10.0 LANDSCAPE AND VISUAL AMENITY

10.1 INTRODUCTION

The landscape and scenic quality of the island is one of St Helena's most valuable environmental resources. The landscape has undergone extensive change since the early settlers arrived and the natural environment with the indigenous and endemic plant communities has undergone extensive degradation. Nonetheless, this predominantly man-made landscape exhibits incredibly dramatic and spectacular scenery of the highest quality, displaying a diverse range of landscapes and habitats. It is also a unique and fragile landscape that is vulnerable to change. The protection, restoration and enhancement of it are therefore essential for the successful integration of the airport and supporting infrastructure proposals.

This chapter presents the baseline landscape character and visual amenity of the study area. It identifies the key landscape features and visual receptors (residents, visitors and users of the landscape) which will be impacted by the airport and its supporting infrastructure and assesses the temporary and long term impacts of the Airport and supporting infrastructure proposals on the landscape resource and visual amenity of the study area. It also identifies mitigation measures which will be undertaken to avoid, reduce or offset the potential landscape and visual impacts which could occur as a result of the reference design. A detailed impact assessment is provided in Appendix 10.1, in Volume 4 of this ES. Supporting information including further details of mitigation requirements can be found in the Landscape and Ecology Mitigation Plan contained in Appendix 10.2 in Volume 4 of this ES.

10.1.1 Landscape Character

The landscape appraisal describes the key components, features and characteristics that make up the various landscape types found within the wider development area. It provides an evaluation of the implications of the Airport and supporting infrastructure development in terms of direct impacts on key landscape components and features and also considers the extent to which loss of features and the introduction of the proposed airport and supporting infrastructure could influence perception of the landscape types and wider character of the study area.

10.1.2 Visual Amenity

Visual amenity is defined as the pleasantness of the view or outlook of an identified receptor or group of receptors. The visual appraisal identifies the potential change in views of the existing landscape as a result of the airport development, and the extent to which these will affect residents, visitors and users of the landscape.

10.2 METHODS

Dedicated work on the landscape and visual amenity elements of the EIA commenced in October 2005 with a visit to St Helena by a chartered landscape architect to undertake baseline data collection including landscape characterisation of the study area. This

primarily informed the development of the reference design to ensure that landscape and visual amenity considerations were fully taken account of during the development of the reference design. The landscape and visual assessment has been an ongoing process since 2005 with a subsequent visit to St Helena in May-June 2007, once the reference design was finalised to complete the assessment in parallel with the development of the landscape mitigation commitments.

10.2.1 Assessment Guidelines

The landscape and visual assessment has been prepared with reference to the Guidelines for Landscape and Visual Impact Assessment (GLVIA), published by the Landscape Institute and the Institute of Environmental Management and Assessment in 2002 and the Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 5.

The GLVIA guidelines acknowledge a relationship between the perception of landscape character and the experience of viewers (referred to as receptors – residents, people in their workplace, using recreational facilities, using the countryside etc).

GLVIA relies on an appreciation of the existing landscape, its sensitivity to change, a thorough understanding of the development proposals, the magnitude of change that will result from the construction and operation of the proposed development, an understanding of the visual form of the existing landscape, its quality, its sensitivity to change in terms of the development proposed, and the potential to mitigate impacts.

There are six key stages to the landscape and visual assessment:

- Recording and analysis of the character, quality, value and sensitivity to change of the existing landscape;
- Identification of the zone of theoretical visibility for the development;
- Field assessment of affected receptors;
- An appreciation of the nature, form and features of the proposed development;
- An assessment of the magnitude of change likely to result from the development; and
- Evaluation of the significance of the changes identified based on magnitude of change and sensitivity.

Further details of the assessment methodology are given in Appendix 10.1, Volume 4.

10.3 EXISTING CONDITIONS

10.3.1 Context

The character of the landscape relates to the natural processes and human activities that have worked over long periods to shape the land into its present condition, it is a composite of physical and cultural elements. Landform, hydrology, vegetation, land cover, land use pattern, cultural and historic features and associations combine to create a common ‘sense of place’ and identity which can be used to categorise the landscape into definable units; landscape character areas.

