning Statement; Design and Access Statement; Road Alignment details; Drainage Impact Assessment; Socio-economic Statement; and Economic Impact Statement.

3.9 The proposed development does not have a pre-determined operational life. However, the applicant has stated that following a period of 5 years of inactivity at the site, the site would be decommissioned. The applicant acknowledges that these matters related to decommissioning will not be confirmed until the time of the submission of the decommissioning and restoration plan.

3.10 The applicant anticipates that the construction period will last 15 months. This period can be defined as three key phases: Enabling Works; Main Construction Activities; and Site Demobilisation and Reinstatement. The applicant has stated it will utilise a Construction Environment Management Document throughout the construction period. This would require to be approved by the Council, in consultation with relevant statutory bodies before the start of development.

3.11 No modifications have been made to the proposed development since validation of the application. The applicant has however provided clarifications on the proposed approach to visitor management in response to the consultee comments from Scottish Natural Heritage. This information did not change the scope of the development.

3.12 To allow the proposed development to operate several licences require to be granted under the provisions of The Space Industry Act 2018. The regulations which detail the absolute requirements of the licencing procedures are to be published in 2020. Between the owner and operator of the vertical launch facility the following licences will be required:

- Operator licence – this will cover launch vehicle(s) and an operator license will also be required for the payload(s)
- Spaceport licence – the will cover the operation of the spaceport site itself
- Range services licence – this will cover the area of land, sea or air that will require to be cleared prior to a during the launch to enable the launch to take place safely.

These licences will be regulated by the United Kingdom Space Agency (UKSA).

3.13 Further to licences under the Space Industry Act 2018, several other licences would be required, including but not limited to:

- Marine Licence – this would consider the deposit of objects from space vehicles in the marine environment. This is regulated by Marine Scotland
- Approval of a Planned and Permanent Redistribution of Air Traffic - will be required though what is known by as the CAP1616 process which is regulated by the Civil Aviation Authority.
- Controlled Activities Regulations Licences – will be required in relation to discharges to the watercourse and temporary abstraction. A Construction Site Licence will also be required.

3.14 On 28 May 2020, the Highland Council were served with a direction from Scottish Government. This states that if The Highland Council are minded to grant planning permission for the proposed vertical launch facility, we are required to notify Scottish Ministers. This Direction does not commit Scottish Ministers to calling in the application, but it does reserve their right to intervene. The Direction has been served to assist in providing an overview of applications for spaceport development in the planning system.

4. SITE DESCRIPTION

4.1 The site is located on the A'Mhoine peninsula and extends to approximately 307ha with the built development and infrastructure covering 3.13ha (Chapter 5, Table 5.23 of the EIAR). There are a number of properties in the settlements to the north east and east of the application site. The settlements include Midtown (3.8km), Skinnet (4.2km), Talmine (3.7km), Achinhuagh (3.8km), Midfield (4.2km), Achinver (3.1km), Strathan (3.5km) and West Strathan (1.8km). Tongue is located 4.1km to the east of the site across the Kyle of Tongue. The closest property is 1.75km from the application site boundary. The area to the north west, west and south of the proposed development is sparsely populated.

4.2 The site is bounded to the south by the A838 road. The site itself comprises undeveloped sweeping moorland which varies in vegetation cover with underlying peat. There are a number of watercourses which run through the site including: Feith an Laisg, Alltan Dubh, Allt Unnis Choinnich and Allt an Loin Chaoil.

4.3 In terms of sites designated for ecological value, the application site contains part of the Caithness and Sutherland Peatlands Special Area of Conservation and Ramsar site as well as the Ben Hutig and A' Mhoine Sites of Special Scientific Interest. It should however be noted that the built infrastructure of the proposed development lies outwith the designated sites. The Inverhope Site of Special Scientific Interest lies to the west of the site.

4.4 Sites designated for ornithological interest within the application site include Caithness and Sutherland Peatlands Special Protection Area and Ramsar site as well as the Ben Hutig Site of Special Scientific Interest. It should however be noted that the built infrastructure of the proposed development lies outwith the designated sites. The North Sutherland Coastal Islands Special Protection Area lies to the north west of the site.

4.5 The Kyle of Tongue National Scenic Area (NSA) is located approximately 1.7 km to the east of the site at its closest point and also extends north east of the site. The Eriboll East and Witten Head Special Landscape Area is located to the north and east of the site.

4.6 The Ben Hope and Ben Loyal Wild Land Area (WLA) lies approximately 0.4 km south of the site boundary.

4.7 The application site and the surrounds accommodate valued habitats including: ground water dependent terrestrial ecosystems (GWDTEs); bog; heath; and flush. The site is used by protected species, including but not limited to otter, reptiles and water voles. The site and wider area also carries a number of ornithological interests including but not limited to merlin, white tailed eagle, golden eagle, greenshank, red-throated diver, greylag goose, golden plover, green shank, peregrine, pink footed goose, hen harrier, barnacle goose, short-eared owl, and dunlin.

4.8 Much of the application site is covered in peat. The peat depths on the site vary between 0.35m to 4.45m in depth. The majority of the infrastructure on the site is on areas of peat less than 1.5m in depth.

4.9 The site is within an area which contains a number of tourist and recreation assets. These include but are not limited to walkers upon Munros and Corbetts and local hill tops as well as promoted routes on the local road network. The Land Reform (Scotland) Act also allows for significant access rights for walkers across this countryside.

4.10 The surrounding area contains a number of historic environment features. The applicant has carried out an assessment based on an Inner Study Area (i.e. within 2km of the application site) and outer study area (i.e. within 10km of the application site). The inner study area includes Moine House as a listed building and a number of other assets that are non-designated. The outer study area contains further listed buildings, scheduled monuments and other assets that are non-designated.

5. PLANNING HISTORY

5.1	08.10.2019	19/04008/PAN Erection of vertical launch space port comprising assembly building with ancillary structures, launch operations and control centre, access roads and car parking, antenna farms, commodity farms, launch pad complex, launch towers, safety and security fencing and associated infrastructure	Closed
5.2	23.07.2019	19/02703/SCOP Proposing to develop a space hub	EIA Scoping Issued
5.3	05.02.2019	18/05855/PREAPP Project aims to launch satellites into Earth orbit from the territory of the United Kingdom	Closed
5.4	06.03.2017	17/00124/PREAPP Project aims to launch satellites into Earth orbit from the territory of the United Kingdom. The project comprises a new junction off the A838 road, a 70m diameter	Closed

concrete launch pad with an associated access road, approximately 2km in length, security and assembly buildings, hard standing areas, security fencing and surface water drainage facilities. Major Pre-Application Advice Service Meeting contact Kellie Kotze for further details.

6. PUBLIC PARTICIPATION

6.1 Advertised: Environmental Impact Assessment Application, and Schedule 3 Development

Date Advertised: 14.02.2019

Representation deadline: 15.03.2020

Timeous representations: 575 (457 in objection, 118 in support)

Late representations: 15 (11 objections, 3 support and 1 petition in support including 513 signatures at the time it was submitted)

6.2 Material considerations raised are summarised as follows:

Matters raised in objection to the application:

a) Impact on climate change as a result of the construction and operation of the proposed development;
b) Impact on natural heritage (including qualifying features of designated sites, protected species and ornithology);
c) Impact on peat land;
d) Economic benefit does not outweigh environmental impact;
e) Impact on amenity (noise);
f) Impact on tourism;
g) Impact on traffic and transport;
h) Adverse landscape and visual impact;
i) Impact of visitor management;
j) concern over this being the first element of a larger development;
k) risk to human health;
l) Contrary to the Development Plan;
m) Loss of croft land;
n) Lack of details on restoration of the site;
o) Impact on potential world heritage site designation;
p) Impact on dark skies
q) Risk of flooding
r) Impact on fisheries
s) Impact on public access
t) Impact on built and cultural heritage

Matters raised in support of the application:

a) Limited visual impact;
b) Economic benefit (jobs, population growth, regeneration);
c) Limited environmental impact due to the proposed approach to the construction and restoration of the site;
d) Potential for the development to strengthen a fragile area;
e) Potential tourism benefits;

6.3 It should be noted that some letters of support were also submitted as an addendum to a letter. These have not been considered as they were dated in advance of the submission of the application.

6.4 All letters of representation are available for inspection via the Council's eplanning portal which can be accessed through the internet www.wam.highland.gov.uk/wam.

7. CONSULTATIONS

7.1 **Tongue Community Council** support the application. It requests that a condition is attached to require a socio-economic study of the impact of employment at the site particularly in regard to housing and the impact on the community. It requests that any developer contributions arising from the development are spent within the area and that any contributions from launch costs are a minimum of 1% of each launch or £5,0000 for each launch, whichever is the greater.

7.2 **Bettyhill, Strathnavar & Altnaharra Community Council** support the application. It considers the proposal will: provide a variety of jobs; help diversification of the local economy; be a tourist facility and give support to the popularity of the NC500 route; and provide enhancement of local infrastructure. Further it considers the proposal to be a high value asset and the small footprint minimises environmental concerns.

7.3 **Durness Community Council** support the application due to the jobs it will bring to the area.

7.4 **Access Officer** does not object to the application. He notes the proposed restriction on public access rights of approximately 7hrs per launch event is not significant, subject to access along the A838 being retained.

7.5 **Contaminated Land** do not object to the application. It notes that their records do not have any previous industrial / commercial uses that would cause land contamination.

7.6 **Environmental Health Officer** does not object to the application.

7.7 **Flood Team** do not object to the application. It is satisfied that the risk of flooding of the development is low. It requests conditions to secure: no site infrastructure, with the exception of any watercourse crossings, within 10m from the top of the bank of any watercourses; and that all watercourse crossings are designed to ensure they do not impede a 1 in 200 year plus climate change flow and include an appropriate level of freeboard.

It notes that the final drainage design will need to ensure post development discharge rate does not exceed the pre-development greenfield run off rate. A condition is sought to secure the final details of the drainage design.

7.8 **Forestry Officer** does not object to the application.

7.9 **Historic Environment Team** do not object to the application. It notes that no major impacts on the historic environment are predicted and it welcomes the proposed mitigation to safeguard the three shielings. A condition is requested to secure a programme of work for the protection and investigation of historic features within the site.

7.10 **Transport Planning** do not object to the application. It highlights that while the Naver Bridge is scheduled for replacement, it is currently not suitable for a large number of HGV movements. As a result a scheme of mitigation will be required for to ensure the safety and condition of the bridge, inclusive of any mitigation work.

It notes that the daily average traffic flows on the A838 and A836 are less than 1000 vehicles per day and the number of existing HGV movements is also low. On the A836 close to Skelpick and the Naver Bridge the average daily HGV flow was 13 vehicles. It notes that peak HGV movements occur in Month 4 when 82 HGV movements per day are estimated (42 inbound and 42 outbound). This compares to the existing daily HGV flow of 13. It considers that the impacts requiring mitigation will be related to the structural condition of the roads used for the construction traffic and on road safety and the free flow of traffic particularly within the settlements and at schools. It has agreed the 17 passing places which require to be upgraded. A condition is requested to secure a construction traffic management plan.

During the operational period it notes that the peak average daily movements are estimated 94 per day (ie. 47 vehicles in). A condition requiring a Travel Plan to deal with the site operational staff during the launch campaign period is requested. It considers that no other mitigation is required to address the impact of the traffic generated by the operational staff.

The parking level is considered to be sufficient but requires some layout amendments. A condition is sought to ensure the level of parking proposed and enhancements to the staff parking layout.

It notes the difficulty in predicting the numbers of spectators that will be attracted to the vicinity of the site to view the launches. A peak is expected for the first few launches and then it seems likely that the numbers will reduce considerably. It notes that the predicted mode split for visitors to the site as being unrealistic and considers that a condition to secure a visitor management plan and parking control, with associated mitigation will be required. This would also require a Launch Day Traffic Management Plan.

7.11 **Civil Aviation Authority** do not object to the application

7.12 **Crofting Commission** do not object to the application. It notes that this is land that is more suitable from a crofting perspective for other developments than that of better quality croftland. It states that the land has been classified as 6.3 in terms of Land Capability for Agriculture in Scotland which entails it is only suitable for rough grazing and not capable of agricultural improvement. It notes that as it is common grazing land it is used for traditional stock rearing of sheep and cattle, and there may be continuation of some traditional peat cutting for domestic purposes. It explains that there are 82 croft holdings that have shared grazings rights on the common grazing but a minority of these will currently be used for traditional grazings purposes. It considers that based on current grazings use, the proposed development would not appear to have a major impact upon customary crofting practices. It recognises that there will be loss of land but explains that the use of land for traditional pastoral purposes has declined. It has set out that one crofters use of the common grazings will be directly affected by the development. The Crofting Commission consider that any loss of land is outweighed by the wider social and economic benefits that will be derived from the potential development.

It recognises that the land requires to be utilised in a manner that enables the continuity and development of the community. Employment opportunities and the development of the wider economy are important for crofting and enabling the

retention of active crofters and crofting families within crofting communities. It explains that it understands that the proposed development will offer employment opportunities. It considers that the proposed development has the potential to assist the retention of an active crofting population to invest in croft housing and the management of croftland.

It notes the potential disturbance to livestock and considers that consultation should be undertaken with an appropriate veterinary authority.

It concludes that in terms of sustaining active crofting communities in economically fragile areas, sometimes the loss of some croft land and its associated environmental benefits has to be countenanced and effected.

7.13 **Health and Safety Executive (Hazardous Substances)** has no comment to make on the application.

7.14 **Highlands and Islands Airports Limited** do not object to the application. It notes that the development would not infringe safeguarding criteria for Wick Airport. It requires continued engagement regarding launch notification procedures.

7.15 **Historic Environment Scotland** do not object to the application. It agrees with the methodology used to undertake the assessment of built and cultural heritage. It notes that there would be a minor effect on the settings of: Caisteal Bharraich Tower (SM1896), Tongue House (LB18458), Tongue House (GDL375), and Tongue Parish Church (Church of Scotland), burial ground and gatepiers (LB18456). It considers that the degree of change to the view in the setting of these features is low. It notes that the Noise and Vibration Assessment concludes that the proposal will have no adverse effect on the designated heritage assets in the outer study area.

7.16 **Marine Scotland (Licensing Operations Team)** do not object to the application. It notes that the deposit of objects from space vehicles, such as the rocket stages, in the marine environment would require a marine licence.

7.17 **Ministry of Defence (Defence Infrastructure Organisation)** do not object to the application. It notes that the application is outside of any Ministry of Defence safeguarding areas.

7.18 **National Air Traffic Services** do not object to the application. It notes that the proposed development does not conflict with its safeguarding criteria.

7.19 **Office for Nuclear Regulation** did not respond to the consultation

7.20 **Scottish Environment Protection Agency (SEPA)** object to the application unless conditions are applied.

It considers that the impact on peat in relation to the proposal is compliant with the Development Plan and Scottish Planning Policy as the development has: avoided locating development on areas of deepest peat; avoided areas of undisturbed peat where possible; minimised the footprint of the development; sought to employ construction techniques to minimise impacts on peat. It requests a condition to ensure the foundations for the Launch Operations Control Centre and the rail track are piled foundations.

The 23,714m^3 of peat to be excavated is noted, with 5,000m^3 of this to be used in reinstatement works post construction. It welcomes the use of the remaining 18,443m^3 of peat being used in peatland restoration works over an area of around 20.5 hectares of damaged peatland. It welcomes the provisions of the Outline

Habitat Management Plan which will facilitate the restoration of 67.5ha of degraded peatland. It requests conditions to secure a finalised Peat Management Plan and a Habitat Management Plan.

It understands that the amount of carbon lost through construction as a result of peat excavation should be sequestrated back into the peat as a result of the proposed restoration works. It questions whether it would be possible to increase the area of peatland management to maximise carbon sequestration to the future level of activity of the development.

It notes that the only significant loss of Ground Water Dependant Terrestrial Ecosystems on the site is the M6 flush to the north of the Launch Site Integration Facility building. However, it considers the loss of the habitat acceptable if impacts are minimised and suitably compensated. A condition is sought to ensure drainage plans are produced which would treat the distinct channel of M6 flush is treated like a watercourse.

It is content that the development minimises impacts on the water environment. It requests a condition to secure the design details of watercourse crossings. It welcomes the buffer of at least 50m between infrastructure and watercourses. It notes that the launch pad is only 40m away from a watercourse but considers this is acceptable due to the impact having this in a different location would cause.

The need for water abstraction for a temporary period during construction is acknowledged and it advises that a it is likely it would be capable of being authorised by SEPA.

In terms of surface water, it is content that the approach to surface water drainage will provide adequate treatment of run-off while minimising impacts on local habitats and peatland. It requests a condition to secure the final detailed design of the surface water drainage features. It explains that the deluge drainage system in operation at the launch pad will be treated using an oil interceptor and filter drain prior to discharge to a local watercourse. It request a condition to secure monitoring of the discharge post launch, with the need for review and mitigation if required.

Foul water drainage is considered acceptable by SEPA however, it requests that an alternative solution which will have a lower impact on the environment is achievable that it should be implemented. A condition is requested to secure this.

It requests conditions to ensure the mitigation outlined in the Schedule of Mitigation is secured. Further it considers a condition should limit development to only the areas identified in the Extent of Works Plan.

Confirmation is provided that the level of fuels, oxidisers and other chemicals store on site are at a level at which the Control of Major Accident Hazard regulations apply.

It requests that should the development not be used for a period of 5 years that the site should be decommissioned. It also recommends a bond to ensure adequate funds are in place to ensure suitable restoration.

SEPA assume a visitor management plan will be secured by condition along with environmental monitoring of the plan.

7.21 **Scottish Natural Heritage (SNH)** object to the application unless the development is constructed and operated strictly in accordance with the mitigation detailed in their response. Initially it objected on the lack of information related to visitor management in relation to the impact on European designated sites. The applicant subsequently provided SNH with a document clarifying how the visitor management strategy could be implemented. Following that document being provided SNH

consider that there would be no likely significant effect on the integrity of the European designated sites subject to mitigation be secured as a condition and the mitigation being strictly implemented. A detailed Visitor Management Plan, Construction Environmental Management Plan (including species protection plans) and provision of an Ecological Clerk of Works require to be secured by condition.

It notes some effects on the qualities of the Kyle of Tongue National Scenic Area but it considers that the special qualities of the National Scenic Area will remain well expressed. To ensure this is the case it requires conditions to ensure the retraction of the lightning tower when the rocket is not on the launch pad and a detailed lighting plan be produced and implemented.

It is in agreement with the conclusions of the assessment on the impact on Wild Land Areas produced by the application that the proposal would not have a significant effect on the wild land area qualities of the Ben Hope – Ben Loyal Wild Land Area (WLA38).

Advice is provided setting out that a decommissioning plan is sought and accompanied by an appropriate bond.

7.22 **Scottish Water** did not respond to the consultation.

7.23 **Transport Scotland** do not object to the application. It requests conditions to secure a construction traffic management plan and a launch day traffic management plan.

8. DEVELOPMENT PLAN POLICY

The following policies are relevant to the assessment of the application

8.1 Highland Wide Local Development Plan 2012

28 - Sustainable Design
29 - Design Quality and Place-making
30 - Physical Constraints
31 - Developer Contributions
36 - Development in the Wider Countryside
47 - Safeguarding Inbye/Apportioned Croftland
55 - Peat and Soils
56 - Travel
57 - Natural, Built and Cultural Heritage
58 - Protected Species
59 - Other important Species
60 - Other Importance Habitats
61 - Landscape
63 - Water Environment
64 - Flood Risk
65 - Waste Water Treatment
66 - Surface Water Drainage
72 - Pollution
73 - Air Quality
77 - Public Access

8.2 **Caithness and Sutherland Local Development Plan 2018**

The proposal is within an area identified for Flexible Community Led Development but is neither allocated or safeguarded for development by an allocation within the Local Development Plan. There are no specific policies relevant to the proposal included within the Caithness and Sutherland Local Development Plan. However, the Local Development Plan identifies Special Landscape Areas within the plan area.

8.5 **Highland Council Supplementary Planning Policy Guidance**

Construction Environmental Management Process for Large Scale Projects (August 2010)
Developer Contributions (November 2018)
Flood Risk and Drainage Impact Assessment (Jan 2013)
Highland Historic Environment Strategy (Jan 2013)
Highland's Statutorily Protected Species (March 2013)
Managing Waste in New Developments (March 2013)
Physical Constraints (March 2013)
Public Art Strategy (March 2013)
Special Landscape Area Citations (June 2011)
Standards for Archaeological Work (March 2012)
Sustainable Design Guide (Jan 2013)

9. OTHER MATERIAL POLICY CONSIDERATIONS

9.1
- National Planning Framework for Scotland 3
- Scottish Planning Policy
- Planning Advice Note (PAN) 1/2011: planning and noise
- Circular 1/2017 – Environmental Impact Assessment
- PAN 60 – Planning for Natural Heritage
- National Space Policy (UK Government)

10. PLANNING APPRAISAL

10.1 Section 25 of the Town and Country Planning (Scotland) Act 1997 requires planning applications to be determined in accordance with the development plan unless material considerations indicate otherwise.

Determining Issues

10.2 This means that the application requires to be assessed against all policies of the Development Plan relevant to the application, all national and local policy guidance and all other material considerations relevant to the application.

Planning Considerations

10.3 The key considerations in this case are:

a) Development Plan and other planning policy;
b) Economic Development;
c) Construction;
d) Roads, Transport and Wider Access;
e) Water, Flood Risk, Drainage and Peat (inc carbon emmissions);
f) Natural Heritage including ornithology;
g) Built and Cultural Heritage;
h) Design, Landscape and Visual Impact (including Wild Land Areas);

i) Impact on Croft Land;
j) Noise and Air Quality;
k) Other material considerations.

Development plan/other planning policy

10.4 The Development Plan comprises the adopted Highland-wide Local Development Plan (HwLDP), Caithness and Sutherland Local Development Plan (CASPlan) and all statutorily adopted supplementary guidance. There are no site specific policies affecting this application site within the Caithness and Sutherland Local Development Plan.

10.5 The most relevant policies for determination of the application is set out in the Highland-wide Local Development Plan. The primary policy for determination of the application in so far as it relates to the location of the development is Policy 36 (Wider Countryside). The preamble to Policy 36 sets out that the Council supports development of rural areas because this will help to maintain population, infrastructure and services. This policy requires consideration of the extent which developments are acceptable in terms of siting and design; pattern of development; compatibility with landscape character and capacity; loss of locally important croft land; and servicing. It states that regard will be had to development in Fragile Areas (the development is within a Fragile Area as defined by HIE) in relation to maintaining population and services by helping to re-populate communities and strengthen services. These matters are considered in this report. Any development assessed against this policy also requires to be considered against all other relevant policies of the HwLDP. Such an approach is consistent with the concept of Sustainable Design (Policy 28) and aim of Scottish Planning Policy to achieve the right development in the right place; it is not to allow development at any cost.

10.6 A number of other relevant polices are contained within the HwLDP and required to be considered. If the Council is satisfied that the development will not be judged significantly detrimental under the terms of the policies of the HwLDP then the application will accord with the Development Plan.

Caithness and Sutherland Local Development Plan (CASPlan)

10.7 The CASPlan states that Special Landscape Areas (SLAs) are regionally valuable landscapes which are intended to protect and enhance unique and important landscape qualities and encourage the enjoyment of these areas. The boundaries of the SLAs are set out in the CASPlan. Policy 57 of the HwLDP provides for the protection of these areas and is accompanied by a background paper “The Assessment of Highland Special Landscape Areas” - both of these are used to assess the landscape impact of any proposal on the integrity of a SLA.

10.8 The CASPlan Vision and Spatial Strategy for the area for the area sets out a series of outcomes related to communities, employment, connectivity, and environment and heritage. The contribution of the proposal will be considered through the material consideration pertinent to the determination of the application.

Scottish Planning Policy

10.10 Scottish Planning Policy (SPP) advances principal policies on Sustainability and Placemaking, and subject policies on A Successful, Sustainable Place; A Low Carbon Place; A Natural, Resilient Place; and A Connected Place. It also highlights that the Development Plan continues to be the starting point of decision making on

planning applications. The content of SPP is a material consideration that carries significant weight, but not more than the Development Plan, although it is for the decision maker to determine the appropriate weight to be afforded to it in each case.

10.11 Through the presumption in favour of development that contributes to sustainable development, SPP is clear that the planning system should support economically, environmentally and socially sustainable places by enabling development that balances the costs and benefits of a proposal over the longer term. SPP states that decisions should be guided by principles set out in Paragraph 29 which includes consideration of net economic benefit; efficient use of existing land capacities; supporting climate change mitigation and adaptation; and protection, enhancement and promotion of access to natural heritage. SPP recognises that the need for energy and the need to protect and enhance Scotland's natural and historic environment must be regarded as compatible goals. National policies highlight potential areas of conflict but also advise that detrimental effects can often be mitigated or effective planning conditions can be used to overcome potential objections to development.

10.12 While it is currently under review, the Government's approach to spatial planning in Scotland, National Planning Framework 3 (NPF3) is a material consideration that should be afforded weight in the planning balance.

Other relevant policy

10.13 The National Space Policy was published by the UK Government in 2015. The policy sets out the roles and responsibilities for space in the UK. In doing so it highlights that the UK Space Agency (UKSA) is responsible for the government's civil space programmes including policy, regulation and delivery. This sets out the recognition of the strategic importance of space to the UK.

10.14 The Paris Agreement sets out a framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. Through this Agreement, Local Authorities were invited to scale up efforts and support actions to reduce emissions; build resilience and decrease vulnerability to the adverse effects of climate change.

10.15 Further to the above, in late 2019 the Scottish Government's targets for reduction in gases were amended by The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. This sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030, 90% by 2040. When reaching a decision on applications, Members will be required to consider whether the development facilitates a reduction in greenhouses gases or if not whether mitigation can be put in place to off-set the impacts of the proposed development.

Economic Development

10.16 Notwithstanding any significant impacts that this proposal may have upon the other matters, the development could be seen to be compatible with Scottish Government policy and guidance due to the economic benefits and opportunities which may be afforded by such a proposal. These have been both supported and contested in representations to the application.

10.17 The proposal for a vertical launch facility for the launch of small earth monitoring satellites into space would be the first of its kind in the UK or Europe. There are limited other similar facilities in the world with only two that could be comparable: Rocket Lab at Mahia Peninsula North Island New Zealand; and Pacific Spaceport Kodiak Island Alaska.

10.18 The applicant has submitted an Economic Impact Assessment in support of the application. The assessment undertaken by the applicant has identified that jobs would be secured and created as a result of the proposed development. This includes jobs at the development site during construction, operation, and in tourism and fabrication. The assessment has estimated that by 2024, across Scotland a total of 177.3 full time equivalent jobs would be supported, with 139.5 of these in the Highlands and Islands. It is estimated that 61.1 full time equivalent posts could be in Caithness and Sutherland of which 43.6 posts could be in Melness and Tongue. When taking into consideration the indirect and induced activity elsewhere in the supply chain for the proposed development, the applicant estimates that by 2024 the development would support 254.2 full time equivalent posts in the Highlands and Islands.

10.19 Representations have challenged these figures and consider that these are over inflated or that the higher skilled jobs would not be available to existing residents in the local area. Many have cited academic research into economic benefits of the which was carried out in 2019.

10.20 Overall, the applicants' assessment estimates that the Gross Value Added of the proposed development to the Highlands and Islands is £17.3m by 2024. When taking into account indirect and induced activity elsewhere £28.4m

10.21 Representations have challenged these figures and consider that these are over inflated or that the higher skilled jobs would not be available to existing residents in the local area. Many have cited academic research into economic benefits of the which was carried out in 2019. Representations have also highlighted the potential impact on tourism of the proposed development, particularly as a result of impact on the landscape and ecotourism in relation to the Mhoine peninsula and the North West Geopark.

10.22 As well as figures presented in the Economic Impact Assessment, the applicant has highlighted other potential socio-economic benefits of the proposed development including, benefits to young people and wider community benefits such as the potential to facilitate a reversal of the population decline in the area and how this can help sustain local services.

Construction

10.23 It is anticipated that the construction period for the development would take 15 months.

10.24 Developers have to comply with reasonable operational practices with regard to construction noise so as not to cause nuisance. Section 60 of the Control of Pollution Act 1974 sets restrictions in terms of hours of operation, plant and equipment used and noise levels etc. and is enforceable via Environmental Health. Some flexibility may be required at particular points within the construction period as activities may involve specialist labour and could be weather dependent.

Generally given the location of the proposed development it is not considered that the construction of the proposed development will have an adverse impact on residential amenity.

10.25 The project anticipates the deployment of a Construction Environmental Management Document (CEMD) in association with the successful contractor engaged. This should include a site specific environmental management procedures which can be finalised and agreed through appropriate planning conditions with the local Planning Authority and relevant statutory consultees. For the avoidance of any doubt submissions are expected to be "plan based" highlighting the measures being deployed to safeguard specific local environmental resources and not simply re-state best practice manuals. Due to the scale of the development SEPA will control pollution prevention measures relating to surface water run off via a Controlled Activities Regulations Construction Site Licence.

10.26 In addition to the requirement for submission and agreement on a CEMD, the Council will require the applicant to enter into legal agreements and provide financial bonds with regard to its use of the local road network (Wear and Tear Agreement) and final site restoration (Restoration Bond). In this manner the site can be best protected from the impacts of construction and for disturbed ground to be effectively restored post construction and operational phases.

10.27 Should the development be granted consent, a Community Liaison Group should be set up to ensure that the community council and other stakeholders are kept up to date and consulted before and during the construction period.

Roads, Transport and Wider Access

10.28 The access to the site will be taken from the A838. The applicant is seeking to use a model of operation which allows multiple Launch Service Providers (LSP). In the EIAR it is assumed that the LSP will transport the rockets to the site in a number of parts and then the rocket will be assembled on site in the Launch Site Integration Facility. The routes to the application site have a number of constraints which the applicant has been made aware of through consultation with the Council. The applicant has identified their route to site for construction and operation of the development will be via the A9 and A836 before continuing onto the A838 to the site.

10.29 In support of the application, the applicant undertook automated traffic counts on the A838 east of the site, A836 and A839 during June 2019. This month is considered a neutral month for traffic counts and it will include a proportion of tourist traffic. The counts demonstrated that the 24-hour daily average traffic flows on the A838 and A836 are less than 1000 vehicles per day. Transport Planning note that this is relatively low for A class routes. The number of existing HGV movements was recorded as being low with average number of HGV movements being 13 on the A836 close to Skelpick and the Naver Bridge.

10.30 During construction HGV movements will peak in month 4 of the construction programme when 82 HGV movements per day are estimated (42 inbound and 42 outbound). This compares to the existing daily HGV flow of 13. Throughout the full 15 months of the estimated programme the increase in HGV traffic is greater than 30% and is therefore significant. Transport Planning consider the impact in HGV movement is 'extra-ordinary' in terms of Section 96 of the Roads (Scotland) Act

1984 where the applicant do not consider the effect is significant. The view of Transport Planning is supported and mitigation for the impacts of development is required during the construction period.

10.31 The Naver Bridge on the A836 near Bettyhill may not be suitable for significant numbers of HGV vehicles in its current form due to the design and strength of the bridge. It is programmed to be replaced by the Council. Construction is scheduled to commence in 2023/24 with a total estimated scheme cost of £7M. The applicant has commenced an assessment of the load of the bridge but it has not yet been completed. Given the nature of the structure and the lifeline link it provides for communities, is it hugely important that the proposed development does not have an adverse impact on either the safety or undue deterioration of the bridge. The applicant has been made aware that it is possible that the structure could be assessed as not suitable to support the short-term increase in HGV loading required for construction of the Space Hub. If appropriate mitigation to resolve this issue is not identified and provided prior to commencement of works, then the development will not be allowed to commence until the Naver Bridge has been replaced. These matters have been highlighted to the applicant and any mitigation required will be secured by condition.

10.32 During the operation of the development limited HGV movement is anticipated, with an average of 4 HGV movements per day during launch campaigns. Given the scale of the development operation, no abnormal loads are proposed during the operation of the development. Some of these movements will include hazardous loads of Kerosene, Liquified Petroleum Gas, LOX and liquid nitrogen. Transport Planning have accepted that no further assessment is required due to the type and quantity of the proposed propellants.

10.33 It is estimated that an average of 94 vehicle movements for staff will occur during launch events. 39 car parking spaces are to be provided on site to accommodate the staff. This is considered acceptable to Transport Planning. However, the layout of the car parking and approach to staff travel to promote the use of sustainable modes of transport requires to be refined. This can be secured by conditions which require a workforce travel plan and a finalised layout of the car parks.

10.34 As stated by Transport Planning, the potential spectator traffic generated by the development on launch days is likely to have a significant impact on the operation of the surrounding road network regarding traffic capacity and access for emergency services particularly during the early phases. While visitors are not being directly invited by the site operation they are highly likely as a consequence of the development.

10.35 The applicant anticipates that a peak in visitors to the site for the first launches and then it seems likely that the numbers will reduce considerably. The Transport Assessment estimates that a total of 1100 spectators will visit the site for the launches. In doing so, it has been assumed with 805 traveling by car (4 in each car) and 295 travelling by coach (59 per coach). This is considered to be an over ambitious modal split. Transport Planning consider that it could be assumed that around 20% of spectators will visit in small buses of around 16 people with the remaining numbers traveling by car with an average occupancy rate of 2.5. This would equate to 14 minibus trips and 352 car trips to the site. This is a total of 732 movements rather than the 450 movements identified by the applicant. Transport Planning consider that the volume of spectator traffic for the first launches has the capability of having a severe, albeit short term impact on the local road network.

The impact may be particularly acute given the routes in the area have single track sections which, if blocked, would lead to impacts on other fragile routes. Without significant traffic and visitor management this impact would not be acceptable. It is considered that the provision of parking at suitable locations to view the launch (including provision for parking of campervans), park and ride facilities, and the use of more sustainable forms of travel would reduce the impacts. This will require significant investment by the applicant and potentially require further planning applications. A Visitor Management Plan can secure details of such mitigation, however certain interventions may require their own standalone planning permission. These will be judged on a case by case basis, however the cumulative effects of these will need to be considered in the context of the EIAR which has been produced for this application.

10.36 Transport Scotland do not consider there to be significant effects on the trunk road network. It does however request conditions to secure details of a Visitor Management Plan and a Construction Traffic Management Plan.

10.37 In terms of recreational access to the outdoors there is little or no known recreational access use of the land within the redline boundary of this application. The majority of the application site will continue to be accessible in relation to the access rights afforded by the Land Reform (Scotland) Act 2003. However, it is noted that access can be restricted by provisions set out in the Space Industry Act 2018 with regard to particular elements of the spaceport and its operational area.

10.38 Depending on how launch day activities are managed, there is potential for disruption for recreational users of the A838. The route forms part of the NC500 and is increasingly a route for cycle touring. It is noted that disruption to these users, even if only for short periods of time, is more significant as cyclists have limited protection from the elements. Therefore any Visitor Management Plan must ensure it caters for all users of the road network.

10.39 The Access Officer has requested that provision is made for non-motorised users into the site itself along the access track. While this would normally be supported on developments such as wind farms, there is a risk that given the location of the proposed development this would allow for potentially easier access to the surrounding European designated site. This is not appropriate given the potential damage that could be caused by an increase in walkers across the areas which contain qualifying features.

10.40 Overall, it is considered that while the development will challenge the capacity of the existing infrastructure in the area, through both the construction and operational phases of the development, an appropriate package of mitigation can be secured by condition. The mitigation has the potential to make significant improvements to the existing road infrastructure in the area which will have benefits for both local road users and tourists.

Water, Flood Risk, Drainage and Peat

10.41 SEPA are satisfied that the development minimised direct impacts on the water environment. Two significant watercourse crossings (over the Allt Alasdair Chattaich and the Allt an Dubh), and nine more minor crossings of man-made ditches are required. Both SEPA and the Flood Team are generally content with the level of detail provided. The crossings will include circular culverts and single

span bridges in the form of half barrel culverts. Nevertheless, conditions will be applied to ensure that the crossings are appropriately designed and sized in order to avoid the risk of flooding.

10.42 The EIAR is clear that a Construction Environmental Management Document / Plan (CEMD) will be in place to ensure that potential sources of pollution on site can be effectively managed throughout construction. An outline CEMD is contained within the Technical Appendix to the EIAR, this is broadly acceptable. The CEMD needs to be secured by planning condition. This will ensure the agreement of construction methodologies with statutory agencies following appointment of the contractor and prior to the start of development or works. In addition to this given the scale of the project a Construction Site Licence will be required. This process is regulated by SEPA under the Controlled Activities Regulations.

10.43 The applicant has submitted details of the proposed surface water treatment. This includes the use of a green roof on the Launch Operations Controls Centre, swales, permeable surfaces, filter trenches and a wetland. SEPA are content that the approach taken should provide adequate treatment of surface run-off while minimising impacts on local habitats and peatland. Details of the SuDS plan can be secured by condition to allow final assessment by SEPA and the THC Flood Risk Management Team. The SuDS will not be adopted by the Council, but it will still require to be designed in a manner which accords with the CIRIA SUDS Manual.

10.44 The nature of the development requires a deluge system. This will release a significant amount of water across the launch pad and surrounding area during the launch of any rocket. The tank used to store the water will have a capacity of 50,000 litres. This water will be used to dampen acoustic loads on the launch pad and reduce the temperature of the exhaust gases from the rocket, thus providing a level of protection to the surrounding habitats. Given the rate of water discharge it is anticipated that there may be limited areas of surface water flooding in the vicinity of the launch pad.

10.45 Use of a deluge system has significant benefits to the environment but it also requires careful monitoring in relation to the water environment and habitats. The EIAR identifies that the deluge system will utilise rain water topped up with mains water. Further, it will collect and filter the water used for deluge purposes at each launch. Given the combined nature of the system an overflow system, which discharges to a local watercourse, is required. The applicant has set out that the level of contaminants from the overflow are expected to be minimal. Watercourse monitoring will be required to ensure that this is the case and if required modifications to the treatment system will have to be implemented. If the deluge system needs draining or cleaning, the water will be removed and disposed of at a suitably licensed facility and not discharged to the watercourse. This can be secured by condition.

10.46 The site infrastructure is not considered to be at risk of flooding. However the use of the deluge system during launch highlights that there may be areas of surface water flooding. It is proposed that any watercourse crossings are designed to accommodate a 1 in 200 year flood event plus and allowance for climate change. Further, the development proposes the use of Sustainable Drainage Systems (SuDS) to attenuate run off and filter out any potential pollutants. Details of the SuDS plan can be secured by condition to allow final assessment by SEPA and the THC Flood Risk Management Team.

10.47 In relation to waste (foul) water from the proposed development, it is anticipated that buildings will be served by a waste water treatment plant which reduces ammonia to a maximum of 5 mg/l with discharge to a watercourse. SEPA consider that this would be able to be authorised under a Controlled Activities Regulations Licence. The applicant has however identified that it may be possible to modify this system so that it could discharge to land closer to the buildings. SEPA and the Council would welcome this approach but would be content with the proposed system given the low level of contaminant. A condition will be applied to set out that the proposed solution can be implemented unless an alternative solution, which has less impact on the environment, is found to be deliverable.

10.48 The application site, and the surrounding area, is home to a number of Ground Water Dependent Terrestrial Ecosystems (GWDTEs). There have been extensive discussions between the applicant and SEPA at the pre-application stage in relation to site layout and GWDTEs. While impacts on GWDTEs have largely been avoided or minimised, there is an area of M6c (flush habitat) that will be lost to the north of the Launch Site Integration Facility. SEPA are however content that, subject to the impacts being minimised by design of the drainage system in this area, the loss is acceptable. Further they welcome the peatland improvement works being undertaken and consider that this will provide suitable compensation for the loss of the GWDTE.

10.49 Peat is a hugely important resource to the sequestration of carbon. It is also host to a number of unique and protected habitats. It is clear that impacts on peat are unavoidable if the proposed development were permitted and this matter is of concern as highlighted in a significant number of representations. However, SEPA consider that, in so far as it relates to their interests, the proposal accords with the requirements of the HwLDP and Scottish Planning Policy. It considers this to be the case for the following reasons:

- Avoidance of development on the areas of deepest peat by measures such as moving the access track between the main road and first watercourse crossing further west;
- Avoidance of undisturbed peatland where possible by measures such as moving the LOCC building, construction compound and turning head onto areas of peatland which has been impacted by peat cutting and road works;
- Minimisation of the footprint of the development by reducing the width of the access track and moving the access track and rail line into the same development corridor; and
- Proposals to employ construction techniques to minimise impacts including putting in place suitable drainage, the use of floating track and piling of building and infrastructure foundations.

10.50 Peat probing has been undertaken across the locations of the proposed site infrastructure. Based on this the outline Peat Management Plan (oPMP) set out in Technical Appendix 5.9 of the EIAR, estimates that 23,417m^3 of peat will be excavated to allow the construction of the development. The oPMP highlights that 4,974m^3 of excavated peat will be acrotelmic peat and the remaining 18,443m^3 is catetelmic peat. The OPMP anticipates that all of the excavated peat can be reused within 300m of the application site boundary, with 13,495m^3 to be used for restoration within the site and a further 11,263m^3 could be used to restore peat cuttings adjacent to the site. Overall the site will lead to a loss of 3.1ha of peatland habitat as a result of the proposed development. The applicant has however committed to offsetting this loss through peatland restoration works adjacent to the

proposed site where there are historic peat cuttings and areas where peat has been disturbed as a result of road improvements. Overall, the applicant anticipates that there 20.5ha of damaged peatland will be improved as mitigation for the construction of the proposed development. This is welcomed by both SEPA and the Council. To ensure works are limited to the areas identified for disturbance, no micrositing will be permissible and works will all require to be undertaken within the areas identified on the Extent of Works plan.

10.51 To mitigate the impact of the operation of the development, the outline Habitat Management Plan (Technical Appendix 5.8) sets out that there is the potential of further peatland habitat improvement 67.5ha through blanket bog restoration. This would include re-wetting of previous peat cuttings and drained areas. The areas identified for these works may not extend to the full 67.5ha but the pockets of restoration within this area would likely contribute to overall enhancement.

10.52 The applicant has undertaken a Carbon Calculator style assessment based upon the Carbon Calculator for Wind Farms on Scottish Peatland. Representations to the application have highlighted the risk of carbon release as a result of the proposed construction and operation of the proposed development. SEPA have noted that the assessment undertaken by the applicant demonstrates that over the lifetime of the project the amount of carbon lost from construction works should be sequestrated back into the peat as a result of the proposed restoration works. It would however be necessary to ensure that further peatland restoration is undertaken to mitigate the impacts of the operation of the development where further greenhouse gases would be released. SEPA consider additional peatland restoration should be secured through a finalised Habitat Management Plan. It is anticipated that the level of greenhouse gas emissions would be lower if a fuel mix of liquid oxygen (LOX) and bio-Liquified Petroleum Gas (BioLPG) is used rather than a mix of LOX and Rocket Propellant 1 (RP-1). This is however outwith the control of the planning system and matters such as this would likely be controlled by regulations to be brought forward under the Space Industry Act 2018.

10.53 Representations have raised concerns with regard to the risk of a major disaster on the site which could potentially lead to a fire which would affect the surrounding peatland. The applicant has undertaken an assessment of Major Accident to the Environment (MATTE). This assessment considers the impact of a range of different accidents which may occur during construction and operation of the proposed development. This assessment acknowledges, that based up the methodology set out in the EIAR, that there are potential significant environmental effects if: there is a major fire on site during the construction and decommissioning phases; there is an anomaly in the launch vehicle which resulted in physical damage to adjacent peat areas, presence of debris, contamination of fuel and payload hazardous materials, and peat fire; and / or release of fuels, resulting major fire. However, it should be noted that these matters related to site safety and environmental impacts as a result of a MATTE, will be considered further through the safety case and the Assessment of Environmental Effects which are required for the Operator, Spaceport and Range Services licences required under the Space Industry Act. This will be assessed by the UK Space Agency who are the competent authority in relation to such matters.

10.54 Representations have set out that the cumulative impact of this and other potential spaceport facilities in Scotland could be significant. This is not disputed, however no other proposal is as advanced as this project. Therefore it would be for the remaining developments to ensure that the cumulative effects are fully taken into

account. For this proposed development it is considered that, on balance, the carbon release can be managed by the use of an appropriate Peat Management Plan and through an augmented Habitat Management Plan.

10.55 SEPA have noted that a range of fuels, oxidisers and other chemicals will be stored on site. SEPA have set out that the amount of these to be stored on site fall below the threshold at which the Control of Major Accident Hazard (COMAH) regulations apply. It welcomes the use of above ground storage for the kerosene based RP-1 fuel and the fuel for the generators. The storage arrangements for all fuels and chemicals will be required to comply with General Binding Rules set out in the Controlled Activities Regulations. This sets out that appropriate impermeable bunds are required around the storage areas

10.56 Private water supplies are not anticipated to be affected by the proposed development.

10.57 A Marine Environmental Risk Assessment (MERA) has been undertaken by the applicant. This identifies a number of risks to the marine environment, such as debris impact on marine ecology, collision risk to marine users and release of unspent fuel from deposited rocket parts. On the basis of 12 launches per year, 5 tonnes of carbon fibre reinforced plastic and 7 tonnes of metal alloy would be dropped into the sea per annum. The MERA sets out that the level of unspent fuel would likely be limited and would be diluted by the volume of water. The deposit of objects from space vehicles in the marine environment would require a marine licence in the following circumstances:

- Within 12nm under article 21(1) of the Marine Scotland Act 2010
- Between 12 and 200nm under article 66(1) of the Marine and Coastal Access Act 2009
- Outwith 200nm under article 21(2) of the Marine Scotland Act 2010

The risk to mariners would be regulated by the UK Space Agency through their licencing procedures.

10.58 Given the route of the rocket over international waters, these effects on the Marine Environment are transboundary effects. While the effects were not identified as significant, the Council nevertheless notified Scottish Ministers in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. In doing so the Council were required to come to a conclusion on matters related to Transboundary Effects. In doing so the following effects were considered:

- Unspent fuel – the planning authority agree with the findings of the EIAR that this will not have an impact based upon the content of the MERA.
- Marine debris impact of marine ecology – the planning authority consider that space debris poses a risk to marine life through direct collision and through ingestion of macro and microplastics. The planning authority note that as a result of the proposed 12 launches per annum a minimum of 5 tonnes of carbon fibre reinforced plastic and 7 tonnes of metal alloy will be dropped into the sea. The planning authority can not conclude from the information within the EIAR whether this is a significant increase on current level of debris but note that the risk is proportional to the number of launches. The planning authority intend to condition that no more than 12 launches can be undertaken per annum.

- Collusion risk of marine debris to marine users - The MERA states that it is 'likely that a mariner notice will be issued' to mitigate the risk of this collision. Also the predicted debris corridor communicated in notice should be specific to each launch and should ideally represent a much higher resolution than the predicted debris corridor described in the MERA. The planning authority are currently considering whether this is a matter which can / should be controlled via the planning system or by the license required under the Space Industry Act.

It is acknowledged that whilst there are transboundary effects, these are not considered significant in EIA terms.

10.59 In response to this the Scottish Government set out that the Council's conclusions seem reasonable. The Scottish Government notified the UK Government (UK Space Agency) about the application. It set out that the UK Space Agency are in discussions on spaceports with the Icelandic, Faroese, Danish and Norwegian governments. It confirmed that there is no requirement to consult them at this stage. The UK Space Agency set out to the Scottish Government that the Space Industry Act 2018 establishes public safety as the primary duty of the regulator with regards to spaceflight activities and extensive regulations and guidance will be put in place to secure this.

Natural Heritage including ornithology

10.60 The EIA Report has identified and assessed impacts on protected species, ornithology, ecology and designated sites. Concern has been raised in representations in relation to the impact on all of these matters.

10.61 The site contains elements of the Caithness and Sutherland Peatlands Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site. These are European designated sites, however it should be noted that through mitigation by design the site infrastructure does not infringe on the boundaries of these designations. In addition elements of the Ben Hutig and A' Mhoine Sites of Special Scientific Interest (SSSI) are within the site boundary but not affected by site infrastructure. The Inverhope SSSI lies to the west of the site.

10.62 The applicant considers that without mitigation there will be significant environmental effects on the European designated sites in addition to effects on the associated SSSIs within the application site boundary. This is not disputed. However, after the application of mitigation the applicant considers that the effects would not be significant.

10.63 In the initial response to the application SNH highlighted that the application infrastructure comes to approximately 100m from the boundary of the designated sites and it welcomed the mitigation by design to avoid direct impact on the designated sites through the layout of the development.

10.64 The status of the following sites means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") apply or, for reserved matters, The Conservation of Habitats and Species Regulations 2017. Consequently, the Council is required to consider the effect of the proposal on the SAC and SPAs detailed below before it can be consented (commonly known as Habitats Regulations Appraisal). This is contained in Appendix 2 of this report and is based upon the advice from SNH.

10.65 For the avoidance of repetition in this report, and as a result of the way in which both the applicant and SNH have assessed the impacts of the proposed development, the affects of the SSSIs are considered alongside the European designated sites. The Appropriate Assessment only considers the impact on the European designated sites.