St Helena has an incredibly diverse landscape, reflecting a complex topography and climate and an exceptionally important biodiversity resource. It is a volcanic island with many dramatic geological features which dominate the landscape. The fragility of the

landscape resource is evident across the island with extensive barren areas and steep slopes which have undergone severe erosion, all of which were previously vegetated and sustained plant communities of indigenous flora.

Most physical features of the landscape vary with altitude, temperature, humidity, rainfall and the subsequent leaching and soil formation. The variable geology, local topographic effects of rainfall and variable slopes governing erosion rates have given rise to a complex pattern of physical features which define much of the current landscape (see Figure 10.1 in Volume 3 of this ES).

Much of the coast around St Helena comprises steep cliffs, rising in parts to more than 400m above sea level with a number of steep-sided valleys or guts dissecting much of the coastal landscape. Wave-cut rock reefs and shelves and occasional offshore stacks inhabited by nesting seabirds are also evident along the coastline. The interior of the island is deeply incised displaying a very folded and complex topography with large areas of level ground restricted to the north east of the island in the Deadwood Plain and Longwood areas and at Prosperous Bay Plain. The central ridge in the island, also known as the Peaks, forms the highest point (Diana's Peak) at 820m above sea level.

Landscape characteristics generally change in response to variations in altitude and corresponding climatic conditions. Vegetation around the coastal reaches of the island is sparse and dominated by exotic species such as prickly pear which provide extensive cover across the steep hill sides of exposed rock, boulders and loose scree. As the altitude of the slope increases other exotic species typically become more evident including wild currant, wild mango and wild pepper tree. Although this habitat contains indigenous species such as samphire and purslane the introduced species have gained dominance to the exclusion of the endemic and indigenous species. The central areas of the island are more luxuriant and contrast with the semi-arid desert landscape of the outer periphery. Pasture land and pockets of arable land are generally concentrated around Longwood and Deadwood with pockets of forest planting and extensive tracts of New Zealand flax monoculture extending over the upper slopes, culminating in the remnant cloud forest of the central peaks.

There are three main population centres on the island, Jamestown, Half Tree Hollow and Longwood although a number of smaller settlements exist across the island.

10.3.2 Historical Landscape Context

The following provides a brief account of the historical landscape changes and in particular those associated with vegetation type and cover. This provides an understanding of the historic context within which the island's landscape has evolved.

Ever since the discovery of St Helena in 1502 by the Portuguese and the subsequent re-capture of the island (from the Dutch) by the British in 1673, the landscape has been subject to sustained degradation. The Portuguese left goats on the island to provide fresh meat for passing ships which initiated the destruction of the natural vegetation. The goats thrived in the absence of predators and the island's vegetation rapidly succumbed to the intensive grazing resulting in progressive fragmentation of the original vegetation cover. The outer two thirds of the island were arid and regeneration was slow resulting in a landscape devoid of vegetation and rapidly eroding. The unwitting destruction continued

with the early settlers clearing much of the forest for fuel. The native vegetation survived longest in the wetter upper zones, until the rise of the New Zealand flax industry in the middle of the last century. Despite the industry's collapse in the 1960s, the flax remains a dominant monoculture on many of the upper, steep slopes. Many endemic species of flora are now extinct with the remaining indigenous and endemic plants surviving in small isolated patches. Exotic and introduced species now dominate the landscape to the exclusion of native species in many areas.

The following description of the past vegetation communities is based on Quentin Cronk's work on the historical and evolutionary development of the flora of St Helena (1984), where further information particularly on species can be found. The Cronk mapping of the pristine endemic vegetation has also informed the landscape and ecological mitigation plan for re-establishment of endemic and indigenous plant communities.

Tree Fern Thicket (c.700 -820)
This is the only past vegetation type which still exists on the island to any real extent. It is found on the highest parts of the central ridge although it now contains numerous introduced species. At this elevation the vegetation is frequently enveloped in mist which promotes a rich growth of epiphytes. The canopy height was probably 3 – 4m.

Cabbage Tree Woodland (c. 600 - 750m)
This would have been found on the richer soils, below the tree-fern thicket of the ridge tops. Only remnants of this vegetation type are left today.

Moist Gumwood Woodland (c.500 – 650m)
This would have covered the slopes of the central ridge where sufficient rainfall would have provided a greater species richness than in the summer-droughted gumwood woodland of lower altitudes.