10.66 In relation to the construction period for the proposed development. The view of SNH is accepted which set out that in relation to Caithness and Sutherland SAC, SPA site a likely significant effect on the above species can be concluded but information provided shows that an adverse effect on site integrity can be avoided. This is as a result of the following mitigation:

- The detailed CEMP, should be agreed with THC, in consultation with SNH prior to the commencement of works;
- The ECOW should have the authority to intervene during construction including the powers to 'stop the job'
- Implementation of the Species Protection Plans for Otters and Breeding Bird Protection Plan should be conditions of planning consent.

The above mitigation can be secured by condition and is equally as applicable to minimising the impacts of construction on the qualifying features of the SSSIs.

10.67 In relation to the operational phase of the development, the impact on the European designated sites will be required to be mitigated through appropriate visitor management as the planned activities take place within the confines of the red line boundary and therefore avoid the protected area and its qualifying interests. The entire Launch Exclusion Zone (LEZ) will require to be managed to avoid impact on the qualifying interests of the designated sites. The LEZ extends to 1.8km from the launch pad. The LEZ has been identified based upon the Federal Aviation Administration Regulations from the United States of America, however the rockets capable of being launched from the proposed development site are of a much smaller scale than those set out in the LEZ. The applicant has set out that it is likely that the LEZ area will reduce in scale when the relevant regulations are published by the UK Space Agency. It is understood from the UK Space Agency that the LEZ will be based upon the safety case required to meet with Sections 9 (Grant of Operators: Safety) and 10 (Grant of Spaceport Licence) in the Space Industry Act 2018.

10.68 In the SNH response of 12 March 2020, it set out that the habitat features of the designated sites are extremely susceptible to physical damage from people and vehicles. Therefore, it considers that it needed a further degree of certainty over the management of visitors and the implications for the qualifying features of the European designated sites prior to reaching a conclusion on the likely significant effects. In doing so it sought either:

1. Confirmation from the Council whether it was certain visitor management will be considered as part of the licensing of the site as a spaceport through the UK Space Agency; or
2. Further details of how the LEZ area will be observed, cleared and policed.

10.69 Given both the Council and the UK Space Agency are competent authorities in relation to the application of the Conservation (Natural Habitats, &C.) Regulations 1994, the Council took external legal advice in relation to the point 1 above. In doing so the Council sought advice on the following matters:

1. Considering Regulation 53 of the EIA Regulations 2017 and Regulation 52 of the Conservation (Natural Habitats, &c.) Regulations 1994, is Counsel of the opinion that a Habitat Regulations Appraisal is required to be undertaken to determine the impact of visitors on the SAC/SPA/SSSI as a result of the operation of the spaceport prior to determination of the planning application by THC?; and
2. If the answer to Q1 is no, is Counsel of the opinion that a Habitat Regulations Appraisal is required to be undertaken to determine the impact of visitors on the SAC/SPA/SSSI as a result of the operation of the spaceport prior to determination of the spaceport licence by the UK Space Agency, as regulator, under the Space Industry Act 2018 and associated regulations?

10.70 In summary the advice provided by external legal advisors set out that

- the potential effect of visitors on the designated site which are environmental issues and there is no clear reason to me why the planning authority would not be reasonably well-placed authority to assess these;
- in theory it could be possible that the planning authority does not, itself, require to undertake an assessment prior to granting permission, however this could only be justified if it was clear that another authority had responsibility and it was agreed that it was the more appropriate authority to carry out the assessment;
- Therefore it is not clear that there is currently the necessary certainty of the division of responsibilities referred to in the SNH letter for the Council not to require an appraisal of the potential effect of visitors to the site before determining the application.

The applicant sought its own legal advice on this matter and it conflicted with the advice secured by the Council. However, the precautionary approach set out in advice received by the Council is accepted. It is however noted that the UK Space Agency as the regulator of space flight will be required to undertake an Appropriate Assessment prior to the determination of any granting of a licence. Equally they would be permitted to adopt an Appropriate Assessment undertaken by another Competent Authority i.e. The Highland Council.

10.71 In advance of the receipt of this advice the Planning Authority had encouraged the applicant to consider providing clarifications to how visitors would be managed in so far as it relates to avoidance of impact on the European designated sites. On receipt of the legal advice, the applicant worked with SNH to produce a clarifications document for how the provisions of the Visitor Management Strategy could be implemented. However, while it has informed the second response from SNH to the application, it is clear that this is just one option for visitor management and other options for visitor management may be developed by the applicant and the Launch Service Operator to avoid impacts on the European designated site. This will also be required to evolve over time to ensure the methods for visitor management remain practicable and workable and controls can be put in place to secure this via condition.

10.72 The clarifications document set out that for the period of launch identified in the Visitor Management Strategy, which extends to 6 hours in advance of the launch, that a system of deter, detect, delay, respond / removal for people who were seeking to enter the LEZ. The clarifications documents considered a series of scenarios to explain what methods may be employed and how they could be

undertaken. The document is not considered to provide any different measures beyond what was contained within Visitor Management Strategy of the EIAR. It does however set out how these could be implemented. The submitted clarifications document does not lead the applicant to a different conclusion on significance of effect in relation to EIA, however it shows how they reached a conclusion of no likely significant effect on the European designated sites.

10.73 Following receipt of these clarifications, SNH do not consider there to be likely significant effects on the qualifying interests of the designated sites if the development is undertaken in strict accordance with the following mitigation:

- A detailed Visitor Management Plan (VMP) should be agreed by The Highland Council, in consultation with SNH, at least six months prior to the first launch taking place. This should include an agreed post launch review arrangement and a monitoring protocol for the SAC and SPA qualifying interests. The VMP should also provide for the necessary changes in visitor management as identified by SNH, for the duration the site is in use. This is to ensure the principles in the Visitor Management Strategy – Clarifications document (May 2020) are carried forward to the detailed Visitor Management Plan and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying habitats and species is required to inform, and where necessary change, future visitor management. Changes may be required in response to predicted effects and effects which have not been predicted due to the novelty of the proposal, the evolution of technologies, changes in visitor behaviour and unforeseen factors.

The above mitigation can be secured by condition and is equally as applicable to minimising the impacts of construction on the qualifying features of the SSSIs. It should be noted that in broad terms the applicant had committed to the production of a Visitor Management Plan via the Visitor Management Strategy set out in the Technical Appendix 2.2 of the EIAR. The clarifications document has however allowed SNH to consider at an earlier stage in the process what the appropriate principles are for Visitor Management.

10.74 A late representation to the application has questioned whether the document submitted by the applicant is Supplementary Information under the EIA Regulations and whether this required advertisement. The Planning Authority consider that the document provides clarifications, does not change the scope of the development, nor does it alter the conclusions of the EIAR. Therefore, the Planning Authority do not consider it to be Supplementary Information in terms of the EIA Regulations.

10.75 The final European designated site to be considered is the North Sutherland Coastal Islands SPA which lies to the north west of the application site. The site is designated for the wintering population of barnacle geese. The birds were not recorded as flying over or feeding in the application site during site surveys. The EIAR concludes that there would be no likely significant effect on the qualifying features of the designated site due to low frequency of launches and distance to the nearest feeding sites. SNH are content with the assessment.

10.76 SNH agree that the geological features of the Ben Hutig SSSI will not be affected by the development

10.77 Outwith the designated sites, the EIAR has assessed and identified impacts on protected species and habitats. Consideration has been given to peat, water vole, deer, seals, reptiles, aquatic ecology and otter. Without mitigation significant effects have been identified in relation to the following matters:

- Fragmentation of otter habitat during construction;
- Disturbance of water vole through piling during construction;
- Fragmentation of water vole habitat during construction;
- Disturbance of water vole through launch activities;

To minimise these effects a range of mitigation, beyond standard good construction practice, is proposed including Species Protection Plans, Habitat Management and design of culverts. These types of mitigation have been shown to work effectively on other large scale construction projects across Highland and there therefore accepted However, this specific mitigation is required to be supported by ongoing monitoring in the run up to and during the construction period. This can be secured by an Ecological Clerk of Works who will be required to have stop the job / activity powers if there is a breach of environmental legislation or risk to protected habitats or species.

10.78 Representations have raised concern about the adequacy of the ornithology chapter of the EIAR. In particular concern is raised around the robustness of assumptions made in the assessments and the level of survey work and the knock on implications of this for the conclusions reached on significance of effect. It is understood that the methodology and scope of the EIAR as well as the supporting survey work had been agreed with SNH in advance of the submission of the application. SNH have not objected on these grounds.

10.79 The applicant has undertaken a series of ornithological surveys including: vantage point survey; moorland breeding bird survey; breeding raptor survey; breeding eagle survey; breeding diver survey; and goose foraging survey. The surveys and subsequent assessments identified potential significant effects on the following ornithological receptors if mitigation is not applied:

- Merlin (habitat loss and disturbance / displacement)
- Golden eagle (habitat loss and disturbance / displacement)
- White-tailed eagle (habitat loss and disturbance / displacement)
- Greenshank (habitat loss and disturbance / displacement)
- Red throated diver (disturbance / displacement)
- Golden plover (habitat loss and disturbance / displacement)
- Dunlin (habitat loss and disturbance / displacement).

10.80 There is potential for likely significant effects as a result of displacement / disturbance, if mitigation is not applied on the following ornithological receptors during operation:

- Merlin
- Golden eagle
- White-tailed eagle
- Greenshank
- Red throated diver
- Golden plover
- Dunlin.

10.81 The applicant has not undertaken a cumulative assessment of the effects on ornithology in combination with other developments that would impact on the same birds which use the application site The applicant has justified this due to the location of the proposed development in relation to developments which the application could be considered in combination with. Representations disagree with this approach. It is noted that the proposal is somewhat remote from other developments which may have an in combination effect.

10.82 During the construction phase mitigation such as the use of a pre-commencement bird survey work, walk over surveys during construction, limitations to vegetation removal, application of buffer zones around any nests, species protection plans and limitation of works during the bird breeding season is proposed. The applicant has identified that if this mitigation is carried out then there would not be a significant effect on ornithology.

10.83 During operation of the development, the effects would be related to disturbance / displacement rather that habitat loss. However, in this phase there will need to be significant monitoring of ornithological populations, restrictions on drone use for monitoring of the site (including for purposes of visitor management), use of species protection plans and a visitor management plan (discussed in paras 10.67-1073). With this mitigation in place, the applicant does not consider there would be significant effects on ornithological interests during operation of the development.

10.84 Representations have raised concerns with regard to the impacts on the North West Highlands Geopark. The site infrastructure appears to be outwith the area covered by the Geopark, it is not envisaged that the proposal would have a direct impact on the Geopark.

10.85 The Peatlands Partnership have been progressing the case for the designation of the Flow Country as a World Heritage site since the late 1990's. The Peatlands Partnership includes the following bodies / organisations:

- Scottish Natural Heritage;
- Highland Council;
- Forestry Commission (Scotland);
- RSPB Scotland;
- Plantlife Scotland;
- The Environmental Research Institute;
- Northern Deer Management Group;
- Flow Country Rivers Trust;
- The Highland Third Sector Interface; and
- Highlands and Islands Enterprise.

It also liaises with local community groups, the Scottish Government's Rural Payments and Inspections Directorate and the North Sutherland Community Forest Trust.

10.86 Representations have raised concerns that the proposed development would have an impact on the sites status as an emerging World Heritage Site. The reason for seeking designation of the Flow Country as a World Heritage Site relate to the quality and extent of the blanket bog habitat. It is not possible, due to the lack of a formal designation along with supporting qualities / citations, at this stage to assess the potential impacts on any potential World Heritage Site resulting from any current adjacent or proposed developments. Inevitably this means that there is a risk that land use change prior to possible nomination and inscription may compromise

areas which might otherwise have been included within the site boundary. However, as discussed at length earlier in this report, the impacts on the habitats for which the Flow Country are famed can be minimised.

10.87 Overall, it is recognised that there will be impacts on natural heritage as a result of the proposed development both through the construction and operations phases of the development. There is however, workable and practical mitigation that can be put in place to minimise the environmental effects. This requires to be given some considerable weight in the decision making process.

Built and Cultural Heritage

10.88 The area has a number of built and cultural heritage features of value including scheduled monuments, listed buildings and an inventory garden and designed landscape. The EIAR has undertaken an assessment of the direct and indirect impacts upon such assets. In undertaking the assessment the applicant has focused on the designated heritage assets within 10km of the site boundary during both the construction and operation of the development.

10.89 Historic Environment Scotland and the Council's Historic Environment Team have not raised concerns with the methodology used to undertake the assessment. In relation to assets within the interest of Historic Environment Scotland, minor effects have been noted by the applicant and Historic Environment Scotland do not disagree with the findings of the assessment on either direct or indirect

10.90 In relation to impacts within the remit of the Council, it is noted that three sheilings are within the application site, the applicant plans to preserve these in situ. This is welcomed. To achieve this the applicant will be required to mark out the locations of the sheilings with high visibility markers 5m for the edge of the assets to ensure they are protected from construction.

10.91 The nearest listed building to the proposed development is Moine House, approximately 2km to the west of the site access, which is category C listed. The building is on the at risk register and comprises an unroofed state. Originally built to mark the halfway point across the Moine. It is understood the building was built to commemorate the opening of the first road across the Moine in 1830. It is a clear landmark given its position in the landscape. Given the buildings relationship with the road, while there will be visibility of the proposed development, it is not considered that it will affect the setting of the listed building.

10.92 Subject to the mitigation set out in paragraph 10.94, it is not considered that there will be significant effects on built and cultural heritage.

Design, Landscape and Visual Impact (including Wild Land Areas)

10.93 The development has been designed to avoid key site constraints such as the steep slopes, areas of deep peat and watercourses.

10.94 There will be two buildings on the site, the Launch Operations Control Centre (LOCC) and the Launch Site Integration Facility (LSIF). The LOCC is approximately 100m to the north of the A838. At its highest point, the building would be 7m tall, with the building sloping down to ground level on the side of the building which faces the A838. The building will have a footprint of 19.6m x 27.9m. A green roof

will be used to help integrate the development into the landscape. Ensuring appropriate turves and mixes of turves during the excavation of this part of the site will be critical to ensuring this mitigation is effective. The walls will be clad in grey metal. Due to the location of the building within a dip in the site surrounded by mounding will assist in reducing the visual impact of the buildings and it would appear as a minor addition to the landscape.

10.95 The LSIF is a larger building, located approximately 1.7km north of the A838, which will be used for assembly of the launch vehicles. The asymmetrical roof reaches a maximum height of 10.9m above finished ground levels. The footprint of the building extends to 44.7m x 32.6m. The building is orientated north to south and will be clad in grey metal with a green metal roof. While a standard metal clad shed could have been chosen for the site, the proposed design is considered more sympathetic to its surroundings which includes the rising landform of Ben Hutig which forms a backdrop to the development. This is welcomed. A condition will be set out to secure final material finishes for all buildings. This will also include a requirement for the buildings have a matt finish.

10.96 Other more significant vertical structures within the site include the antenna park, lightning tower and strongback. While these are relatively slimline structures, on launch days the launch vehicle, which has an indicative diameter of 1.3m, will also be a notable feature on the site. The lightning tower extends to 40m in height when the rocket is in the strongback but this retracts to 20m on non-launch days. The strongback while reaching a height of 22m when erected, it lies horizontally during non-launch events. The lighting within the antenna park also reduces in height from 15m down to 5m during non-launch events. While the structures only need to be erected to their full extent on the day of the launch, which will be limited to 12 per year, the retraction of these structures will be secured by condition as per the advice of SNH in relation to mitigation of the impacts on the National Scenic Area.

10.97 A total of 14 viewpoints across a study area of 15km have been assessed with regard to landscape and visual impact during both launch day and non-launch day scenarios. These viewpoints are representative of a range of receptors including recreational users of the outdoors, road users and residents. The expected impact of the development can be understood from the ZTV which shows the combined visibility of all built elements of the proposed development (Figure 4.11) in the EIAR. This identifies that visibility of the proposed development runs in three broad corridors running from north east to south west. The first corridor of visibility runs through the site, a further corridor of visibility runs to the east of the Kyle of Tongue and the final corridor of visibility is to the west of Loch Erribol. Each broad corridor of theoretical visibility is defined by the topography of the area. It should be noted that the ZTV does not indicate how much of the development is visible, for example it could be that the whole building or just part of the roofline is visible.

10.98 The methodology for the Landscape and Visual Impact Assessment generally follows that set out in Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3). As set out in para 3.32 of GLVIA 3 the “LVIA should always clearly distinguish clearly between what are considered to be significant and non-significant effects.” The applicant clearly sets out what the assessor considers to be a significant effect following the combination of judgements (Sensitivity and Magnitude). It appears that the applicant has applied a threshold of anything being of moderate impact or below as being not significant. It has therefore considered

anything of moderate / major and above to be a significant effect. THC is of the view that Moderate effects can be significant but this needs to be considered on a viewpoint by viewpoint basis.

10.99 In the assessment of each viewpoint, the applicant has come to a judgement as to whether the effect is significant or not. This is undertaken on a viewpoint by viewpoint and case by case basis. In assessing visual impacts in particular, it is important to consider that the viewpoint is representative of particular receptors i.e. people who would be at that point and experiencing that view of the landscape not just in that single view but in taking in their entire surroundings.

10.100 A key consideration in the effects on receptors is the sequential effect when travelling through and area on the local road network both by individuals who live and work in the area and tourists. Those travelling scenic routes, whether designated as such or not, have a higher sensitivity to views. While a driver of a vehicle is likely to be concentrated on the view immediately in front, passengers have a greater scope for looking at their surroundings. In addition the area is regularly frequented by cyclists. As such it is considered that road users are high susceptibility receptors. The applicant has referred to some road users as medium sensitivity receptors.

10.101 There are few instances when the development as a whole would be seen. The majority of instances where one would view the development as a whole would be to the south and east of the proposed development. Given the height of the proposed site infrastructure in closer views, particularly from the A838 to the south of the site, the development would appear as a stark new feature, however it will be backdropped and from the majority of views it the development is not of a scale where it would break the skyline. It will be visible from the road network as well as a range of routes used by recreational users of the outdoors. The design of the development is best demonstrated from the visuals for viewpoint (VP) 4 to the A838 to the south of the site.

Landscape and Seascape

10.102 The development sits within the Sweeping Moorland and Flows Landscape Character Type (LCT). This is characterised by a smooth and gently undulating landform, with long, low and largely uninterrupted skylines offering extensive views. The LCT gives consistent views to the distant lone mountains and rugged mountain massif LCTs. Across the whole LCT there is strong sense of remoteness.

10.103 Wrapping around the application site to the north, south and west is the Rocky Hills and Moorland LCT. This is characterised by rocky outcrops and moorland. It is punctured by distinctive hills such as Ben Hutig. The LCT provides a transition between the sweeping moorland and flows to the lone mountains to the south. Beyond the LCT to the north and east lie smaller landscape character types of Sandy Beaches and Dunes LCT, High Cliffs and Sheltered Bays LCT and Coastal Crofts and Small Farms LCT. The Kyles and Sea Lochs Coastal Character type runs to the north west and north east of the site where the land meets the sea.

10.104 Further to the south is the Lone Mountains LCT which contains Ben Hope, Ben Loyal and Ben Beinn Stumanadh.

10.105 The applicant has identified that the above landscape character types and coastal character types will all be significantly impacted during operation of development on launch day scenarios. The landscape effects are limited to the Rocky Hills and Moorland and Sweeping Moorland and Flows LCTs on non-launch days.

10.106 The applicant considers that the vertical elements and the buildings of the development would have an impact on the perceived remoteness and wildness of the area. This is not disputed. Of particular concern is the artificial lighting required on the site and the effect that this could have on these qualities due to the general lack of lighting in the vicinity of the development. While the lighting is required during launch scenarios, the lighting should be as minimal as possible in both scenarios to minimise the impact on the sense of remoteness and wildness in hours of darkness. The mitigation by design of the retractable elements, the design, scale and location of buildings is considered to reduce the landscape and seascape impacts.

10.107 To the south and east of the application site lies the Kyle of Tongue National Scenic Area (NSA). The special qualities of the NSA are:

- An ever-present backdrop of mountains;
- The Kyle – a link from an inhabited coast to a wild, moorland;
- Scale, from domestic to monumental;
- The constantly changing character of the Kyle;
- Rich variety of coastal scenery;
- Distinct pattern of settlement.

10.108 SNH agree with the overall assessment findings of the assessment undertaken against the special qualities, however they have some concerns with the application of the assessment of the special qualities. SNH consider that the special quality of "The Kyle – a link from an inhabited coast to a wild, moorland" should have also been scoped in for assessment due to the likelihood of significant adverse effect. The position of SNH is accepted on this matter. While predominantly outwith the NSA, the moorland of Mhoine is important to the setting of the NSA. While it is considered that the effects on this special quality have been underplayed by the applicant, it is accepted by SNH that the special quality remains well expressed.

10.109 The applicant has not considered there to be a significant effect on any of the special qualities of the NSA. It notes that from the areas of the NSA closest to the development there would be limited visibility of the proposed development, which would largely be limited to the launch day scenarios when the lightning tower is at its full height and it extends above the skyline in some views. It should however the development would occupy a limited field of view in a wider panorama. It is considered that the lighting required within the development will exacerbate the impacts on the special qualities, however not to a point where the special qualities will be diluted. It is considered that this would be particularly noticeable in those elevated locations to the east of the site, such as Ben Tongue (VP14). A scheme of mitigation can however be secured by condition. From the south of the NSA, around Ben Loyal and Ben Hope, it is considered that while the proposed development will be visible, it is not considered to be of a scale or design that would draw the eye in a manner which would significantly detract from the special qualities of the NSA. Overall, while there are some localised impacts, due to the mitigation by design the proposed development is considered to safeguard the character and appearance of the NSA.

10.110 The Eribol East and Whiten Head Special Landscape Area (SLA), lies to the north and west of the proposed development site. Visibility of the proposed development from within the SLA is very limited, however the SLA is one which is also appreciated from a distance. When viewing the SLA from the A838, one would likely see the development in the context of the SNL. The development is not anticipated to effect the sharp transition between the A' Mhoine peninsula and Loch Eriboll. The applicant has identified a significant, albeit short lived, effect on the perception of naturalness, remoteness and wildness of the SLA on launch days. Given the duration of the impact the development would not effect the special qualities of the SLA to an extent it would effect the integrity of the SLA. Due to a lack of visbility it is not considered that the Oldshoremore, Cape Wrath and Durness SLA to the west nor the Farr Bay, Strathy and Portskerra SLA to the east will be effected by the proposed development.

10.111 No element of the proposed development is within a Wild Land Area (WLA), however it is in very close proximity to the Ben Loyal – Ben Hope (WLA38). As it is not within a Wild Land Area it is considered that Paragraph 215 of Scottish Planning Policy does not apply. However, wild land is an important asset and in assessing the application, the following matters require consideration:

- Introduction of infrastructure into views from the wild land area; and
- Introduction of a contemporary land use visible from the wild land area potentially affecting the perceptual qualities of wildness.

10.112 A Wild Land Assessment has been carried out by the applicant and SNH have commented on this. SNH consider that that there will be some localised significant effects during launch times on WLA38. It does however note that these will not be to the degree (magnitude and duration) that they would have a significant impact on the wild land qualities. This is inline with the findings of the applicants' assessment. Representations have raised concerns with the findings of the assessment undertaken by the applicant ad consider that the proposed development will have a significant adverse impact on the qualities of the Wild Land Area.

10.113 Scottish Natural Heritage (SNH) published descriptors for each of the 42 Wild Land Areas across Scotland in January 2017. These descriptors set out wild land qualities for each of the Wild Land Areas and are based on the particular combinations of the wild land attributes and influence when experienced.

10.114 The special qualities of WLA38 are:

1. A striking, awe inspiring contrast between isolated mountains and open peatland;
2. Towering, steep rocky mountains that are arresting and attract hill walkers;
3. Rugged, rocky knolls, crags and plateaux conveying a strong sense of naturalness;
4. Extensive, exposed peatland and lochs that are awe-inspiring in their simplicity and openness;
5. Native woodland highlighting landscape features and contributing cumulatively to the sense of naturalness; and
6. An interior possessing strong qualities of sanctuary and solitude, away from the mountain foci near the WLA margins.

10.115 In its assessment the applicant has considered the impacts on each quality of the wild land area during the construction phase, operational phases (launch day scenario and non-launch day scenario) and decommissioning phase. It is considered effects on the Wild Land Area during construction and decommissioning would be the similar.

10.116 Wild Land Quality 1 of WLA 38 is “A striking, awe inspiring contrast between isolated mountains and open peatland”. This quality is expressed within the wild land area but it is recognised that the contrast between the lone mountains and the peatland flows outwith the WLA extend beyond the WLA. Given the location of the proposed development, it is considered that there would be a significant effect on the expression of this wild land quality when viewed from the area to the immediate south of the proposed development during the operational phase of the development. The applicant considers that this effect will reduce with distance as one travels further into the interior of the wild land. On launch days the effects would be more pronounced given the additional vehicle movements and activity as well as lighting requirements. The launch scenario would be for a limited timeframe, between 6 and 3 hours before launch and a short period after the launch. As set out earlier in the report, the lighting requires further mitigation and this can be secured by condition. While a reduction in the length of time which lighting would be on or the level of lighting generally on the site would reduce the impact, it is not considered it would take it below the level of significance currently identified within the EIAR. It is noted that the wild land descriptor identifies that at elevated views within the WLA, one would experience distant features and human artefacts, such as the telecoms mast on Ben Tongue as well as some large scale wind farms and conifer plantations. The proposed development would introduce a further human intervention into the landscape. It is not considered it would draw the eye to the extent other types of development in such landscapes would, for example a wind farm, it would however be a new feature which contrasts to the open moorland which forms the fringes of the WLA. SNH do not consider there to be a significant effect on this quality of the WLA.

10.117 WLA quality 2 is “Towering, steep rocky mountains that are arresting and attract hill walkers”. When considering the impact on this quality, there requires to be a degree of understanding of where one would experience this quality from both within and outwith the WLA. When viewing the proposed development from Ben Hope and Ben Loyal, the development would contribute to the level of distant features and human artefacts as set out in the consideration of WLA quality 1. It is considered that while the verticality of the proposed development will contrast with the flows landscape when viewed from the elevated locations within the WLA, Quality 2 will not be experienced to such an extent from other areas within the WLA. The applicant considers that the effect on non launch days would be minor (not significant) and on launch days it would be major / moderate (significant). This is considered to be a reasonable assessment of the effects on this quality given the increased elements in the view and increased activities on launch days.

10.118 WLA quality 3 is “Rugged, rocky knolls, crags and plateaux conveying a strong sense of naturalness”. From the areas within the WLA where this quality can be experienced it is noted from the ZTV that there is more restricted visibility with the exception of more elevated summits such a Cnoc Lon Nan Eildean. The launch vehicle however will be visible, and potentially audible, for a period of time. The

applicant has identified moderate (not significant) effects for non-launch days and major / moderate (significant) effects on launch days due to increased activity. This is accepted.

10.119 WLA quality 4 is “Extensive, exposed peatland and lochs that are awe-inspiring in their simplicity and openness”. This quality is expressed on the low lying peatland both within and outwith the wild land area and is highly susceptible to change. SNH consider that the development would interrupt the wide sense of awe and simplicity. SNH note that the visibility of the scheme within a limited distance. The applicant has identified that there would be a moderate (not significant) effect on non-launch days and a major / moderate (significant) effect on launch days with this reducing to a moderate to no effect further into the WLA. While this is understood it is considered that the launch day effects in closer proximity to the WLA may be major (significant) rather than major / moderate.

10.120 WLA quality 5 is “Native woodland highlighting landscape features and contributing cumulatively to the sense of naturalness”. It is not considered that this quality of the WLA will be affected by the development.

10.121 WLA quality 6 is “An interior possessing strong qualities of sanctuary and solitude, away from the mountain foci near the WLA margins”. SNH have noted that the access track to the LSIF may be visible from elevated positions and that lighting during launch events after dusk may have a greater effect on the sense of solitude which is a key component of this quality. The lighting effects could be reduced through a revised lighting strategy. The applicant has identified that the effects on launch days would range from moderate to none. It is considered that this is a fair assessment but without further mitigation of the lighting during launch events after dusk the impacts may be considered moderate over a wider area of the WLA than anticipated by the applicant. The applicant has not identified significant effects during the non-launch scenario.

10.122 Overall, it is considered that there are some significant residual effects on the qualities of WLA as a result of the proposed development. However, through the mitigation by design of the proposed development and further mitigation proposed such as a revised lighting scheme which would seek to reduce the length lighting would be required for these effects can be substantially overcome.

10.123 The significant effects identified in the LVIA are not disputed. Unsurprisingly, as visual impact assessment is largely subjective and dependant on the application of professional judgement, there is a difference between the applicant’s assessment and that of the Planning Authority, however these differences are limited. The visual impacts anticipated during construction and decommissioning are noted. The table below identifies the significance of visual effects as identified by the applicant and the Council. Those highlighted in bold are identified as significant effects. The effects highlighted in grey are where there are differences between the assessment of the applicant and the assessment of the Planning Authority:

Viewpoint	Applicant / THC	Non-Launch	Launch
1	Applicant	Minor	**Major**
	THC	Minor	**Major**

2	Applicant	None	**Major**
	THC	None	**Major**
3	Applicant	Major	**Major**
	THC	Major	**Major**
4	Applicant	Major	**Major**
	THC	Major	**Major**
5	Applicant	Slight	**Major / Moderate**
	THC	Moderate	**Major / Moderate**
6	Applicant	Slight	**Major / Moderate**
	THC	Moderate	**Major / Moderate**
7	Applicant	Slight	**Major / Moderate**
	THC	Slight	**Major / Moderate**
8	Applicant	**Major / Moderate**	**Major**
	THC	**Major**	**Major**
9	Applicant	Moderate	**Major / Moderate**
	THC	Moderate	**Major / Moderate**
10	Applicant	Moderate	**Major / Moderate**
	THC	Moderate	**Major / Moderate**
11	Applicant	**Major / Moderate**	**Major**
	THC	**Major / Moderate**	**Major**
12	Applicant	Moderate / minor	Moderate
	THC	Moderate / minor	Moderate
13	Applicant	**Major / Moderate**	**Major / Moderate**
	THC	**Major / Moderate**	**Major / Moderate**
14	Applicant	Moderate	**Major / Moderate**
	THC	**Major / Moderate**	**Major / Moderate**

10.124 From the table above it is noted that there are significant visual effects on recreational users of the outdoors and road users at a number of representative viewpoints. There are differences in opinion between the Council and the applicant at the following viewpoints:

- Viewpoint 5 (Summit of Ben Hope) – The viewpoint is located on the most northerly Munro, some 11.6km from the proposed development site and wide panoramic views are available. It is consider that there is a slight magnitude of change in the view when looking toward the proposed development during a non-launch event scenario. It is considered that the proposed development would lead to a discernible alteration in the view when looking north toward the development. It is however agreed that the composition of the baseline view would remain broadly consistent. The high sensitivity of the receptor combined with the magnitude of change would lead to a moderate, but not significant effect, at this viewpoint during a non-launch event scenario.
- Viewpoint 6 (Summit of Ben Loyal) – The viewpoint is slightly further away than Ben Hope the most northerly Corbett at 11.8km from the proposed development site, but it is a popular location given its position as the most northerly Corbett. During a non-launch event scenario, it is considered that there would be a slight magnitude of change in the view when looking toward the proposed development. It is considered that the proposed development would lead to a discernible alteration in the view when looking toward the proposed development. The underlying composition of the baseline view would remain broadly consistent. The high sensitivity of the receptor combined with the magnitude of change would lead to a moderate, but not significant effect, at this viewpoint during a non-launch event scenario.
- Viewpoint 8 (Ben Hutig) – When traversing the hill toward the summit there is little to no visibility of the development during the non-launch scenario. However, at the summit it is considered that there would be a substantial magnitude of change in both the launch and non-launch scenarios. From the summit there would be a considerable alteration to the existing view and a substantial change to the baseline. This, combined with the high sensitivity of the receptor, would lead to a major (significant) impact during the non-launch scenario. It is however noted that it is unlikely to be as popular as other summits in the area given it is not a Munro or Corbett. It does however have some local value.
- Viewpoint 14 (Ben Tongue) – when traversing the route toward the summit, one would have some visibility of the proposed development when one turns around to take in the surroundings during a pause in the walk on the assent and during the descent. Visibility however would not be consistent on either the assent of descent. At the summit, it is considered that the proposed development would lead to the partial alteration of the view given the potential visibility of the access track as well as the building and structures within the site. This would introduce a development which runs broadly north to south, in contrast to other built features in the landscape which run east to west. Therefore, while the therefore the moderate magnitude of impact combined with the high sensitivity of the receptor would lead to a major / moderate (significant) effect rather than the moderate effect identified for a non-launch scenario.

10.125 Representations have highlighted that there may be times where the site is prepared for launch and then due to weather, or other reasons, the launch can not go ahead. These representations consider that as a result the mitigation relied upon by the applicant, that the launch period effects will be for a short duration, underplays the effect of the proposed development. The launch roll out period where the Launch Vehicle is in the strongback would be a relatively short duration of approximately 6 hours. It is understood that if a launch his aborted, that the rocket could be taken back down from the strongback, and the relevant structures

retracted, thus reducing the impact. The applicant is proposing an Operational Environmental Management Plan. It is considered that mitigation of visual impacts of launch abortions can be secured through such a document.

10.126 The applicant has considered the visual impacts on the A838, A836 and recreational routes in the area. The A838 and A836 forms part of the NC500 tourist route. There will be visibility of the proposed development over a short but sensitive section of this route toward the east of the Kyle of Tongue and across A' Mhoine between Moine House and An Dubh Loch. In this section of the route it is considered that the effects of the development would range from moderate/major to major during the launch and non-launch scenarios. It is considered that while there will be a localised impact, it is not considered that the impact of the development would effect the impact on the route as a whole. The impacts on the recreational routes are noted.

10.127 While there are differences in opinion on the visual impacts at some limited viewpoints during the non-launch scenario, overall it is considered that the development has been designed in a manner which integrates significant mitigation. This includes the use of sensitively designed buildings, retractable vertical infrastructure (lighting tower, strongback and aerial park lighting columns), and an access road finished in a recessive material. As set out in the earlier sections of this report related to landscape, landscape designation and wild land, lighting of the site, during both launch and non-launch scenarios, will have a notable visual impact. This requires further mitigation which can be secured by condition. Subject to the aforementioned mitigation, although significant visual effects have been identified they are considered to be acceptable.

Impact on Croft Land

10.128 The proposed development is located on common grazings. The Council recognises the core component that crofting plays in the communities of Highland. The land is suitable for rough grazing and is not capable of agricultural improvement. The Crofting Commission has identified that there are 82 croft holdings that have shared grazings rights on the common grazing but notes a minority of these will currently be used for traditional grazings purposes.

10.129 Representations have been received in relation to the impact of the development on crofting use. Given the proposed development and the current grazings use, the Crofters Commission do not considered that the proposed development would have a major impact on current grazing uses. It notes that there is one crofter whose use of the common grazings will be impacted but the loss of land to the proposed development would be outweighed by the wider social and economic benefits. The position of the Crofting Commission is accepted.

10.130 A separate process will be required in relation to use of the land for a non-crofting purpose. The Crofting Commission notes the potential disturbance to livestock and considers that consultation should be undertaken with an appropriate veterinary authority. The applicant is currently in discussions with crofters in relation to livestock management with regard to launch events.

Noise and Air Quality

10.131 The applicant has undertaken an assessment of the impact of noise as a result of the construction and operation of the proposed development. It is noted that there will be noise as a result of construction, as set out in paragraph 10.24, this can be controlled by Section 60 of the Control of Pollution Act 1974.

10.132 Operational noise for such a facility will largely be limited to the launch There will be some noise from plant associated with the building and assembly of the launch vehicles however this is anticipated to be limited and would be unlikely to affect noise sensitive receptors due to the location of the facility.

10.133 The assessment has considered the noise impacts at a range of noise sensitive receptors including at West Strathan, East Strathan, Talmine and Midtown. In doing so the applicant has identified the potential noise levels during launch and during flight at a range of altitudes. It is anticipated that the noise from the launch and flight will be experienced for up to 70 seconds, up to 12 times per calendar year. The 70 second period is considered as the likely length of time until which the launch vehicle will reach an altitude of 10,600m. At this altitude it is predicted that noise levels at the residential receptors will be no higher than the background noise levels. At the closest noise sensitive receptors, the noise at launch is anticipated to be between 100-110db, by the time the launch vehicle reaches 5202m altitude the noise would reduce to between 70-80db. Further to launches, the rocket will also pass the sound barrier and therefore create a sonic boom. The level of noise from the sonic boom will reach between 127db and 144db and last for a period of 0.2 seconds. These impacts are considered to be significant albeit short lived.

10.134 Given the level of potential noise impacts it is considered appropriate that noise monitoring is undertaken during launch activities to verify the findings of the noise assessment. If it is found that the noise emissions are higher than that predicted by the EIAR, a scheme of mitigation for the affected noise sensitive receptors may be required.

10.135 The applicant has undertaken an assessment of the potential effects of the development on air quality during the construction and operational phases of the development. Environmental Health have not raised any concerns in relation to noise or air quality.

Other material considerations

10.136 Those consultees with an interest in aviation have not raised concern with regard to the proposed development. The applicant will be required to follow the process under CAP1616: Airspace change, which is regulated by the Civil Aviation, to change the notified airspace design and planned and permanent redistribution of air traffic.

10.137 Representations have raised concern about the proposed development being determined by a Local Authority rather than the Scottish Government given the potential national importance of such a facility. As set out in paragraph 3.14 of this report the Highland Council were served with a direction from Scottish Government. This states that if The Highland Council are minded to grant planning permission for the proposed vertical launch facility, we are required to notify Scottish Ministers. The Direction has been served to assist in providing an overview of applications for spaceport development in the planning system. Further on 11 June 2020 The Town

and Country Planning (Notification of Applications) (Spaceport Related Developments) (Scotland) Direction 2020. This requires planning authorities in Scotland to advise Scottish Ministers of receipt of any new planning application for a spaceport related development that comes into the planning system. The purpose of that direction is to enable a national overview of spaceport related developments in the planning system to be created.

10.138 Given the complexity of major developments, and to assist in the discharge of conditions, the Planning Authority seek that the developer employs a Planning Monitoring Officer (PMO). The role of the PMO, amongst other things, will include the monitoring of, and enforcement of compliance with, all conditions, agreements and obligations related to this permission (or any superseding or related permissions) and shall include the provision of a monthly compliance report to the Planning Authority during the construction period and annual reports thereafter.

10.139 The applicant has advised that the development has a nominal operational period of 50 years but it is not applying for a temporary planning permission. If the development is no longer in operational use the proposed development will require to be decommissioned and the site reinstated. The applicant has committed to decommissioning and reinstatement if the proposed development is not used for vertical launches for a period of 5 years. A scheme for decommissioning and restoration can be secured by condition. This will be accompanied by a financial guarantee to cover the costs of decommissioning and restoration.

10.140 Representations are concerned that if planning permission is granted then further associated development would be follow on and the number of launches from the site will increase. The application in front of the Planning Authority has a relatively narrow scope and the assessment has been based upon the parameters set out in the EIAR. If further development and intensification of the use of the site is sought, a further planning application and assessment of the environmental effects would be required.

10.141 The engineering of the development has caused some concern in those making representations to the application. This is a new and unique development type in Scotland and therefore the designers of the scheme will have to be confident that the engineering solution is appropriate. As it relates to the buildings these matters will be tested through the building warrant process but for infrastructure such as the launch pad, this will likely be required to be considered through the safety case for the required licences.

Non-material considerations

10.142 In line with Council policy and practice, community benefit considerations are undertaken as a separate exercise and generally parallel to the planning process. It is understood that Tongue Community Council's response relates to this matter.

10.143 While certain matters of safety and human health have been considered in this report, there are other regulatory functions which control these issues.

Matters to be secured by Section 75 Agreement

10.144 None

11. CONCLUSION

11.1 The proposed development is a unique and if permitted could be one of the first developments of its kind in Europe. However, as with all applications, the benefits of the proposal must be weighed against potential drawbacks and then considered in the round, taking account of the relevant policies of the Development Plan.

11.2 The development has attracted a large number of objections from across the world but also a level of support has been demonstrated. There is also support for the development from Tongue Community Council as well as other surrounding community councils across Caithness and north Sutherland. Consultee comments have been addressed in the report and subject to a number of conditions and development of the proposals in accordance with the required conditions there are no outstanding objections to the proposed development from consultees.

11.3 This is a scheme that will be significantly regulated by other authorities including SEPA, SNH, Marine Scotland, CAA and the UK Space Agency.

11.4 The proposal has a number of challenges in terms of access, landscape and visual impact and environmental impacts where there will be residual significant effects. The development also has a number of benefits, not least the potential economic benefits. The applicant has committed to a range of mitigation in the Environmental Impact Assessment Report. This will require to be followed through and further mitigation, as identified by the Planning Authority and consultees requires to be implemented timeously. With application of the required mitigation, it is considered that, on balance, the development can be considered to accord with the polices of the Development Plan.

11.5 All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

12. IMPLICATIONS

12.1 Resource: Not applicable.

12.2 Legal: Not applicable.

12.3 Community (Equality, Poverty and Rural): Not applicable.

12.4 Climate Change/Carbon Clever: The proposed development will likely release carbon as a result of construction and operation. Conditions are proposed to minimise release of carbon through the construction period and secure peat land and blanket bog restoration to sequester carbon.

12.5 Risk: Not applicable.

12.6 Gaelic: Not applicable.

13. RECOMMENDATION

Action required before decision issued	Y	
Notification to Scottish Ministers	Y	As per paragraph 3.14 of this report if Members are minded to grant planning permission for the application, the Council are required to notify Scottish Ministers

Subject to the above, it is recommended that planning permission be

Granted, subject to the following:

Conditions and Reasons

1. Planning permission is hereby granted for the construction of vertical launch spaceport with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure to be constructed on an area of ground covering 307ha.

   For the avoidance of doubt, no more than 12 launches may take place in any calendar year.

   Reason: To clarify the terms of the permission granted.

2. The Operator shall, at all times after the first launch campaign, record information regarding the details of each launch, inclusive of dates and times of each launch and length of each stage of launch campaign, from the site and retain the information in perpetuity. For the avoidance of doubt the applicant shall also record and retain information in relation to aborted / scrubbed launches. The information shall be made available to the Planning Authority within one month of any request by them.

   In the event that no launch activity takes place from the site for a period of 5 years, or the operator, leaseholder and / or landlord advises that the development is no longer going to be operated, whichever is earliest, a scheme shall be submitted to the Planning Authority for its written approval detailing how the development will be decommissioned. The scheme shall be prepared in accordance with legislative requirements and published best practice at time of decommissioning. The scheme shall include details about how all elements of the development are to be decommissioned, including where necessary details of:

   a) justification for retention of any relevant elements of the development;
   b) the treatment of disturbed ground surfaces;
   c) management and timing of the works;
   d) environmental management provisions;
   e) a traffic management plan to address any traffic impact issues during the decommissioning period.

Thereafter the scheme shall be implemented in accordance with the approved details and timetable.

Reason: To ensure that should the spaceport no longer be required an appropriate mechanism is in place for decommissioning of the development.

3. No development shall commence until:

i. Full details of a guarantee, bond or other financial provision to be put in place to cover all of the decommissioning and Site restoration measures outlined in the Decommissioning and Restoration Plan approved under condition 2 of this permission have been submitted to, and approved in writing by, the planning authority. For the avoidance of doubt the bond must be able to be called upon by The Highland Council and be enforceable against the operator and landowner and/ or leaseholder; and

ii. Confirmation in writing by a suitably qualified independent professional that the amount of financial provision proposed under part (i) above is sufficient to meet the full estimated costs of all decommissioning, dismantling, removal, disposal, Site restoration, remediation and incidental work, as well as associated professional costs, has been submitted to, and approved in writing by, the planning authority; and

iii. Documentary evidence that the guarantee, bond or other financial provision approved under parts (i) and (ii) above is in place has been submitted to, and confirmation in writing that the financial provision is satisfactory has been issued by, the planning authority.

Thereafter, the Operator, and Leaseholder and/or Landowner, shall:

i. Ensure that the guarantee, bond or other financial provision is maintained throughout the duration of this permission; and

ii. Pay for the guarantee, bond or other financial provision to be subject to a review five years after the commencement of development and every five years thereafter until such time as the wind farm is decommissioned and the Site restored.

Each review shall be:

a) conducted by a suitably qualified independent professional; and

b) published within three months of each five year period ending, with a copy submitted upon its publication to both the landowner(s) and the Planning Authority; and

c) approved in writing by the planning authority without amendment or, as the case may be, approved in writing by the Planning Authority following amendment to their reasonable satisfaction.

Where a review approved under part (c) above recommends that the amount of the guarantee, bond or other financial provision should be altered (be that an increase or decrease) or the framework governing the bond or other financial provision requires to be amended, the Operator, and Leaseholder and/or Landowner shall do

so within one month of receiving that written approval, or another timescale as may be agreed in writing by the planning authority, and in accordance with the recommendations contained therein.

Reason: To ensure that there are sufficient funds to secure performance of the decommissioning and restoration conditions.

4. No building shall be erected on the site until full details of materials for all buildings and structures on the site have been submitted to and approved in writing by the Planning Authority. For the avoidance any metal cladding of the buildings shall be of a matt or semi-matt non-reflective finish. Thereafter, development shall progress in accordance with these approved details.

Reason: In the interests of the character and appearance of the area.

5. None of the buildings or structures on the site shall display any name, logo, sign or other advertisement (other than health and safety signage) unless otherwise approved in advance in writing by the Planning Authority.

Reason: In the interests of the character and appearance of the area.

6. Any and all permanent cables, with the exception of final connections, between the Launch Operations Control Centre, Launch Pad Complex, Launch Site Integration Facility and Antenna Park on site shall be installed and kept underground.

Reason: In the interests of visual amenity.

7. Construction of the Launch Operations Control Centre, Launch Site Integration Facility and Launch Pad Complex or ancillary infrastructure shall not commence until final details of:

   a) any and all external lighting to be used during the operation of the site. For the avoidance of doubt this shall ensure that the use of lighting within the site is minimised in terms of lighting intensity and duration of lighting for both launch and non-launch scenarios;
   b) fencing;
   c) paths; and
   d) any other ancillary elements of the development,

   have been submitted to, and approved in writing by, the Planning Authority.

   Thereafter, development shall progress in accordance with these approved details.

   Reason: In the interests of the character and appearance of the area.

8. No development shall commence until a Construction Environment Management Document (CEMD) has been submitted to and approved in writing by the Planning Authority. Thereafter the construction of the development shall only be carried out in accordance with the approved CEMD, subject to any variations approved in writing by the Planning Authority. The CEMD shall include:
   a) details of the phasing of construction works;
   b) details of the formation of temporary construction compounds, access tracks and any areas of hardstanding;

c) details of the temporary site compound including temporary structures/buildings, fencing, parking and storage provision to be used in connection with the construction of the development;
d) details of the maintenance of visibility splays on the entrance to the site;
e) details of the method of construction of the launch pad and all foundations;
f) details of the method of working cable trenches;
g) details of the method of construction and erection of the buildings;
h) details of dust management;
i) details of pollution control: protection of the water environment, bunding of fuel storage areas, surface water drainage, sewage disposal and discharge of foul drainage;
j) details of temporary site illumination during the construction period;
k) details of timing of works;
l) details of surface treatments and the construction of all hard surfaces and access tracks between each element of the proposed development This shall include details of the tracks in a dark, non-reflective finish with details of the chemical properties of any and all imported stone provided;
m) details of routeing of onsite cabling;
n) details of emergency procedures and pollution response plans;
o) siting and details of wheel washing facilities;
p) cleaning of site entrances, site tracks and the adjacent public highway and the sheeting of all HGVs taking spoil or construction materials to/from the site to prevent spillage or deposit of any materials on the highway;
q) details and implementation and a timetable for post construction restoration/reinstatement of the temporary working areas, and the construction compound;
r) details of working practices for protecting nearby residential dwellings, including general measures to control noise and vibration arising from on-site activities, to be adopted as set out in British Standard 5228 Part 1: 2009;
s) details of the location of fencing to be erected around designated features within and adjacent to the site inclusive of areas of blanket bog;
t) a Species Protection Plan
u) a Breeding Bird Protection Plan;
v) details of areas on the site designated for the storage, loading, off-loading, parking and manoeuvring of heavy duty plant, equipment and vehicles.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process.

9. Development shall not commence until an independent Environmental Clerk of Works (“ECoW”) has been appointed, such appointment to be approved in writing by the Planning Authority. The terms of appointment shall:

a. Impose a duty to monitor compliance with the ecological, ornithological and hydrological commitments provided in the Environmental Impact Assessment Report dated February 2020 lodged in support of the application and the Construction Environmental Management Plan, Species Protection Plan, Breeding Bird Protection Plan, Water Quality Management Plan, Peat Management Plan Habitat Management Plan, and other plans approved in terms of the conditions of this permission (“the ECoW Works”);

b. Require the ECoW to report to the nominated construction project manager any incidences of non-compliance with the ECoW Works at the earliest practical opportunity and stop the job where any breach has been identified until the time that it has been reviewed by the construction project manager; and
c. Require the ECoW to report to the appropriate statutory body any incidences of non-compliance with the ECoW Works at the earliest practical opportunity.