Dry Gumwood Woodland (c. 300 – 500m)
Large areas of the island of mid-altitude would have once been covered by the drought resistant Gumwood. Two Gumwood species would have been present, gumwood and bastard gumwood. Some small pockets of gumwood remain on the island.

Ebony – Gumwood Thicket (c. 100 – 500m)
In rocky and precipitous places, particularly on the sheltered western side of the island, ebony was able to compete with the gumwood, forming a species rich community. Relict patches remain, particularly in the southwest of the island.

Scrubwood Scrub (c.1 – 350m)
On the periphery of the island, where rainfall is too low or exposure too high the very drought tolerant, salinity and wind tolerant scrubwood along with other species formed a low scrubby vegetation, which in places covered ground down to sea level. Small pockets of scrubwood remain on the island particularly on cliff areas and the more exposed, peripheral areas.

Saline semi-desert (c.0 – 250m)
In very dry areas and on level ground, such as Prosperous Bay Plain, where evaporation exceeds precipitation, the salinity of the soil would have been high. It is likely that in these areas even the salt-tolerant scrubwood would have had difficulty in establishing. The

vegetation in these areas would have been dominated by native halophytes such as samphire and babies' toes which are still evident today in small dispersed clusters.

Refer to Appendix 10.3 in Volume 4 of this ES for further details on past and present vegetation communities.

10.3.3 Landscape Character Areas

The study area has been sub-divided into a number of Landscape Character Areas where combinations of scale, landform, landcover, watercourses, settlements, frame scenes of distinct form and sense. The 14 Landscape Character Areas within the study area are identified in Figure 10.2 in Volume 3 of this ES and are as follows:

- Landscape Character Area 1 – Rupert's Valley
- Landscape Character Area 2 – Deeply incised upper valleys and vegetated slopes
- Landscape Character Area 3 – Deadwood Plain
- Landscape Character Area 4 – Longwood
- Landscape Character Area 5 – Eroded slopes with extensive gully systems
- Landscape Character Area 6 – Prosperous Bay Plain
- Landscape Character Area 7 – Prosperous Bay and Lower Fisher's Valley
- Landscape Character Area 8 – Dry Gut
- Landscape Character Area 9 – Bencoolen
- Landscape Character Area 10 – Sharks Valley
- Landscape Character Area 11 – Stone Top ridges and peaks
- Landscape Character Area 12 – Upper Slopes covered by flax and woodland planting interspersed with settlements
- Landscape Character Area 13 – Steep eroded coastal slopes
- Landscape Character Area 14 – The Barn

Descriptions of the above Landscape Character Areas (LCAs) identifying their key features and characteristics including their form, quality, value and sensitivity are provided in Appendix 10.1, Volume 4 and illustrated on Figure 10.2 with illustrative photographs contained in Figure 10.3 Sheets 1-7 in Volume 3 of this ES.

10.3.4 Visual Amenity

The study area for the baseline survey has been the entire area from which the proposed airport and its supporting infrastructure including haul and permanent access route could potentially affect people's views of the landscape. Receptors include residential properties, workplaces, recreational facilities, road users, pedestrians and other outdoor sites used by the public which will be likely to experience a change in existing views as a result of the construction and operation of the proposed airport and its supporting infrastructure. All receptors within the study area likely to experience visual impacts have been identified and fall into one of two categories:

- Views from buildings, including residential properties, offices, commercial premises, residential care facilities and schools; or
- Views from outdoor locations, including key view points and scenic vantage points, recreational areas and footpaths

The types of receptors likely to experience visual impacts as a result of the introduction of the airport development are identified below. These key receptors and receptor groups are also identified on Figure 10.5 with further details provided in Appendix 10.1, Volume 4.

10.3.4.1 Views from Buildings

Views from buildings, including residential properties, offices, commercial premises, residential care facilities and schools. In general, buildings fall within one of five categories:

- Dwellings and commercial buildings in Rupert's Valley and Bay;
- Dwellings and buildings within Longwood and Deadwood;
- Dwellings and buildings to the immediate west of Prosperous Bay Plain including Government Garage at Bradleys, Bottom Woods and the Met Station;
- Dwellings and buildings within and in the vicinity of Level Wood, Silver Hill and Woody Ridge; and
- Dwellings and buildings in Half Tree Hollow, Cow Path, Francis Plain, Alarm Forest and buildings in elevated locations at St Pauls.