The ECoW shall be appointed on the approved terms throughout the period from commencement of development, throughout any period of construction activity, and during any period of post construction restoration works approved as part of the Construction Environmental Management Document and the establishment of the Habitat Management Plan.

Reason: To protect ecological interests.

10. No development shall commence until pre-construction surveys have been carried out by a suitably qualified person, in accordance with the submitted Species Protection Plan comprising:

a) in the spring before construction commences, raptor, diver and breeding bird surveys of the site plus appropriate buffers (2 km for breeding raptors, 500 m for breeding waders and 1 km for breeding divers)
b) an otter survey along all watercourses within 250 m of the works area.
c) a water vole survey along all watercourses within 50 m of the works area
d) a Breeding Bird Survey;
e) a pre-works check for adder along all riverbanks within 30 m of water crossings.

Thereafter Species Protection Plans (inclusive of a Breeding Bird Protection Plan) for the species surveyed shall be submitted to and approved in writing by the Planning Authority, in consultation with SNH, prior to the commencement of development. Thereafter, the approved species protection plans shall be implemented in full.

Reason: In the interests of nature conservation.

11. No later than 6 months prior to the first launch from the site, a visitor management plan (VMP) shall be submitted to and approved in writing by the Planning Authority in consultation with SNH, Transport Scotland, and emergency services.

The VMP shall be based on the principles set out in the Visitor Management Strategy submitted with the Environmental Impact Assessment Report as clarified by the Scenario Planning with Supporting Planning Assumptions document (May 2020) and shall set out the proposed management of visitors to the site and the launch exclusion zone for the period of the launch campaign.
The approved VMP shall include:

a) The period of the launch campaign;
b) Details of how visitors will be managed during launch and non-launch scenarios across the application site and the Launch Exclusion Zone, having particular regard to the impact of visitor management on the qualifying features of the Caithness and Sutherland SAC, SPA and Ramsar site;

c) The estimated visitor numbers, proposed viewing areas, visitor traffic routes to these areas and the traffic generation on these routes;
d) The size, layout and location of the car, campervan and coach parking required to accommodate the estimated visitors at or close to the viewing areas and details of suitable accessible routes for pedestrians from the parking to the viewing areas;
e) Provision of the agreed visitor facilities (including parking facilities) prior to launch;
f) Measures to encourage sustainable transport to the site including remote park and ride and provision of public transport services from rail stations and larger settlements within Caithness and Sutherland;
g) Proposals for a suitable Traffic Regulation Order mechanism to control stopping and waiting on the A838 (and at other locations which are identified as likely to be impacted by uncontrolled parking in the vicinity of the launch site). This shall include any associated signage;
h) Proposals for any byelaws (not relevant to the Space Industry Act 2018) to establish the Launch Exclusion Zone which will impact on the public road network;
i) Security measures which may affect the free flow of traffic on the public road;
j) Proposals of road signage to inform and warn road users on the main visitor routes and within the settlements of Melness, Talmine and Tongue and to redirect road users where required, including any signage on the public road required for the Launch Exclusion Zone; and
k) Proposals for a public information protocol and a communications strategy (including a website) to provide information on the traffic management proposals.

Thereafter the approved VMP shall be implemented in full.

The VMP will also include provision for monitoring of visitor management and a review of the VMP shall be undertaken, in consultation with the Council, SNH, Transport Scotland, and emergency services following each launch during the first year of launches. Thereafter, monitoring and review of the visitor management plan will take place at the end of the 2nd and 5th year of operation and thereafter every 5th anniversary of the first launch from the development or 6 months in advance of the first launch by any new Launch Site Operator.

Following each review of the VMP, the revised VMP shall be submitted for the written approval of the Planning Authority in consultation with SNH, Transport Scotland, and emergency services. Thereafter the revised VMP shall be implemented in full.

Reason: To ensure that visitors are managed in a manner which would not have an adverse effect on the qualifying features of Caithness and Sutherland Peatlands Special Protection Area and Caithness and Sutherland Peatlands Special Area of Conservation, or on the local road network. To ensure the principles in the Visitor Management Strategy submitted with the Environmental Impact Assessment Report as clarified by the Scenario Planning with Supporting Planning Assumptions document (May 2020) are carried forward to the detailed Visitor Management Plan and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying

habitats and species is required to inform, and where necessary change, future visitor management. Changes may be required in response to predicted effects and effects which have not been predicted due to the novelty of the proposal, the evolution of technologies, changes in visitor behaviour and unforeseen factors.

12. No development or work shall (including site clearance) shall commence until a programme of work for the protection of historic features affected by the proposed development, including a timetable for investigation, has been submitted to and approved in writing by the Planning Authority. The approved programme shall be implemented in accordance with the agreed timetable for investigation.

Reason: In order to protect the historic interest of the site.

13. There shall be no Commencement of Development until a Community Liaison Group has been established, the remit and membership of which shall be submitted to and approved in writing by the Planning Authority. The scheme shall set out how the community is to be kept informed of project progress, how it will allow advanced dialogue on the provision of all transport-related mitigation measures and other mitigation measures and keep under review the timing of the delivery of components during construction and launch events. This should also ensure that local events and tourist seasons are considered and appropriate measures to co-ordinate activities on the site during construction and operation of the development with these and any other major projects in the area to manage conflict between construction traffic, operational traffic and the increased traffic generated by such events/seasons/developments. The scheme shall be implemented as approved.

Reason: To assist project implementation and operation, ensuring community dialogue and the delivery of appropriate mitigation measures for example to minimise potential hazards to road users, including pedestrians, travelling on the road networks.

14. No development shall commence until full details of all surface water drainage provision within the application site have been submitted to and approved in writing by the Planning Authority. The details shall:

i. be based on principles outlined on the Surface Water Plan (Drawing SK-C-SW001)
ii. accord with the principles of Sustainable Drainage Systems (SUDS) and be designed to the standards outlined in The CIRIA SUDS Manual any superseding guidance prevailing at the time,
iii. include final details of the drainage feature to the east of the LOCC;
iv. make provision for the flush habitat north of the LSIF building to be treated like a watercourse and be crossed by a series of closed culverts to minimise impacts on it and maintain local hydrology

The submission shall be supported by a revised Drainage Impact Assessment (inclusive of any revised modelling) to ensure the final design does not have an adverse impact on flood risk, drainage and M6 flush habitat with all discharge rates not exceeding greenfield run off rates.

Thereafter, only the approved details shall be implemented and all surface water drainage provision shall be completed prior to the first occupation of any part of the development.

Reason: To ensure that surface water drainage is provided timeously and complies with the principles of SUDS; in order to protect the water environment.

15. No development shall commence until the Planning Authority has approved in writing the terms of appointment by the Company of an independent and suitably qualified to assist the Planning Authority in monitoring compliance with the terms of the deemed planning permission and conditions attached to this consent ("PMO"). The terms of appointment shall;

    a. Impose a duty to monitor compliance with the terms of the deemed planning permission and conditions attached to this consent throughout the construction and operation of the proposed development;
    b. Require the PMO to submit a monthly report to the Planning Authority summarising works undertaken on site during construction of the development and then provide an annual report of activities on the site and compliance with conditions; and
    c. Require the PMO to report to the Planning Authority any incidences of non-compliance with the terms of the terms of the planning permission and conditions attached to this consent at the earliest practical opportunity.

    The PMO shall be appointed on the approved terms throughout the period from Commencement of Development to the time which the development is no longer in operation.

    Reason: To enable the development to be suitably monitored to ensure compliance with the planning permission granted.

16. No development shall commence until a structural assessment of the Naver Bridge, which shall include an assessment of any and all loads which will be transported across the bridge (inclusive of construction vehicles, plant and machinery) which may be used in the construction of the, has been submitted to and agreed in writing by the Planning Authority.

    Thereafter, no development shall commence until either:

    a. the existing Naver Bridge has been replaced; or
    b. a scheme of mitigation to safeguard the safety and the condition of the bridge during the period of construction traffic has been submitted to and agreed in writing by the Planning Authority. The scheme of mitigation shall be informed by the structural assessment and it shall include:
        i. a pre-start inspection;
        ii. arrangements for undertaking regular inspection of the bridge;
        iii. arrangements for reporting any deterioration and for carrying out maintenance due to the extraordinary level of traffic;
        iv. arrangements for an inspection post-construction;
        v. consideration of Traffic Management measures for Heavy Goods Vehicles during construction of the development; and
        vi. details of any necessary works to the bridge and the road over the bridge and the immediate approach to the bridge in order to facilitate the safe passage of the proposed construction traffic.

    Thereafter no development shall commence until the agreed scheme of mitigation has been implemented to a timetable to be agreed with the Planning Authority.

Reason: To ensure the free flow and safety of the local road network

17. No development shall commence until a Construction Traffic Management Plan (CTMP) has been submitted to and approved in writing by the Planning Authority. The CTMP shall include:

a) A Section 96 Wear and Tear Agreement including provision of a suitable bond. This shall be provided and will cover the construction routes on the local road network, including but not limited to A836 and A838 from Bettyhill to the site, as set out below;
b) Identification of the routes to be used for construction HGV traffic which shall not include any use of the A838 west of the site access and the A836 to Lairg;
c) Identification of any abnormal indivisible loads (such as cranes and low loaders with construction plant) and the routes to be used by these vehicles;
d) Identification of the structures along the construction traffic routes and agreement with The Council's structures section regarding any required inspection of these structures. Identification and provision of any required mitigation at the structures inclusive of any traffic management that may be required;
e) Identification of a scheme of mitigation to provide improved inter-visible passing places (suitable for HGVs) within the existing road boundary on any single track sections of the construction routes in general accordance with Figure 5.1 of The Council's Roads and Transport Guidelines. The mitigation shall then be delivered prior to commencement of the development;
f) Proposals for ensuring that construction HGV traffic adheres to the agreed routes;
g) A pre-start inspection of the agreed routes (this shall be a video inspection with a method for establishing location by GPS coordinate and/or chainage). Any areas of significant deterioration shall be recorded photographically with an accurate location and suitable written commentary. Ideally all inspections should be undertaken jointly with The Council and at least 7 days notice shall be given to enable this;
h) Monthly inspection reports of the agreed routes;
i) A method of reporting and repairing defects found on the agreed routes;
j) A final inspection and report on the condition of the agreed routes within 1 month of completion of the development;
k) Provision of suitable measures to remove the depositing of debris on the public road, which may include use of a vacuum road sweeper (or a wheel wash within the site) if required by The Council due to problems with mud on the road;
l) A scheme of temporary signage and other temporary mitigation traffic management or works such as a voluntary 20mph speed limit required for the construction HGVs. Proposals for the following settlements shall be considered – Tongue, Bettyhill, Reay and Thurso;
m) Specific traffic management proposals are required for Tongue primary school, Farr High School at Bettyhill and Reay primary school. HGV construction traffic should avoid school start and finish periods whenever possible;
n) A suitable point of contact for The Council and for members of the public regarding construction traffic movements and any impacts on the public road; and

o) Details of how complaints regarding construction traffic and damage to the road will be dealt with and how the community and wider public will be kept informed of any significant traffic movements.

Thereafter the approved CTMP shall be implemented in full prior to the commencement of the development.

Reason: to ensure the free flow and safety of the local and trunk road networks during the construction period.

18. The development shall not be brought into use as a spaceport until a practicable Workforce Travel Plan has been submitted to and approved in writing by the Planning Authority. The Plan shall detail the following measures:

a) The name and contact details of an appointed Travel Plan Co-ordinator;
b) The proposed objectives and targets for staff travel, including targets to reduce access being taken to the development by staff and visitors in private cars, encourage practicable access options to the development by sustainable and active transport and for avoiding parking overspill onto the adjacent public roads;
c) Details of measures to be taken to meet the proposed targets;
d) Details of monitoring that will be undertaken to measure the success of the Travel Plan against the approved targets;
e) Details of the reporting of the monitoring of the Workforce Travel Plan, which shall be annually from the date of the first use of the development as a spaceport. This report shall include details of any further mitigation measures required to ensure the targets in the Workforce Travel Plan can be met.

Thereafter the Workforce Travel Plan shall be implemented prior to first use of the development as a spaceport.

Reason: To reduce the reliance on private cars and encourage modal shift to sustainable and active transport.

19. No development shall commence on the car park until a detailed scheme for the car parking spaces, detailing no fewer than 39 parking spaces inclusive of appropriately located disabled parking spaces in accordance with the Roads and Transportation Guidelines for New Development, has been submitted to and approved in writing by the Planning Authority. The approved scheme shall be implemented prior to first occupation of the phase of the development to which it relates, thereafter being maintained for this use in perpetuity.

Reason: To ensure adequate provision of car parking.

20. No development shall commence until a scheme for the delivery of 17 passing places to a design and specification agreed with The Council, in general accordance with the Pell Frishmann Passing Place Review Rev B dated 24/03/20, has been submitted to and approved in writing by the Planning Authority and has been implemented to the satisfaction of the Planning Authority.

Reason: To ensure that the consequences for the local road network as a result of construction traffic from the proposed development are addressed.

21. The development shall not be brought into use as a spaceport until a Launch Event Visitor Management Group is established by the Launch Site Operator in collaboration with The Council, SEPA, SNH, Sutherland Access Panel, Emergency Services, and local Community Councils.

The group shall act as a vehicle to develop and review the effectiveness of the Visitor Management Plan to avoid conflicts in launch campaign visitor management which may lead to damage to the Natura 2000 sites, disturb protected species and / or create parking and traffic management problems.

The Launch Event Visitor Management Group, or element of any combined liaison group relating to this development, shall be maintained in perpetuity with the first meeting to take place within 6 months of commencement of development and meetings then being held at least once every three months prior to the first launch campaign to develop the Visitor Management Plan; after the first launch and after every third launch thereafter within the first year of operation. Thereafter the Launch Campaign Visitor Management Group shall meet at least once every six months.

Reason: To assist with the provision of mitigation measures to minimise the potential for conflict of events which may lead to traffic management problems.

22. No development shall commence until a foundation plan has been submitted and approved in writing by the Planning Authority in consultation with SEPA. The plan will include, but not limited to, pile foundations for the Launch Operations Control Centre, the Launch Pad and the rail track. Thereafter the foundation plan shall be implemented.

Reason: To limit the impact of the proposed development on the peat resource and minimise carbon loss.

23. Prior to the commencement of the development (including any engineering works) of the development, a Peat Management Plan shall be submitted to and approved in writing by the Planning Authority in consultation with the SEPA and SNH. The Peat Management Plan shall include:

a) the volume of peat disturbed by the development (re-estimated following any further ground investigations and any further measures to reduce peat disturbance);

b) the volume of peat to be reused during reinstatement works, and in restoration and remediation of damaged and degraded peat within the site and within the vicinity of the site;

c) a plan identifying where and how disturbed peat can be reused in site reinstatement works;

Thereafter the approved peat management plan shall be implemented in full.

Reason: To ensure the development of the site limits impact on the peat resource and minimises carbon loss.

24. No development shall commence until a Stage 1 Nature Conservation Management Plan (including Habitat Management Plan and restoration) has been submitted to and approved in writing by the Planning Authority in consultation with SNH and

SEPA. The Nature Conservation Management Plan shall set out proposed long term management for the application site and immediate vicinity and shall provide for the management, monitoring and reporting of terrestrial and aquatic habitats on site. Specifically this shall include management, monitoring and reporting of:

i. peatland restoration of, as a minimum the areas shown in Figure 5.11 of the EIA Report, with the first phase of works to be completed within one year of the operation of the site;
ii. water quality (across the whole site but with a focus on water quality following launch events in the vicinity of the launch pad and the watercourse into which the overflow from the deluge water will discharge);
iii. impact of the proposed development on blanket bog.

This shall be based on the principles of the Outline Habitat Management Plan and shall ensure that any and all management, monitoring and reporting shall be undertaken with the aim to protect and enhance the habitat and biodiversity of the site and the surrounding area, with a particular view to maximising sequestration of the carbon released as a result of the construction and operation of the proposed development. The HMP within the conservation management plan shall include:

a) a summary of the baseline habitat conditions on site including sensitive habitats and/or designated sites;
b) a summary of the protected species survey data and review of any species most likely to be impacted by the development;
c) a summary of the relevant legislation, planning policy and best practice guidance related to the development;
d) detailed management and mitigation measures for habitat reinstatement and enhancement; and
e) detailed monitoring measures and reporting prescriptions.

The approved Nature Conservation Management Plan will be reviewed and updated by the Developer to reflect ground condition surveys undertaken during construction and prior to the first launch campaign and shall be submitted to the Planning Authority for its written approval in consultation with SNH and SEPA prior to the first launch campaign, as the Stage 2 Nature Conservation Management Plan.

In furtherance of the aim and for the better implementation and review of the Nature Conservation Management Plan Steering Group (NCPM SG) shall be formed prior to the commencement of any development. The membership of this NCMP SG will include representatives of the Developer, the Planning Authority and SNH. The NCMP SG will meet annually but it is expected that its consideration of relevant matters will be primarily by exchange of correspondence.

The Stage 2 Nature Conservation Management Plan shall be further reviewed by the Developer at a frequency of no longer than the 5 year anniversary of the first launch date, and no longer than every 6 years thereafter until the Development is no longer in operation. The Developer shall submit a stage reviewed Nature Conservation Management Plan following each such Nature Conservation Management Plan monitoring year as provided for in the Nature Conservation Management Plan for approval in writing by the Planning Authority in consultation with SNH and SEPA. Mitigation identified through the reviewed Nature Conservation Management Plans shall be implemented in full by the Developer, unless otherwise agreed in writing by the Planning Authority in consultation with SNH and SEPA.

NCMP monitoring shall be carried out by the Developer in operational years 1, 5, 10, 15 and 25 and shall be reported to the Planning Authority, the NCMP Steering Group in writing by the Developer.

The Developer shall submit a monitoring report to the Planning Authority, SNH and SEPA on the ongoing implementation of the approved Nature Conservation Management Plan which will be provided no later than 6 months after the end of each NCMP monitoring year. The monitoring report shall present an assessment of the implementation of the Nature Conservation Management Plan, including -

a. an assessment of the implementation of the Nature Conservation Management Plan, and any reviewed such plan, in relation to the aims and objectives of the plan;

b. the levels, of habitat restoration delivered on site, and

c. the results of any monitoring and surveys required in compliance with the conditions of this deemed planning permission.

If a monitoring report identifies that the implementation of the Nature Conservation Management Plan is not meeting the aims and objectives of the Habitat Management Plan then this shall be reported by the Developer to the HMP SG along with details of the proposed mitigation and any other works considered to be required to ensure the aims and objectives of the approved Habitat Management Plan will be met within 6 months of the relevant monitoring report being so submitted. The HMP SG will review such proposals and make recommendations thereon. The Developer shall then finalise proposed mitigation and other works, incorporate changes into an updated Habitat Management Plan which shall be submitted to the Planning Authority within 12 months of the relevant monitoring report for written approval in consultation with SNH and SEPA.

Unless otherwise agreed in advance in writing with the Planning Authority after consultation with SNH and SEPA, the approved Habitat Management Plan, each approved reviewed Habitat Management Plan and updated mitigation and works to achieve same shall be implemented in full by the Developer.

Reason: In the interests of good land management, the protection of habitats, carbon sequestration and to minimise the impacts on the qualifying interests of the Caithness and Sutherland Peatlands Special Area of Conservation.

25. No development shall commence until details of any and all watercourse crossings have been submitted to and approved in writing by the Planning Authority. All watercourse crossings shall be designed to ensure they do not impede a 1 in 200 year plus climate change flow, include an appropriate level of freeboard and include formal mammal passages if a sufficient bank would be maintained under flood conditions.

Reason: In the interests of ensuring the risk of flooding is not increased as a result of the development.

26. For the avoidance of doubt when the water deluge system is being maintained (inclusive of drainage or cleaning) the water shall not be discharged to a local watercourse and shall be removed or disposed at a suitably licenced facility.

Reason: To ensure that the quality of the water environment is protected.

27. No development shall commence until a Foul Drainage Plan is submitted to and approved in writing by the Planning Authority in consultation with SEPA.

Foul drainage shall be implemented in line with Drawing SK-C-FW001 “Foul Drainage Plan” unless an alternative solution, which is demonstrated to have less impact on the environment, is agreed by the Planning Authority in consultation with SEPA.

Thereafter the approved foul drainage solution shall be implemented prior to the development being brought into use as a spaceport.

Reason: To ensure that the quality of the water environment is protected.

28. No works or development, with the exception of surface water drainage infrastructure, foul drainage, nature conservation and habitat management shall be undertaken outwith areas identified for construction works on the approved Extent of Works Plan (approved drawing erc 19.02.P17), the areas of which shall be marked out on the site. For the avoidance of doubt storage of material may take place within 10m of the top of the bank of any watercourse or waterbody unless otherwise agreed in writing by SEPA and The Highland Council’s Flood Risk Management Team.

Reason: To ensure the impact of construction on the surrounding environment is managed.

29. No development shall commence until an updated Schedule of Mitigation has been submitted to and approved in writing by the Planning Authority in consultation with SNH and SEPA. The document shall include provision for :

a) An updated Schedule of Mitigation (SM) including all mitigation identified in the Environmental Impact Assessment Report and any additional mitigation otherwise included as conditions on this planning permission;
b) A timetable for the implementation of each element of mitigation;
c) Processes to control / action changes from the agreed Schedule of Mitigation.

Thereafter all mitigation identified in the approved document shall be implemented in full in accordance with the timescales included in the schedule of mitigation.

Reason: to ensure the delivery of required mitigation to ensure the impacts of the proposed development on the receiving environment are managed.

30. No development shall commence until a programme for monitoring the effect of discharge of deluge water from the launch pad on the watercourse is agreed by the Planning Authority in consultation with SEPA. Should the monitoring show that the discharge includes contaminants above a concentration which could cause pollution then a modification to the treatment approach will be required

Reason: To ensure no adverse environmental impacts arise from the operation of the water deluge system.

31. No development shall commence on until a scheme for monitoring noise from launch vehicles during the first year of operation has been submitted to, and agreed in writing by, the Planning Authority. Within six months of the first anniversary of the first launch from the space port, a report that compares the predicted effects contained with the EIAR submitted in support of this application and identifies any further mitigation deemed necessary to protect sensitive receptors, including a programme for implementation, shall be submitted to, and agreed in writing by, the Planning Authority. Any agreed mitigation shall be implemented in accordance with the agreed programme.

Reason: To protect the amenity of sensitive receptors from operational noise that was not predicted.

32. No development or works shall commence until an Operational Environmental Management Plan (OEMP) has been submitted to, and approved in writing by, the Planning Authority. The OEMP shall include, but will not necessarily be limited to:

a. an overview of the environmental conditions attached to the planning permission and the measures which will be implemented to ensure the proposal is operated in accordance with the terms of the planning permission;
b. A description of all key operating procedures for the site with reference to environmental management and control;
c. A site log sheet for emissions showing which items of plant will be operational at each stage of operation, anticipated sources of emissions, associated emissions points that will be in use and details of abatement which will be applied during operation;
d. Description of controls that will be in place during operation of the site and monitoring regimes which will be implemented during the operating period to record activities, emissions and any activities requiring information tot be generated to meet planning permission or licencing requirements;
e. Processes to control / action changes as a result of unexpected events during operation.

The Operational Environmental Management Plan shall be implemented as approved, ensuring all on site staff are familiar with and adhere to its terms.

The OEMP shall be reviewed every 5 years from the date of the approval of the permission to ensure that it remains in line with good practice. The reviewed and updated documents shall be submitted and approved in writing to the Planning Authority by 01 March of any review year.

Reason: In order to enable the Planning Authority to adequately control the development and to minimise its impact on the nature conservation and amenities of the local area.

33. At all times outwith a launch event, which for the purposes of this condition is defined as the period of time when the launch vehicle is required to be in a vertical position within the Launch Pad Complex for operation reasons, the lightning tower, strongback and lighting columns within the antenna park shall be retracted to their lowest height.

Reason: to ensure visual impacts are minimised.

REASON FOR DECISION

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

REASONED CONCLUSION

The Council's assessment of the information presented within the EIA Report and other environmental information in relation to the development is contained within the Report of Handling. Residual significant effects have been identified in relation to landscape and visual effects, noise, traffic, major accidents and disasters and greenhouse gases.

The Council is satisfied that this reasoned conclusion is still up to date.

The Council is satisfied that other effects/issues can be addressed by way of mitigation. A detailed description of the proposed mitigation is contained within Chapter 15 of the EIA Report and the Report of Handling.

The Council has incorporated the requirement for a schedule of mitigation within the conditions of this permission. Monitoring has been secured through Conditions 2, 8, 9, 11, 15, 18, 19, 24, 29, 30, 31, and 32 of this permission.

All documents can be viewed online at https://wam.highland.gov.uk/wam/ and searching using the case reference number.

TIME LIMIT FOR THE IMPLEMENTATION OF THIS PLANNING PERMISSION

In accordance with Section 58 of the Town and Country Planning (Scotland) Act 1997 (as amended), the development to which this planning permission relates must commence within THREE YEARS of the date of this decision notice. If development has not commenced within this period, then this planning permission shall lapse.

FOOTNOTE TO APPLICANT

Initiation and Completion Notices

The Town and Country Planning (Scotland) Act 1997 (as amended) requires all developers to submit notices to the Planning Authority prior to, and upon completion of, development. These are in addition to any other similar requirements (such as Building Warrant completion notices) and failure to comply represents a breach of planning control and may result in formal enforcement action.

1. The developer must submit a Notice of Initiation of Development in accordance with Section 27A of the Act to the Planning Authority prior to work commencing on site.

2. On completion of the development, the developer must submit a Notice of Completion in accordance with Section 27B of the Act to the Planning Authority.

Copies of the notices referred to are attached to this decision notice for your convenience.

Accordance with Approved Plans and Conditions

You are advised that development must progress in accordance with the plans approved under, and any conditions attached to, this permission. You must not deviate from this permission without consent from the Planning Authority (irrespective of any changes that may separately be requested at the Building Warrant stage or by any other Statutory Authority). Any pre-conditions (those requiring certain works, submissions etc. prior to commencement of development) must be fulfilled prior to work starting on site. Failure to adhere to this permission and meet the requirements of all conditions may invalidate your permission or result in formal enforcement action

Flood Risk

It is important to note that the granting of planning permission does not imply there is an unconditional absence of flood risk relating to (or emanating from) the application site. As per Scottish Planning Policy (paragraph 259), planning permission does not remove the liability position of developers or owners in relation to flood risk.

Scottish Water

You are advised that a supply and connection to Scottish Water infrastructure is dependent on sufficient spare capacity at the time of the application for connection to Scottish Water. The granting of planning permission does not guarantee a connection. Any enquiries with regards to sewerage connection and/or water supply should be directed to Scottish Water on 0845 601 8855.

Septic Tanks and Soakaways

Where a private foul drainage solution is proposed, you will require separate consent from the Scottish Environment Protection Agency (SEPA). Planning permission does not guarantee that approval will be given by SEPA and as such you are advised to contact them direct to discuss the matter (01349 862021).

Local Roads Authority Consent

In addition to planning permission, you may require one or more separate consents (such as road construction consent, dropped kerb consent, a road openings permit, occupation of the road permit etc.) from the Area Roads Team prior to work commencing. These consents may require additional work and/or introduce additional specifications and you are therefore advised to contact your local Area Roads office for further guidance at the earliest opportunity.

Failure to comply with access, parking and drainage infrastructure requirements may endanger road users, affect the safety and free-flow of traffic and is likely to result in enforcement action being taken against you under both the Town and Country Planning (Scotland) Act 1997 and the Roads (Scotland) Act 1984.

Further information on the Council's roads standards can be found at: http://www.highland.gov.uk/yourenvironment/roadsandtransport

Application forms and guidance notes for access-related consents can be downloaded from:

http://www.highland.gov.uk/info/20005/roads_and_pavements/101/permits_for_working_on_public_roads/2

Mud and Debris on Road

Please note that it an offence under Section 95 of the Roads (Scotland) Act 1984 to allow mud or any other material to be deposited, and thereafter remain, on a public road from any vehicle or development site. You must, therefore, put in place a strategy for dealing with any material deposited on the public road network and maintain this until development is complete.

Construction Hours and Noise-Generating Activities: You are advised that construction work associated with the approved development (incl. the loading/unloading of delivery vehicles, plant or other machinery), for which noise is audible at the boundary of the application site, should not normally take place outwith the hours of 08:00 and 19:00 Monday to Friday, 08:00 and 13:00 on Saturdays or at any time on a Sunday or Bank Holiday in Scotland, as prescribed in Schedule 1 of the Banking and Financial Dealings Act 1971 (as amended).

Work falling outwith these hours which gives rise to amenity concerns, or noise at any time which exceeds acceptable levels, may result in the service of a notice under Section 60 of the Control of Pollution Act 1974 (as amended). Breaching a Section 60 notice constitutes an offence and is likely to result in court action.

If you wish formal consent to work at specific times or on specific days, you may apply to the Council's Environmental Health Officer under Section 61 of the 1974 Act. Any such application should be submitted after you have obtained your Building Warrant, if required, and will be considered on its merits. Any decision taken will reflect the nature of the development, the site's location and the proximity of noise sensitive premises. Please contact env.health@highland.gov.uk for more information.

Protected Species – Halting of Work

You are advised that work on site must stop immediately, and Scottish Natural Heritage must be contacted, if evidence of any protected species or nesting/breeding sites, not previously detected during the course of the application and provided for in this permission, are found on site. For the avoidance of doubt, it is an offence to deliberately or recklessly kill, injure or disturb protected species or to damage or destroy the breeding site of a protected species. These sites are protected even if the animal is not there at the time of discovery. Further information regarding protected species and developer responsibilities is available from SNH: www.snh.gov.uk/protecting-scotlands-nature/protected-species

Other Licences and Regulatory Procedures

To allow the proposed development to operate a number of licences require to be granted. These include:

- Operator licence regulated by the UK Space Agency
- Spaceport licence regulated by the UK Space Agency
- Range services licence under regulated by the UK Space Agency 2018
- Marine Licence regulated by Marine Scotland

- Planned and Permanent Redistribution of Air Traffic (CAP1616) regulated by the Civil Aviation Authority.
- Controlled Activities Regulations Licences Regulated by SEPA

The applicant will be required to ensure these and any other relevant regulatory regimes are followed and appropriate consents / licences in place prior to the operation of the proposed development.

Designation:	Acting Head of Development Management – Highland
Author:	Simon Hindson
Background Papers:	Documents referred to in report and in case file.
Relevant Plans:	Plan 1 - UKVLS-NOR-ZZ-ZZ-DR-A-90051 REV P03 – Site Location Plan
	Plan 2 - UKVLS-NOR-ZZ-ZZ-DR-A-90054 REV P06 – Site Layout Plan
	Plan 3 - UKVLS-NOR-ZZ-ZZ-DR-A-90055 REV P06 - Site Plan As Proposed Launch Operations Control Centre
	Plan 4 - UKVLS-NOR-ZZ-ZZ-DR-A-90056 REV P06 - Site Plan As Proposed Launch Site Integration Facility
	Plan 5 - UKVLS-NOR-ZZ-ZZ-DR-A-90057 REV P06 - Site Plan As Proposed Launch Pad Complex
	Plan 6 - UKVLS-NOR-CC-ZZ-DR-A-00103 REV P03 – Launch Operation Control Building Elevations East / West
	Plan 7 - UKVLS-NOR-CC-ZZ-DR-A-00104 REV P04 - Launch Operation Control Building Elevations North South
	Plan 8 - UKVLS-NOR-CC-ZZ-DR-A-00105 REV P04 - Launch Operation Control Building Elevations
	Plan 9 - UKVLS-NOR-CC-00-DR-A-00001 REV P05 - Launch Operation Control Building Floor Plans
	Plan 10 - UKVLS-NOR-VF-ZZ-DR-A-00104 REV P04 - Launch Site Integration Facility Elevations East / West
	Plan 11 - UKVLS-NOR-VF-ZZ-DR-A-00105 REV P04 - Launch Site Integration Facility Elevations North / South
	Plan 12 - UKVLS-NOR-VF-00-DR-A-00001 REV P016 – Launch Site Integration Facility Floor Plan
	Plan 13 - UKVLS-NOR-VF-ZZ-DR-A-00106 REV P04 - Launch Pad Complex Elevations
	Plan 14 - UKVLS-NOR-VF-ZZ-DR-A-00107 REV P04 - Launch Pad Complex Elevations (Reduced)
	Plan 15 - UKVLS-ARP-ZZ-XX-DR-C-0001 REV P02 – Access Road Layout
	Plan 16 - UKVLS-ARP-ZZ-ZZ-DR-E-2101 REV P02 - Access Road and Site Infrastructure Proposed Contours

Construction of vertical launch space port with launch operations control centre, site integration facility, launch pad complex, antenna park, access road, fencing, services and associated infrastructure

20/00616/FUL

CONSIDERATION OF PROPOSALS AFFECTING EUROPEAN SITES

Caithness and Sutherland Peatlands Special Protection Area

Caithness and Sutherland Peatlands Special Area of Conservation

North Sutherland Coastal Islands SPA Special Protection Area

The status of Caithness and Sutherland Peatlands Special Protection Area, Caithness and Sutherland Peatlands Special Area of Conservation, and North Sutherland Coastal Islands SPA Special Protection Area means that the requirements of the Conservation (Natural Habitats, & c.) Regulations 1994 as amended (the 'Habitats Regulations') or, for reserved matters the Conservation of Habitats and Species Regulations 2017 as amended apply.

This means that where the conclusion reached by the Council on a development proposal unconnected with the nature conservation management of a Natura 2000 site is that it is likely to have a significant effect on those sites, it must undertake an Appropriate Assessment of the implications for the conservation interests for which the areas have been designated. The need for Appropriate Assessment extends to plans or projects out with the boundary of the site in order to determine their implications for the interest protected within the site.

This means that the Council, as competent authority, has a duty to:

- Determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- Determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- Make an Appropriate Assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

The competent authority can only agree to the proposal after having ascertained that it will not have an adverse effect on the integrity of the sites. If this is not the case and there are not alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest, which in this case can include those of a social or economic nature.

It is evident that the proposal is not connected with or necessary to site management for conservation, hence further consideration is required. The proposed vertical launch facility has the potential to have a likely significant effect on the qualifying interests due to impacts arising from construction, operation and decommissioning of the Proposed Development. The Council is therefore required to undertake an appropriate assessment of the implications of the proposal on the above named European designated sites.

Caithness and Sutherland SPA

SNH have advised that the proposal is likely to have a significant effect on the following qualifying interests of the Caithness and Sutherland Peatlands SPA:

- Dunlin *Calidris alpina schinzii*
- Golden Plover *Pluvialis apricaria*
- Greenshank *Tringa nebularia*

The proposal has the potential to disturb/displace greenshank, golden plover and dunlin during both the construction and operation of the space hub. This will adversely impact on the following conservation objectives:

- Distribution of species within the site;
- Distribution and extent of habitats supporting the species; and
- No significant disturbance of the species.

As a result of the likely significant effects, as competent authority, The Highland Council is ***required*** to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests.

Caithness and Sutherland SAC

SNH have advised that the proposal is likely to have a significant effect on the following qualifying interests of the Caithness and Sutherland Peatlands SAC:

- Blanket bogs
- Depressions on peat substrates of the *Rhynchosporion*
- Natural dystrophic lakes and ponds,
- Northern Atlantic wet heaths,
- Otter.

As a result of the likely significant effects, as competent authority, The Highland Council is ***required*** to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests.

North Sutherland Coastal Islands SPA

SNH have advised that the site, is protected for its wintering population of barnacle geese which roost on the islands of Eilean Hoan and Eilean nan Ron. The birds generally feed on improved land around the Kyle of Tongue with the nearest feeding location being approximately 4.5 km from the proposed development site.

The surveys included in the EIAR did not record any barnacle geese flying through or feeding in the development area. Regarding feeding sites, disturbance due to noise was considered to be the only potential impact. It is concluded in the EIAR that due to the distance of the nearest feeding sites from the development and the low frequency of the launches that there will not be a significant effect. We are content with this assessment and therefore **no likely significant effect** can be concluded.

As a result of the lack of likely significant effects, as competent authority, The Highland Council is ***not required*** to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests and can be scoped out if the appropriate assessment

While the responsibility to carry out the Appropriate Assessment rests with the Council, advice contained within Circular 6/1995 is that the assessment can be based on the information submitted from other agencies. In this case, the Appropriate Assessment is informed by information supplied by SNH, the applicant and various published information.

Caithness and Sutherland Peatlands SAC

In its response to the Council of 12 March 2020, SNH advised that the proposal is likely to have a significant effect on the qualifying interests of the SAC during construction. Their advice is set out below:

For the construction phase a likely significant effect on the habitats above can be concluded but information provided shows that the adverse effect on site integrity can be avoided. The outline Construction Environment Management Plan (CEMP) provides adequate mitigation and the principles it contains should be worked through to the detail stage. It will also be essential that the on-site Environmental Clerk of Works (ECOW) has the authority to intervene if environmental risks are being taken or damage caused. The mitigation measures below should be conditioned to ensure the following habitat conservation objectives are met and avoid an adverse effect on site integrity for these habitats:

- *Distribution of the habitats within site.*
- *Structure and function of the habitats.*
- *Processes supporting the habitats.*

Regarding otter, a likely significant effect can be concluded but information provided shows that an adverse effect on site integrity can be avoided. An otter survey has been carried out and Species Protection Plan (SPP) produced. The field survey area included all watercourses within the red-line boundary together with a wider 2.2km buffer around the centre point of the proposed launch pad. Three records of otter activity (spraints) were found within the red line boundary and two in the wider survey area to the north-west. No holts or rest sites were found.

The SPP proposes mitigation including pre-construction survey, tool-box talks, presence of an ECOW and other suitable, good-practice measures. The survey appears competent and the mitigation in the SPP will ensure the following conservation objectives are met and will avoid an adverse effect on site integrity for this species:

- *Distribution of the species within the site.*
- *No significant disturbance of the species.*

Further to the above advice SNH advised that the proposal should be conditions so that the works are undertaken strictly in accordance with the below mitigation:

	Mitigation	Reason
1.	The detailed CEMP, should be agreed with THC, in consultation with SNH prior to the commencement of works.	To ensure suitable mitigation is included in the final, detailed CEMP to avoid damage to the qualifying interests.

2.	The ECOW should have the authority to intervene during construction including the powers to 'stop the job'.	To ensure the CEMP and other relevant mitigation is being adhered to.
3.	Implementation of the Species Protection Plan should be a condition of planning consent.	To protect otter from disturbance.

In its response to the Council of 12 March 2020, SNH advised that the proposal is likely to have a significant effect on the qualifying interests of the SAC during operation as a result of potential visitors to the site. It noted that "the combination of the lack of detail over how this area will be observed, cleared and policed and the sensitivity of the habitats involved provides a likely high but unquantifiable risk." However, it was not able to conclude whether there was a likely significant effect as it considered further information was required on the above matters. The applicant provided a clarifications document for how the provisions of the Visitor Management Strategy could be implemented, this allowed SNH to reach a conclusion on the likely significant effects of the SAC. In a letter dated 28 May 2020, SNH advised:

During the operational phase most of the planned activities take place within the confines of the application red line boundary and therefore avoid the protected area and its qualifying features. However, visitor management will be required over a much wider area which includes the Launch Exclusion Zone (LEZ), currently expected to cover a 1.8km radius, as well as an additional area between the A838 and the LEZ. This will include an area well in excess of 1000ha within both the protected areas.

The features above are extremely susceptible to physical damage from vehicles and from people even in relatively small numbers. An outline Visitor Management Strategy was produced and is included in the EIAR.

The revised Visitor Management Strategy, 28 May 2020, sets out the principles by which visitors will be managed. The principles follow a "Deter, Detect, Delay, Respond/Removal" model which is focussed on the early stages, as well as providing and promoting offsite viewing alternatives. The additional information includes further detail on how individuals will be removed from the site including a commitment to do this on foot by suitably trained and equipped individuals. Vehicles will only be used in an emergency situation (where there is threat to life), an appropriate type of vehicle will be agreed through the final Visitor Management Plan and vehicle operators will be suitably trained. In the unlikely event that vehicles are deployed they will be carefully driven, avoiding soft, wet areas and not damaging the vegetation surface. Furthermore, in the unlikely event that a vehicle needs to be used, it will take the least damaging route in and out, informed again by operator training. All of this substantially reduces the likelihood of vehicle impacts to the vegetation and of repeat damage to the same locations.

Post launch reviews will be put in place to assess the effectiveness of the Visitor Management Plan after each launch event and a habitat monitoring protocol will be agreed to assess the levels of impact on the qualifying interests. SNH should have the opportunity to input to both the post launch reviews and the assessment of the annual monitoring to advise on the impacts, including cumulative impacts, and the measures required to further reduce any effects to a minimal level. If these measures are adopted into the final Visitor Management Plan, at least six months prior to the first launch, to allow time for planning and implementation, then the combined measures would be sufficient to avoid an adverse effect on site integrity for the habitats listed above.

Further to the above advice SNH advised that the proposal should be conditions so that the works are undertaken strictly in accordance with the below mitigation:

	Mitigation	Reason
1.	A detailed Visitor Management Plan should be agreed by The Highland Council, in consultation with SNH, at least six months prior to the first launch taking place. This should include an agreed post launch review arrangement and a monitoring protocol for the SAC and SPA qualifying interests. The VMP should also provide for the necessary changes in visitor management as identified by SNH, for the duration the site is in use.	To ensure the principles in the revised Visitor Management Strategy (May 2020) are carried forward to the detailed Visitor Management Plan and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying habitats and species is required to inform, and where necessary change, future visitor management. Changes may

It is concluded that by the development being undertaken strictly in accordance with the above mitigation during the construction and operational phases of the development the combined measured would be sufficient to avoid an adverse effect on site integrity for the habitats and species listed above.

Caithness and Sutherland Peatlands SPA

In its response to the Council of 12 March 2020, SNH advised that the proposal is likely to have a significant effect on the qualifying interests of the SAC during construction. Their advice is set out below:

For the construction phase a likely significant effect on the above species can be concluded but information provided shows that an adverse effect on site integrity can be avoided. Disturbance can be mitigated by the measures included in the outline CEMP & Species Protection Plans (SPP). The SPP contains reference to the intention to provide a Breeding Bird Protection Plan (BBPP). The detailed CEMP and BBPP, to be developed, should also be agreed with THC, in consultation with SNH, to ensure mitigation is followed through and, where necessary, clarified prior to commencement of works. This includes necessary measures to avoid disturbance such as pre-commencement surveys, setting out exclusion zones and adherence to limitations on timing of works.

As for SAC habitats above it is essential that the ECOW has the authority to enforce measures identified to protect the breeding birds. In addition to the measures in 3.1.1 above, the following mitigation measures should be conditioned:

	Mitigation	Reason
1.	The Species Protection Plan (SPP) contains reference to the intention to provide a Breeding Bird Protection Plan (BBPP). The latter should be agreed with THC, in consultation with SNH prior to the commencement of works.	To ensure mitigation is followed through, and where necessary clarified prior to commencement of works. This includes necessary measures to avoid disturbance which may include restrictions to the construction period.

For the operational period, in its response to the Council of 12 March 2020, SNH advised that:

Disturbance through noise from launches has been evaluated in the EIAR and although the noise events are extremely loud they will be very short-lived. From our own experience of blasting for construction and from military jets, it appears that sudden, loud noise events have short-term effects and do not appear to result in the permanent displacement of breeding birds. Therefore, our advice is that there is no basis for concluding adverse impact from the launches themselves.

SNH further advised that the proposal is likely to have a significant effect on the qualifying interests of the SPA during operation as a result of potential visitors to the site. It noted that "the combination of the lack of detail over how this area will be observed, cleared and policed and the sensitivity of the habitats involved provides a likely high but unquantifiable risk." However, it was not able to conclude whether there was a likely significant effect as it considered further information was required on the above matters. The applicant provided a clarifications document for how the provisions of the Visitor Management Strategy could be implemented, this allowed SNH to reach a conclusion on the likely significant effects of the SPA. In a letter dated 28 May 2020, SNH advised:

During the operational phase most of the planned activities take place within the confines of the application red line boundary and therefore avoid the protected area and its qualifying features. However, visitor management will be required over a much wider area which includes the Launch Exclusion Zone (LEZ), currently expected to cover a 1.8km radius, as well as an additional area between the A838 and the LEZ. This will include an area well in excess of 1000ha within both the protected areas.

The features above are extremely susceptible to physical damage from vehicles and from people even in relatively small numbers. An outline Visitor Management Strategy was produced and is included in the EIAR.

The revised Visitor Management Strategy, 28 May 2020, sets out the principles by which visitors will be managed. The principles follow a "Deter, Detect, Delay, Respond/Removal" model which is focussed on the early stages, as well as providing and promoting offsite viewing alternatives. The additional information includes further detail on how individuals will be removed from the site including a commitment to do this on foot by suitably trained and equipped individuals. Vehicles will only be used in an emergency situation (where there is threat to life), an appropriate type of vehicle will be agreed through the final Visitor Management Plan and vehicle operators will be suitably trained. In the unlikely event that vehicles are deployed they will be carefully driven, avoiding soft, wet areas and not

damaging the vegetation surface. Furthermore, in the unlikely event that a vehicle needs to be used, it will take the least damaging route in and out, informed again by operator training. All of this substantially reduces the likelihood of vehicle impacts to the vegetation and of repeat damage to the same locations.

Post launch reviews will be put in place to assess the effectiveness of the Visitor Management Plan after each launch event and a habitat monitoring protocol will be agreed to assess the levels of impact on the qualifying interests. SNH should have the opportunity to input to both the post launch reviews and the assessment of the annual monitoring to advise on the impacts, including cumulative impacts, and the measures required to further reduce any effects to a minimal level. If these measures are adopted into the final Visitor Management Plan, at least six months prior to the first launch, to allow time for planning and implementation, then the combined measures would be sufficient to avoid an adverse effect on site integrity for the habitats listed above.

Further to the above advice SNH advised that the proposal should be conditions so that the works are undertaken strictly in accordance with the below mitigation:

	Mitigation	Reason
1.	A detailed Visitor Management Plan should be agreed by The Highland Council, in consultation with SNH, at least six months prior to the first launch taking place. This should include an agreed post launch review arrangement and a monitoring protocol for the SAC and SPA qualifying interests. The VMP should also provide for the necessary changes in visitor management as identified by SNH, for the duration the site is in use.	To ensure the principles in the revised Visitor Management Strategy (May 2020) are carried forward to the detailed Visitor Management Plan and to allow sufficient time for planning and implementation. The inclusion of suitable reviews of impacts post launch, and appropriate monitoring of qualifying habitats and species is required to inform, and where necessary change, future visitor management. Changes may

It is concluded that by the development being undertaken strictly in accordance with the above mitigation during the construction and operational phases of the development the combined measured would be sufficient to avoid an adverse effect on site integrity for the bird species listed above.