10.3.4.2 Views from Outdoor Locations

Views from outdoor locations, including key view points including scenic vantage points, recreational areas and footpaths. On the whole, views from outdoor locations generally fall into one of five categories:

- Public open space and recreational facilities used by residents and visitors including the open green adjacent to Longwood Avenue, Longwood golf course, The Millennium Forest, Rupert's Bay and beach and features of historic interest such as Longwood House, Napoleon's Tomb, High Knoll Fort and Prosperous Bay Signal Station;
- Views from footpaths which cross or run immediately adjacent to Prosperous Bay Plain including King and Queen Rocks (Prosperous Bay Signal Station), Prosperous Bay, Gill Point, Woody Ridge to Dry Gut as well as the various informal routes which fishermen use to access the coast between King and Queen Rocks and Gill Point;
- Views from sections of footpaths including The Barn, Flagstaff Hill, Sugar Loaf, Bank's Battery, Fisher's Valley, Shark's Valley, Cox's Battery, The Boer Road, The Pipe Path and footpaths in The Peaks; and
- Views from scenic vantage points and key view points including Diana's Peak, Mount Actaeon and Cuckold's Point.

10.4 ASSESSMENT OF EFFECTS

Development can change people's direct experience and perception of the landscape depending on existing context, the scale, form, colour and texture of the proposals, the nature of activity associated with the development and the distance and angle of view. There are a number of ways in which development of the form proposed might impact on the existing landscape and visual amenity of the study area. Impacts will be either temporary and relate specifically to the construction stage of works whilst others will be permanent and incurred once the scheme is in operation.

In the context of the Airport and supporting infrastructure proposals, key components relate to:

- The scale and form of the development can prove inappropriate and intrusive in the context of existing landform, settlement, planting structure and overall character;
- Development can involve the loss or fragmentation of important and distinctive landscape components (woodland, trees, field pattern, landform);
- Development can introduce activity, features and forms, out of keeping with established cultural or historic landscapes; and
- Development can contribute to the regeneration of despoiled or degraded landscapes and the establishment of areas of new landscape.
- The development can intrude into the existing views experienced by residents and day to day users of the area; and
- Users of the landscape such as tourists and visitors can be subject to new impacts, in a highly valued landscape.

10.4.1 Construction Effects

The assessment of landscape and visual effects associated with the construction phase of works has considered the various activities required to construct the permanent infrastructure as well as the substantial amount of temporary works required to enable and support the Contractor during the construction period. Temporary works will include the following:

- A wharf in Rupert's Bay for landing the heavy equipment required to construct the airport and all other supporting infrastructure;
- A temporary quarry in Rupert's Valley to provide material for the construction of the wharf;
- Compounds, offices and lay down areas for plant and materials in Rupert's Valley and at two sites to the west of the airport site for the Contractor's workforce, equipment and bulk materials storage;
- A possible temporary airstrip to the west of the airport site at PBP;
- A possible temporary seawater abstraction facility and delivery pipeline may be required from Gill Point to the airport site; and
- A possible temporary storage reservoir in Dry Gut.

10.4.2 Mitigation of Construction Phase Effects

Opportunities for mitigation to reduce the potential landscape impacts during the construction period will be limited and will primarily relate to the restrictions imposed on the working areas thereby limiting works to the minimum working area necessary to undertake the construction works. Protection and avoidance of important landscape features including endemic flora for any of the temporary works will also be undertaken with all compounds, work camps and lay down areas fully reinstated on completion of construction. Further details can be found in the Landscape and Ecology Mitigation Plan contained in Appendix 10.2, Volume 4. The EMP in Volume 5 of this ES also stipulates measures to avoid, reduce or offset the environmental effects of the works, including those related to the landscape, which the Contractor will be required to adhere to and which will form contractual requirements under which SHG will be able to enforce compliance by the Contractor.