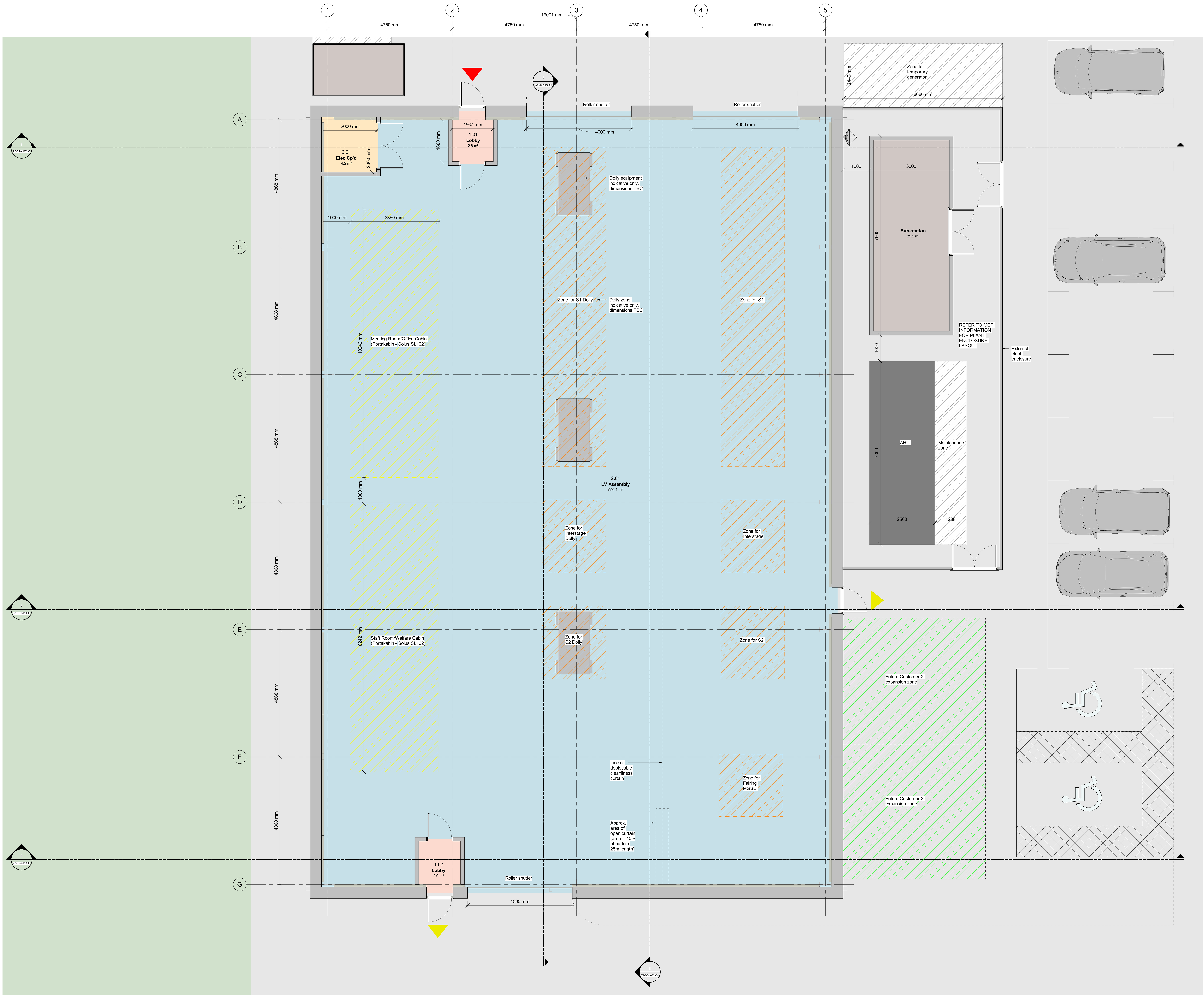
HIGHLAND COUNCIL APPRAISAL OF THE PROPOSAL

- The proposal is not directly connected with or necessary to site management for conservation;
- The proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; therefore;
- An Appropriate Assessment of the implications (of the proposal) for the site in view of that site's conservation objectives is provided below.

The impacts on the Caithness and Sutherland SAC and the Caithness and Sutherland SPA are considered in terms of the different phases of the development where different impacts would likely arise. i.e. the construction phase; operational phase and the decommissioning phase. The mitigation proposed by SNH should be sufficient to address any significant risk and avoid an impact on the integrity of the designated sites and their qualifying features.

Overall, it can be therefore concluded that while likely significant effects have been identified during both the construction and operational phases of the development. there will not be an adverse effect on site integrity of either the Caithness and Sutherland SAC or the Caithness and Sutherland SPA if the mitigation set out within the appropriate assessment is applied.

DATE	REVISION	REV	DR	CH
14/02/24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P01	LB	CH
13/03/24	ISSUED FOR PLANNING APPLICATION	P02	LB	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P03	LB	CH



LEVEL 00_Planning

SCALE : 1 : 50

Departments

- Circulation
- Plant
- Store
- Technical

Key

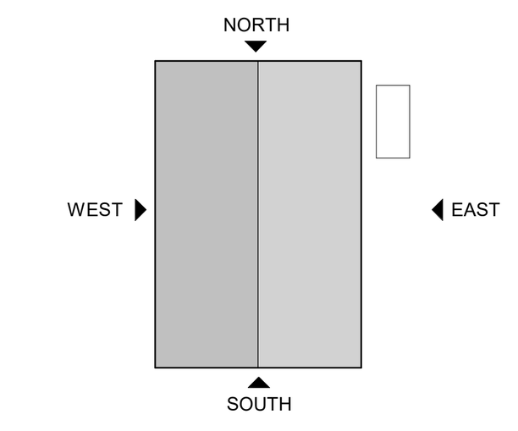
- Equipment areas (dimensions TBC)
- Zone for future additional Payload area
- Zone for Portacabin
- Main entrance
- Emergency exit (TBC by Fire Engineer)

NOTE:

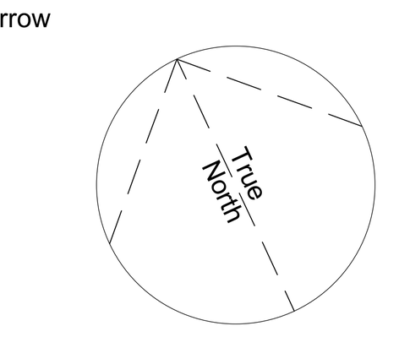
DRAWING TO BE READ IN CONJUNCTION WITH DRAWINGS :-

UKVLS-NOR-VF-ZZ-DR-A-P0204
UKVLS-NOR-VF-ZZ-DR-A-P0205
UKVLS-NOR-VF-ZZ-DR-A-P0303
UKVLS-NOR-VF-ZZ-DR-A-P0304

Keyplan



North Arrow



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NORR Consultants Limited.
An Ingenium International Company

Skypark 5, Suite 1A
45 Finnieston Street,
Glasgow G3 8JU
Scotland, UK
norr.com

Drawn	Date
LB	03/07/2023
Checked	**Date**
CH	03/07/2023

Scale: As indicated @ A0

Client: Sutherland Spaceport Ltd

Project: Sutherland Spaceport - LSIF

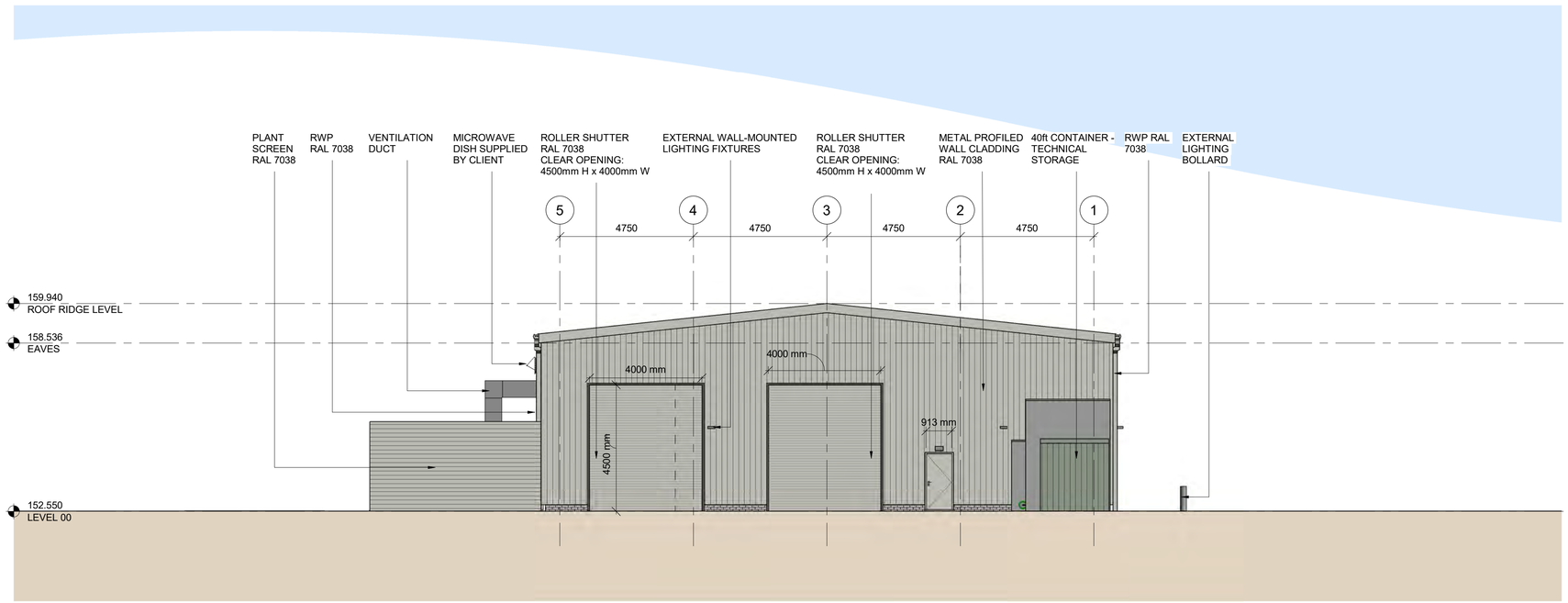
Drawing Title: GA Plan - Level 00

Sheet Status: A3 - APPROVED FOR STAGE 3

Project No. IAGG19-0030

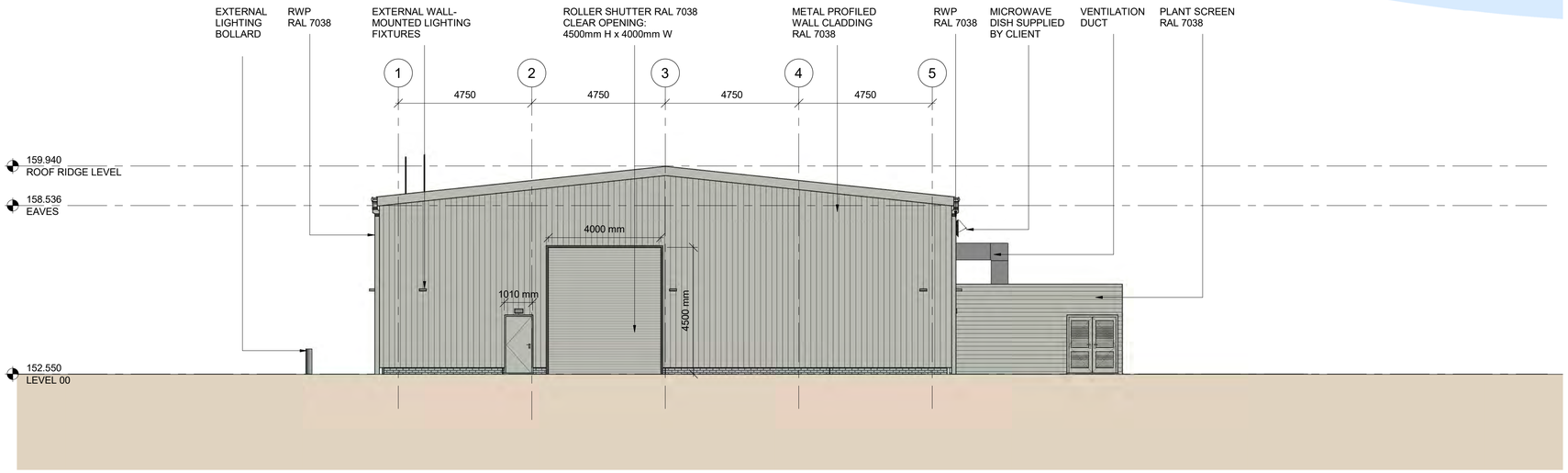
Drawing No. UKVLS-NOR-VF-00-DR-A-P0102 | Rev. P03

ISO A1 - 594mmx841mm



NORTH ELEVATION_Planning

SCALE: 1 : 100



SOUTH ELEVATION_Planning

SCALE: 1 : 100

KEY

- METAL PROFILED INSULATED ROOF CLADDING
- METAL PROFILED INSULATED WALL CLADDING
- FACING BRICK BASE COURSE

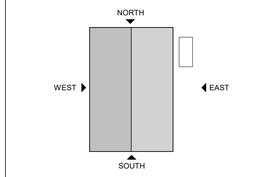
NOTE:

DRAWING TO BE READ IN CONJUNCTION WITH DRAWINGS :-

UKVLS-NOR-VF-ZZ-DR-A-P0102
UKVLS-NOR-VF-ZZ-DR-A-P0204
UKVLS-NOR-VF-ZZ-DR-A-P0303
UKVLS-NOR-VF-ZZ-DR-A-P0304

DATE	REVISION	REV	DR	CH
14/02/24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P01	LB	CH
13/03/24	ISSUED FOR PLANNING APPLICATION	P02	LB	CH
18/03/24	Roller shutters updated, as per cliet instruction	P03	LB	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P04	LB	CH

Keyplan



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Skypark 5, Suite 1A
45 Finnieston Street,
Glasgow G3 8JU
Scotland, UK
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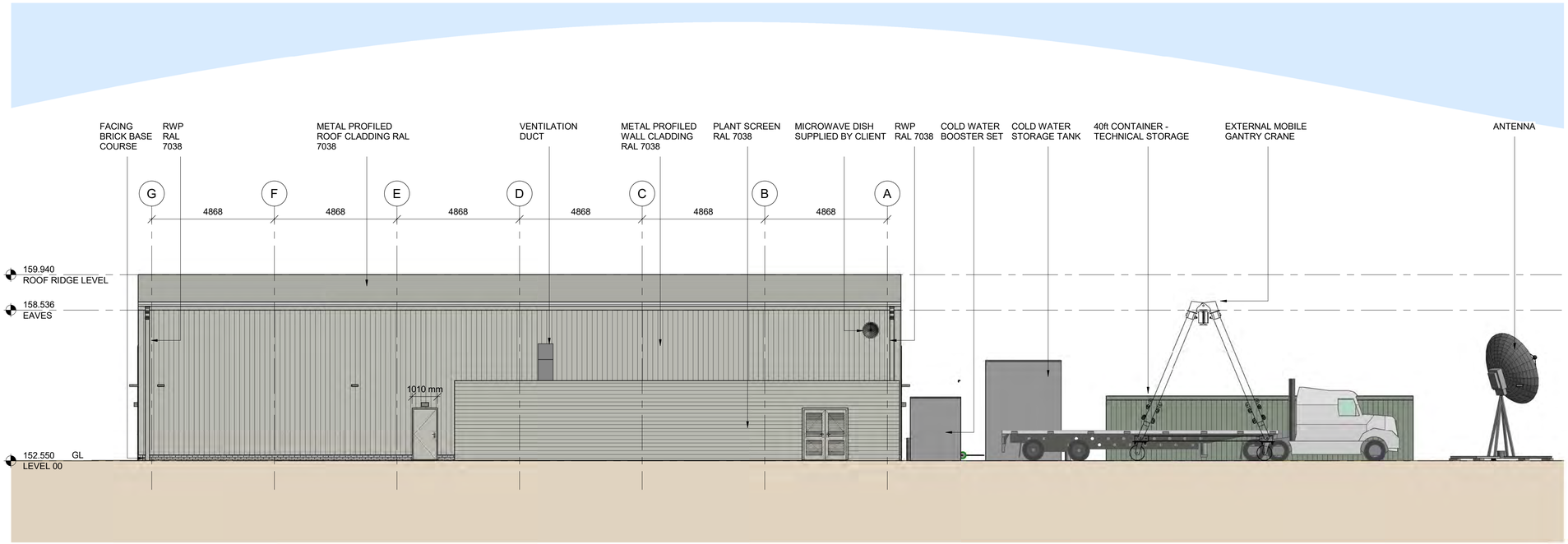
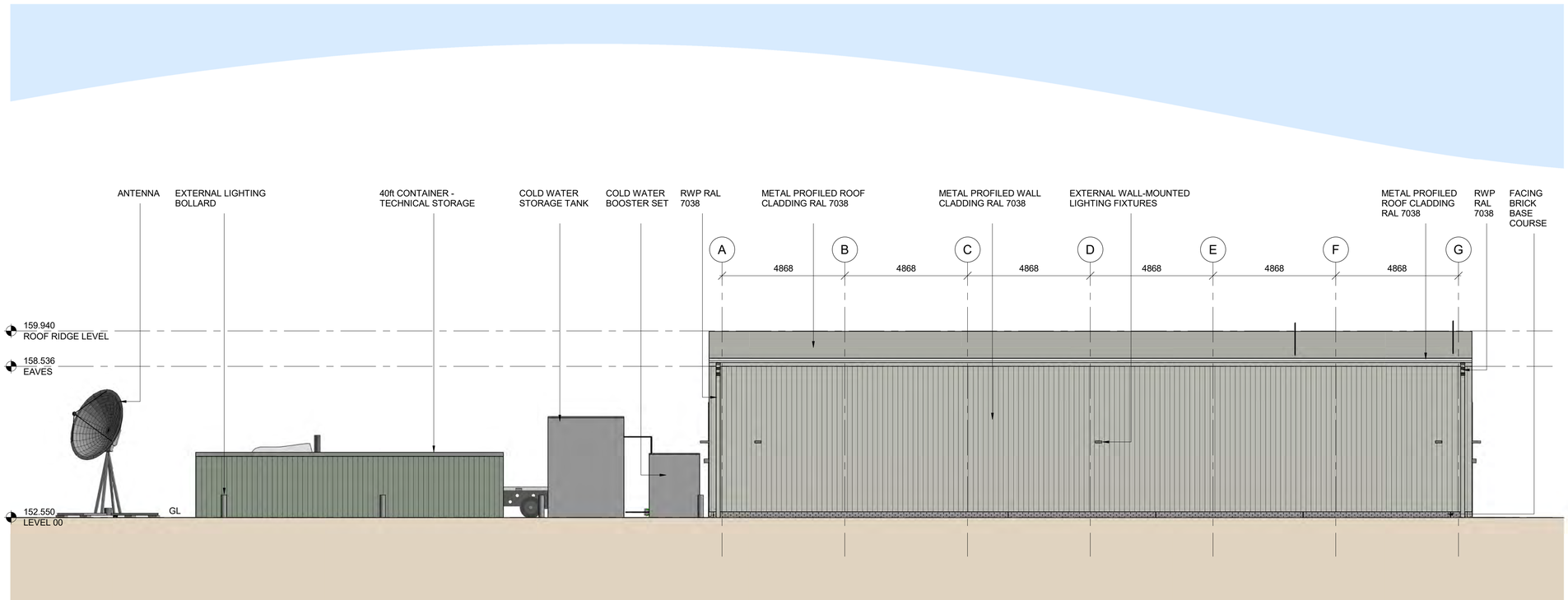
Drawn Author	Date
Checked Checker	Date
Scale As indicated @ A1	
Client Sutherland Spaceport Ltd	
Project Sutherland Spaceport - LSIF	
Drawing Title Launch Site Integration Facility - Elevations North_South	
Sheet Status A3 - APPROVED FOR STAGE 3	
Project No. IAGG19-0030	
Drawing No. UKVLS-NOR-VF-ZZ-DR-A-P0205	Rev. P04

ISO A1 - 594mmx841mm



EAST ELEVATION_Planning

SCALE: 1 : 100



WEST ELEVATION_Planning

SCALE: 1 : 100

KEY

- METAL PROFILED INSULATED ROOF CLADDING
- METAL PROFILED INSULATED WALL CLADDING
- FACING BRICK BASE COURSE

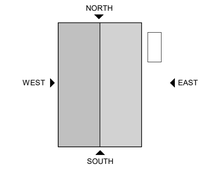
NOTE:

DRAWING TO BE READ IN CONJUNCTION WITH DRAWINGS :-

UKVLS-NOR-VF-ZZ-DR-A-P0102
UKVLS-NOR-VF-ZZ-DR-A-P0205
UKVLS-NOR-VF-ZZ-DR-A-P0303
UKVLS-NOR-VF-ZZ-DR-A-P0304

DATE	REVISION	REV	DR	CH
14/02/24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P01	LB	CH
13/03/24	ISSUED FOR PLANNING APPLICATION	P02	LB	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P03	LB	CH

Keyplan



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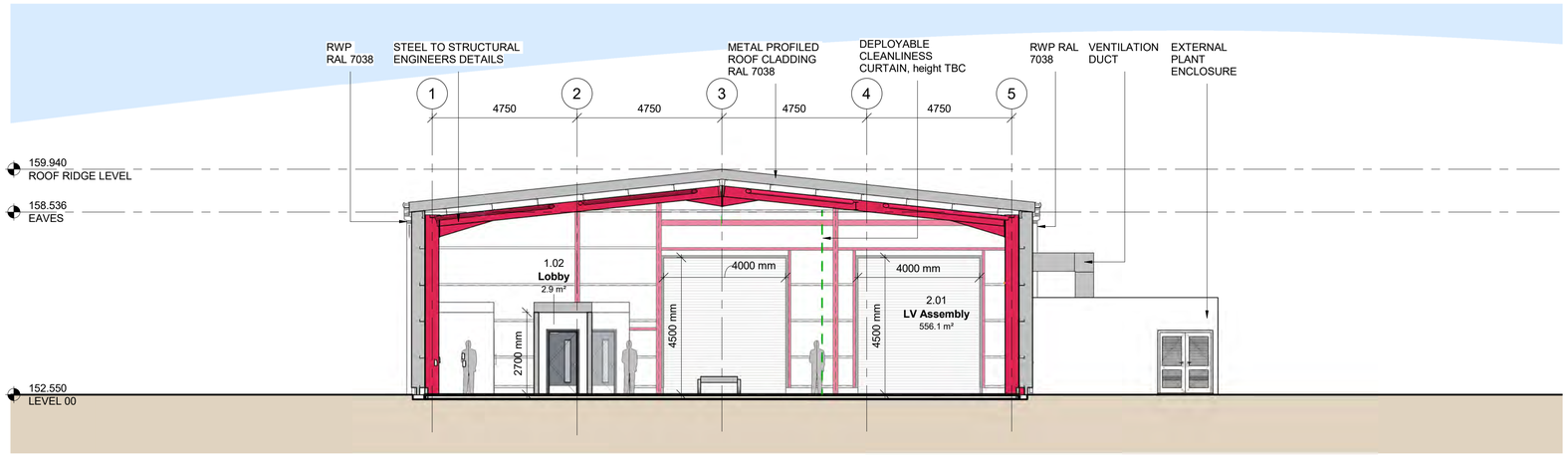
45 Finnieston Street,
Glasgow G3 8JU
Scotland, UK
norr.com

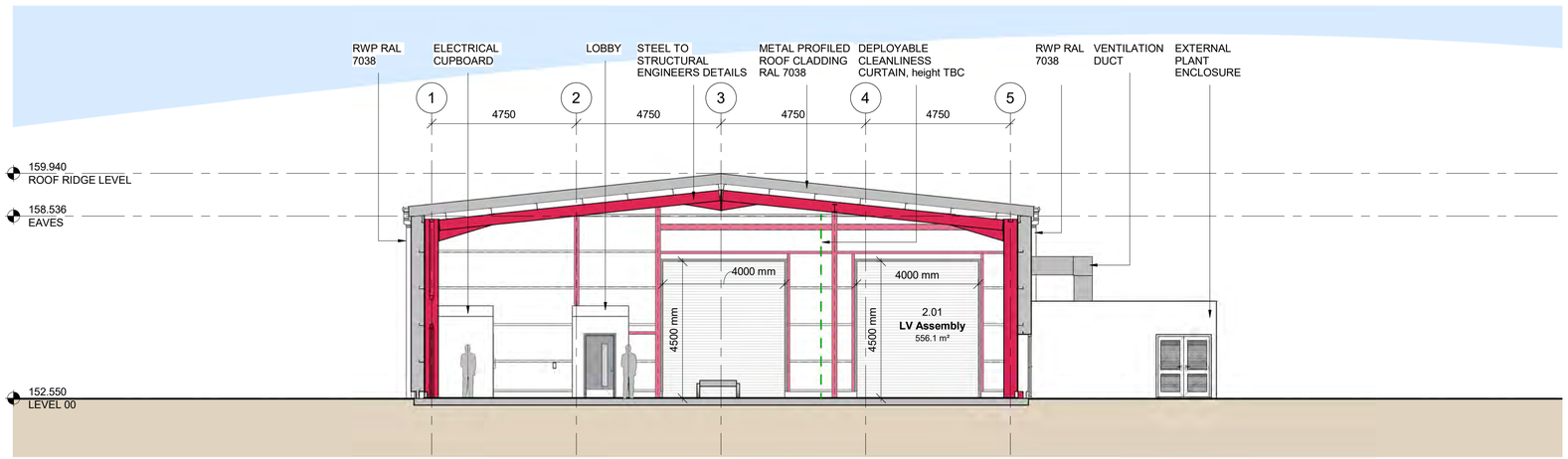
Drawn LB	Date 07/07/23
Checked CH	Date 07/07/23
Scale As indicated @ A1	
Client Sutherland Spaceport Ltd	
Project Sutherland Spaceport - LSIF	
Drawing Title Launch Site Integration Facility - Elevations East_West	
Sheet Status A3 - APPROVED FOR STAGE 3	
Project No. IAGG19-0030	
Drawing No. UKVLS-NOR-VF-ZZ-DR-A-P0204	Rev. P03

ISO A1 - 594mmx841mm



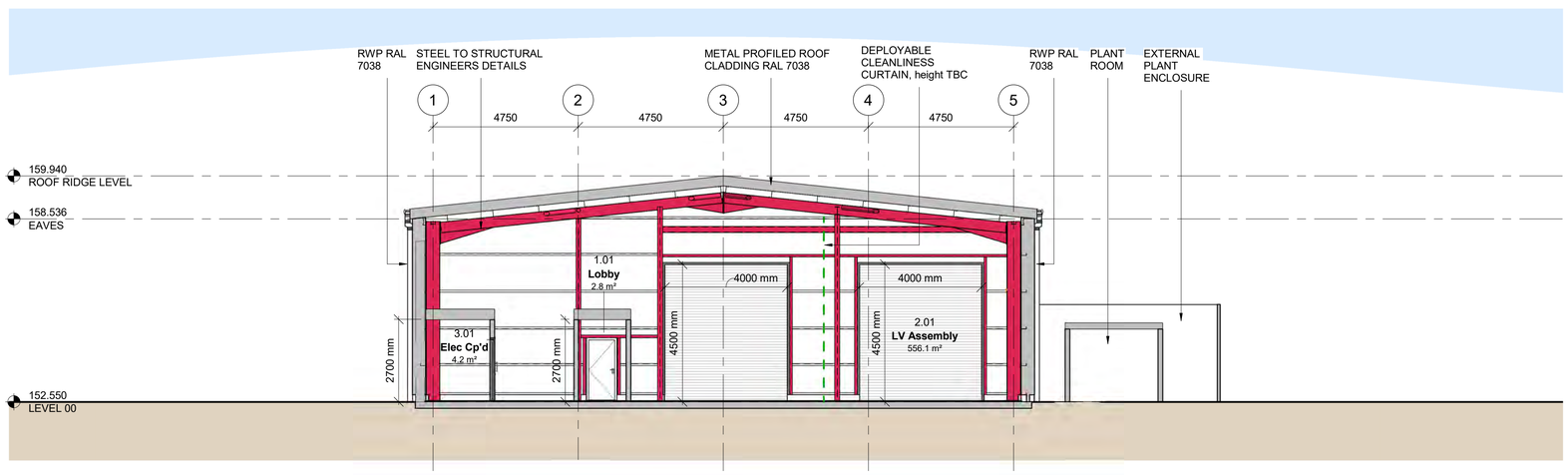
SECTION 1_Planning

SCALE: 1 : 100



SECTION 2_Planning

SCALE: 1 : 100



SECTION 3_Planning

SCALE: 1 : 100

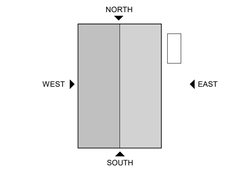
NOTE:

DRAWING TO BE READ IN CONJUNCTION WITH DRAWINGS :-

UKVLS-NOR-VF-ZZ-DR-A-P0102
UKVLS-NOR-VF-ZZ-DR-A-P0204
UKVLS-NOR-VF-ZZ-DR-A-P0205
UKVLS-NOR-VF-ZZ-DR-A-P0304

DATE	REVISION	REV	DR	CH
14/02/24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P01	LB	CH
13/03/24	ISSUED FOR PLANNING APPLICATION	P02	LB	CH
18/03/24	Roller shutters updated, as per cliet instruction	P03	LB	CH
30/04/24	Levels adjusted to suit revised floor construction	P04	LB	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P05	LB	CH

Keyplan



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45 Finnieston Street,
Glasgow G3 8JU
Scotland, UK
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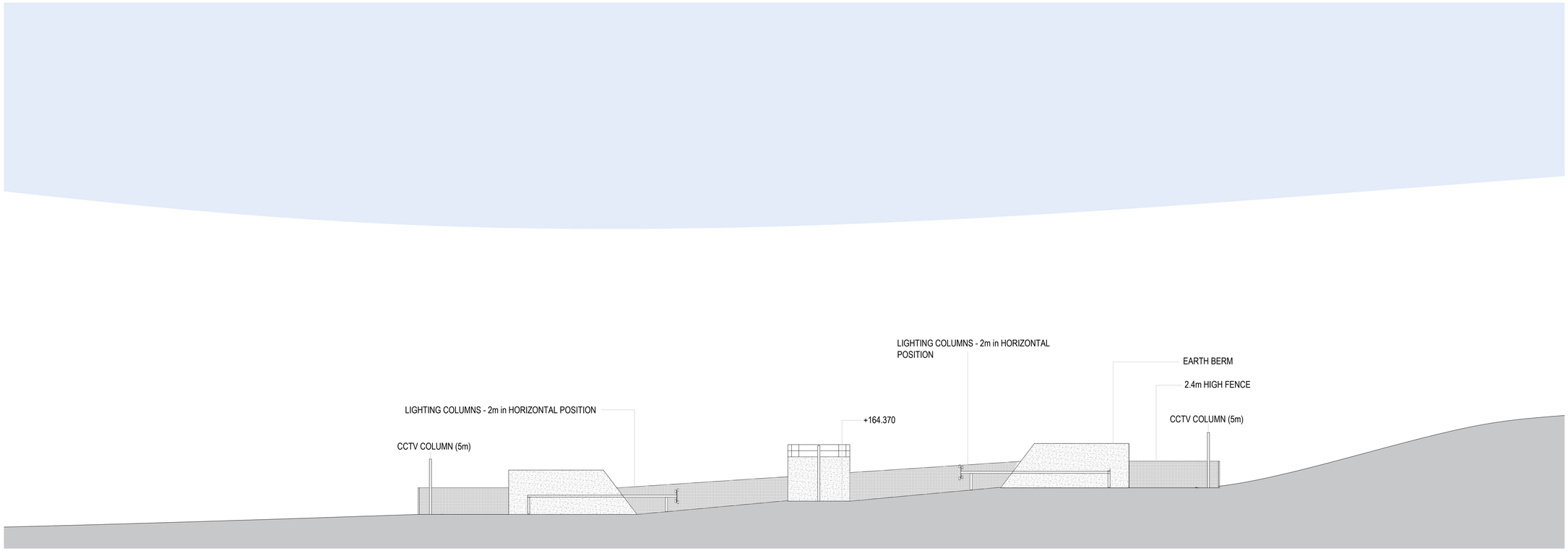
Drawn: LB	Date: 05/07/2023
Checked: CH	Date: 05/07/2023
Scale: As indicated @ A1	
Client: Sutherland Spaceport Ltd	
Project: Sutherland Spaceport - LSIF	
Drawing Title: Launch Site Integration Facility Sections North_South	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-VF-ZZ-DR-A-P0303	Rev.: P05



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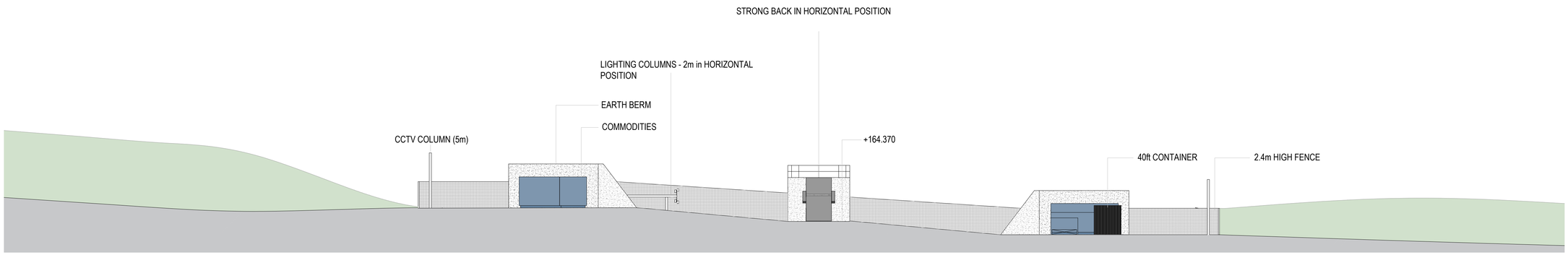

SOUTH ELEVATION - 1:200 AT A1

1:200

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DATE	REVISION	REV	DRW	CHK
13/03/24	ISSUED FOR PLANNING APPLICATION	P01	MT	CH
01/05/24	LEVELS UPDATED - REISSUED FOR PLANNING	P02	MT	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P03	LB	CH

Keyplan

North Arrow

Detail Symbol

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Scotland, UK
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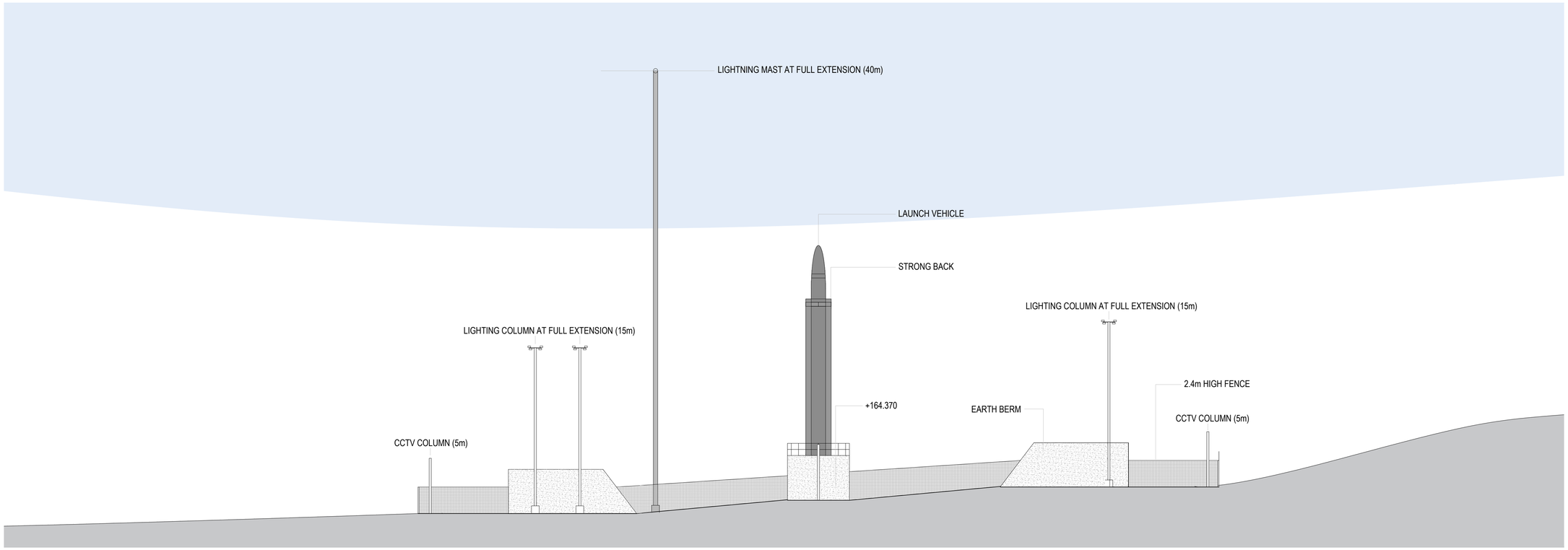
Drawn: M Turowski	Date: 05/03/2024
Checked: C Hunter	Date: 05/03/2024
Scale: 1:200 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX	
Drawing Title: LAUNCH PAD COMPLEX ELEVATIONS - REDUCED POSITIONS	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-VF-ZZ-DR-A-00209	Rev.: P03



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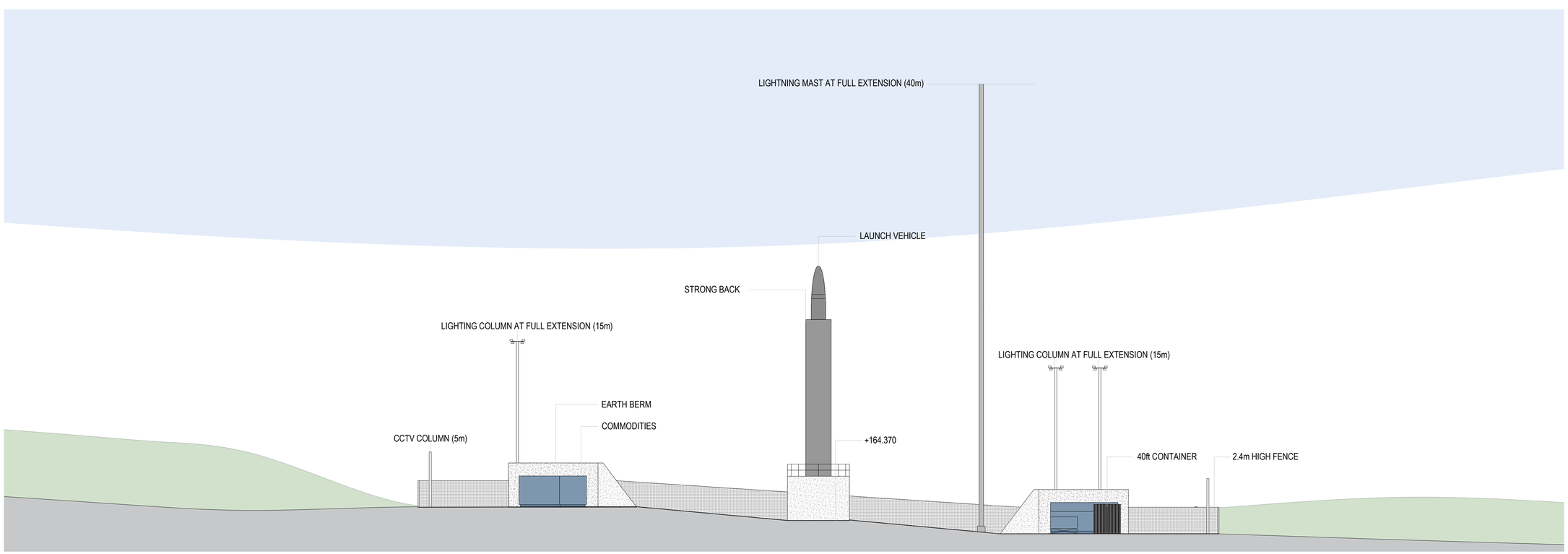

SOUTH ELEVATION - 1:200 AT A1

1:200

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DATE	REVISION	REV	DRW	CHK
13/03/24	ISSUED FOR PLANNING APPROVAL	P01	MT	CH
01/05/24	LEVELS UPDATED - REISSUED FOR PLANNING	P02	MT	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P03	LB	CH

Keyplan

North Arrow

Detail Symbol

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45 Finnieston Street
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Scotland, UK
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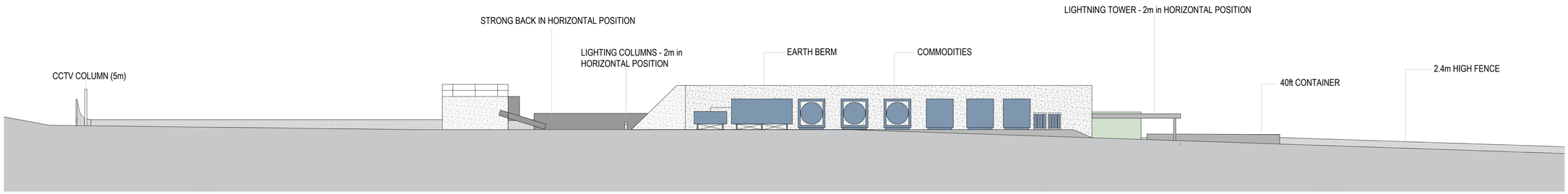
Drawn: M Turowski	Date: 05/03/2024
Checked: C Hunter	Date: 05/03/2024
Scale: 1:200 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX	
Drawing Title: LAUNCH PAD COMPLEX ELEVATIONS	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-VF-ZZ-DR-A-00208	Rev.: P03



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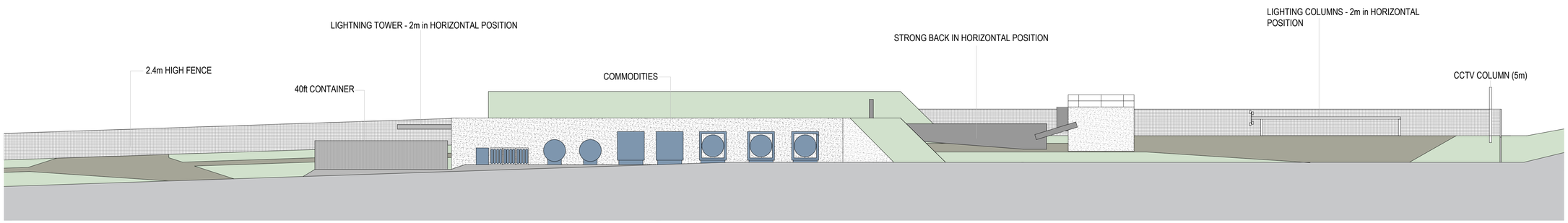

EAST ELEVATION - 1:200 AT A1

1:200

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DATE	REVISION	REV	DRW	CHK
21.07.23	IOC STAGE 3 ISSUE	P01	CH	CH
14.02.24	PROJECT TITLE UPDATED / STAGE 3 - ISSUED FOR PLANNING APPLICATION	P02	MT	CH
20.02.24	ISSUED FOR NMV	P03	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P04	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P05	LB	CH

Keyplan

North Arrow

Detail Symbol

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45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
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Drawn: C Hunter	Date: 21.07.23
Checked: C Hunter	Date: 21.07.23

Scale: 1:100 @ A1

Client: Sutherland Spaceport Ltd

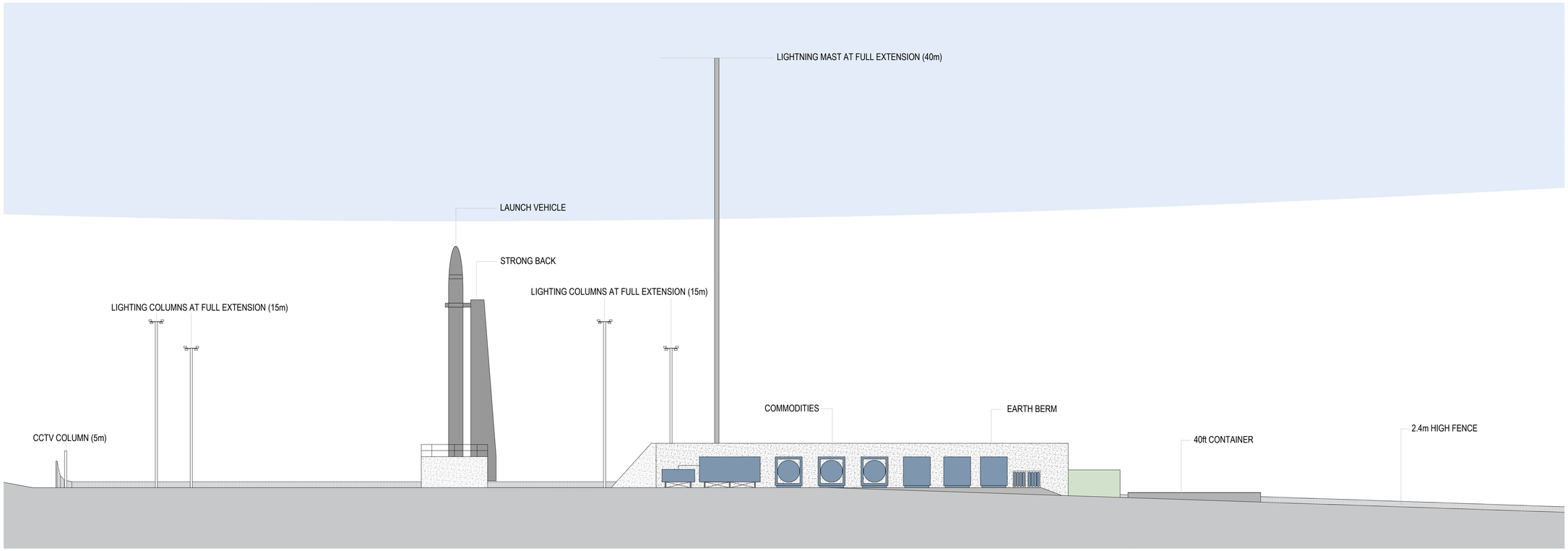
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX

Drawing Title: LAUNCH PAD COMPLEX ELEVATIONS - REDUCED POSITIONS

Sheet Status: A3 - APPROVED FOR STAGE 3

Project No.: IAGG19-0030

Drawing No.: UKVLS-NOR-VF-ZZ-DR-A-00207 Rev.: P05



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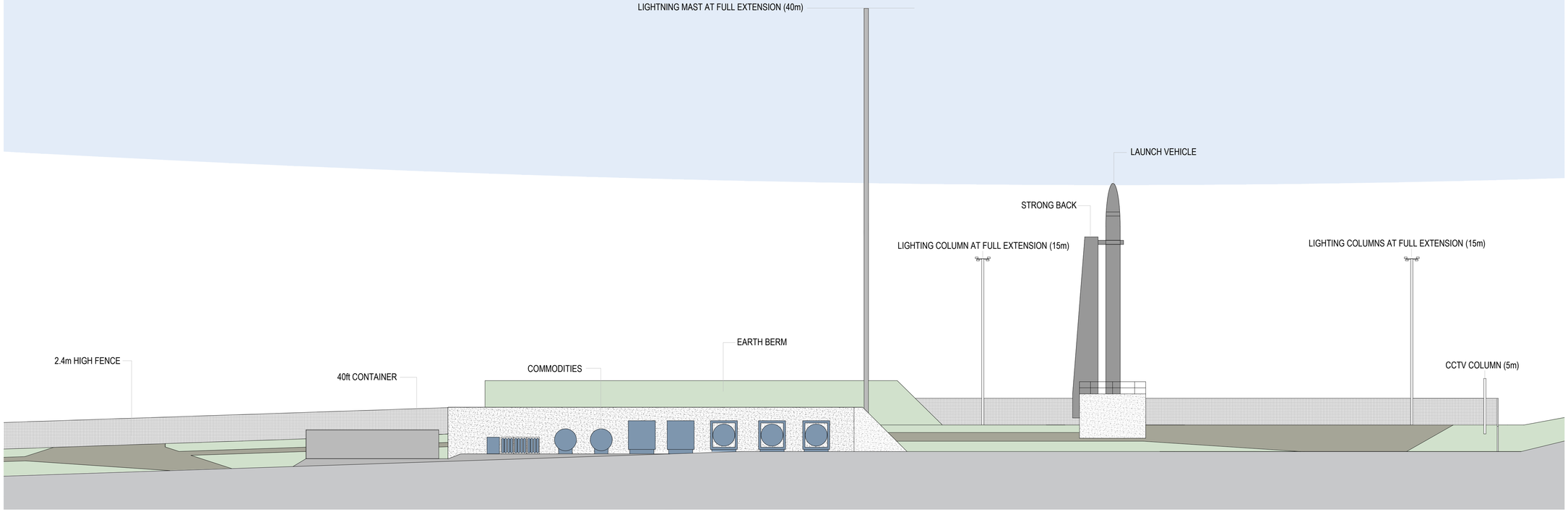

EAST ELEVATION - 1:200 AT A1

1:200

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DATE	REVISION	REV	DRW	CHK
21.07.23	IOC STAGE 3 ISSUE	P01	CH	CH
14.02.24	PROJECT TITLE UPDATED / STAGE 3 - ISSUED FOR PLANNING APPLICATION	P02	MT	CH
20.02.24	ISSUED FOR NMV	P03	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P04	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P05	LB	CH

Keyplan

North Arrow

Detail Symbol

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Glasgow, G3 8JU
Scotland, UK
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Drawn: C Hunter	Date: 21.07.23
Checked: C Hunter	Date: 21.07.23

Scale: 1:200 @ A1

Client: Sutherland Spaceport Ltd

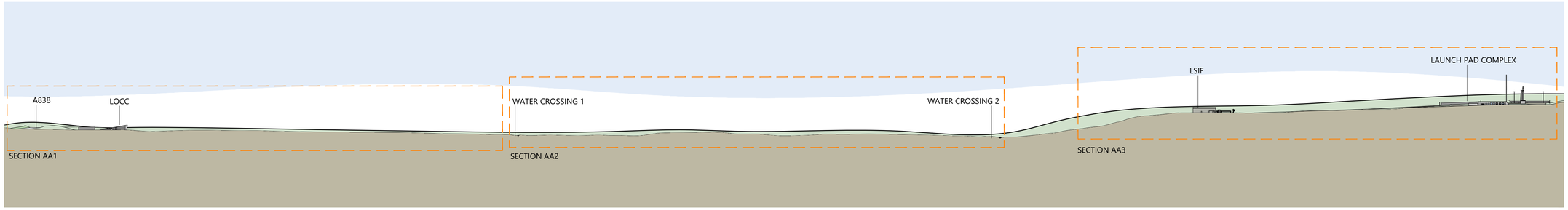
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX

Drawing Title: LAUNCH PAD COMPLEX ELEVATIONS

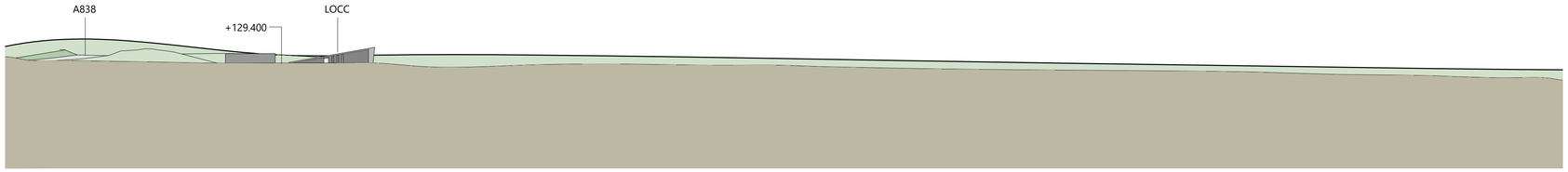
Sheet Status: A3 - APPROVED FOR STAGE 3

Project No.: IAGG19-0030

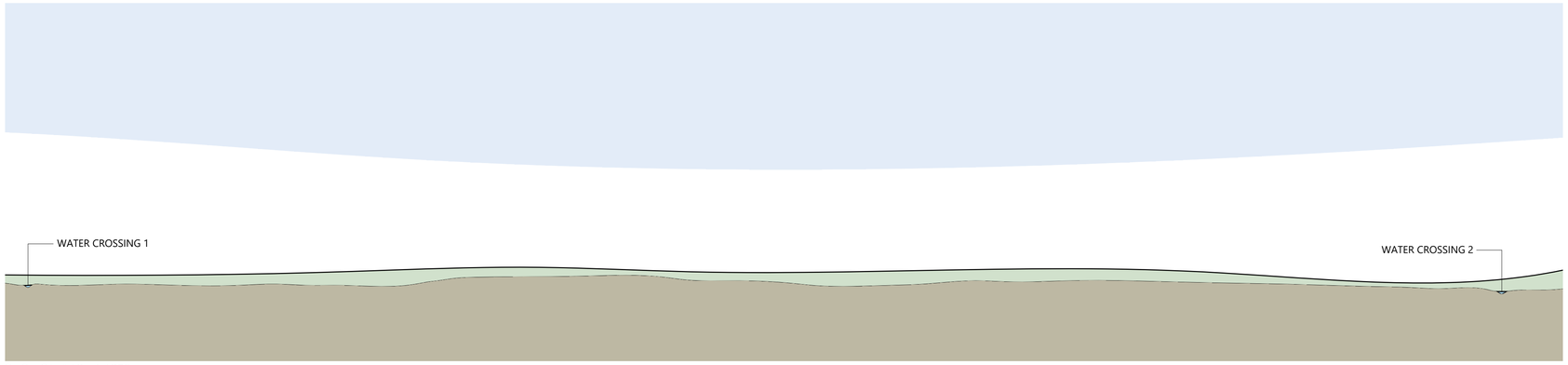
Drawing No.: UKVLS-NOR-VF-ZZ-DR-A-00206 Rev.: P05



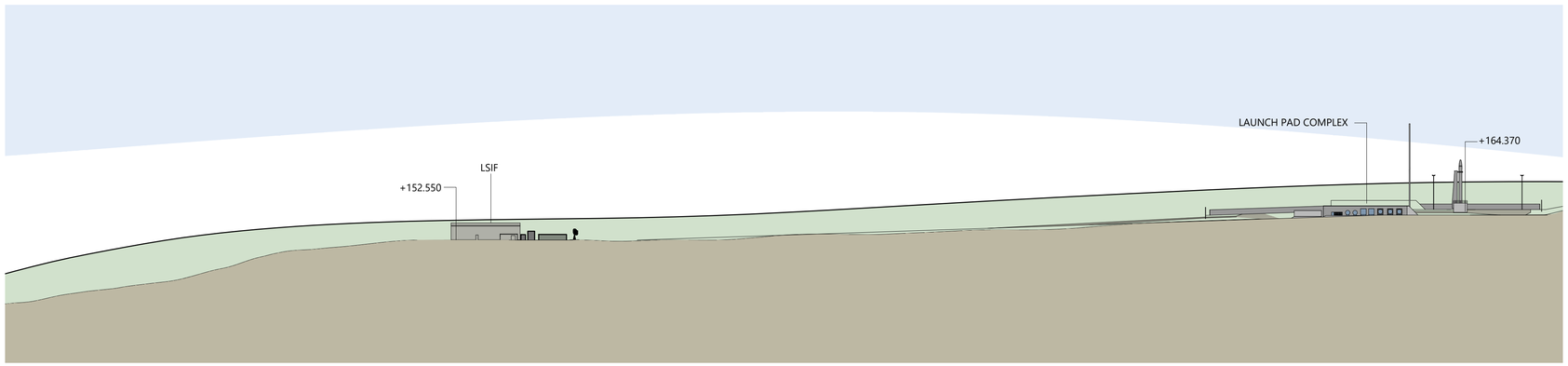
SITE SECTION AA (EAST) - NOT TO SCALE



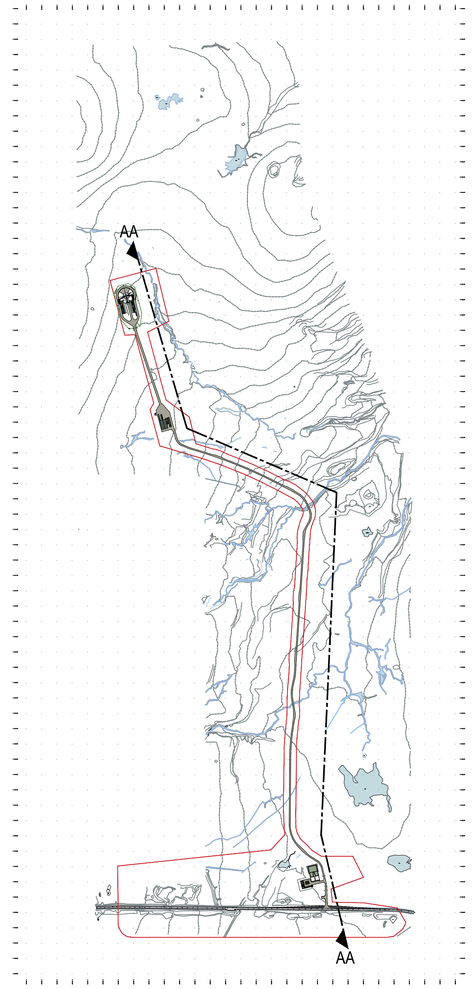
SECTION AA1 - 1:1250



SECTION AA2 - 1:1250



SECTION AA3 - 1:1250



SITE PLAN - INDICATING LOCATION OF SECTION CUT

1:500

0 20m 40m 60m 80m 100m

DATE	REVISION	REV	DRW	CHK
13.03.24	ISSUED FOR PLANNING APPLICATION	P01	CH	CH
01.05.24	LEVELS UPDATED - REISSUED FOR PLANNING	P02	CH	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P03	CH	CH

Keyplan

SECTION CUT

INDICATES EXTRACT FROM DRAWING

North Arrow

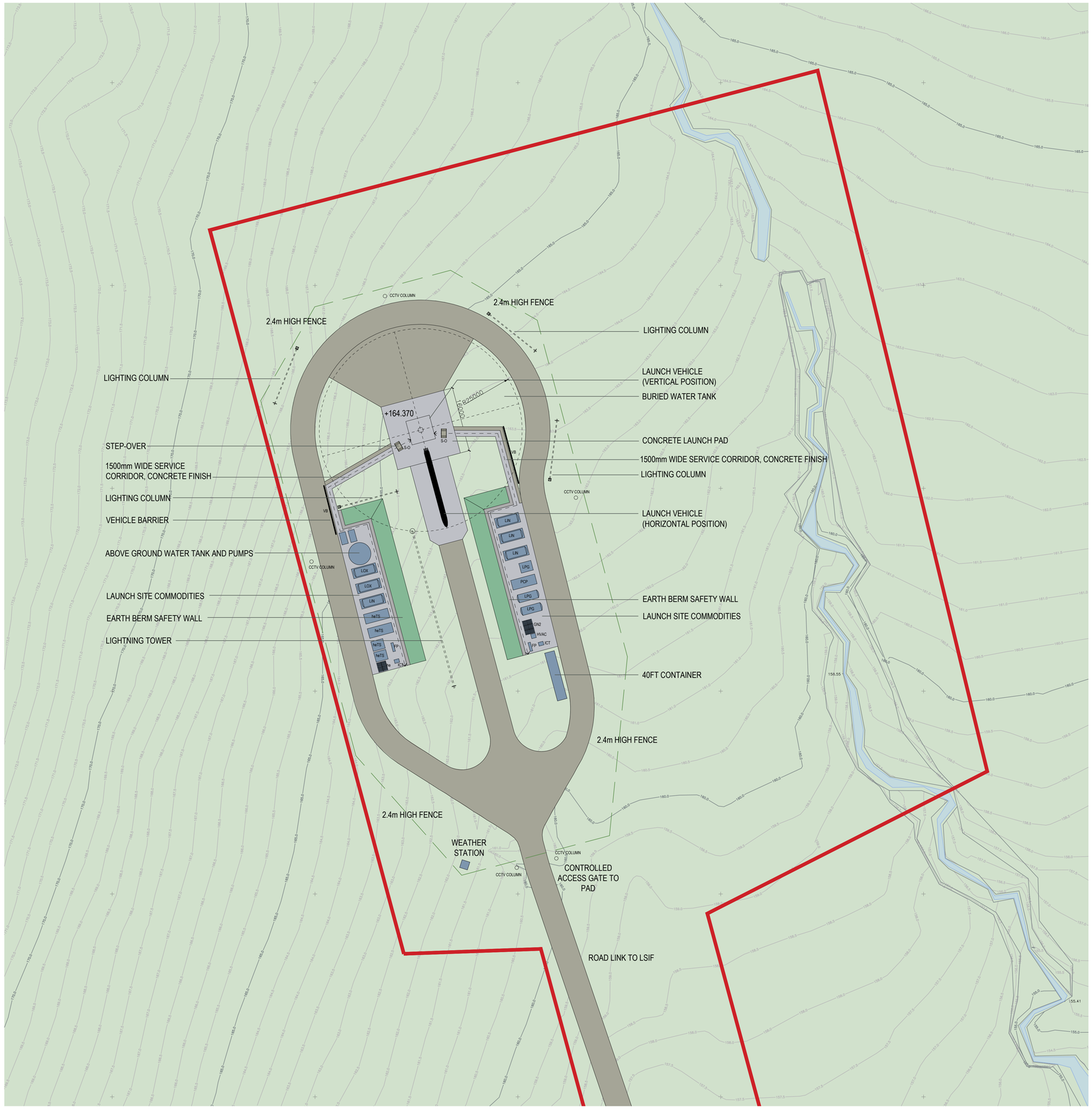
Detail Symbol

Consultants

NORR Consultants Limited.
An Ingenium International Company

Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

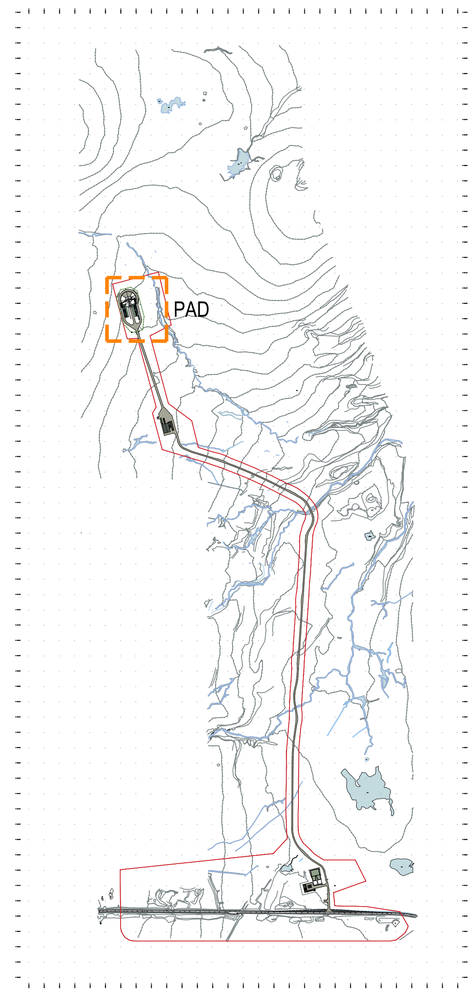
Drawn: M Turowski	Date: 08.03.2024
Checked: C Hunter	Date: 11.03.2024
Scale: 1.1250 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT	
Drawing Title: PROPOSED SITE SECTION	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-90165	Rev.: P03



LAUNCH PAD - 1:500 AT A1

1:500

0 20m 40m 60m 80m 100m



FOR FULL COMMODITY PROPOSALS REFER TO MEP LAYOUTS, DRAWINGS AND TECHNICAL NOTES

FOR MEP INSTALLATIONS (CCTV,LIGHTING,LIGHTNING TOWER, ETC.) REFER TO MEP LAYOUTS, DRAWINGS AND TECHNICAL NOTES

FOR ROAD & PAD FINISHES REFER TO CIVIL & STRUCTURAL ENGINEER'S DRAWINGS AND SPECIFICATIONS

DATE	REVISION	REV	DRW	CHK
21.07.23	IOC STAGE 3 ISSUE	P01	CH	CH
24.07.23	FEEDER PILLARS & ICT RACK ADDED	P02	CH	CH
28.07.23	PAD FINISHES UPDATED AS REQUESTED	P03	CH	CH
11.08.23	PAD UPDATED AS PER ARUP NOTES	P04	CH	CH
01.02.24	TEMPORARY GENERATOR OMITTED	P05	CH	CH
14.02.24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P06	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P07	MT	CH
06.08.24	UPDATED IN ACCORDANCE WITH ARUP 'OPTION 2' LAYOUT	P08	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P09	LB	CH

Keyplan

SITE BOUNDARY

LAUNCH PAD SITE EXTRACT

North Arrow

Detail Symbol

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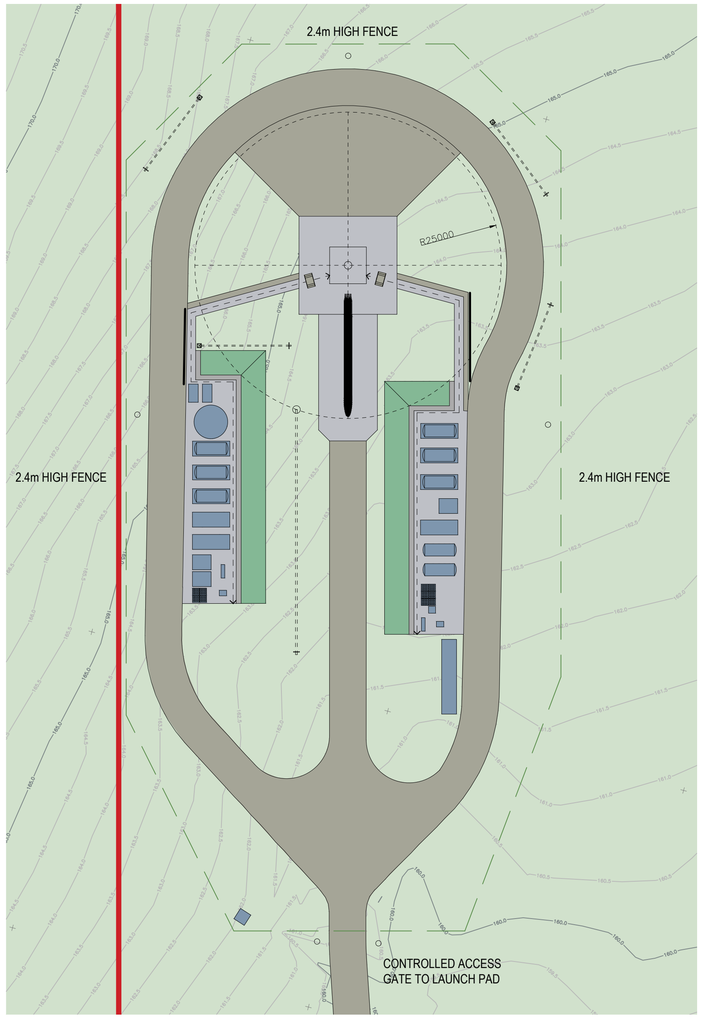
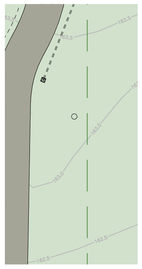
Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

Drawn: L Baxter	Date: 03.07.2023
Checked: C Hunter	Date: 03.07.2023
Scale: 1.500 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX	
Drawing Title: PROPOSED SITE PLAN, LAUNCH PAD COMPLEX	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-90157	Rev.: P09

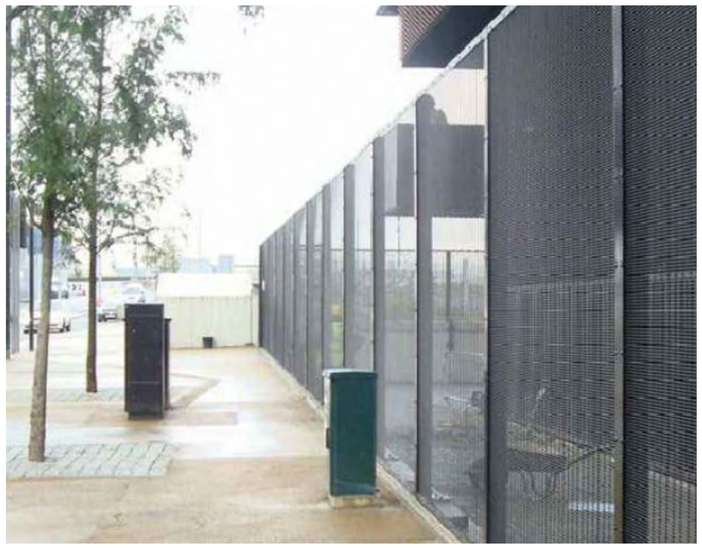


LAUNCH PAD COMPLEX FENCE EXTENTS - 1:500 AT A1



DASHED LINE DENOTES FENCING EXTENTS

2.4m HIGH SECURUS SR1 FENCING TO PERIMETER OF LAUNCH PAD, LSIF SERVICE YARD AND ANTENNA PARK. METAL FINISH - RAL 7037



SECURUS SR1

SECURUS SR1

1:500

0 20m 40m 60m 80m 100m

DATE	REVISION	REV	DRW	CHK
21.07.23	IOC STAGE 3 ISSUE	P01	CH	CH
14.02.24	PROJECT TITLE UPDATED / STAGE 3 - ISSUED FOR PLANNING APPLICATION	P02	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P03	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P04	LB	CH

Keyplan

SITE BOUNDARY

North Arrow

Detail Symbol

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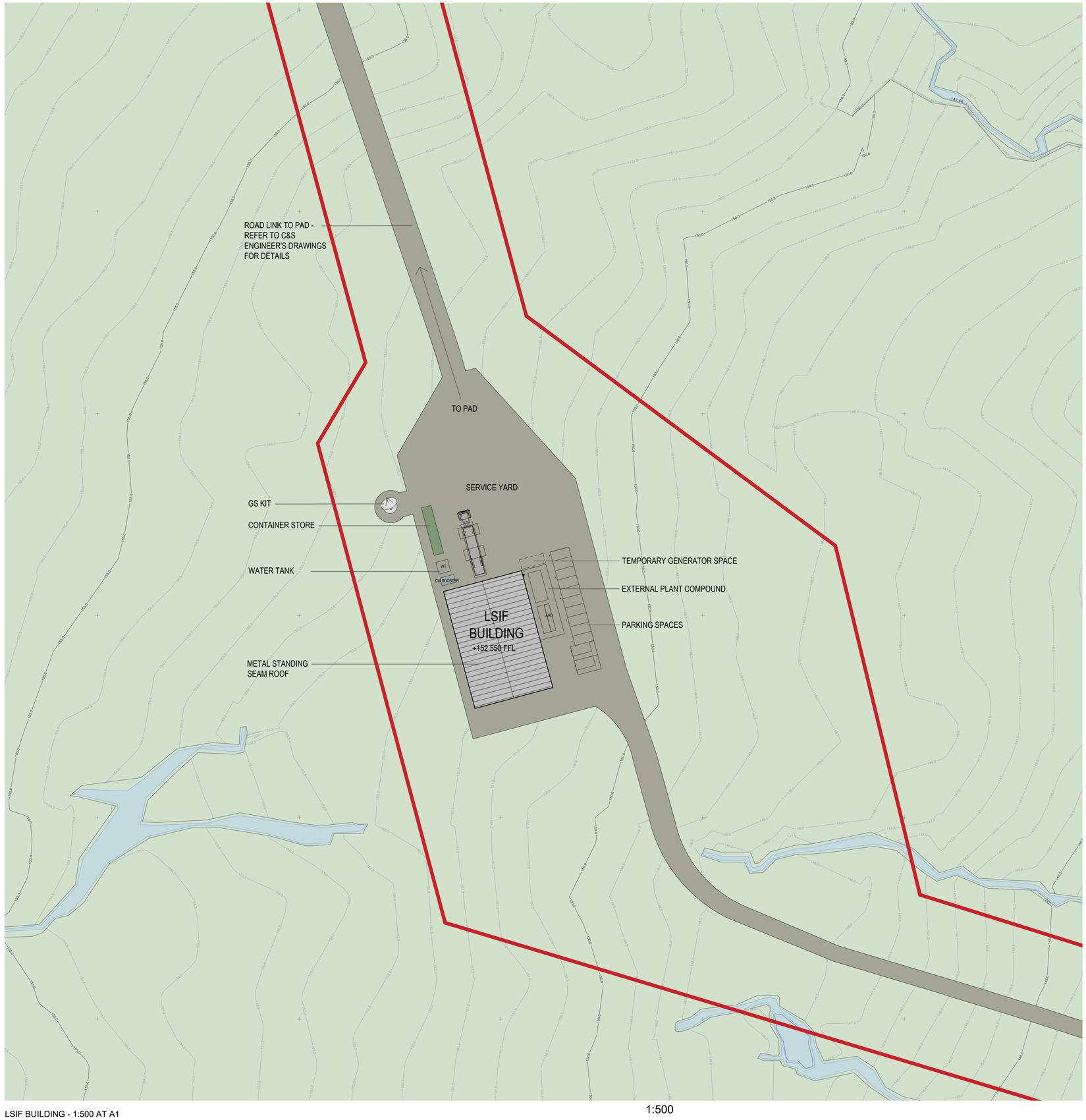
Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

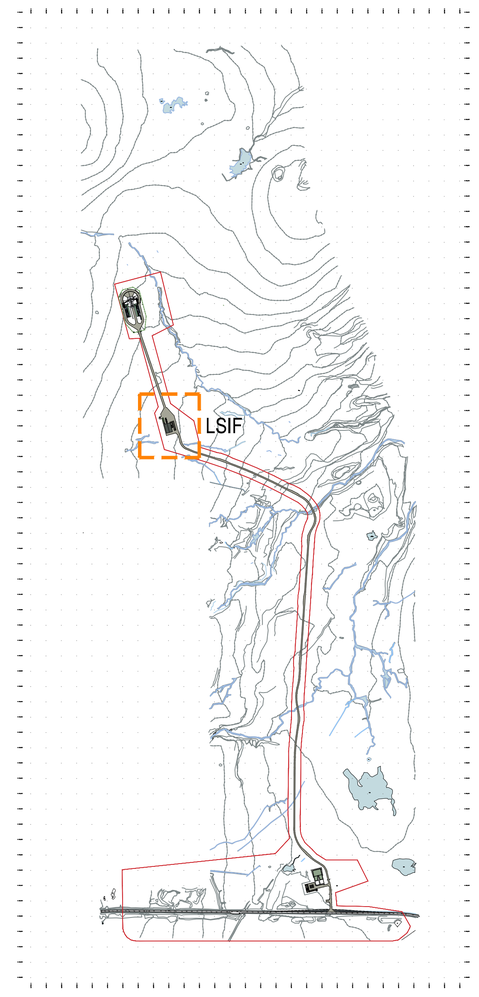
Drawn: L Baxter	Date: 21.07.2023
Checked: C Hunter	Date: 21.07.2023
Scale: 1.500 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LAUNCH PAD COMPLEX	
Drawing Title: FENCING PROPOSALS	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-68101	Rev.: P04



LSIF BUILDING - 1:500 AT A1

1:500

0 20m 40m 60m 80m 100m



FOR EXTERNAL ROAD AND YARD FINISHES REFER TO CIVIL & STRUCTURAL ENGINEER'S DRAWINGS AND SPECIFICATIONS

DATE	REVISION	REV	DRW	CHK
28.07.23	ISSUED FOR STAGE 3 APPROVAL	P01	LB	CH
01.02.24	EXTERNAL PLANT UPDATED	P02	LB	CH
14.02.24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P03	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P04	MT	CH
30.04.24	LEVELS ADJUSTED TO SUIT REVISED FLOOR CONSTRUCTION	P05	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P06	LB	CH

Keyplan

PROFILED METAL ROOF FINISH - RAL 7038

SITE BOUNDARY

LSIF SITE EXTRACT

LSIF - LAUNCH SITE INTEGRATION FACILITY

North Arrow

Detail Symbol

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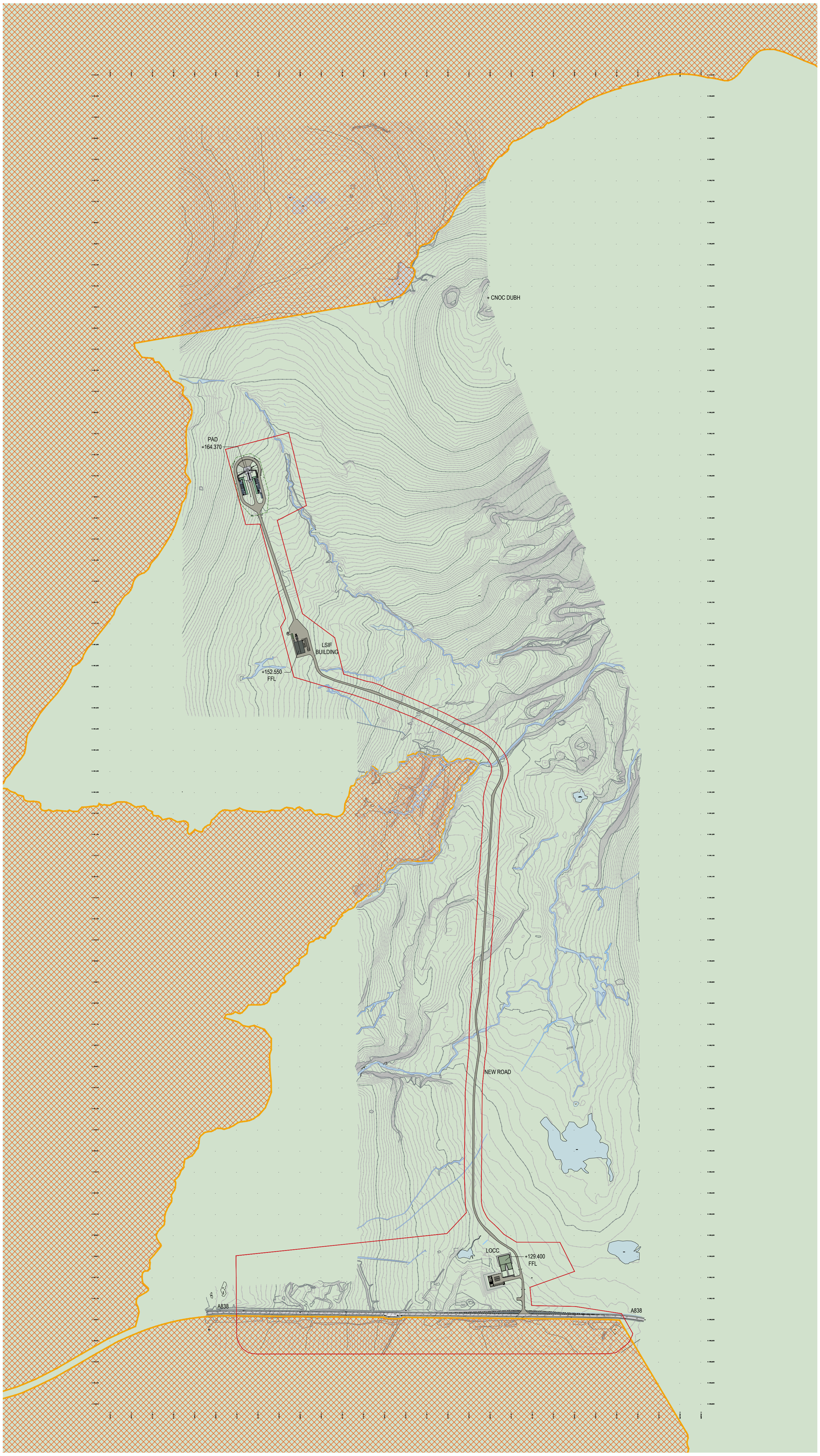
An Ingenium International Company

Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

Drawn: L BAXTER	Date: 28.07.2023
Checked: C HUNTER	Date: 28.07.2023
Scale: 1.500 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LSIF	
Drawing Title: PROPOSED SITE PLAN, LAUNCH SITE INTEGRATION FACILITY	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-90156	Rev.: P06



SITE PLAN AS PROPOSED - 1:5000 AT A1

1:5000

0 200m 400m 600m 800m 1000m

DATE	REVISION	REV	DRW	CHK
28.07.23	ISSUED FOR STAGE 3 APPROVAL	P01	LB	CH
18.08.23	LOCC FOOTPRINT UPDATED	P02	LB	CH
01.02.24	SITE BOUNDARY ADJUSTED	P03	LB	CH
14.02.24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P04	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P05	MT	CH
01.05.24	LSIF LEVELS ADJUSTED TO SUIT REVISED FLOOR CONSTRUCTION	P06	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P07	LB	CH

SSSI / SPA / SAC / RAMSAR ENVIRONMENTAL AND LANDSCAPE DESIGNATIONS

RED LINE DENOTES APPLICATION SITE BOUNDARY

LSIF - LAUNCH SITE INTEGRATION FACILITY

LOCC - LAUNCH OPERATIONS CONTROL CENTRE

Point	Easting	Northing	Elevation	Description
A1	254083.285	960059.509	138.103	Nail
A2	254238.718	960059.074	133.205	Nail
A3	254380.737	960057.560	129.909	Nail
A4	254518.985	960064.137	128.569	Nail
A5	253957.769	960069.668	145.267	Nail
A6	253854.981	960070.586	151.090	Nail
A7	253720.298	960072.206	157.814	Nail

NOTE:
1) The grid is OS National Grid based on OSTN15
2) The levels are relative to Ordnance Datum based on OSGM15

Keyplan

SITE BOUNDARY

North Arrow

Detail Symbol

DETAIL
SHEET

Consultants

NORR

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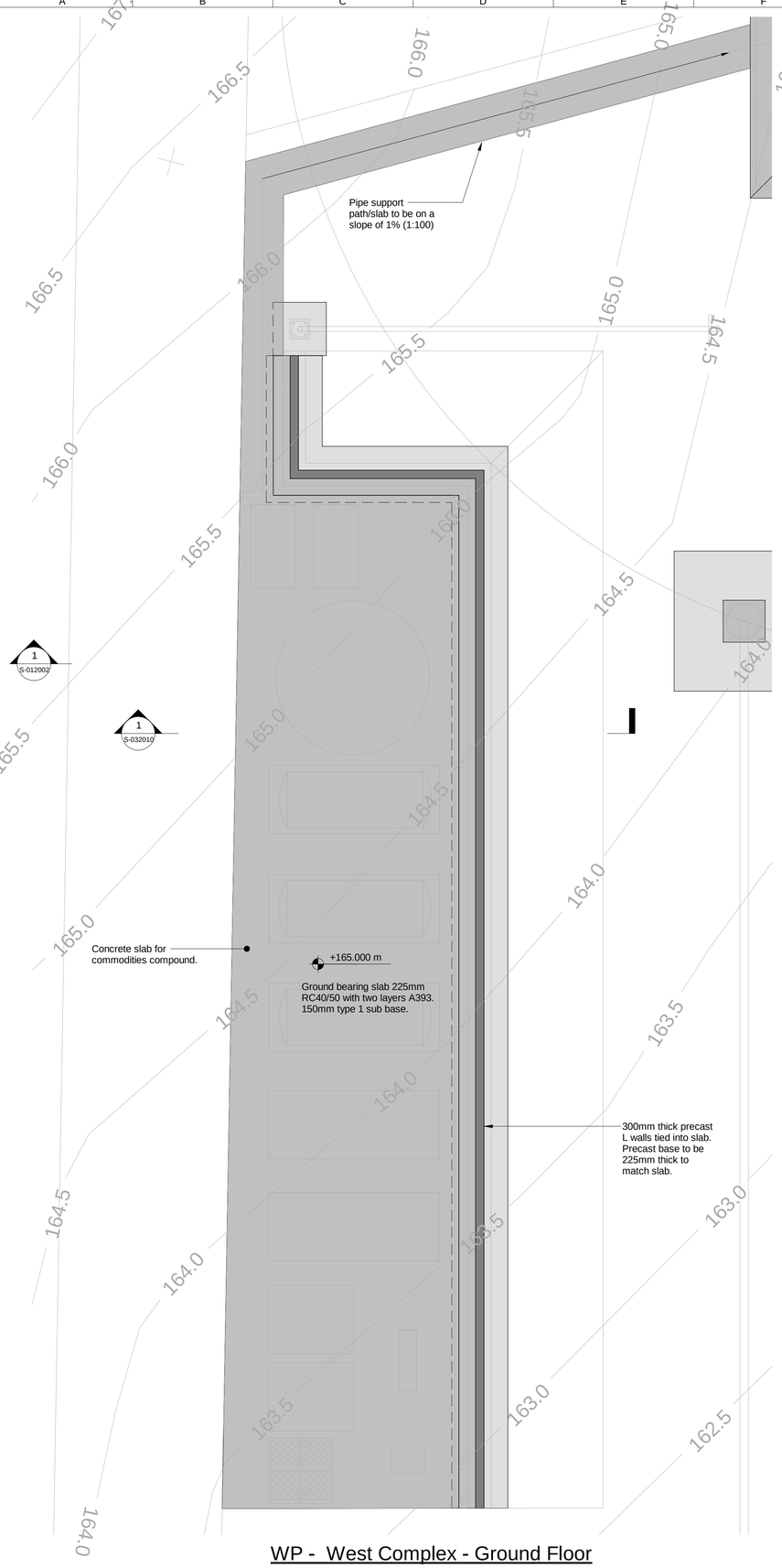
An Ingenium International Company

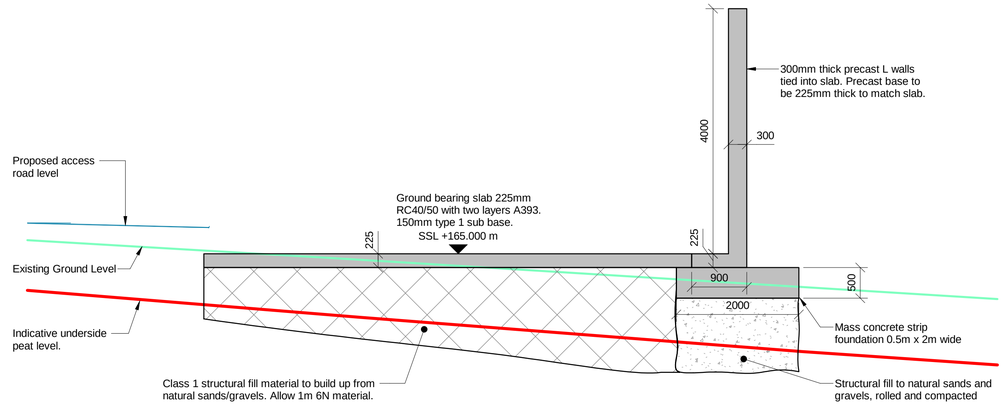
Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

Drawn: L Baxter	Date: 28.07.2023
Checked: C Hunter	Date: 28.07.2023
Scale: 1.5000 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT	
Drawing Title: PROPOSED SITE LAYOUT	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-90154	Rev.: P07



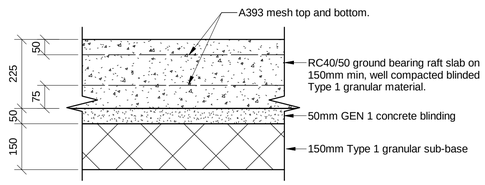
WP - West Complex - Ground Floor

Scale 1 : 100



Section 1-1
West Complex Cross Section

Scale 1 : 50



Typical Ground Bearing Slab Construction

Scale 1 : 10

Notes:

1. Drawing to be read in conjunction with all relevant Architect's and Engineer's Drawings and Specifications.
2. For structural notes refer to drawing UKVLS-ARUP-LC-FN-DR-S-011001.
3. Do not scale drawing.
4. Dimensions are in millimeters unless noted otherwise.

Launch Complex Notes:

1. The design sulphate classification for the launch complex site is DS-3 with an ACEC class AC-4 due to the presence of the aggressive ground conditions from the surrounding peat. The design chemical class of DC4 + exposure class XF4 is recommended due to the risk of de-icing salts on the surface. The concrete is to be C40/50 grade and shall have a maximum water cement ratio of 0.4 with a minimum cement content of 380kg/m^3. Permissible cement types as defined in BS8500-1 table A.12. Freeze thaw resisting aggregates required.
2. Refer to Arup technical Note 02 for interpretation of the ground investigation.
3. Refer to Arup Technical Note 03 Earthworks and Road Design.
4. The contractor to allow for suitable dewatering for the safe construction of the foundations.
5. Contractor to allow for suitable environmental protection measures in accordance with the CEMP to ensure the surrounding peatland and adjacent water course Allt Bad nam Fiadh is protected from any construction run off. The ECOW shall be consulted prior to any works starting on site to ensure all environmental protection plans are in place.Refer to Arup drawing UKVLK-ARP-ZZ-XX-DR-C-0001 for the locations of the watercourse buffer zone.
6. For borehole logs please refer to Ground Investigation Report by Bam Ritches Final Factual Investigation Report ref 323N March 2022.

Issue	Date	
P02	26/08/2024	Building Warrant Issue
P01	15/09/2023	Tender Issue

ARUP

4th Floor
10 George Street, Edinburgh, EH2 2PF
Tel +44 (0)131 331 1999
www.arup.com

Client
Orbex

Project Title
Spacehub Sutherland

Drawing Title
Launch Complex
West General Arrangement

Scale at A1	Dsg/Drw/Chkd/Appd
As indicated	MW/LS/GM/GM

Role: Structural

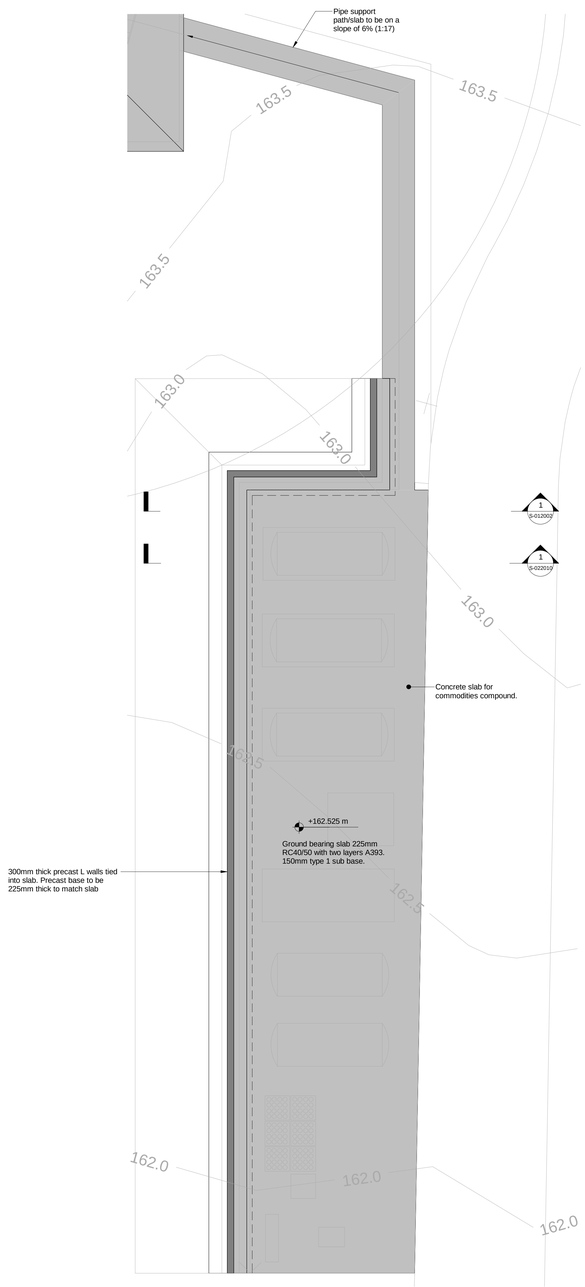
Status: S4 - Suitable for Stage Approval

Arup Job No	Rev
267278-00	P02

ID
UKVLS-ARUP-LC-FN-DR-S-032010

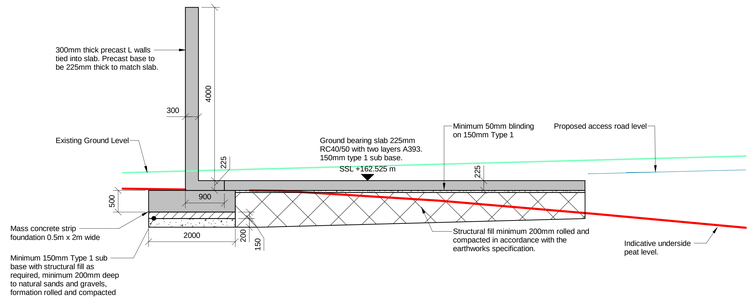
25/09/2024 15:05:37

Do not scale



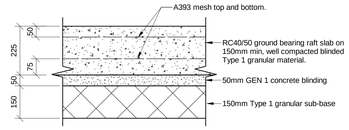
EP - East Complex - Ground Floor

Scale 1 : 100



Section 1-1
East Complex Cross Section

Scale 1 : 50



Typical Ground Bearing Slab Construction

Scale 1 : 10

Notes:

1. Drawing to be read in conjunction with all relevant Architect's and Engineer's Drawings and Specifications.
2. For structural notes refer to drawing UKVLS-ARUP-LC-FN-DR-S-011001.
3. Do not scale drawing.
4. Dimensions are in millimeters unless noted otherwise.

Launch Complex Notes:

1. The design sulphate classification for the launch complex site is DS-3 with an ACEC class AC-4 due to the presence of the aggressive ground conditions from the surrounding peat. The design chemical class of DC4 + exposure class XF4 is recommended due to the risk of de-icing salts on the surface. The concrete is to be C40/50 grade and shall have a maximum water cement ratio of 0.4 with a minimum cement content of 380kg/m^3. Permissible cement types as defined in BS8500-1 table A.12. Freeze thaw resisting aggregates required.
2. Refer to Arup technical Note 02 for interpretation of the ground investigation.
3. Refer to Arup Technical Note 03 Earthworks and Road Design.
4. The contractor to allow for suitable dewatering for the safe construction of the foundations.
5. Contractor to allow for suitable environmental protection measures in accordance with the CEMP to ensure the surrounding peatland and adjacent water course Allt Bad nam Fiadh is protected from any construction run off. The ECOW shall be consulted prior to any works starting on site to ensure all environmental protection plans are in place.Refer to Arup drawing UKVLK-ARP-ZZ-XX-DR-C-0001 for the locations of the watercourse buffer zone.
6. For borehole logs please refer to Ground Investigation Report by Bam Ritches Final Factual Investigation Report ref 323N March 2022.

26/08/2024 15:05:37

Issue	Date	Description
P02	26/08/2024	Building Warrant Issue
P01	15/09/2023	Tender Issue

ARUP

4th Floor
10 George Street, Edinburgh, EH2 2PF
Tel +44 (0)131 331 1999
www.arup.com

Client
Orbex

Project Title
Spacehub Sutherland

Drawing Title
Launch Complex
East Ground Floor Layout

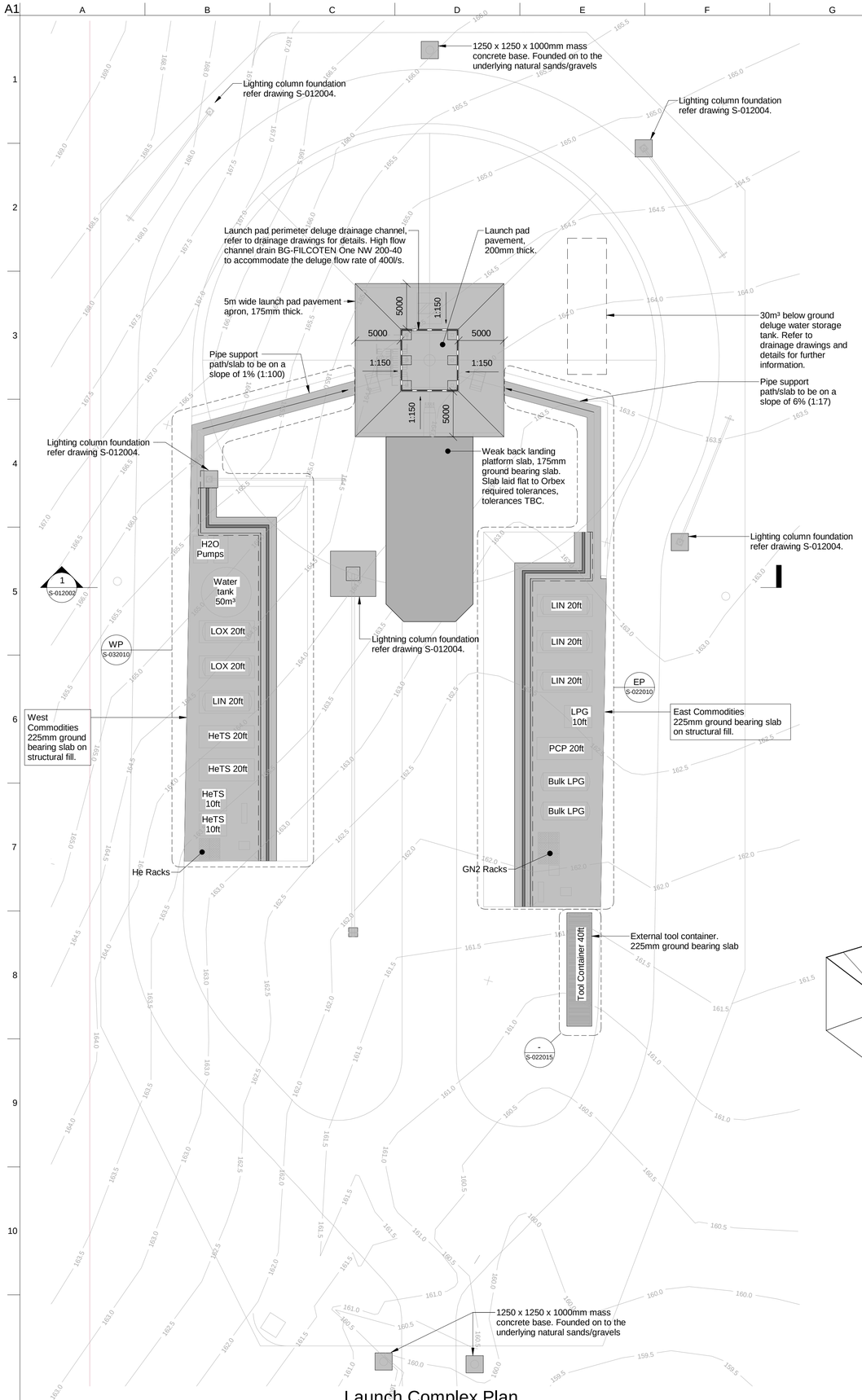
Scale at A0	Dsgn/Drwn/Chkd/Ap
As indicated	MW/LS/GM/GM

Role: Structural

Status: S4 - Suitable for Stage Approval

Arup Job No	Rev
267278-00	P02

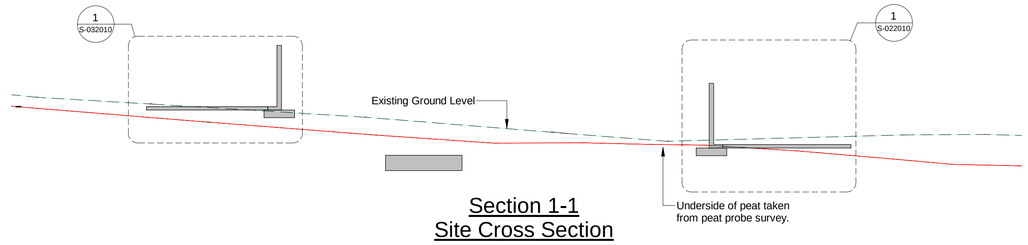
ID
UKVLS-ARUP-LC-FN-DR-S-022010



Launch Complex Plan

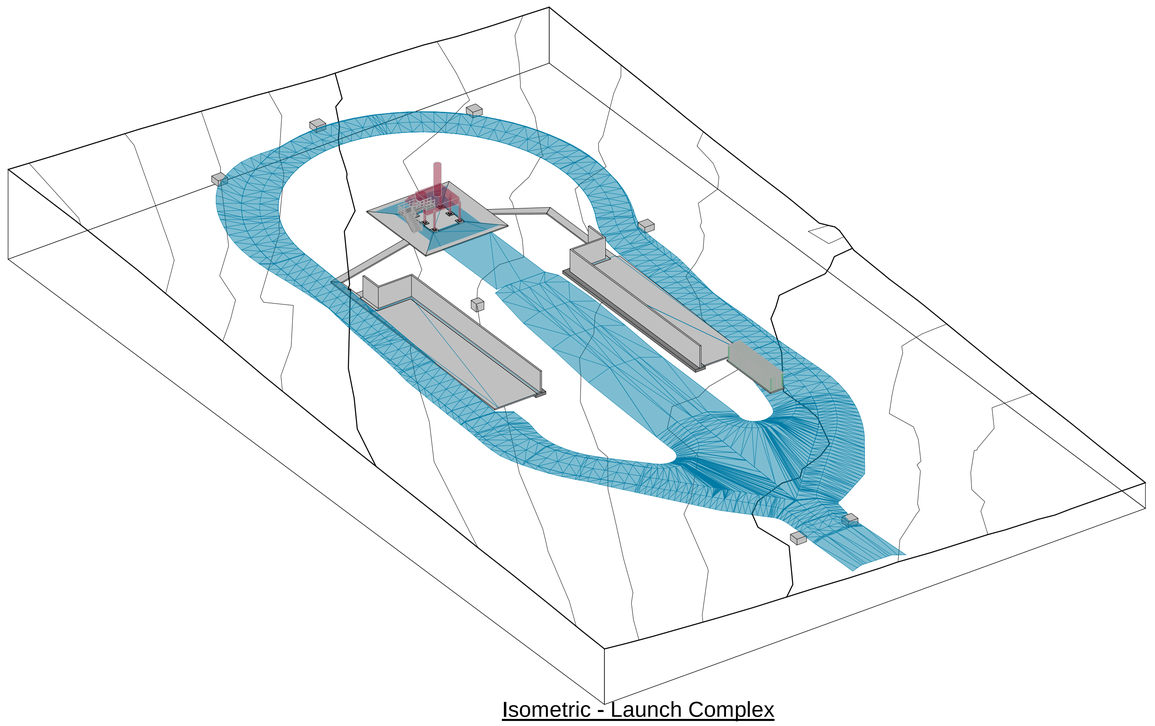
Scale 1 : 275

Commodity	Type	Size	Weight	Load
H2O Pumps	Pump set	1.5m(l) x 1.5m(w) x 1.5m(h)	2t	9kPa
Water Tank 50m³	TANK	3.0m dia x 8.2m(h)	50t	70kPa
LOX 20ft	ISO	6.1m(l) x 2.4m(w) x 2.6m(h)	35t	24kPa or 4 point loads of 85kN
LIN 20ft	ISO	6.1m(l) x 2.4m(w) x 2.6m(h)	35t	24kPa or 4 point loads of 85kN
HeTS 20ft	ISO	6.1m(l) x 2.4m(w) x 2.6m(h)	15t	11kPa or 4 point loads of 36kN
HeTS 10ft	ISO	3.0m(l) x 2.4m(w) x 2.6m(h)	8t	10kPa or 4 point loads of 20kN
He Racks	Rack and Bottles	1.0m(l) x 1.0m(w) x 1.7m(h)	2t	
LPG 10ft	ISO	3.0m(l) x 2.4m(w) x 2.6m(h)	25t	24kPa or 4 point loads of 62kN
PCP 20ft	ISO	6.1m(l) x 2.4m(w) x 2.6m(h)	8t	24kPa or 4 point loads of 20kN
Bulk LPG	TANK	4.2m(l) x 1.6m(w) x 2.2m(h)	25t	36kPa or 4 point loads of 61kN
GN2 Racks	Rack and Bottles	1.0m(l) x 1.0m(w) x 1.7m(h)	2t	20kPa
Tool Shed 40ft	ISO	12.19m(l) x 2.4m(w) x 2.6m(h)	10t	5kPa or 4 point loads of 25kN
Standby Generator	ISO	6.1m(l) x 2.44m(w) x 2.4m(h)	16t	11kPa or 4 point loads of 40kN



Section 1-1
Site Cross Section

Scale 1 : 200



Isometric - Launch Complex

Notes:

1. Drawing to be read in conjunction with all relevant Architect's and Engineer's Drawings and Specifications.
2. For structural notes refer to drawing UKVLS-ARUP-LC-FN-DR-S-011001.
3. Do not scale drawing.
4. Dimensions are in millimeters unless noted otherwise.

Launch Complex & Launch Pad Pavement Notes:

1. The design sulphate classification for the launch complex site is DS-3 with an ACEC class AC-4 due to the presence of the aggressive ground conditions from the surrounding peat. The design chemical class of DC4 + exposure class XF4 is recommended due to the risk of de-icing salts on the surface. The concrete is to be C40/50 grade and shall have a maximum water cement ratio of 0.4 with a minimum cement content of 380kg/m³. Permissible cement types as defined in BS8500-1 table A.12. Freeze thaw resisting aggregates required.
2. Refer to Arup technical Note 02 for interpretation of the ground investigation.
3. Refer to Arup Technical Note 03 Earthworks and Road Design.
4. The contractor to allow for suitable dewatering for the safe construction of the foundations.
5. Contractor to allow for suitable environmental protection measures in accordance with the CEMP to ensure the surrounding peatland and adjacent water course Allt Bad nam Fiadh is protected from any construction run off. The ECOW shall be consulted prior to any works starting on site to ensure all environmental protection plans are in place.Refer to Arup drawing UKVLK-ARP-ZZ-XX-DR-C-0001 for the locations of the watercourse buffer zone.
6. For borehole logs please refer to Ground Investigation Report by Bam Ritches Final Factual Investigation Report ref 323N March 2022.
7. Refer to Arup piling specification for piling requirements.
8. Launch pad pavement to be 175mm/200mm thick using low strength concrete, maximum 25MPa with lime stone aggregate, plastic fibre reinforcement and air entrained concrete with minimum 4% entrainment agent. The final specification for the launch pad concrete will need to be agreed with the LSP and LSO.
9. The concrete surface at the launch pad will be subject to high temperatures from the launch vehicle exhaust. A suitable concrete mix will need to be developed to ensure the required durability is achieved and this will be developed in the next stage through coordination with the LSP. Allow for RC20/25 concrete with limestone aggregate, 4% air entrainment mixture and polypropylene fibres to minimise explosive spalling due to the high temperatures during launch.
10. Further details required for the support system for the fuel supply pipeline system from the commodities areas to the launch pad. Details to be provided by Orbex.

Issue	Date	
P02	26/08/2024	Building Warrant Issue
P01	15/09/2023	Tender Issue

ARUP

4th Floor
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Client
Orbex

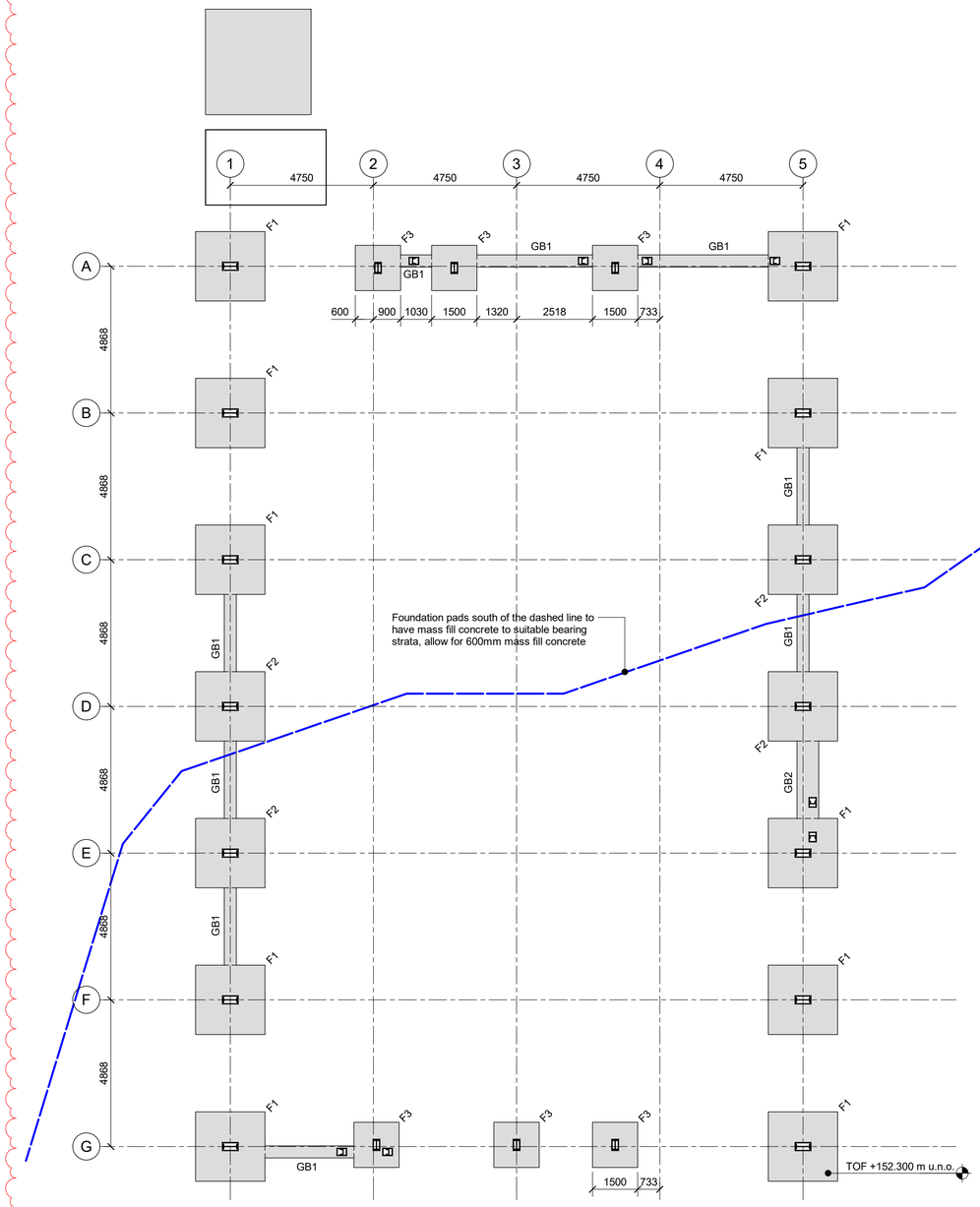
Project Title
Spacehub Sutherland

Drawing Title
Launch Complex
General Arrangement

Scale at A1	As indicated
Dsg/Drwl/Chkd/Apgd	MW/LS/GM/GM
Role	Structural
Status	S4 - Suitable for Stage Approval
Arup Job No	267278-00
Rev	P02
ID	UKVLS-ARUP-LC-FN-DR-S-012002

25/09/2024 15:22:21

Do not scale



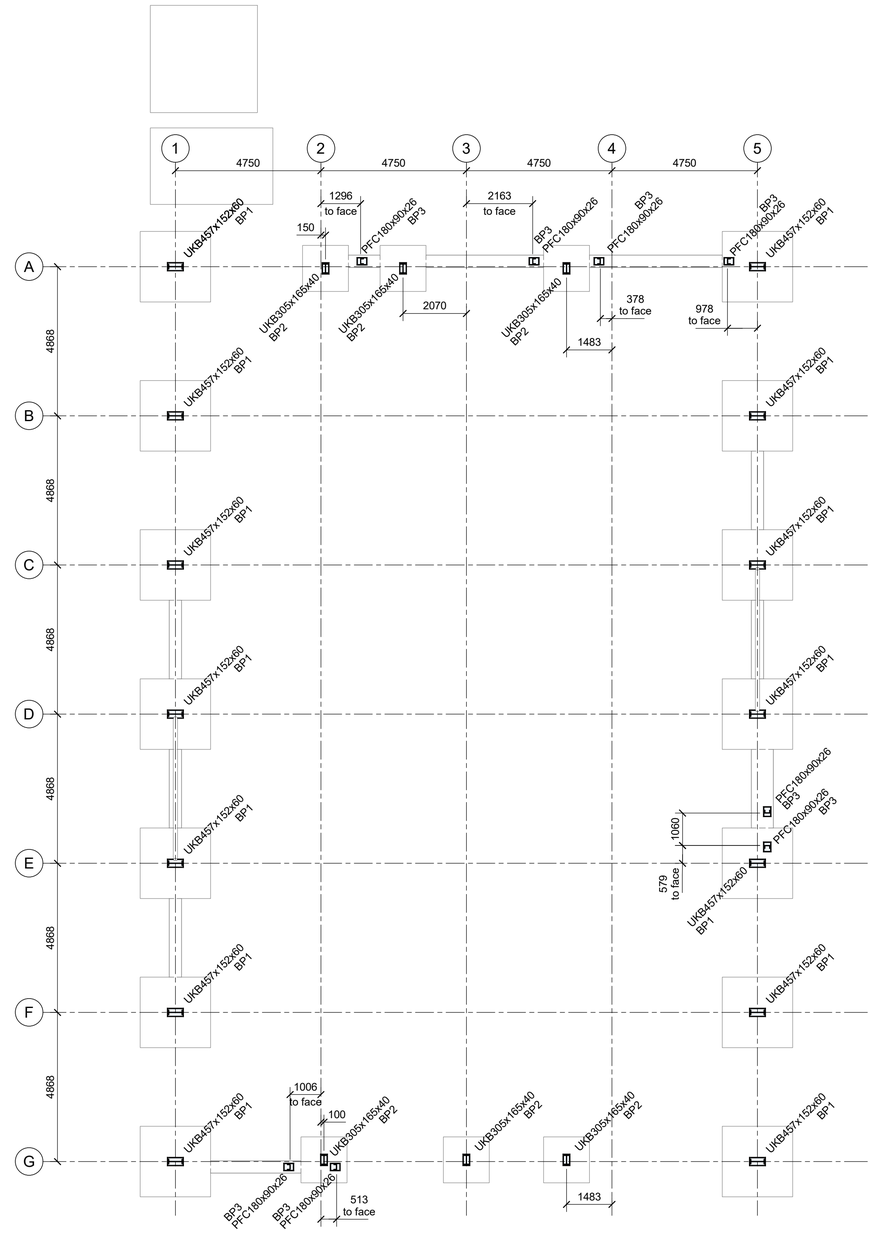
For pilecap details refer to UKVLS-ARUP-VF-ZZ-DR-S-106005.

Foundation Layout

Scale 1 : 100

Structural Foundation Schedule	
Type Mark	Type
F1	2300 x 2300 x 600mm
F2	2300 x 2300 x 900mm
F3	1500 x 1500 x 600mm

Ground Beam Schedule	
Ref.	Type
GB1	400x400mm Ground Beam
GB2	720x400mm Ground Beam



For baseplate details refer to UKVLS-ARUP-VF-ZZ-DR-S-106007.

Column Base Plate Layout

Scale 1 : 100

Structural Column Schedule	
ID Type Mark	Type
PFC180b	PFC180x90x26
UKB305g	UKB305x165x40
UKB457b	UKB457x152x60

Baseplate Schedule	
Type Mark	Type
BP1	500 x 250 x 20mm thk baseplate
BP2	350 x 200 x 15mm thk baseplate
BP3	300 x 220 x 15mm thk baseplate

Notes:
1. Drawing to be read in conjunction with all relevant Architect's and Engineer's Drawings and Specifications.
2. For structural notes refer to drawing UKVLS-ARUP-VF-ZZ-DR-S-101000.
3. Do not scale drawing.
4. Dimensions are in millimetres unless noted otherwise.
5. Assume all steelwork grade S355

Issue	Date	
P05	23/08/2024	For Information
P04	01/02/2024	Tender Issue
P03	14/12/2023	Tender Issue
P02	26/10/2023	Tender Issue
P01	24/08/2023	Stage 3 Issue

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Client
Orbex

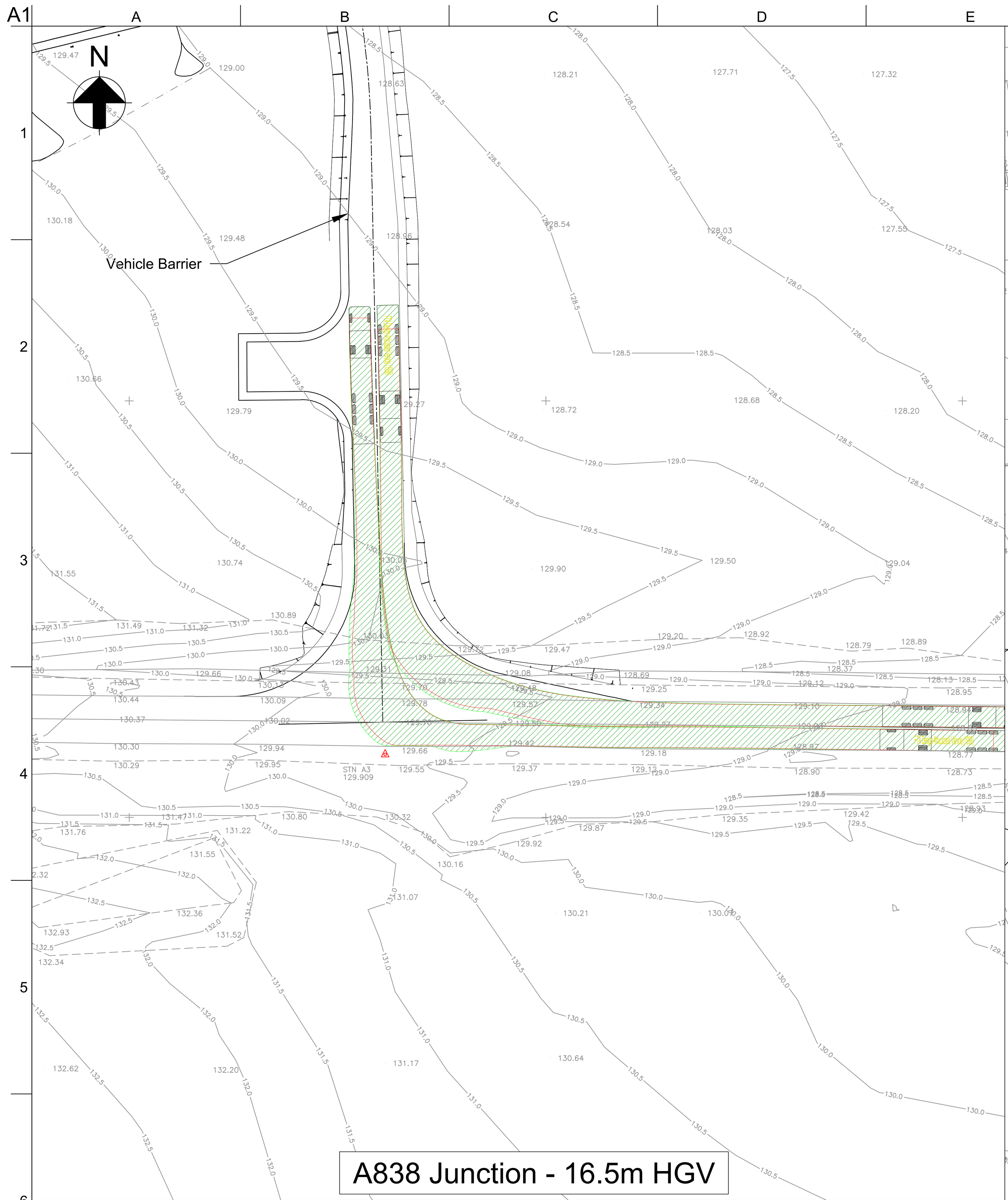
Project Title
Spacehub Sutherland

Drawing Title
LSIF Structure
Foundation Layout

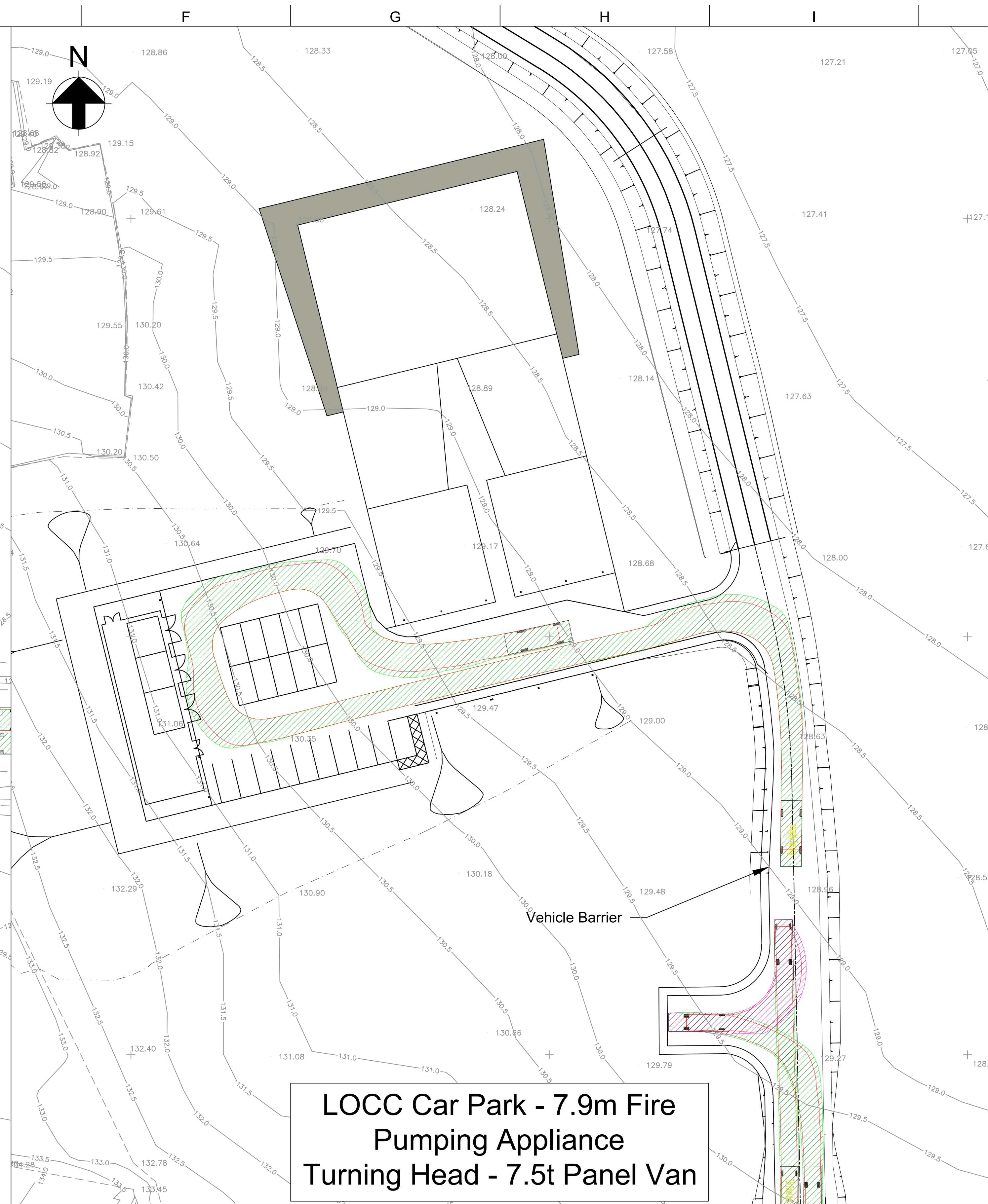
Scale at A1: 1 : 100
Dsg/Drw/Chkd/Appd: MW/LS/GM/GM
Role: Structural
Status: S2 - Suitable for Information
Arup Job No: 267278-00
Rev: P05
ID: UKVLS-ARUP-VF-F1-DR-S-102001

22/08/2024 16:45:55

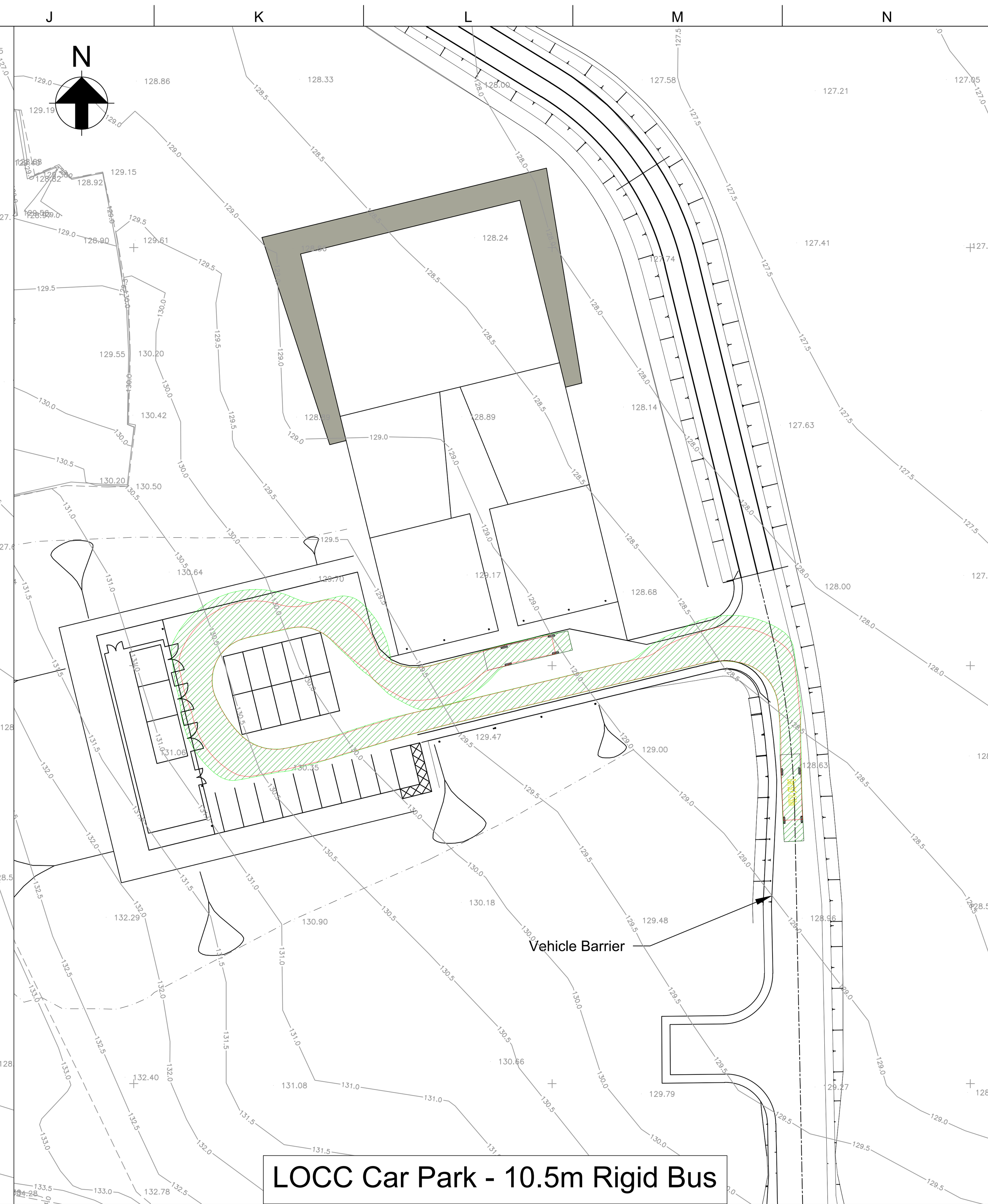
Do not scale



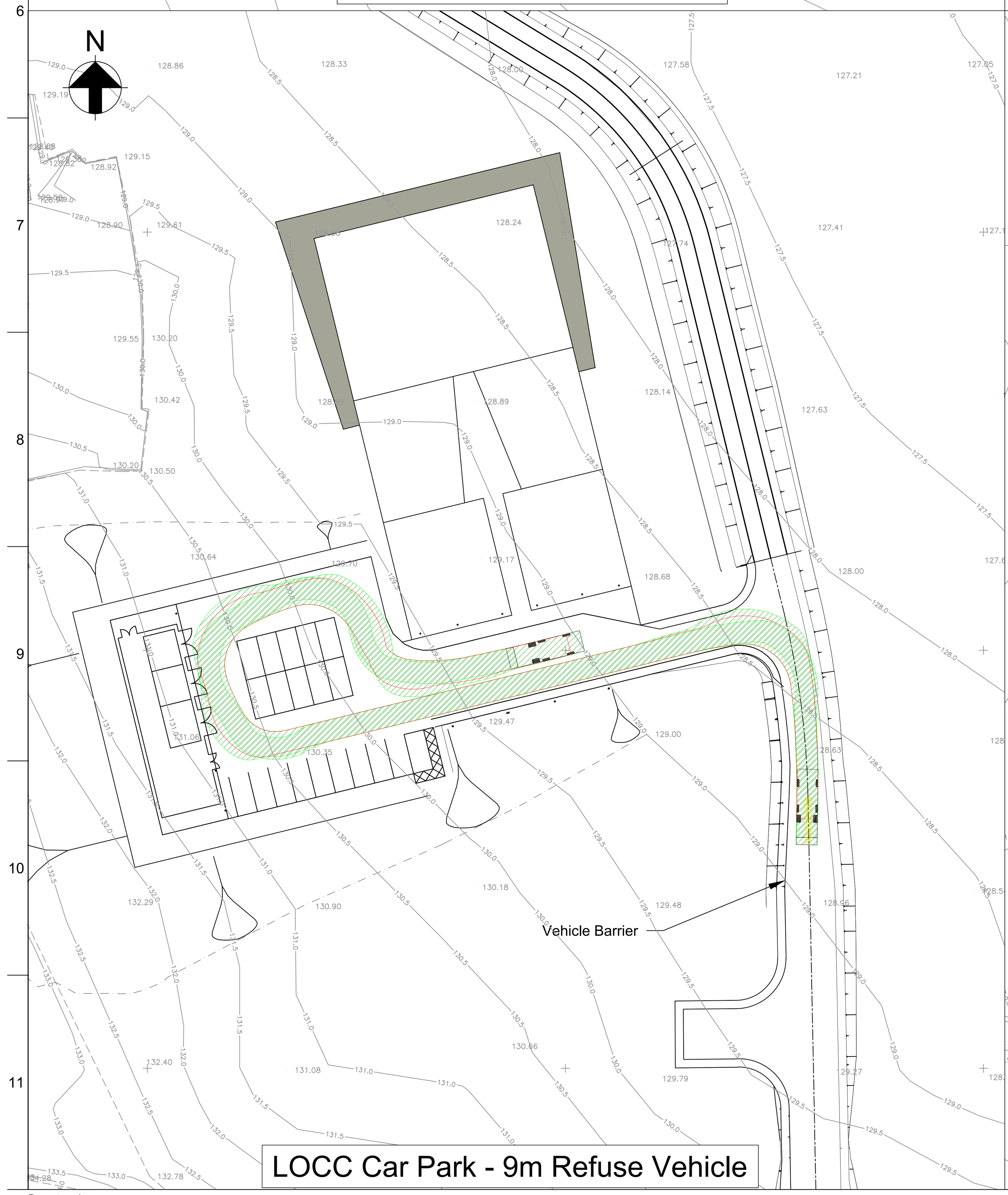
A838 Junction - 16.5m HGV



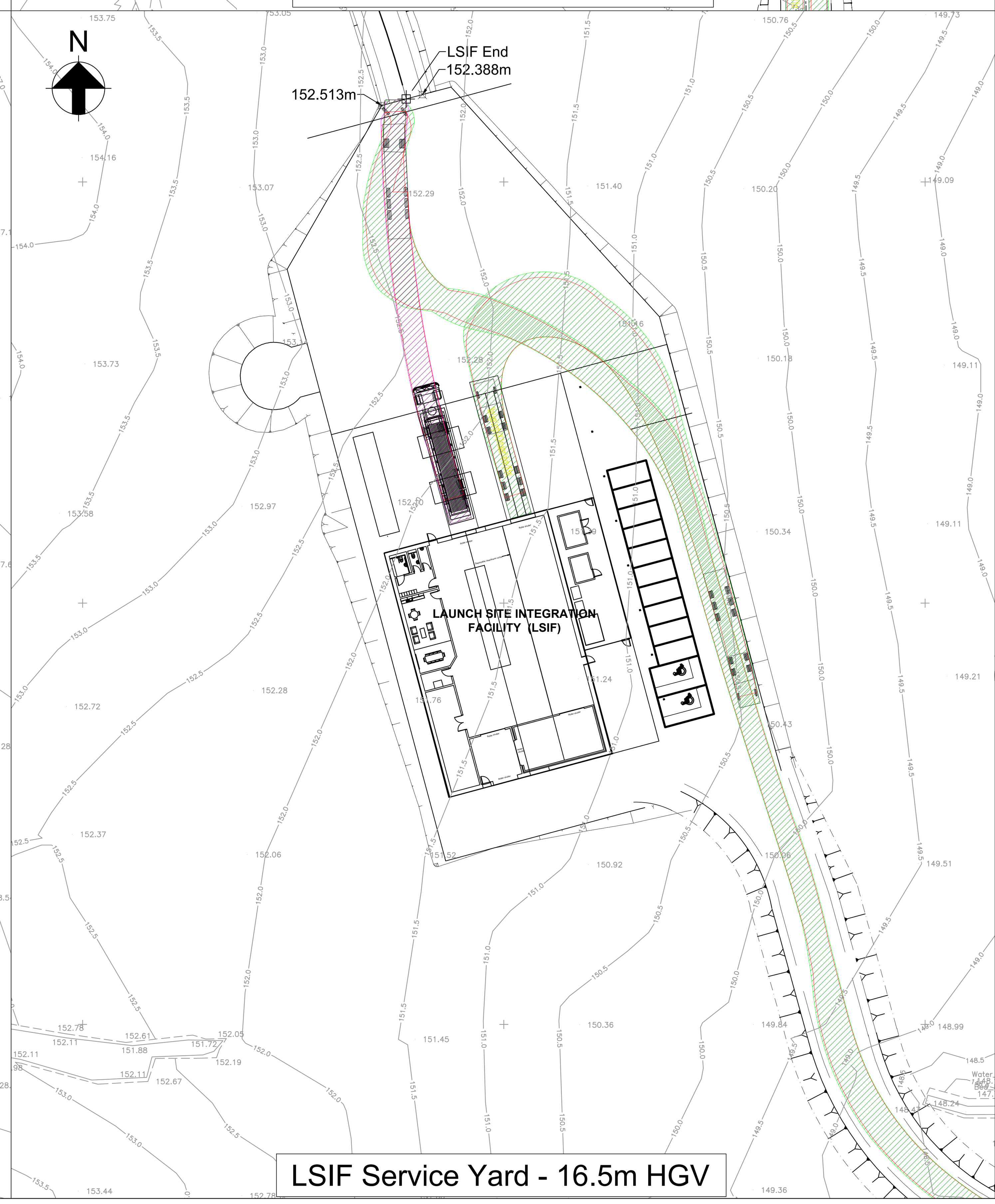
LOCC Car Park - 7.9m Fire Pumping Appliance
Turning Head - 7.5t Panel Van



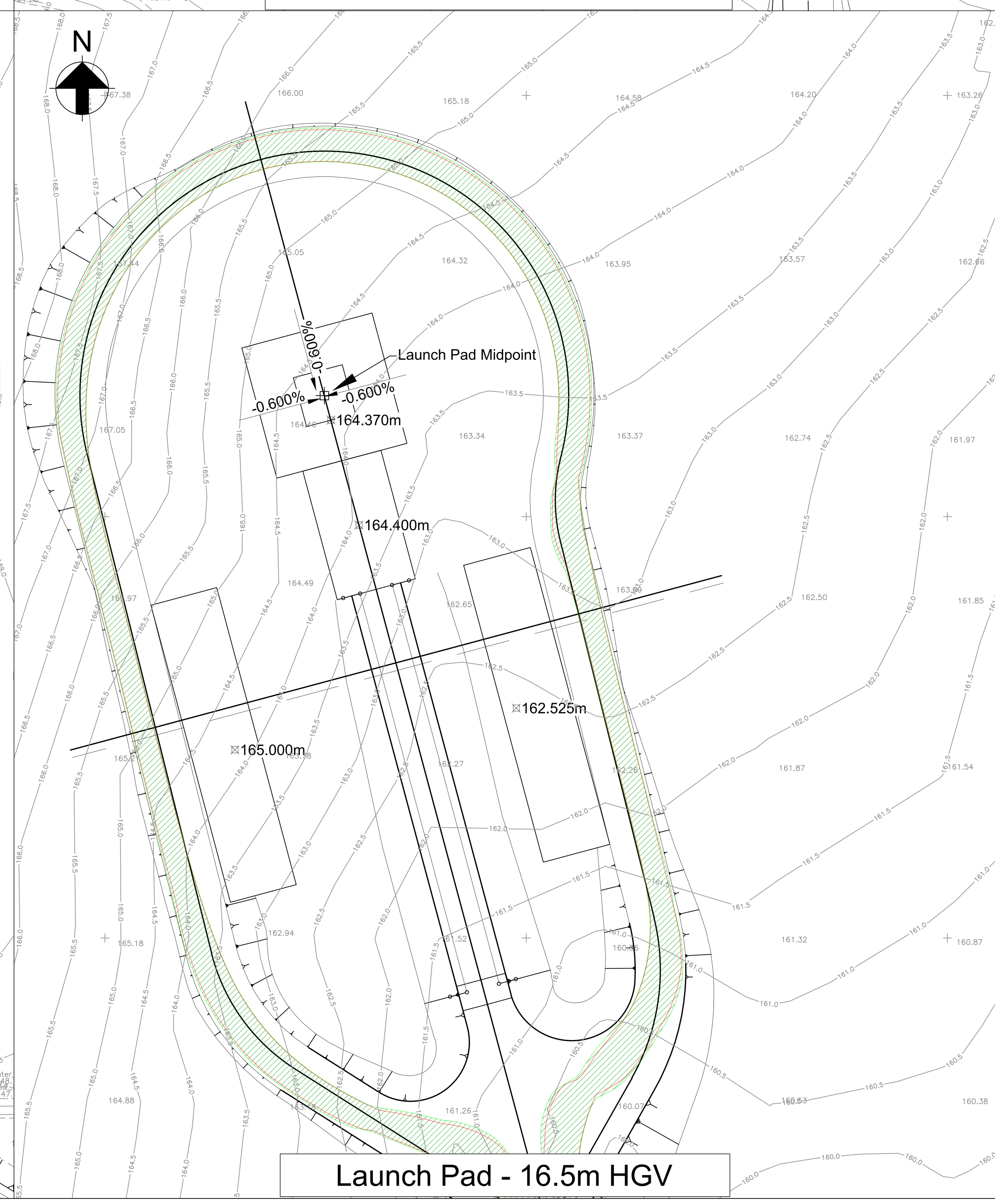
LOCC Car Park - 10.5m Rigid Bus



LOCC Car Park - 9m Refuse Vehicle



LSIF Service Yard - 16.5m HGV



Launch Pad - 16.5m HGV

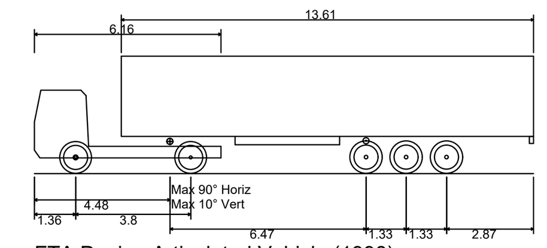
Notes :

1. All dimensions are in metres unless stated otherwise.
2. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.

Legend

Chassis Outline

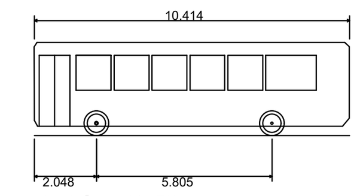
Body Outline



FTA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m

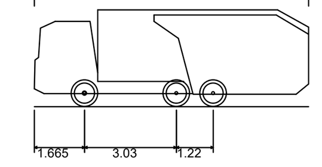
Figure 1 - HGV (16.5m) Vehicle Tracking Details



Dart SLF 10.50m

Overall Length	10.414m
Overall Width	2.360m
Overall Body Height	3.067m
Min Body Ground Clearance	0.302m
Track Width	2.300m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.499m

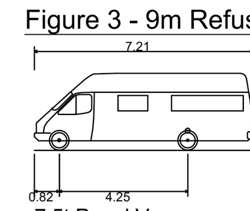
Figure 2 - 10.5m Rigid Bus Vehicle Tracking Details



Phoenix 2 High Capacity Twin Pack 15 (Elite 2 6x2ML chassis)

Overall Length	9.070m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.800m

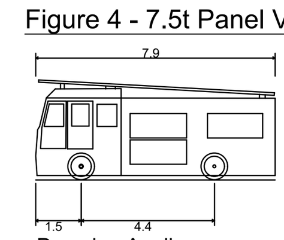
Figure 3 - 9m Refuse Vehicle Vehicle Tracking Details



7.5t Panel Van

Overall Length	7.210m
Overall Width	2.192m
Overall Body Height	2.544m
Min Body Ground Clearance	0.316m
Track Width	1.865m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Figure 4 - 7.5t Panel Van Vehicle Tracking Details



Pumping Appliance

Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.750m

Figure 5 - 7.9m Pumping Appliance Vehicle Tracking Details

Rev	Date	By	Chkd	Appd
P09	23 /08/ 24	CRP	GM	GM
Planning Issue				
P08	03 /05/ 24	ML	GM	GM
Planning Issue				

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10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
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Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Swept Path Analysis

Scale at A1: 1:500

Role: C

Suitability: S4 - For Approval

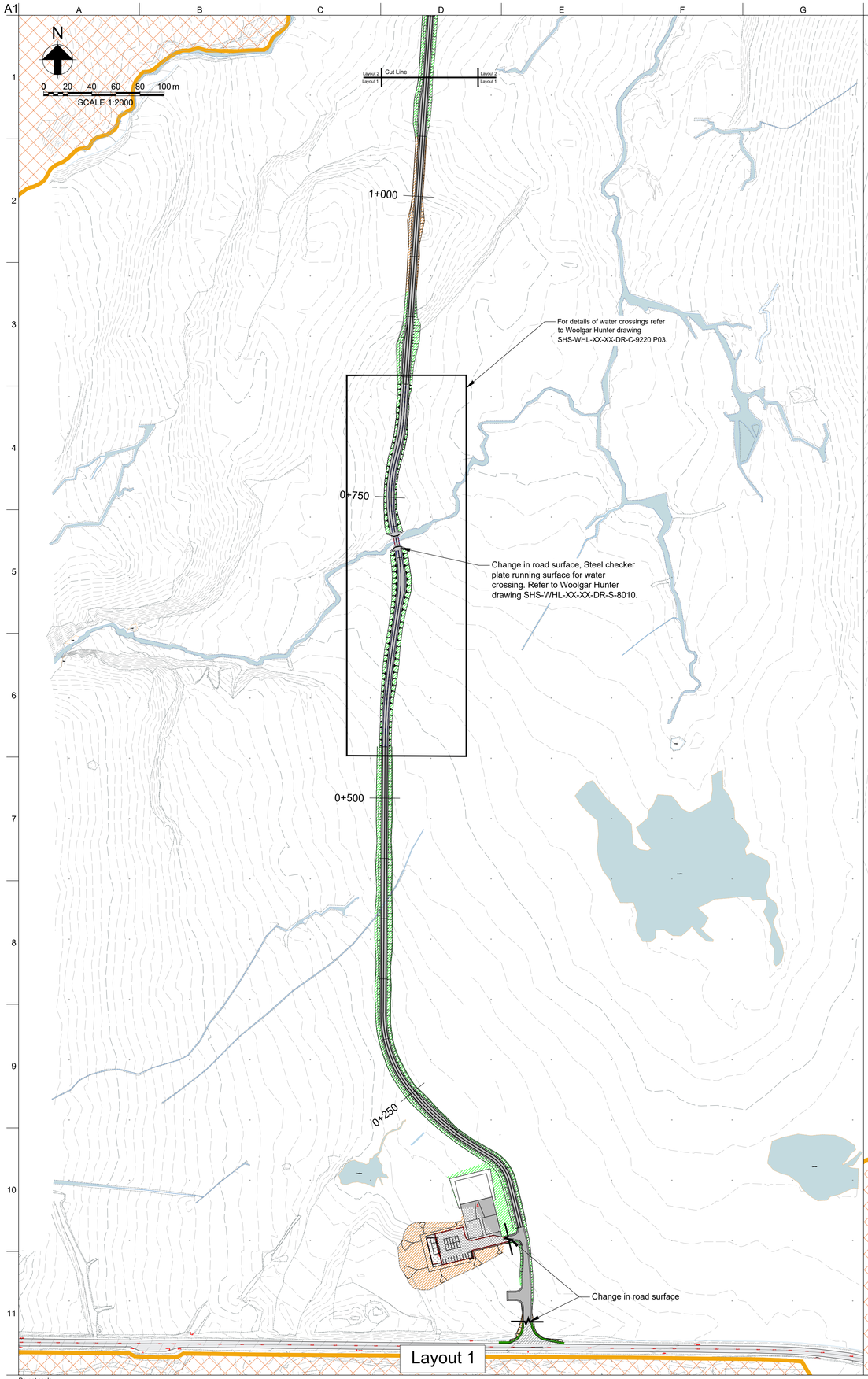
Arup Job No: **267278-00**

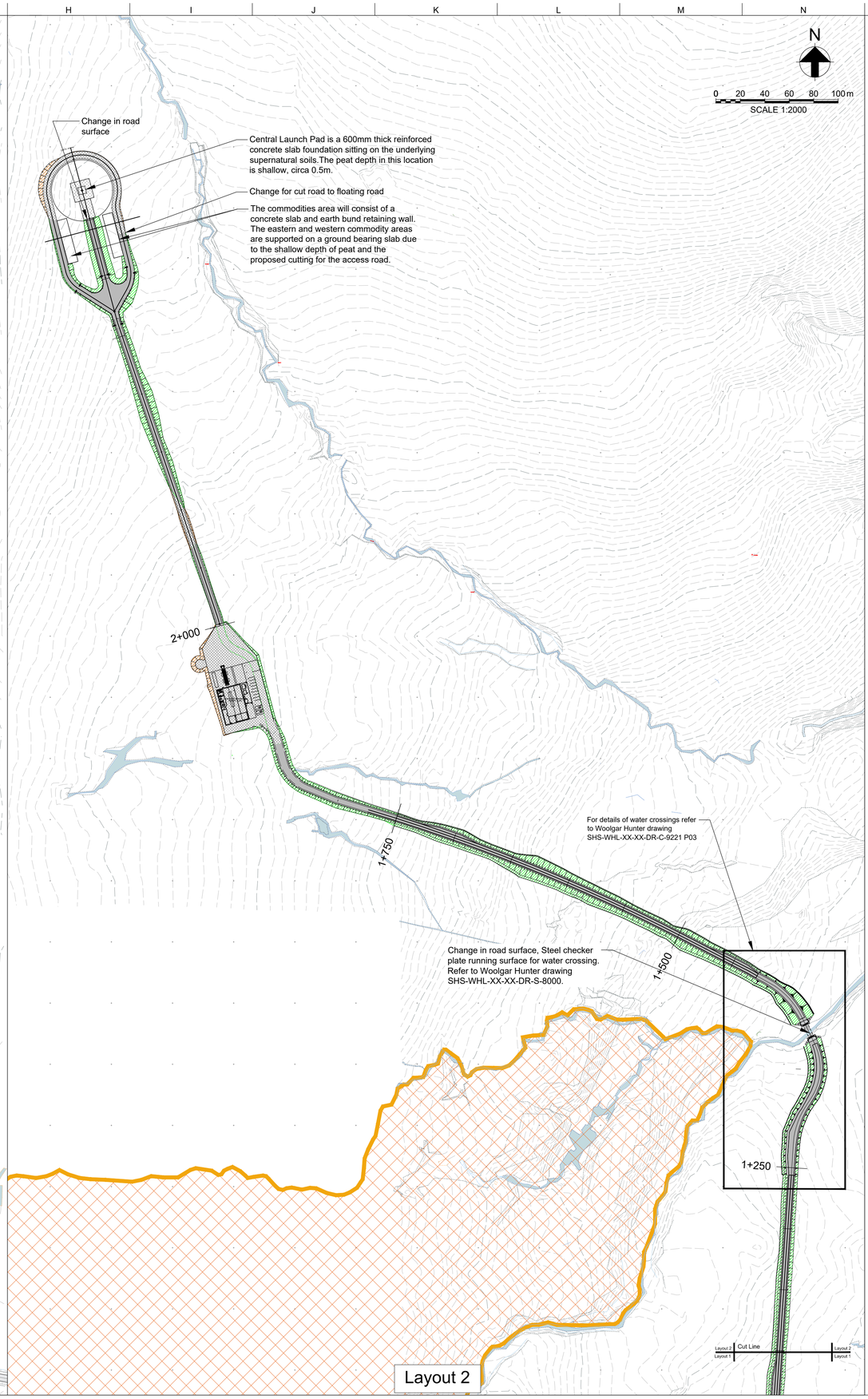
Rev: **P09**

Name: **UKVLS-ARP-ZZ-XX-DR-C-0006**

Do not scale

A1





Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.
4. For typical pavement build-ups and standard road cross sections refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0005.

Legend:

- Asphalt Pavement
- Floating Road
- Unbound Pavement
- Concrete Pavement
- Verge
- Earthworks Fill
- Earthworks Cut
- SSSI/SPA/SAC/RAMSAR Environmental and Landscape Designations
- 100mm Upstand Kerb (K1)

Rev	Date	By	Chkd	Appd
P09	23/08/24	CRP	GM	GM
Planning Issue				
P08	02/05/24	ML	GM	GM
Planning Issue				
P07	07/03/24	ML	GM	GM
Planning Issue				
P06	22/02/23	ML	GM	GM
Planning Issue				
P05	14/11/23	ML	GM	GM
Tender Issue				
P04	14/07/23	ML	GM	GM
Tender Issue				
P03	25/05/22	ML	GM	GM
Tender Issue				
P02	20/01/20	BHM	BHM	GM
Issued for Approval - Planning Application Submission				
P01	10/01/20	BHM	BHM	GM
Issued for Comments/Review				

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Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Engineering Construction Layout

Scale at A1 1:2000

Role C

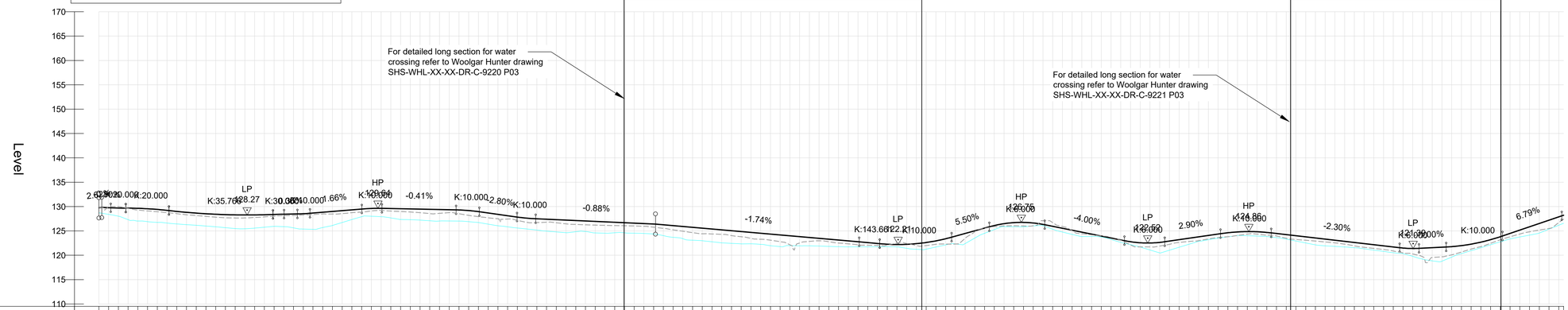
Suitability S4 - For Approval

Arup Job No **267278-00**

Rev **P09**

Name **UKVLS-ARP-ZZ-XX-DR-C-0004**

Do not scale



ACCESS ROAD ALG P01.2 - LONGSECTION (3)
SCALE: H 1:2500,V 1:500. DATUM: 110.000

ACCESS ROAD ALG P01.2 - LONGSECTION (3)
SCALE: H 1:2500,V 1:500. DATUM: 110.000

Do not scale

Notes:

1. All dimensions are in metres unless stated otherwise.
2. For access road layout and chainages refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.
3. For access road contours refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0003.
4. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
5. Peat depths provided by Nevis Environmental.
6. Peat depths based on probing at 100m centres and 10m around the roads and buildings.

Legend:

▬	Proposed Road Level
╌	Existing Ground Level
▬	Bottom of Peat Level

Rev	Date	By	Chkd	Appd
P09	23 /08/24	CRP	GM	GM
	Planning Issue			
P08	03 /05/24	CF	GM	GM
	Planning Issue			
P07	07 /03/24	ML	GM	GM
	Planning Issue			
P06	22 /02/24	ML	GM	GM
	Planning Issue			
P05	14 /11/23	ML	GM	GM
	Tender Issue			
P04	13 /07/23	ML	GM	GM
	Tender Issue			
P03	06 /07/23	ML	GM	GM
	Tender Issue			
P02	25 /05/22	ML	GM	GM
	Tender Issue			
P01	10 /01/20	BHM	BHM	GM
	Issued for Approval - Planning Application Submission			

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Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Longsection

Scale at A1
H1:2500, V1:500

Role
C

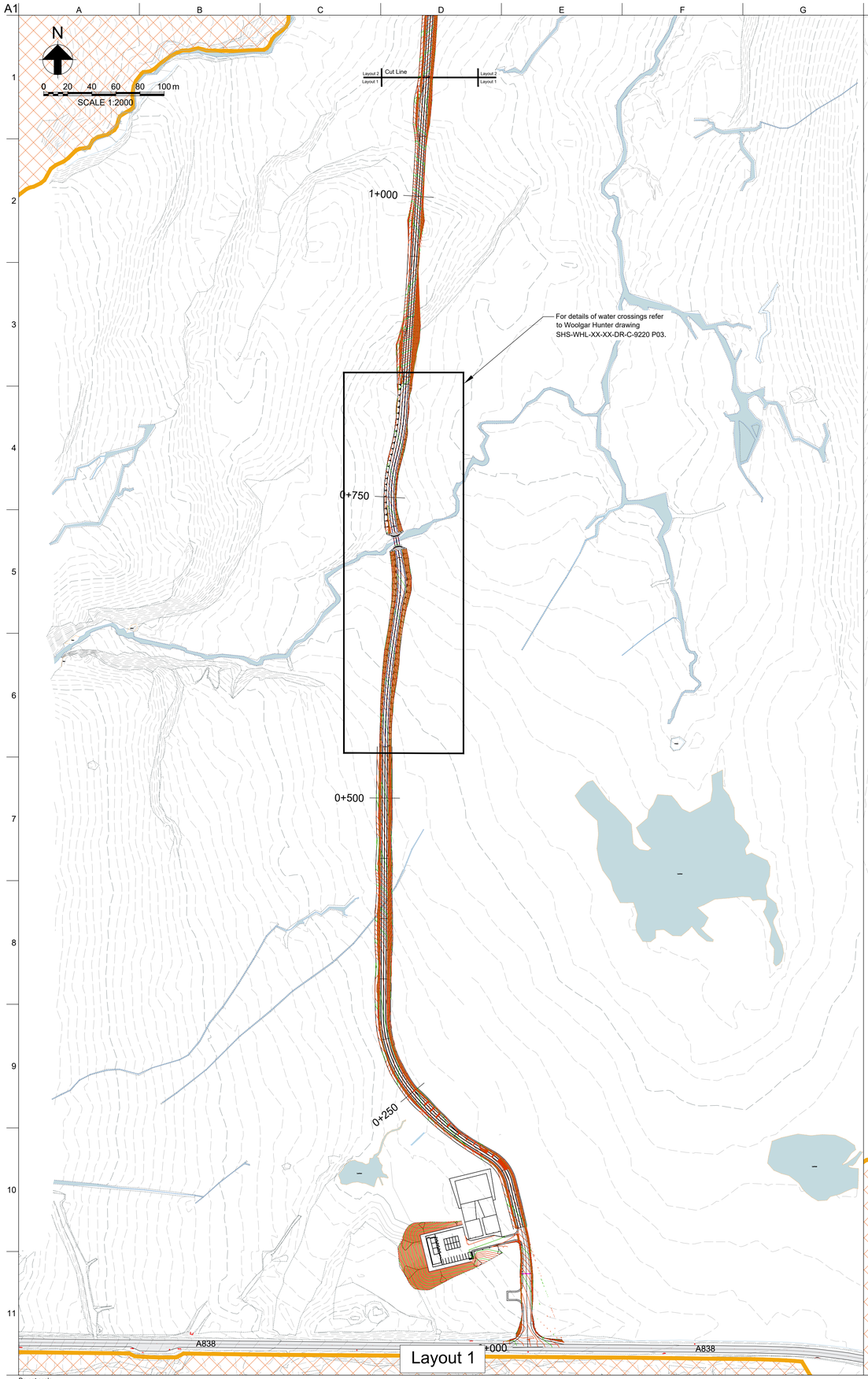
Suitability
S4 - For Approval

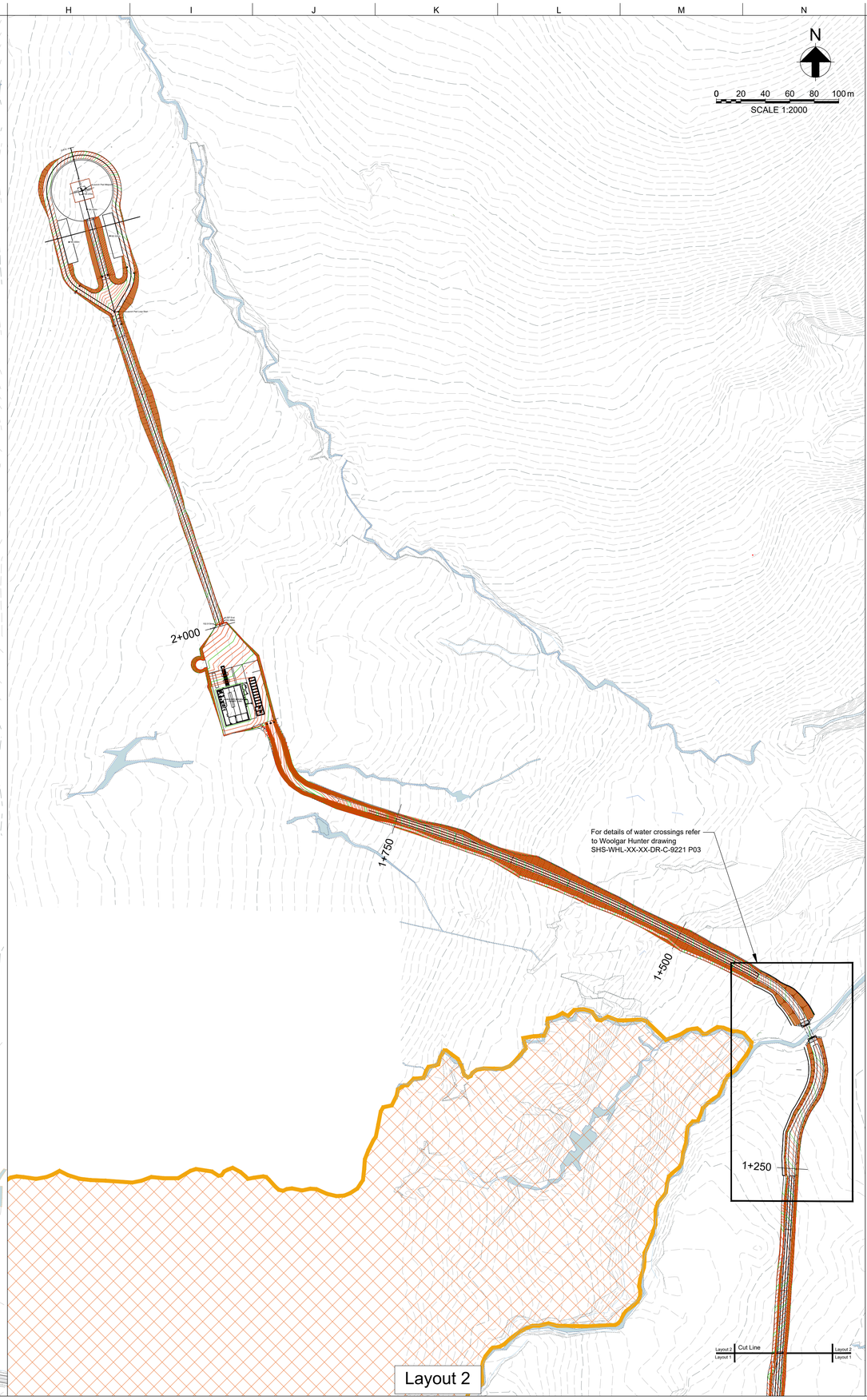
Arup Job No
267278-00

Rev
P09

Name
UKVLS-ARP-ZZ-XX-DR-C-0002

A1





Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.
4. For access road longsection refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0002.

Legend:

- Major Contour (1.0m Interval)
- Minor Contour (0.2m Interval)
- SSSI/SPA/SAC/RAMSAR Environmental and Landscape Designations

Rev	Date	By	Chkd	Appd
P09	23 /08/24	CRP	GM	GM
Planning Issue				
P08	03 /05/24	ML	GM	GM
Planning Issue				
P07	07 /03/24	ML	GM	GM
Planning Issue				
P06	22 /02/24	ML	GM	GM
Planning Issue				
P05	14 /11/23	ML	GM	GM
Tender Issue				
P04	25 /07/23	ML	GM	GM
Tender Issue				
P03	25 /05/22	ML	GM	GM
Tender Issue				
P02	17 /01/20	BHM	BHM	GM
Issued for Approval - Planning Application Submission				
P01	10 /01/20	BHM	BHM	GM
Issued for Comments/Review				

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Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road and Site Infrastructure Proposed Contours

Scale at A1 1:2000

Role C

Suitability S4 - For Approval

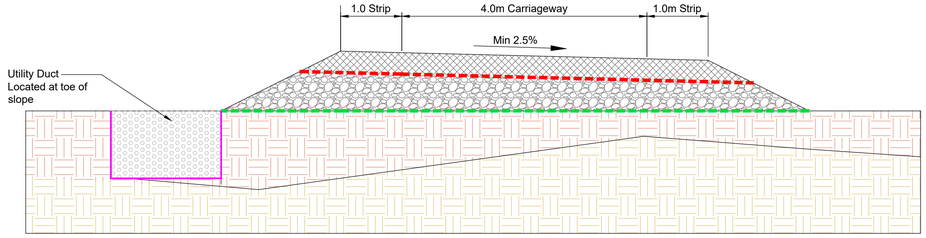
Arup Job No **267278-00**

Rev **P09**

Name **UKVLS-ARP-ZZ-XX-DR-C-0003**

Do not scale

Access Road - Floating Road



Key:

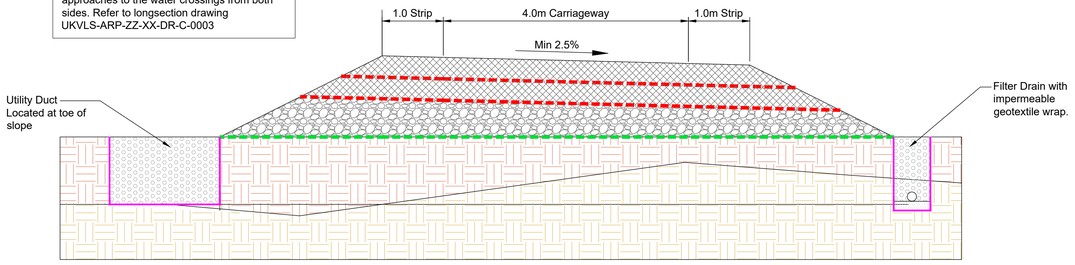
- Sub-grade Non - Peat
- Sub-grade Peat
- 280mm Well Graded Crushed Gravel (Gravel size 75mm down)
- 280m Type 1 Material
- Geogrid between Type 1 and Gravel
- Geogrid between Gravel and Sub-grade

Notes Floating Road Construction:

1. Floating road to be installed directly on Peat.
2. Floating road design based on guidance from "Floating Roads on Peat" prepared by SNH and Forestry Civil Engineering.
3. Assumed CBR of the Peat is 0.5%.
4. Design to be confirmed on receipt of Ground Investigation results and discussions with Geogrid Manufacturer's and/or Contractors to confirm design is suitable for site conditions.

Access Road - Floating Road Regulated GeoGrid

Localised thickening to the floating road at the approaches to the water crossings from both sides. Refer to longsection drawing UKVLS-ARP-ZZ-XX-DR-C-0003



Key:

- Sub-grade Non - Peat
- Sub-grade Peat
- 280mm Well Graded Crushed Gravel (Gravel size 75mm down)
- 280m Type 1 Material
- Geogrid between Type 1 and Gravel
- Geogrid between Gravel and Sub-grade

Notes Floating Road Construction:

1. Floating road to be installed directly on Peat.
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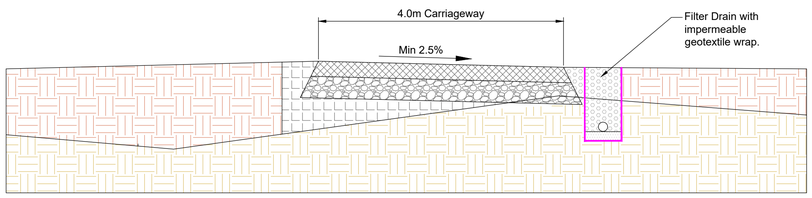
3. Assumed CBR of the Peat is 0.5%.
4. Design to be confirmed on receipt of Ground Investigation results and discussions with Geogrid Manufacturer's and/or Contractors to confirm design is suitable for site conditions.

Access Road - Unbound Pavement



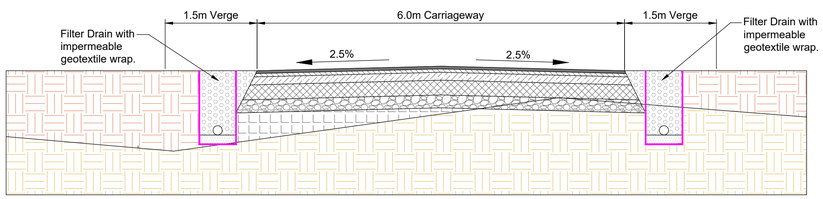
Key:

- Sub-grade Non - Peat
- Sub-grade Peat
- 350mm 6F1 Capping Material
- 250m Type 1 Material
- Granular Fill Material

Notes Unbound Pavement Construction:

1. All peat to be excavated below access road.
2. Excavated peat to be replaced with suitable granular fill material.
3. Unbound pavement design based on guidance from "Floating Roads on Peat" prepared by SNH and Forestry Civil Engineering and "Roads and Tracks:Operations Note 25" by the Forestry Commission.
4. Assumed sub-grade CBR 5%.
5. Design to be confirmed on receipt of Ground Investigation results and discussions with Contractors to confirm design is suitable for site conditions.

Access Road - Asphalt Pavement



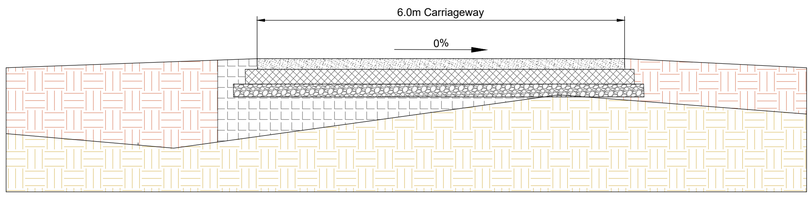
Key:

- Sub-grade Non - Peat
- Sub-grade Peat
- Granular Fill Material
- 210mm 6F1 Capping
- 240mm Type 1 Sub-base
- 130mm DBM Base Course
- 55mm DBM Binder Course
- 45mm HRA Surface Course

Notes Asphalt Pavement Construction:

1. All peat to be excavated below access road.
2. Excavated peat to be replaced with suitable granular fill material.
3. Pavement foundation design in accordance with The Highland Council document Roads and Transport Guidelines for New Developments assumed CBR of sub-grade is 5%.
4. Pavement design based on an Industrial Road in accordance with The Highland Council document Roads and Transport Guidelines for New Developments.
5. Design to be confirmed on receipt of Ground Investigation results.

Access Road - Concrete Pavement



Key:

- Sub-grade Non - Peat
- Sub-grade Peat
- Granular Fill Material
- 210mm 6F1 Capping
- 240mm Type 1 Sub-base
- 175mm C32/40 Reinforced Concrete

Notes Concrete Pavement Construction:

1. All peat to be excavated below access road.
2. Excavated peat to be replaced with suitable granular fill material.
3. Pavement foundation design in accordance with Highlands Council document Roads and Transport Guidelines for New Developments assumed CBR of sub-grade is 5%.
4. Concrete pavement design based on Concrete Society Technical Report No.66 - External In-Situ Concrete Pavement.
5. Design to be confirmed on receipt of Ground Investigation results.

0 500 1000 1500 2000 2500mm
SCALE 1:50

Notes :

1. All dimensions are in metres unless stated otherwise.
2. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.
3. For locations of the different pavement construction types refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0004.

Rev	Date	By	Chkd	Appd
P07	23 /08/ 24	CRP	GM	GM
Planning Issue				
P06	03 /05/ 24	ML	GM	GM
Planning Issue				
P05	07 /03/ 24	ML	GM	GM
Tender Issue				
P04	14 /11/ 23	ML	GM	GM
Tender Issue				
P03	25 /05/ 22	ML	GM	GM
Tender Issue				
P02	20 /01/ 20	BHM	BHM	GM
Issued for Approval - Planning Application Submission				
P01	10 /01/ 20	BHM	BHM	GM
Issued for Comments/Review				

ARUP

10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
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Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Typical Cross Sections and Pavement Construction

Scale at A1 1:50

Role C

Suitability S4 - For Approval

Arup Job No 267278-00

Rev P07

Name
UKVLS-ARP-ZZ-XX-DR-C-0005

Do not scale

A1

N

0 20 40 60 80 100 m

SCALE 1:2000

Layout 2 Layout 1 Cut Line Layout 2 Layout 1

1+000

0+750

0+500

0+250

+000

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-C-9220 P03.

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-S-8010 P06.

Launch Operations Control Centre (LOCC) Building

LOCC Car Park

Vehicle Barrier

Turning Head for Cars and Vans. The turning head has been located on the west side of the access road in an area of disturbed peat and to minimise the impact on the undisturbed peat to the east

Proposed junction with A838

A838

A838

Layout 1

N

0 20 40 60 80 100 m

SCALE 1:2000

Launch Pad

The launch pad and access road has been located out with the 30m watercourse buffer zone to minimise the impact on the watercourse during the construction and operation of the pad.

10m watercourse buffer

20m watercourse buffer

30m watercourse buffer

40m watercourse buffer

50m watercourse buffer

2+000

Launch Site Integration Facility (LSIF) Building

LSIF Service Yard constructed of unbound stone built off the underlying supernatural soils. Peat to be removed from the footprint of the LSIF service yard.

The LSIF building has been located out with the zone of the GWDTE to minimise the impact on the environment.

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-C-9221 P03

1+750

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-S-8000 P06

1+500

1+250

Layout 2 Cut Line Layout 2 Layout 1

Layout 2

Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road longsection refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0002.
4. For access road contours refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0003.
5. For access road construction types refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0004 and UKVLS-ARP-ZZ-XX-DR-C-0005.
6. For swept path analysis refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0006.
7. For peat probe depths refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0007.
8. For details of junction with A838 refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0008.

Legend:

SSSI/SPA/SAC/RAMSAR Environmental and Landscape Designations

Rev	Date	By	Chkd	Appd
P10	16 /08/24	CRP	GM	GM
Planning Issue				
P09	03 /05/24	CF	GM	GM
Planning Issue				
P08	07 /03/24	ML	GM	GM
Planning Issue				
P07	22 /02/24	ML	GM	GM
Planning Issue				
P06	14 /11/23	ML	GM	GM
Tender Issue				
P05	14 /07/23	ML	GM	GM
Tender Issue				
P04	07 /07/23	ML	GM	GM
Tender Issue				
P03	25 /05/22	ML	GM	GM
Tender Issue				
P02	20 /01/20	BHM	BHM	GM
Issued for Approval - Planning Application Submission				
P01	10 /01/20	BHM	BHM	GM
Issued for Comments/Review				

ARUP

10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
www.arup.com

Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Layout

Scale at A1
1:2000

Role
C

Suitability
S4 - For Approval

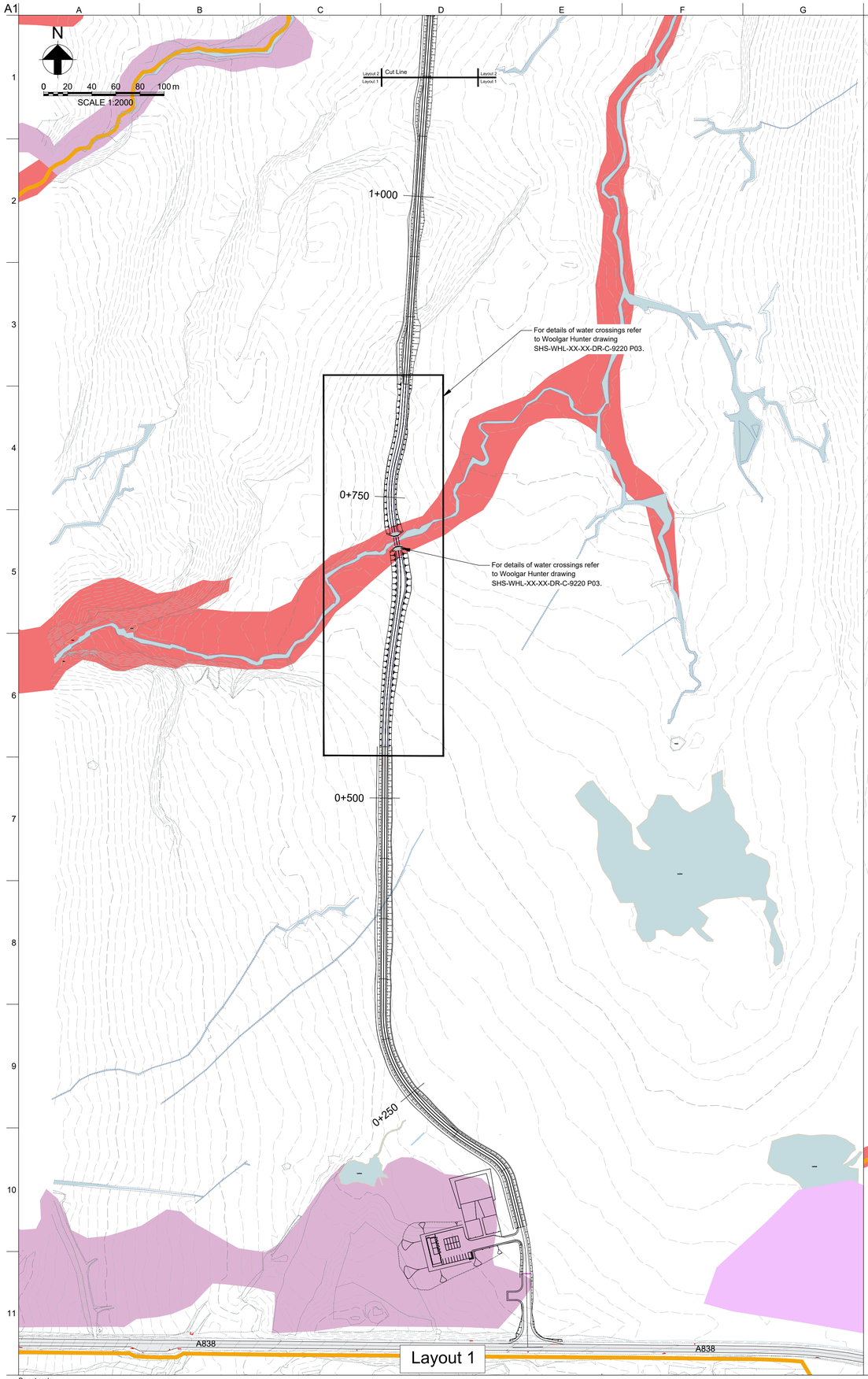
Arup Job No
267278-00

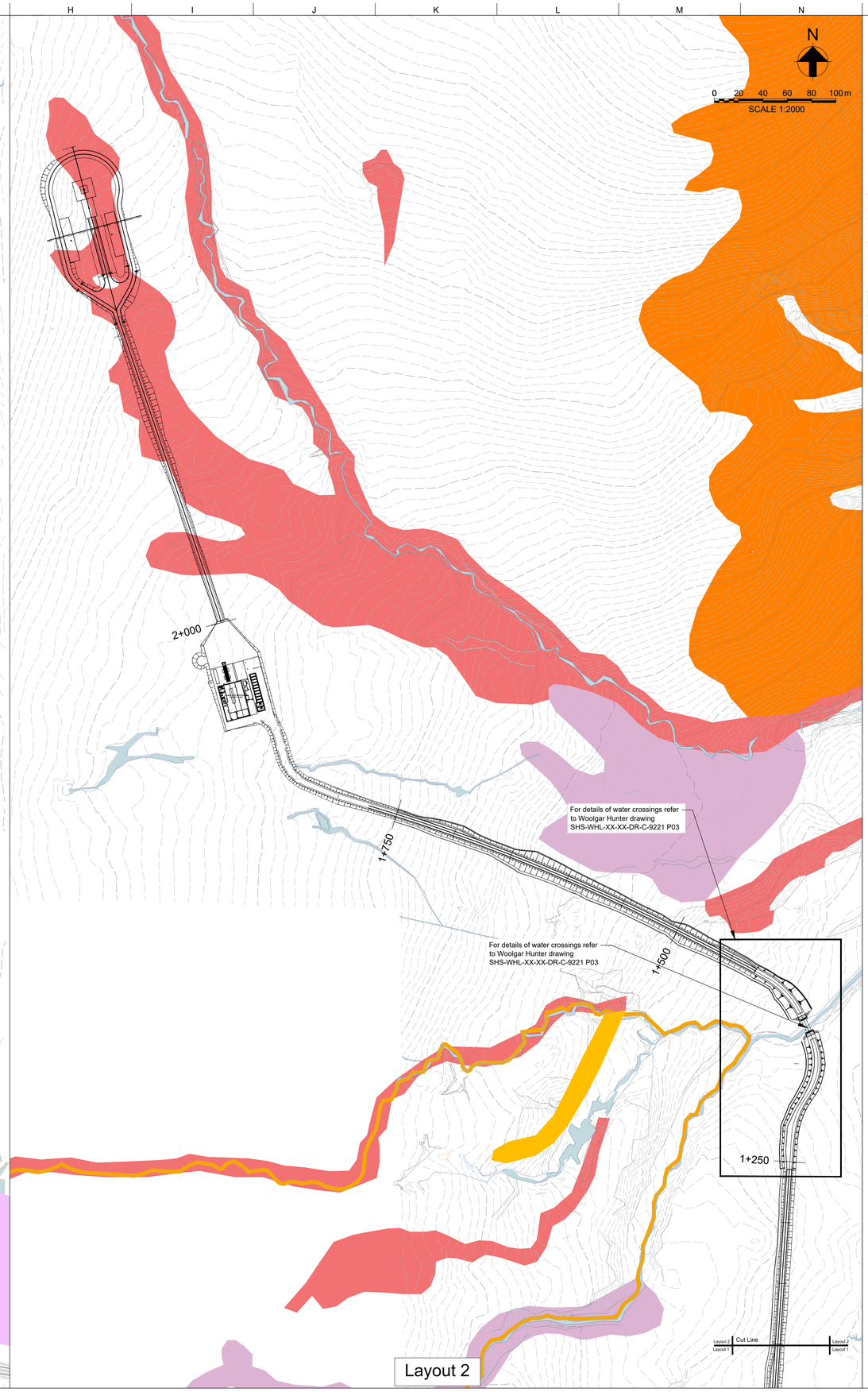
Rev
P10

Name
UKVLS-ARP-ZZ-XX-DR-C-0001

Do not scale

A1





Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.

Legend:

- High GWDTE
- High GWDTE
- Medium GWDTE
- Medium GWDTE
- Notable Other Plants
- Notable Sphagnum
- Notable Sphagnum Spring Location

Rev	Date	By	Chkd	Appd
P07	23 /08/ 24	CRP	GM	GM
Planning Issue				
P06	03 /05/ 24	ML	GM	GM
Planning Issue				
P05	07 /03/ 24	ML	GM	GM
Planning Issue				
P04	23 /02/ 24	ML	GM	GM
Planning Issue				
P03	14 /11/ 23	ML	GM	GM
Tender Issue				
P02	14 /07/ 23	ML	GM	GM
Tender Issue				
P01	25 /05/ 22	ML	GM	GM
Tender Issue				

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10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
www.arup.com

Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
GWDTE Access Road Plan

Scale at A1 1:2000

Role C

Suitability S4 - For Approval

Arup Job No **267278-00**

Rev **P07**

Name **UKVLS-ARP-ZZ-XX-DR-C-0010**

Do not scale

A1

N

0 20 40 60 80 100m

SCALE 1:2000

LSIF End
152.388m

152.513m

LAUNCH SITE INTEGRATION FACILITY (LSIF)

N

0 20 40 60 80 100m

SCALE 1:2000

Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road longsection refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0002.
4. For access road contours refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0003.
5. For access road construction types refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0004 and UKVLS-ARP-ZZ-XX-DR-C-0005.
6. For swept path analysis refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0006.
7. For peat probe depths refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0007.
8. For details of junction with A838 refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0008.

Legend:

SSSI/SPA/SAC/RAMSAR Environmental and Landscape Designations

Car Parking bays to have one layer of Ecogrid E50 on top of the unbound pavement make up. The 50mm geo-grid is to provide the delineation between running surface and parking bays. The Ecogrid is to be filled with 6-30mm sharp angular stone. Sub base as per standard unbound road make up. Parking bays/disabled bays delineated with Ecogrid flat parking markers.

Rev	Date	By	Chkd	Appd
P05	23/08/24	CRP	GM	GM
Planning Issue				
P04	03/05/24	ML	GM	GM
Planning Issue				
P03	14/11/23	ML	GM	GM
Tender Issue				
P02	14/07/23	ML	GM	GM
Tender Issue				
P01	25/05/22	ML	GM	GM
Tender Issue				

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10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
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Client
Highlands and Islands Enterprise

Project Title
Space Hub Sutherland

Drawing Title
LIFF Car Park Layout

Scale at A1 1:500

Role C

Suitability S4 - For Approval

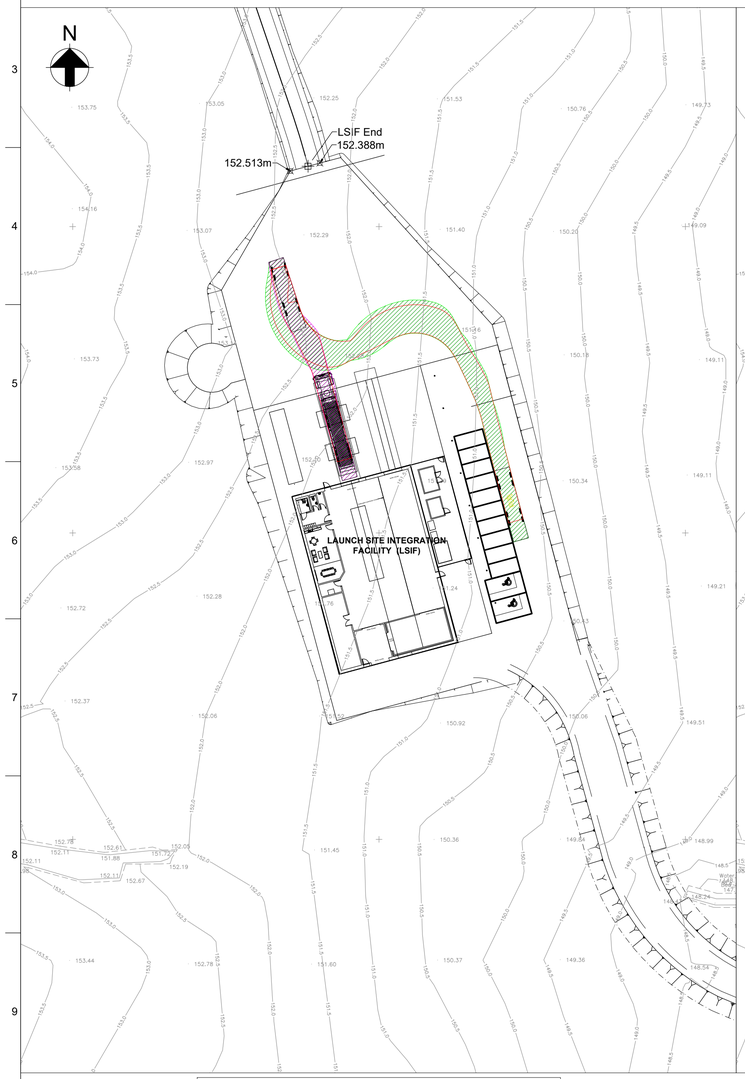
Arup Job No **267278-00**

Rev **P05**

Name **UKVLS-ARP-ZZ-XX-DR-C-0011**

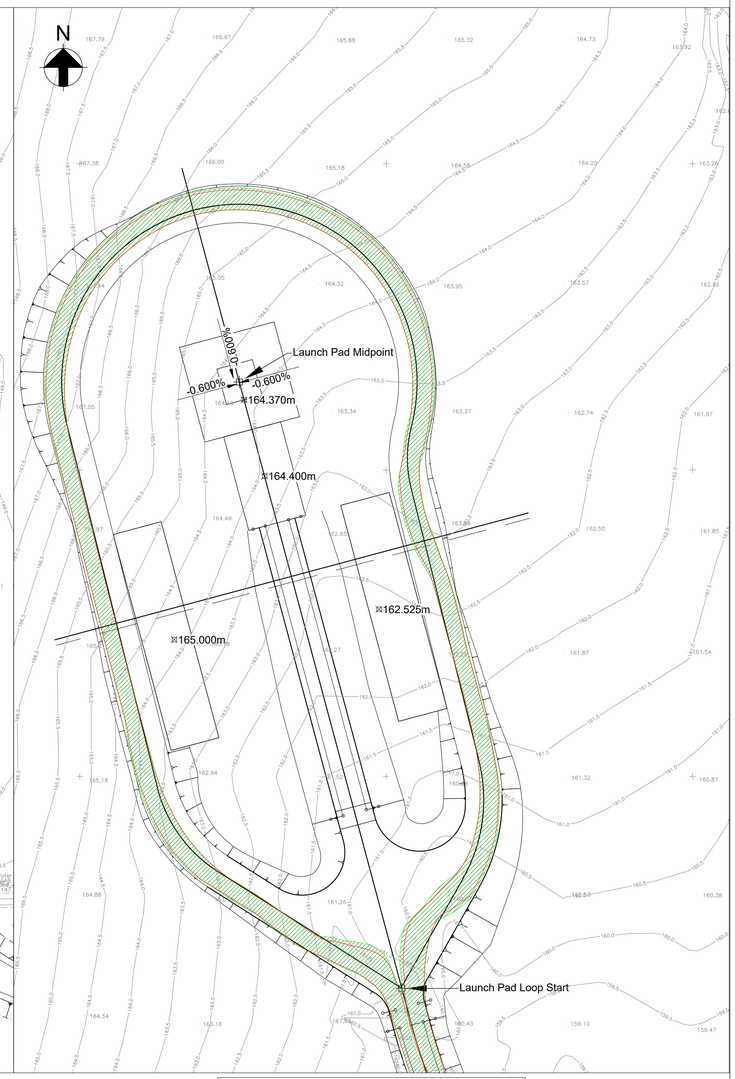
Do not scale

A1



LSIF Service Yard - 12m Rigid Truck

LSIF Service Yard - 12m Rigid Truck



Launch Pad - 12m Rigid Truck

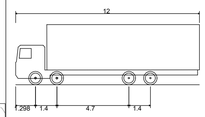
Notes :

1. All dimensions are in metres unless stated otherwise.
2. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.

Legend

Chassis Outline

Body Outline



Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.900m

Rev	Date	By	Chkd	Appd
P04	23 /08/24	CRP	GM	GM
Planning Issue				
P03	03 /05/24	ML	GM	GM
Planning Issue				
P02	14 /11/23	ML	GM	GM
Tender Issue				
P01	14 /07/23	ML	GM	GM
Issued for Tender				

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10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
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Client
Highlands and Islands Enterprise

Project Title
Space Hub Sutherland

Drawing Title
LSIF and Lauch Pad
Swept Path Analysis

Scale at A1 1:500

Role C

Suitability S4 - For Approval

Arup Job No **267278-00**

Rev **P04**

Name **UKVLS-ARP-ZZ-XX-DR-C-0013**

Do not scale

connector pipes

NEW Cutoff Drain 29
See Detail 16

NEW Cutoff Drain 26
See Detail 16

NEW Cutoff Drain 35
See Detail 16

NEW Headwall 30
See Detail 8
Invert at base of
Drainage Ditch

LSIF End
152.388m

152.513m

NEW Cutoff Drain 36
See Detail 16

NEW Cutoff Drain 37
See Detail 16

NEW Headwall 31
See Detail 8
Invert at base of
Drainage Ditch

Road Crossing pipe to be
sleeved in a 600mm PVC pipe.

NEW Headwall 33
See Detail 8
E=253826.082
N=961669.127
Invert at base of
Drainage Ditch

NEW CP5

NEW CP1

Surface water pipe (Gradient 1:500)
to break surface and follow existing
ground level. Stone protection
and anchorage required
See detail 12

LAUNCH SITE INTEGRATION
FACILITY (LSIF)

Filter drain network to collect surface water
run off from the LSIF building and car park
and pipe it away to the dispersion mound system
to the East.

Surface water run off from the building, service
yard and car park will discharge to the above ground
SUDs filter dispersion mound
following countour 148.8m
See detail 11

NEW CP6

NEW CP8

NEW Headwall 34
See Detail 8
Invert at base of
Drainage Ditch

NEW 11

NEW 9
Anchors and additional stone
required at junction to
counter thrust.

NEW CP7

NEW CP2

NEW CP4

NEW 10

NEW CP3

1
Double Airvalve
"High Point"

Sewage Treatment Plant
Foul for the LSIF Building to drain to a package
treatment plant. The treatment plant is to reduce
ammonia to a maximum of 5mg/l as per
requirement from SEPA. The proposal is to use
a Klargester BioDisc Domestic Sewage Treatment Plant
Model - BB 1.995m Ø (Or Similar/approved specification).
Full 200mm Concrete Surround.
Once treated to the required levels, the foul water will
discharge via a piped system to the nearest
viable water course, the Alltan Dubh which is
located at the second water crossing for the
access road. A sample chamber will be provided
after the treatment plant. The foul water
discharge will combine with the access road
surface water system after the sampling point.

NEW Cutoff Drain 38
See Detail 16

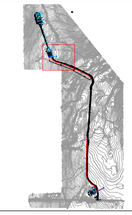
Treatment Works
Sampling Chamber

New Pumping Station
Klargester AquaPump - PU Vertical Range
1.25m Dia. (Or Similar/approved specification)
Full 200mm Concrete Surround

LSIF Foul Water 80mmØ HPPE SDR17
pumping main to discharge to the
water course Allt Alltan Dubh

Land Cut off Drains.
See note 8

Site Map



Notes

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. This drawing shall only be used for the design discipline stated in title.
4. Refer to health & safety plan and enviromental plan before undertaking any works.
5. To be read in conjunction with MCHW SHW Series 500 and Specification Appendices 5/1 to 5/7.
6. Refer to Revision/ Issue description box below for purpose of issue.
7. Refer to Drawing Nos. UKVLS-ARP-ZZ-ZZ-DR-C-0510 - UKVLS-ARP-ZZ-ZZ-DR-C-0513 for Scheme Drainage Network Location Plan.
8. Refer to Drawing Series;
   - UKVLS-ARP-ZZ-XX-DR-C-0001 - UKVLS-ARP-ZZ-XX-DR-C-0012 for Carriageway Design Plans.
   - UKVLS-ARP-ZZ-ZZ-SD-C-0530 - UKVLS-ARP-ZZ-ZZ-SD-C-0531 for Drainage Standard Details.
   - UKVLS-ARP-ZZ-ZZ-DR-B-2200 - UKVLS-ARP-ZZ-ZZ-DR-B-2100 for Culvert Water Crossing Details.
9. Refer to Pipe Network and Chamber Schedules drawing UKVLS-ARP-ZZ-ZZ-DR-C-0521 - UKVLS-ARP-ZZ-ZZ-DR-C-0522 for pipe and chamber details.
10. Pipes constructed in the carriageway shall have 1.2m depth of cover to soffit as a minimum and pipes not constructed in the highway shall have 0.9m depth of cover to soffit as a minimum. Pipes which do not have sufficient depth of cover to soffit shall be suitably protected.
11. Between the new access junction by the LOCC and the lauch pad complex cut off drains using a 225mm dia twin wall pipes to be placed at 50m centres up the road and at low points.
12. Scheme and utilities layout, duct/pipe sizes, depths etc are preliminary and subject to further design development.
13. The contractor is to determine the size, type and location of all existing services, chartered or non-chartered on site that will affect construction.
14. Tails left for future construction to be appropriately capped to avoid ingress of soil and water.

Legend:

- Proposed Surface Water Filter Drain
- Proposed Surface Water Network
- Proposed Surface Water Slot Drain
- Proposed Surface Water Drainage Ditch
- Proposed Surface Water Land Cut Drain pipe
- Proposed Foul line

Rev	Date	By	Chkd	Appd
P06	22 /08/ 24	CRP	CR	GM
	Planning Issue			
P05	03 /05/ 24	CM	CR	GM
	Tender/Costing			

ARUP

4th Floor, 10 George Street
Edinburgh, EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
www.arup.com

Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Proposed Drainage
Plan Layout
Sheet 1 of 5

Scale at A1 1:500

Role C

Suitability S4 - Suitable for Stage Approval

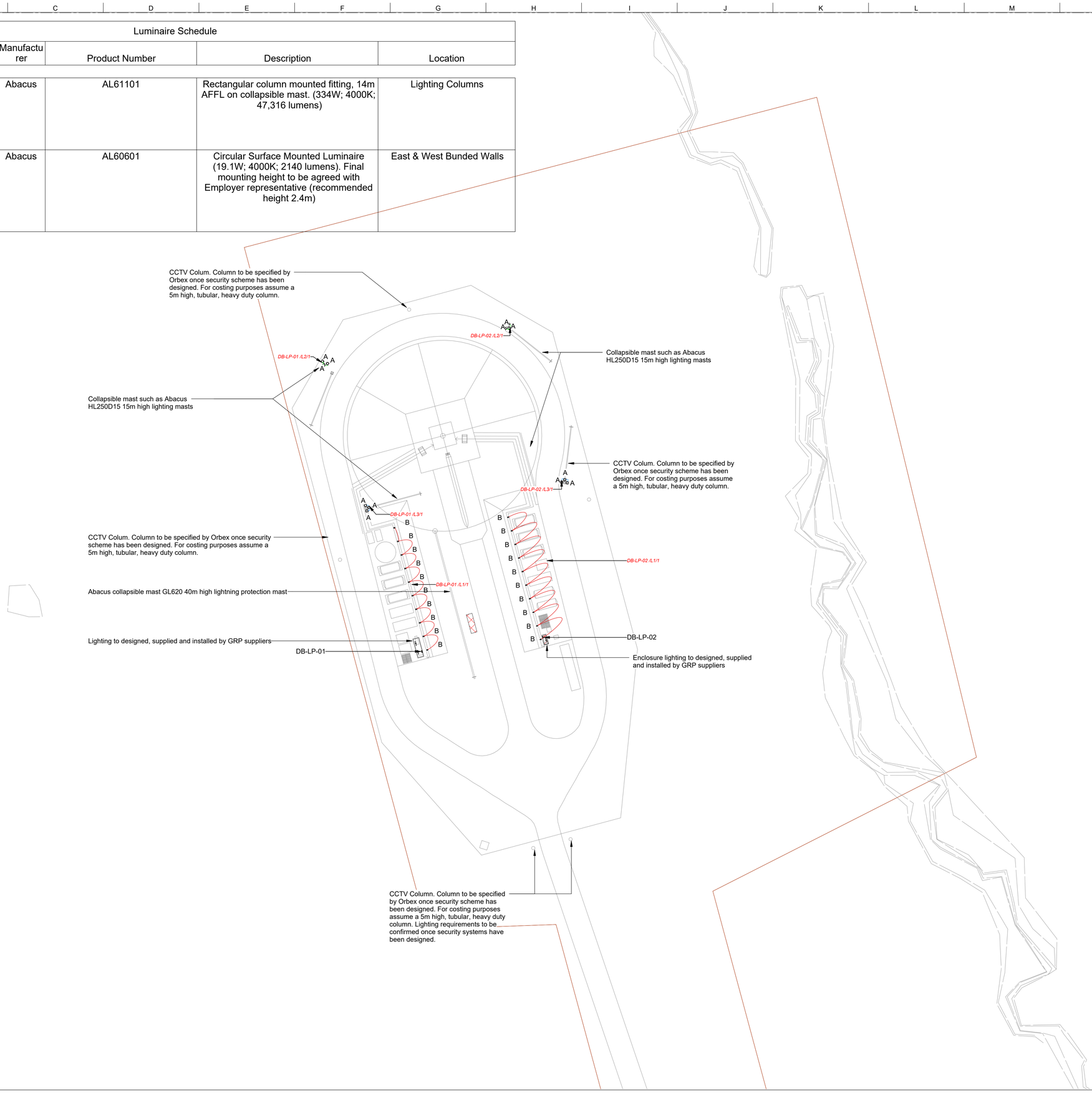
Arup Job No 267278-00

Rev P06

Name UKVLS-ARP-ZZ-ZZ-DR-C-0510

Do not scale

Luminaire Schedule					
Reference	Image	Manufacturer	Product Number	Description	Location
A		Abacus	AL61101	Rectangular column mounted fitting, 14m AFFL on collapsible mast. (334W; 4000K; 47,316 lumens)	Lighting Columns
B		Abacus	AL60601	Circular Surface Mounted Luminaire (19.1W; 4000K; 2140 lumens). Final mounting height to be agreed with Employer representative (recommended height 2.4m)	East & West Bunded Walls



Notes:

1. Do not scale from this drawing.
2. This drawing shall be read in conjunction with all other Planning drawings and all other Planning documentation.
3. Installation, testing and commissioning of electrical works are to comply fully with the requirements of the IET Wiring Regulations 18th Edition BS 7671:2018 +A2:2022.
4. All lighting & associated controls shall comply with BS 7671:2018+A2:2022 , BS EN 12464 Part 1:2011 & BS 5266 Part 1:2016.
5. All luminaires in the project shall have LED light sources. LED luminaires will be specified using the categories determined in the "Guidelines for Specification of LED Lighting Products 2011" by the Lighting Industry Liaison Group.
6. The contractor shall coordinate and agree the final orientation of the flood lights with an Employers representative on site
7. This scheme has been designed based upon a flat and open area. Shadowing from obstructions due to equipment on the pad has not been taken into account.
8. LED lifetime L80B10: > 60,000 hours
9. Dirt depreciation factor: BS5489-1:2020 Table C.1

13. 12 month cleaning intervals assumed for all luminaires

Legend

A — Column mounted Floodlight Reference A

B — Wall mounted Circular Luminaire Reference B

Issue	Date	
P04	23/08/24	Planning Issue
P03	11/03/24	Planning Issue
P02	23/02/2024	Planning Issue
P01	15/09/2023	RIBA Stage 4

ARUP

Arup Scotland
4th Floor, 10 George Street, Edinburgh EH2 2PF
Tel 0131 331 1999
www.arup.com

Client
Spaceport Sutherland Limited

Project Title
Spaceport Sutherland

Drawing Title
Electrical Services
Launch Pad Complex
CCTV Column & Lighting Layout

Scale at A1	Dsg/Drw/Chkd/Appd
1 : 500	TS/LM/TS/GC

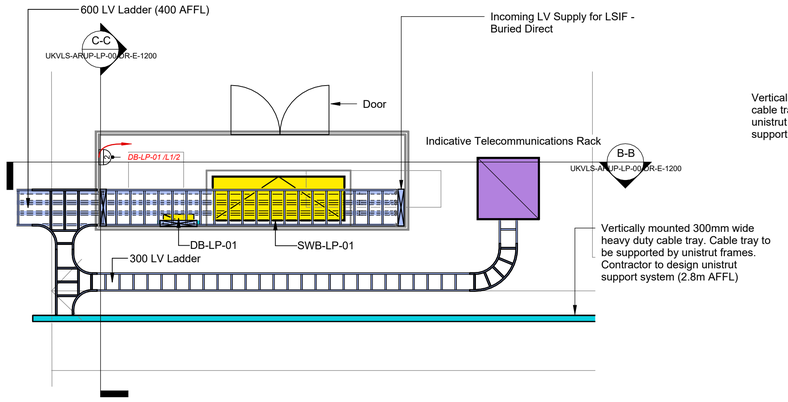
Role: Electrical

Status: S4 - Suitable for Stage Approval

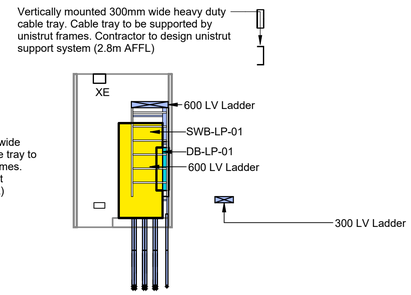
Arup Job No	Rev
267278-00	P04

ID
UKVLS-ARUP-LP-00-DR-E-2200

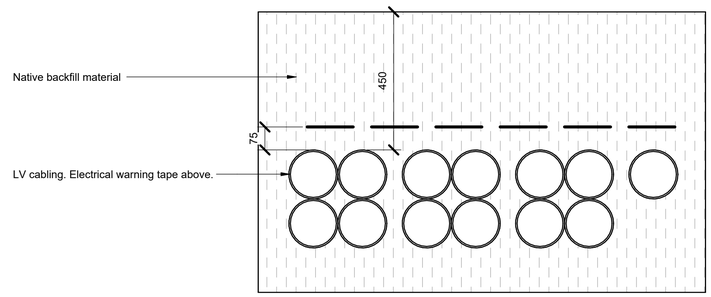
19/08/2024 11:56:09



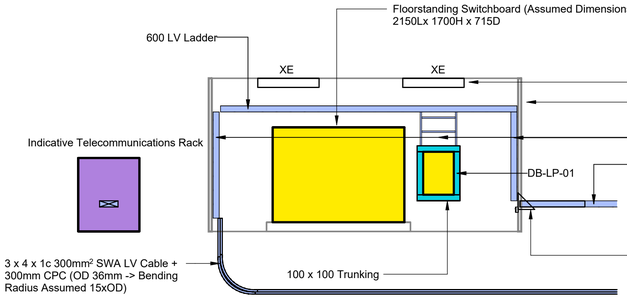
A FP West Enclosure - Layout
1 : 50



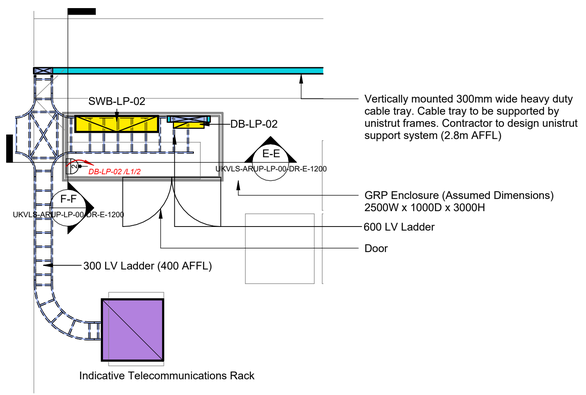
C-C FP West Enclosure -Section
1 : 50



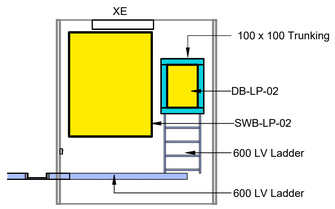
2 Buried Duct Detail



B-B FP West Enclosure -Section
1 : 50

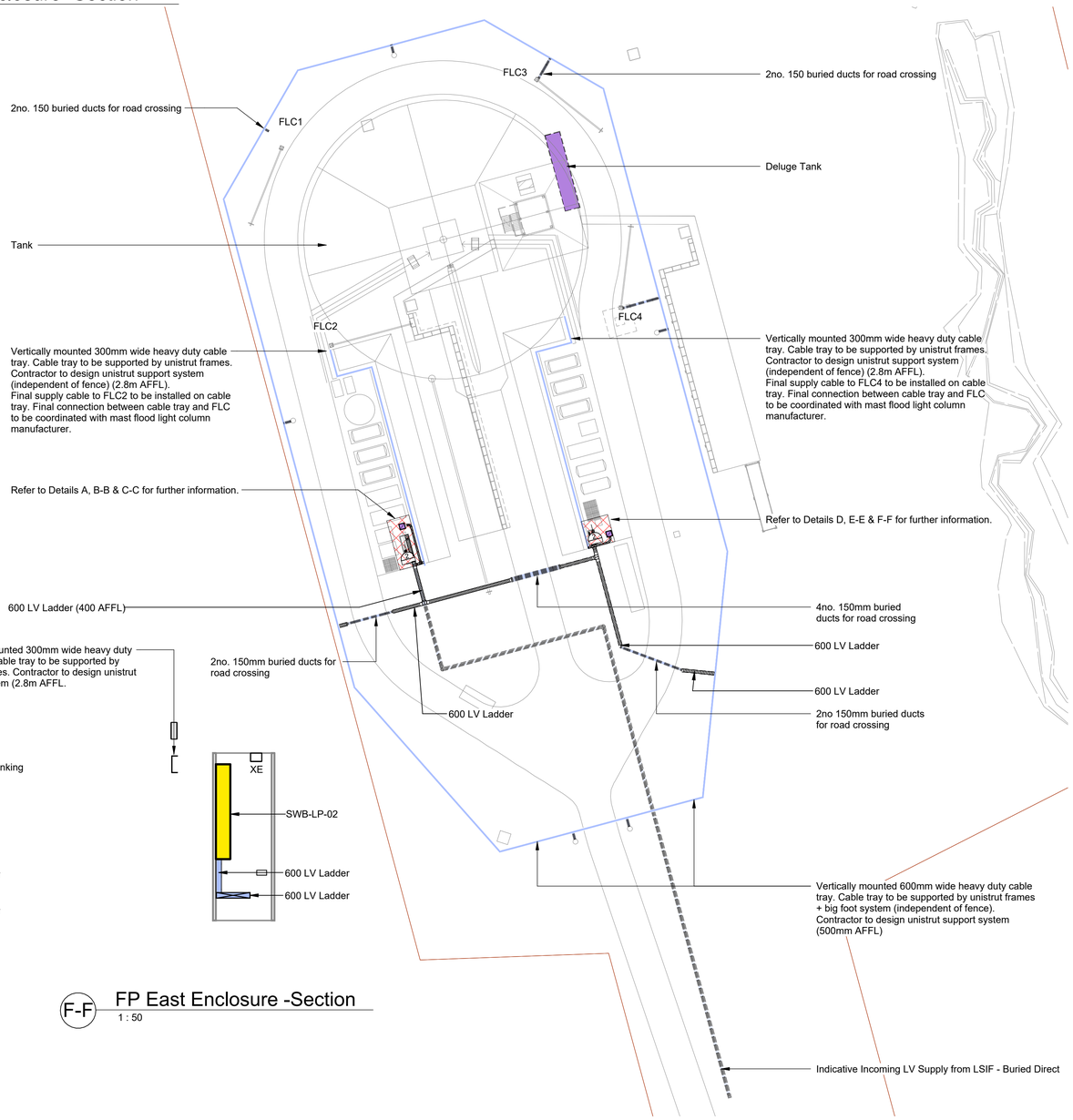


C FD East Enclosure - Layout
1 : 50



E-E FP East Enclosure -Section
1 : 50

F-F FP East Enclosure -Section
1 : 50



Notes:

1. Do not scale from this drawing.
2. This drawing shall be read in conjunction with all other Planning drawings and all other Planning documentation.
3. Installation, testing and commissioning of electrical works are to comply fully with the requirements of the IET Wiring Regulations 18th Edition BS 7671:2018 +A2:2022 and BS EN 50131-1:2018+A3:2020.
4. The contractor shall design support system for all containment runs. Low level containment shall be mounted using a Contractor designed big foot/unistrut system.
5. When designing the support system and procuring the containment system, the contractor shall coordinate with the manufacturer to ensure the site-specific ground conditions have been taken into account and support anti-corrosion measures, appropriate for the environment, have been applied.

Issue	Date	
P04	23/08/24	Planning Issue
P03	11/03/24	Planning Issue
P02	23/02/2024	Planning Issue
P01	15/09/2023	RIBA Stage 4

ARUP

Arup Scotland
4th Floor, 10 George Street, Edinburgh EH2 2PF
Tel 0131 331 1999
www.arup.com

Client
Spaceport Sutherland Limited

Project Title
Spaceport Sutherland

Drawing Title
Electrical Services
Launch Pad Complex
Electrical & ICT Distribution and Layout

Scale at A1	Dsg/Drw/Chkd/Appd
As indicated	TS/LM/TS/GC

Role: Electrical

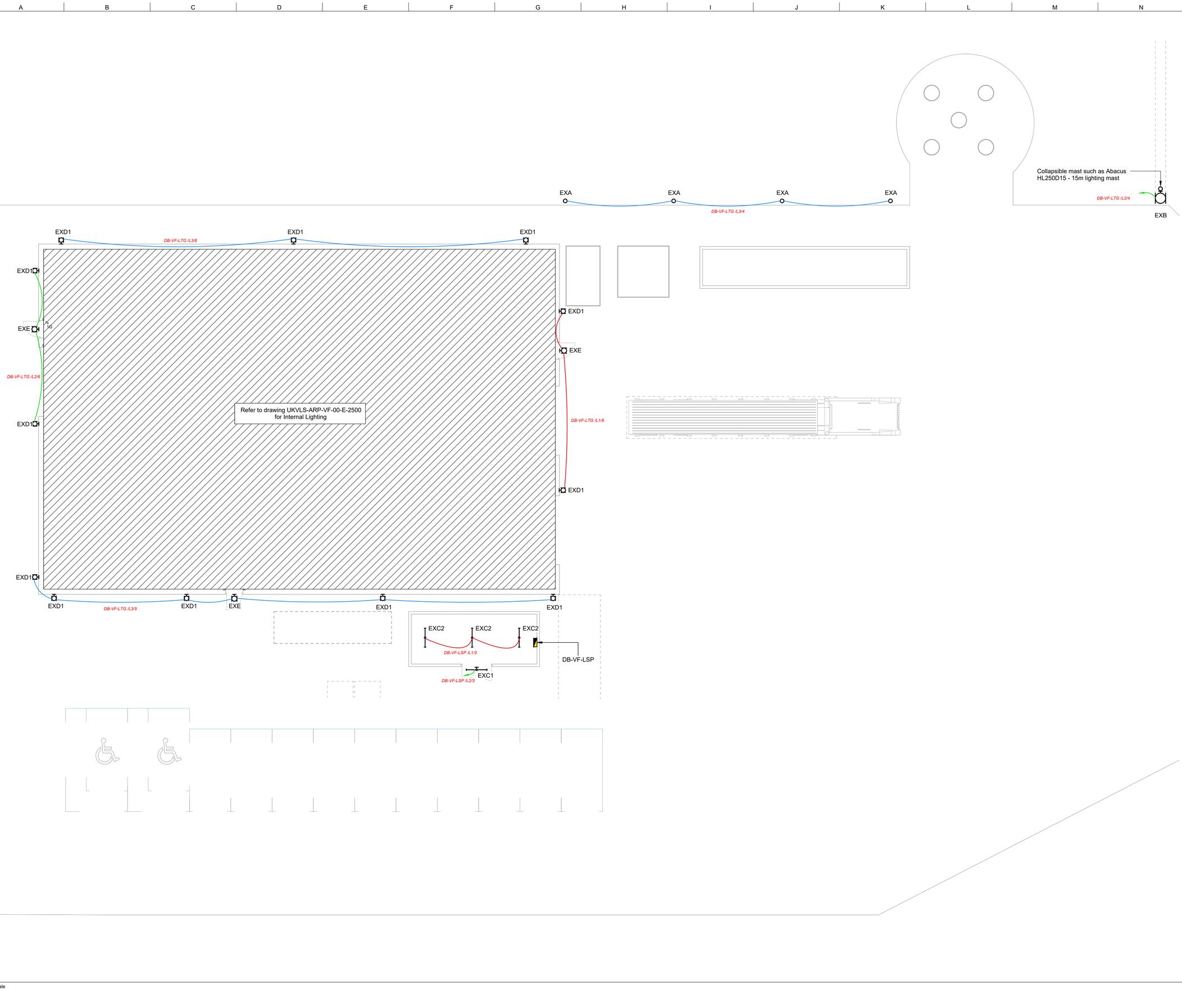
Status: S4 - Suitable for Stage Approval

Arup Job No	Rev
267278-00	P04

ID
UKVLS-ARUP-LP-00-DR-E-1200

19/08/2024 11:55:15

Do not scale



Notes:

1. Do not scale from this drawing.
2. This drawing shall be read in conjunction with all other Planning drawings and all other Planning documentation.
3. Installation, testing and commissioning of electrical works are to comply fully with the requirements of the IET Wiring Regulations 18th Edition BS 7671:2018 +A2:2022.
4. All general lighting, emergency lighting & associated controls shall comply with BS 7671:2018+A2:2022, BS EN 12464-1:2011 & BS 5266-1:2016.
5. All luminaires in the project shall have LED light sources. LED luminaires will be specified using the categories determined in the "Guidelines for Specification of LED Lighting Products 2011" by the Lighting Industry Liaison Group.
6. The contractor shall coordinate and agree the final orientation of the flood lights with an Employers representative on site
7. This scheme has been designed based upon a flat and open area. Shadowing from obstructions due to equipment on the pad has not been taken into account.
8. LED lifetime L80B10: > 60,000 hours
   Dirt depreciation factor: BS5489-1:2020 Table C.1
9. The lighting layout has been developed assuming a 12 month cleaning interval for all luminaires.
10. All external lighting to be manually controlled.

Legend:

EXA	Surface Mounted Standing Bollard Reference EXA
EXB	Rectangular column mounted fitting Reference EXB
EXC1	Fence surface mounted linear LED Reference EXC1
EXC2	Ceiling mounted linear LED Reference EXC2
EXD1	Wall surface mounted LED Reference EXD1
EXE	Wall surface mounted LED Reference EXE
	PIR Sensor
1G	Light Switch

P09	23/08/24	Planning Issue
P08	11/03/24	Planning Issue
P07	23/02/24	Planning Issue
P06	01/02/24	Tender Issue
P05	27/10/23	Stage 4 Issue
P04	01/04/20	Stage 4 Issue
P03	31/01/20	Final Planning Issue
P02	23/01/20	Planning Issue
P01	15/01/20	Draft Planning Issue

Issue	Date	

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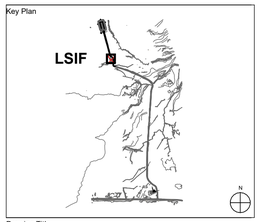
Client
Spaceport Sutherland Limited

Project Title
Spaceport Sutherland

Key Plan



Drawing Title
Launch Site Integration Facility
External Lighting

Scale at A1	Dsg/Drw/Chkd/Appd
1 : 100	TS/LM/TS/GC

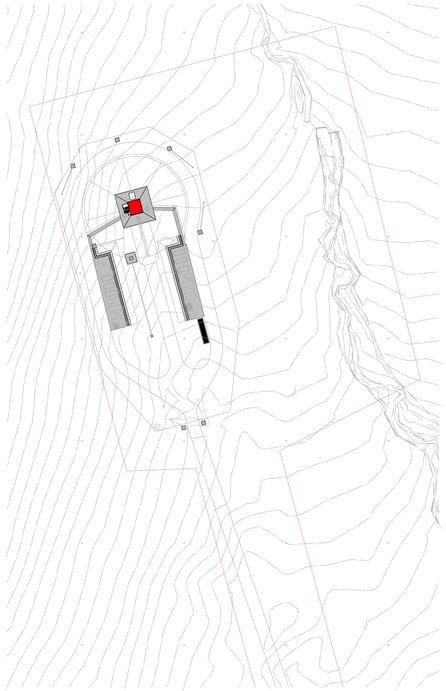
Role: Electrical

Status: S4 - Suitable For Stage Approval

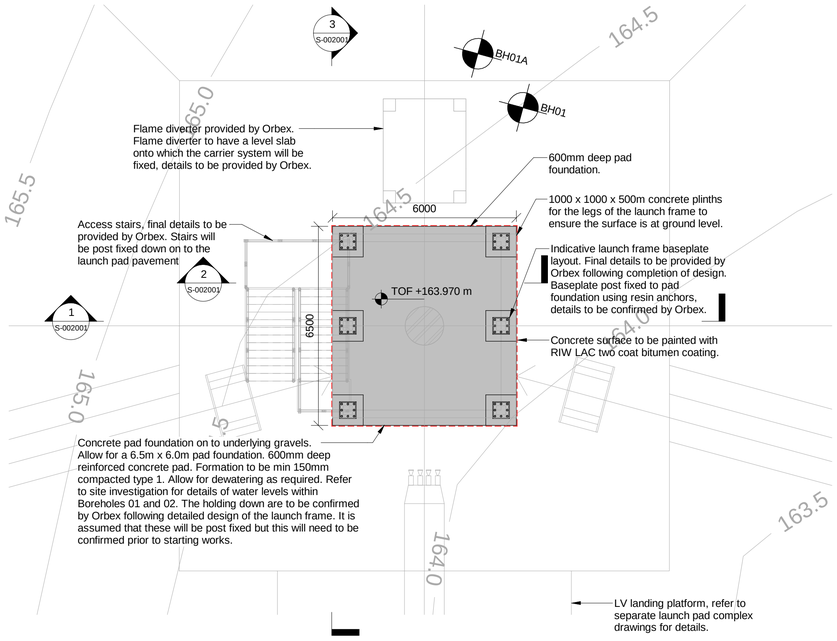
Arup Job No	Rev
267278-00	P09

ID
UKVLS-ARP-ZZ-ZZ-DR-E-2102

28/08/2024 12:48:31

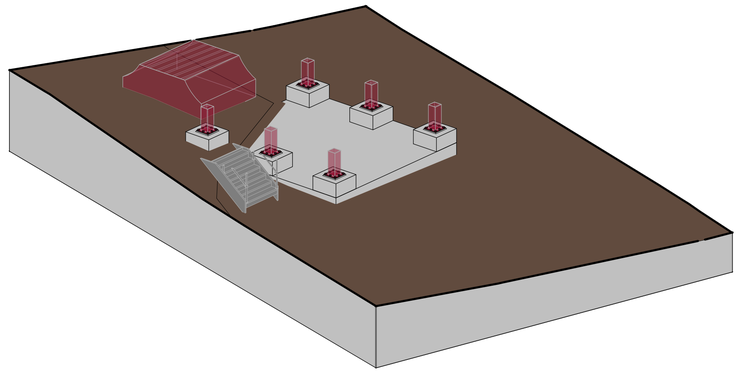


Key Plan



Launch Pad

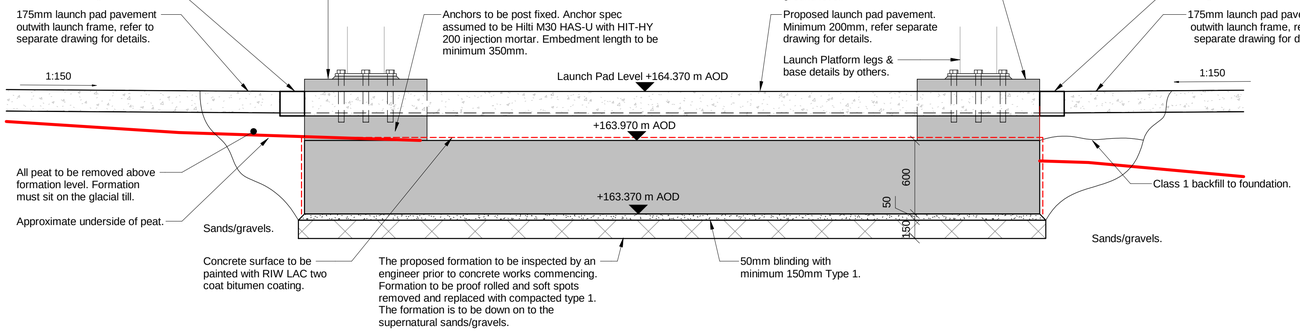
Scale 1 : 100



Isometric - Launch Pad Foundation

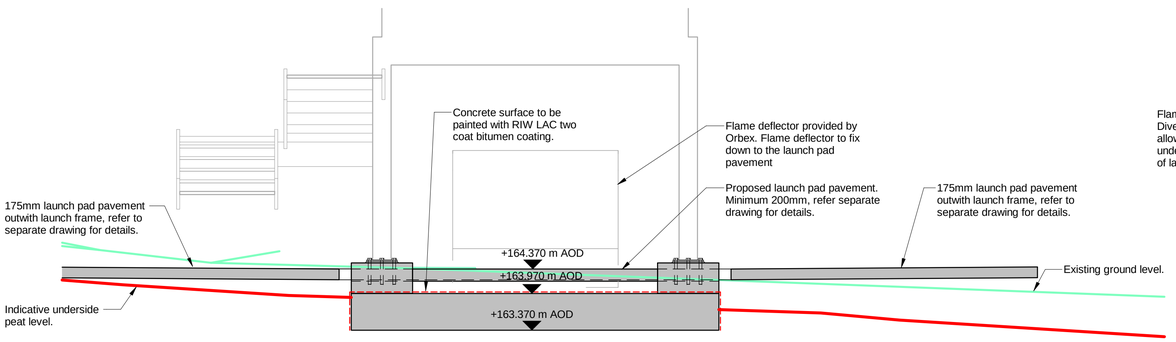
Notes:

1. Drawing to be read in conjunction with all relevant Architect's and Engineer's Drawings and Specifications.
2. For structural notes refer to drawing UKVLS-ARUP-LP-FN-DR-S-001000.
3. Do not scale drawing.
4. Dimensions are in millimeters unless noted otherwise.
5. The design sulphate classification for the launch pad site is DS-3 with an ACEC class AC-4 due to the presence of the aggressive ground conditions from the surrounding peat. The design chemical class of DC-4 +APM is recommended for below ground concrete structures. The concrete shall have a a maximum water cement content of 0.35 and a minimum cement content of 380kg/m3 with permissible cement types as defined in BS8500-1 table A.12. The concrete requires additional protective measures as defined in table A.11. The concrete is to be painted with a surface protection using a RIW LAC system or equal approved.
6. Refer to Arup technical Note 02 for interpretation of the ground investigation.
7. Refer to Arup Technical Note 03 Earthworks and Road Design.
8. The contractor to allow for suitable dewatering for the safe construction of the foundations.
9. Contractor to allow for suitable environmental protection measures in accordance with the CEMP to ensure the surrounding peatland and adjacent water course Ailt Bad nam Fiadh is protected from any construction run off. The ECOW shall be consulted prior to any works starting on site to ensure all environmental protection plans are in place.Refer to Arup drawing UKVLK-ARP-ZZ-XX-DR-C-0001 for the locations of the watercourse buffer zone.
10. For borehole logs please refer to Ground Investigation Report by Bam Ritches Final Factual Investigation Report ref 323N March 2022.



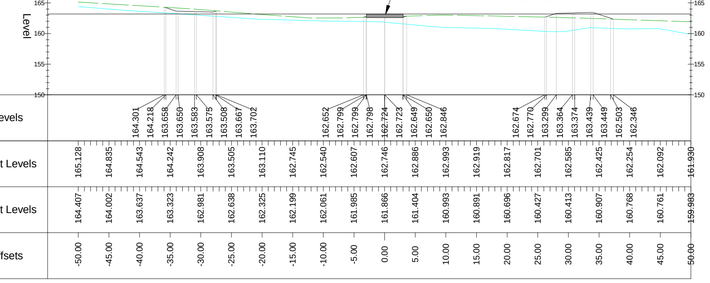
Section 2-2
Launch Pad Foundation Cross Section

Scale 1 : 25



Section 1

Scale 1 : 50



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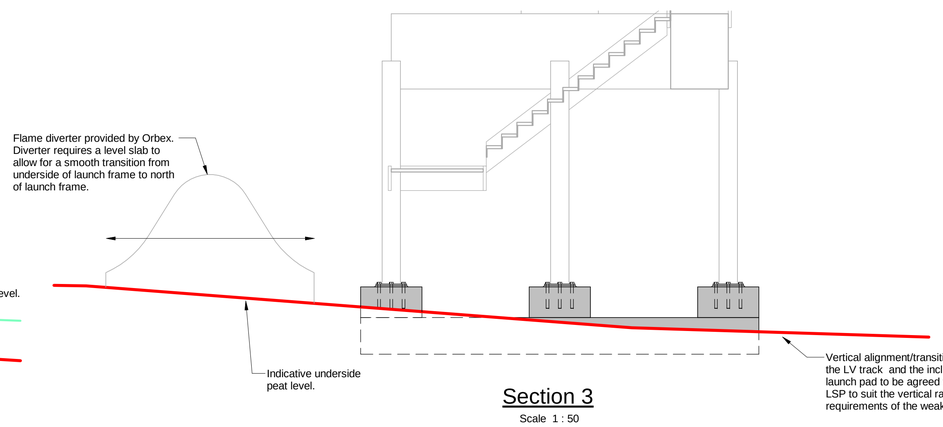
Scale 1 : 500



Section 3

Scale 1 : 50

Issue	Date	
P02	26/08/2024	Building Warrant Issue
P01	08/09/2023	Tender Issue

ARUP

4th Floor
10 George Street, Edinburgh, EH2 2PF
Tel +44 (0)131 331 1999
www.arup.com

Client
Orbex

Project Title
Spacehub Sutherland

Drawing Title
Launch Frame Pad Foundation

Scale at A1	Dsg/Drw/Chkd/Appd
As indicated	MW/LS/GM/GM

Role
Structural

Status
S4 - Suitable for Stage Approval

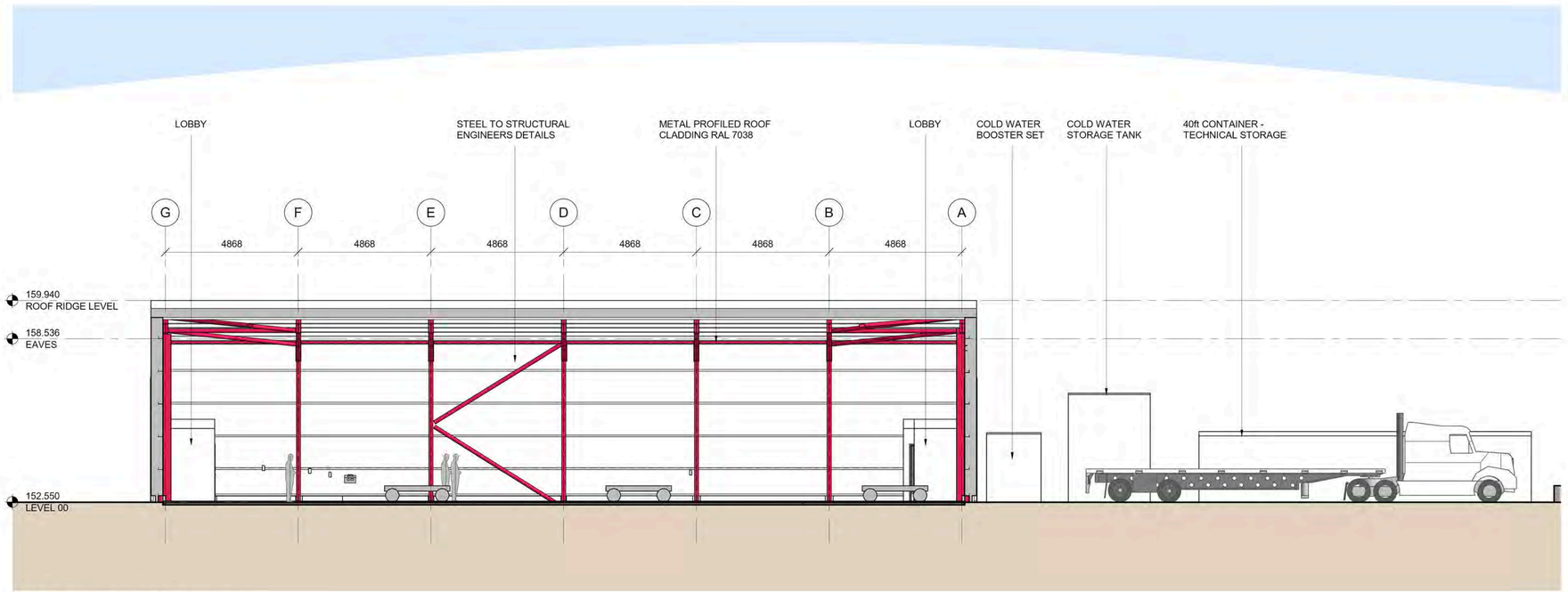
Arup Job No	Rev
267278-00	P02

ID
UKVLS-ARUP-LP-FN-DR-S-002001

25/09/2024 15:05:33

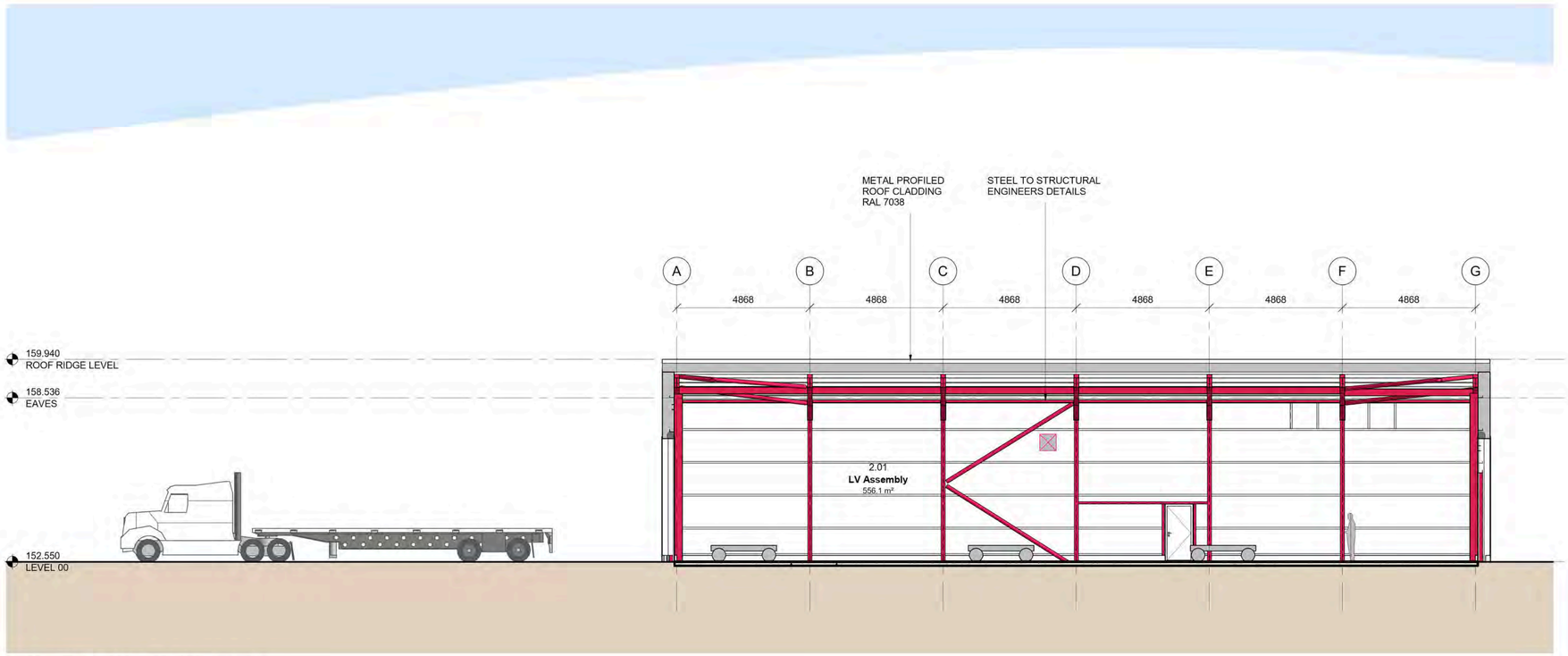
Do not scale

ISO A1 - 594mmx841mm



EAST SECTION_Planning

SCALE: 1 : 100



WEST SECTION_Planning

SCALE: 1 : 100

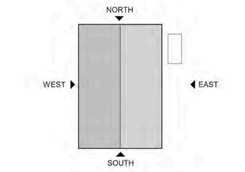
NOTE:

DRAWING TO BE READ IN CONJUNCTION WITH DRAWINGS :-

UKVLS-NOR-VF-ZZ-DR-A-P0102
UKVLS-NOR-VF-ZZ-DR-A-P0204
UKVLS-NOR-VF-ZZ-DR-A-P0205
UKVLS-NOR-VF-ZZ-DR-A-P0303

DATE	REVISION	REV	DR	CH
14/02/24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P01	LB	CH
13/03/24	ISSUED FOR PLANNING APPLICATION	P02	LB	CH
18/03/24	Roller shutters updated, as per cliet instruction	P03	LB	CH
30/04/24	Levels adjusted to suit revised floor construction	P04	LB	CH
23/08/24	RE-ISSUED FOR PLANNING APPLICATION	P05	LB	CH

Keyplan



NORR

NORR Consultants Limited.
An Ingenium International Company

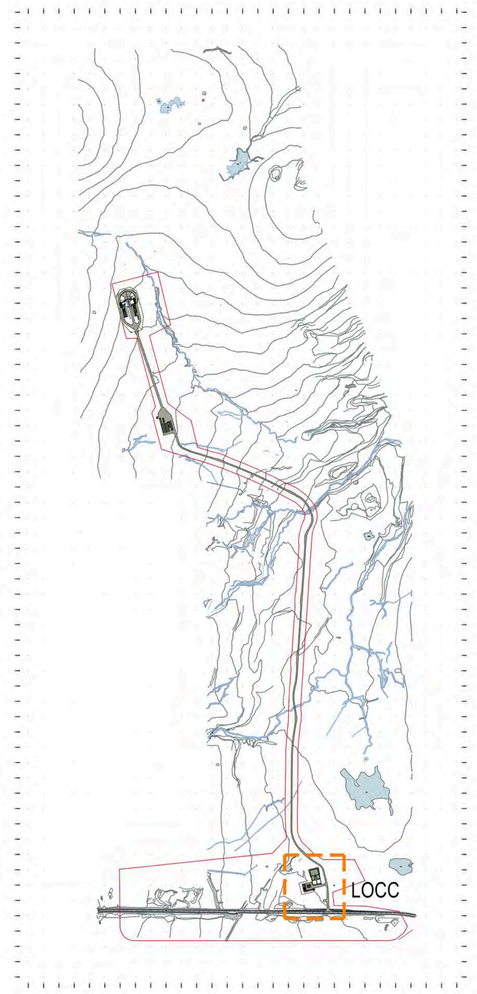
Skypark 5, Suite 1A
45 Finnieston Street,
Glasgow G3 8JU
Scotland, UK
norr.com

Drawn LB	Date 06/12/2023
Checked CH	Date 06/12/2023
Scale As indicated @ A1	
Client Sutherland Spaceport Ltd	
Project Sutherland Spaceport - LSIF	
Drawing Title Launch Site Integration Facility - Sections East_West	
Sheet Status A3 - APPROVED FOR STAGE 3	
Project No. IAGG19-0030	
Drawing No. UKVLS-NOR-VF-ZZ-DR-A-P0304	Rev. P05

LOCC BUILDING - 1:500 AT A1

1:500

0 20m 40m 60m 80m 100m



DATE	REVISION	REV	DRW	CHK
27.07.23	ISSUED FOR STAGE 3 APPROVAL	P01	LB	CH
18.08.23	CABIN FOOTPRINT UPDATED	P02	LB	CH
01.02.24	TURNING HEAD REPOSITIONED. BUILDING FOORPRINT REVERTED TO CONSENTED SCHEME.	P03	LB	CH
14.02.24	STAGE 3 - ISSUED FOR PLANNING APPLICATION	P04	MT	CH
13.03.24	ISSUED FOR PLANNING APPLICATION	P05	MT	CH
23.08.24	RE-ISSUED FOR PLANNING APPLICATION	P06	LB	CH

Keyplan

SSSI / SPA / SAC / RAMSAR ENVIRONMENTAL AND LANDSCAPE DESIGNATIONS

WHINSTONE UNIT PEDESTRAIN SURFACE

CAITHNESS NATURAL STONE PATH TO BUILDING PERIMETER

SITE BOUNDARY

LOCC SITE EXTRACT

LOCC - LAUNCH OPERATIONS CONTROL CENTRE

North Arrow

Detail Symbol

Consultants

NORR
NORR Consultants Limited.
An Ingenium International Company

Skypark 5, Suite 1A
45 Finnieston Street
Glasgow, G3 8JU
Scotland, UK
norr.com

Drawn: L Baxter	Date: 28.07.2023
Checked: C Hunter	Date: 28.07.2023
Scale: 1.500 @ A1	
Client: Sutherland Spaceport Ltd	
Project: SUTHERLAND SPACEPORT - LOCC	
Drawing Title: PROPOSED SITE PLAN, LAUNCH OPERATIONS CONTROL CENTRE	
Sheet Status: A3 - APPROVED FOR STAGE 3	
Project No.: IAGG19-0030	
Drawing No.: UKVLS-NOR-ZZ-ZZ-DR-A-90155	Rev.: P06

A1

N

0 20 40 60 80 100m

SCALE 1:2000

1+000

0+750

0+500

0+250

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-C-9220 P03.

Layout 1

N

0 20 40 60 80 100m

SCALE 1:2000

2+000

1+750

1+500

1+250

For details of water crossings refer to Woolgar Hunter drawing SHS-WHL-XX-XX-DR-C-9221 P03

Layout 2

Notes:

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. For access road layout refer to drawing UKVLS-ARP-ZZ-XX-DR-C-0001.
4. Peat depths provided by Nevis Environmental. Peat depths based on probing at 100m centres and 10m centres around proposed roads and buildings.

Legend:

0.4 Peat Probe Location and Peat Depth (m)

SSSI/SPA/SAC/RAMSAR Environmental and Landscape Designations

Rev.	Date	By	Chkd	Appd
P10	23/08/24	CRP	GM	GM
Planning Issue				
P09	03/05/24	ML	GM	GM
Planning Issue				
P08	07/03/24	ML	GM	GM
Planning Issue				
P07	22/02/24	ML	GM	GM
Planning Issue				
P06	14/11/23	ML	GM	GM
Tender Issue				
P05	14/07/23	ML	GM	GM
Tender Issue				
P04	06/07/23	ML	GM	GM
Tender Issue				
P03	25/05/22	ML	GM	GM
Tender Issue				
P02	20/01/20	BHM	BHM	GM
Issued for Approval - Planning Application Submission				
P01	10/01/20	BHM	BHM	GM
Issued for Comments/Review				

ARUP

10 George Street, Edinburgh EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
www.arup.com

Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Access Road Peat Depths

Scale at A1 1:2000

Role C

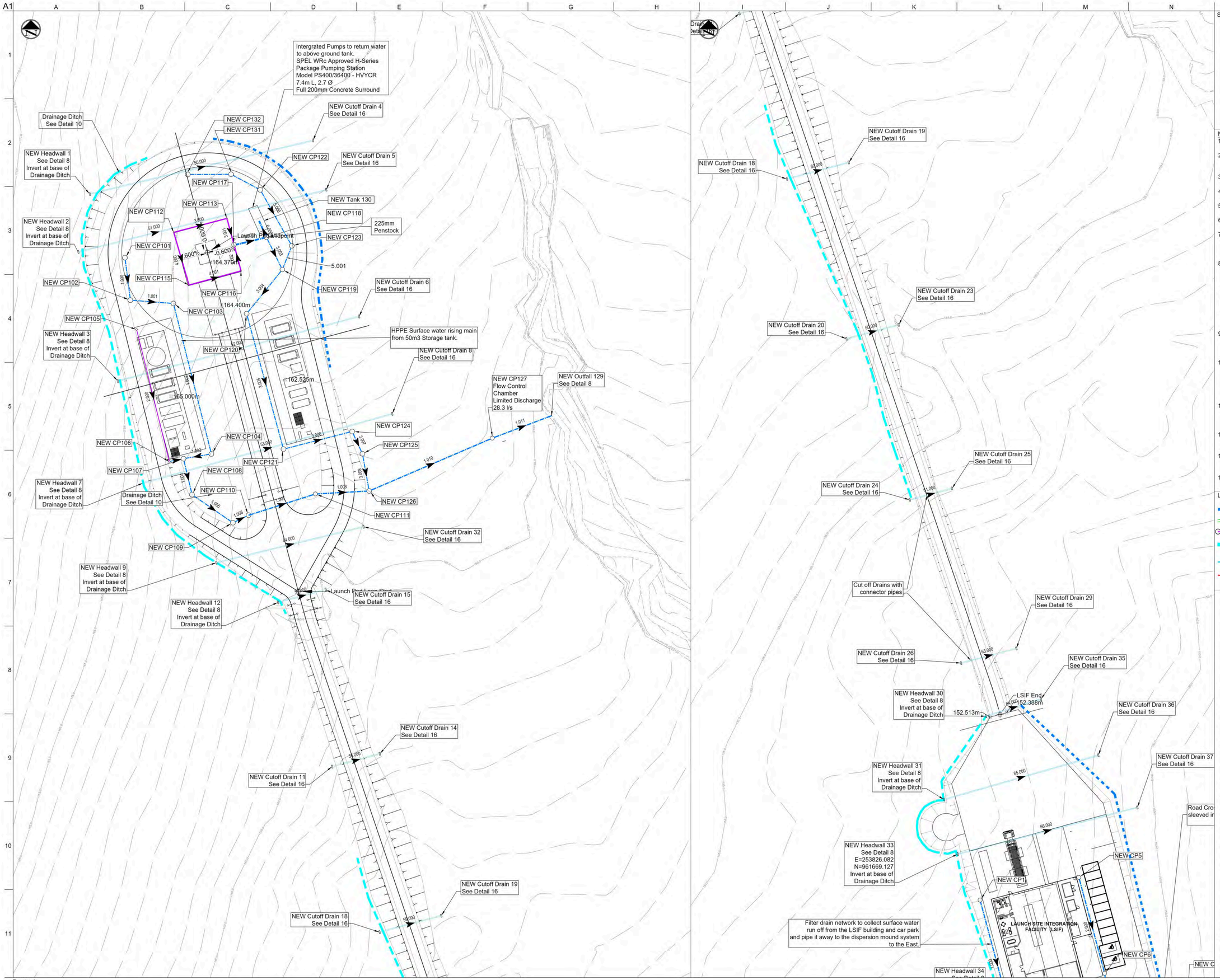
Suitability S4 - For Approval

Arup Job No **267278-00**

Rev **P10**

Name **UKVLS-ARP-ZZ-XX-DR-C-0007**

Do not scale



Site Map

Notes

1. All dimensions are in metres unless stated otherwise.
2. Existing ground information based on Malcolm Hughes Topographical Survey, 53202, provided on 19/03/19.
3. This drawing shall only be used for the design discipline stated in title.
4. Refer to health & safety plan and enviromental plan before undertaking any works.
5. To be read in conjunction with MCHW SHW Series 500 and Specification Appendices 5/1 to 5/7.
6. Refer to Revision/ Issue description box below for purpose of issue.
7. Refer to Drawing Nos. UKVLS-ARP-ZZ-ZZ-DR-C-0510 - UKVLS-ARP-ZZ-ZZ-DR-C-0513 for Scheme Drainage Network Location Plan.
8. Refer to Drawing Series;
   - UKVLS-ARP-ZZ-XX-DR-C-0001 - UKVLS-ARP-ZZ-XX-DR-C-0012 for Carriageway Design Plans.
   - UKVLS-ARP-ZZ-ZZ-SD-C-0530 - UKVLS-ARP-ZZ-ZZ-SD-C-0531 for Drainage Standard Details.
   - UKVLS-ARP-ZZ-ZZ-DR-B-2200 - UKVLS-ARP-ZZ-ZZ-DR-B-2100 for Culvert Water Crossing Details.
9. Refer to Pipe Network and Chamber Schedules drawing UKVLS-ARP-ZZ-ZZ-DR-C-0521 - UKVLS-ARP-ZZ-ZZ-DR-C-0522 for pipe and chamber details.
10. Pipes constructed in the carriageway shall have 1.2m depth of cover to soffit as a minimum and pipes not constructed in the highway shall have 0.9m depth of cover to soffit as a minimum. Pipes which do not have sufficient depth of cover to soffit shall be suitably protected.
11. Between the new access junction by the LOCC and the lauch pad complex cut off drains using a 225mm dia twin wall pipes to be placed at 50m centres up the road and at low points.
12. Scheme and utilities layout, duct/pipe sizes, depths etc are preliminary and subject to further design development.
13. The contractor is to determine the size, type and location of all existing services, chartered or non-chartered on site that will affect construction.
14. Tails left for future construction to be appropriately capped to avoid ingress of soil and water.

Legend:

- Proposed Surface Water Filter Drain
- Proposed Surface Water Network
- Proposed Surface Water Slot Drain
- Proposed Surface Water Drainage Ditch
- Proposed Surface Water Land Cut Drain pipe
- Proposed Foul line

Rev	Date	By	Chkd	Appd
P05	23 /08/ 24	CRP	CR	GM
	Planning Issue			
P04	03 /05/ 24	CM	CR	GM
	Tender/Costing			

ARUP

4th Floor, 10 George Street
Edinburgh, EH2 2PF
Tel +44 (0)131 331 1999 Fax +44 (0)131 331 3730
www.arup.com

Client
Sutherland Spaceport Ltd

Project Title
Sutherland Spaceport

Drawing Title
Proposed Drainage
Plan Layout
Launch Pad Area
Sheet 5 of 5

Scale at A1 1:500

Role C

Suitability S4 - Suitable for Stage Approval

Arup Job No 267278-00

Rev P05

Name UKVLS-ARP-ZZ-ZZ-DR-C-0514

Do not scale