10.4.3 Permanent Effects

The assessment of permanent effects of the Airport and supporting infrastructure proposals once the airport is operational on the 14 landscape character areas and on the visual amenity of the various receptors has also been considered. It considers the components of providing Airport and supporting infrastructure to St Helena and how the

permanent structures will impact the features and characteristics of the various character areas and on views experienced by receptors, taking into account the mitigation measures outlined below. Permanent works will include the following:

- A wharf at Rupert's Bay;
- A BFI in Rupert's Valley;
- A permanent access road between Rupert's Bay and the airport on Prosperous Bay Plain;
- The airport and its essential support facilities at PBP; and
- A permanent water supply system from Shark's Valley to the airport.

10.4.4 Mitigation of Permanent Effects

The development of landscape and visual mitigation measures has been undertaken in conjunction with the detailed ecological mitigation proposals to ensure a cohesive and integrated approach to mitigation which reflects the intrinsic relationship between the landscape and ecology resource on St Helena.

The detailed landscape and ecological mitigation commitments have been developed in parallel with the refinement of the reference design in order that impacts can, wherever possible, be mitigated through avoidance, reduction or compensatory measures. Mitigation has been developed through the design and incorporated into the technical specification which the Contractor must follow.

The detailed landscape and ecology mitigation plan (LEMP) in Appendix 10.2 seeks to provide compensatory habitats and landscape treatment to reduce and offset the permanent direct loss of habitat and the direct and indirect impacts on the landscape resource of the island as a result of the Airport and supporting infrastructure proposals. The mitigation of adverse impacts associated with the introduction of the Airport and supporting infrastructure proposals has involved a combination of three approaches:

- **Avoidance**: Avoidance of adverse effects at source. An example of this approach has included avoidance of a specific feature of interest through identification of potential impacts during the reference design process and through close co-operation with the design team, potential impacts have been designed out;
- **Reduction**: Reduction of adverse effects that cannot be eliminated by prevention. An example of this has included sensitive native planting to help assimilate elements of the Airport and supporting infrastructure proposals into the landscape or to screen the visual impact from properties or publicly used areas; and
- **Offsetting**: The provision of alternative or compensatory measures, where appropriate and feasible. An example of this approach has included creation of new habitats to compensate for loss of habitat required for the Airport and supporting infrastructure proposals. These have included off-site compensatory planting or habitat creation and/or management.

The key objectives of the LEMP are to achieve:

- Sympathetic and high quality design which will provide a sensitive solution to the integration of the Airport and supporting infrastructure proposals into the various local environments;
- Planting which uses native species to increase the biodiversity and ecological value and habitat interest of the study area; and
- Landscape planting, earthworks (mounding and earth shaping) and other mitigation measures where appropriate to minimise the visual impact of the Airport and supporting infrastructure proposals and enhance the existing local landscape character and structure.

For further information on the landscape mitigation plan including a detailed description of the mitigation commitments refer to Appendix 10.2, Volume 4 and Figure 10.7. Examples of such measures are provided below:

- Amenity planting within Rupert's Valley adjacent to residential properties to reinstate for plants lost during construction of the haul road and to strengthen the existing visual screen.
- Native species planting along the haul road in conjunction with invasive species control to help integrate the road into the landscape and in views from visual receptors.
- Mitigation principles for the restoration of the quarry in Rupert's Valley to ensure that the restored quarry is integrated with its localised setting to reflect the landscape character of Rupert's Valley.
- Reinstatement of fence lines through Deadwood Plain adjacent to the haul/access road maintaining access where required for paddocks/properties/walkers.
- Reinstatement of woodland planting in Mulberry Gut.
- Screen planting using amenity and native species adjacent to sensitive receptors with immediate views of the haul/access road.
- Extensive gumwood planting at Bilberry Field Gut to help regenerate a degraded landscape thereby providing compensation planting for the permanent loss of the landscape resource at Dry Gut.
- Native species planting along the access road between the airport and Bottom Woods to provide a high quality boundary treatment for visitors arriving on St Helena.
- Control of invasive plant species across PBP with establishment of native species in areas of creeper carpet.
- Long term maintenance of alien invasive species control programmes to prevent reinvasion and maintain the competitive advantage of native species.
- Low density native species planting using a more architectural interpretation around the terminal forecourt.
- Planting and seeding of native species on the embankment of Dry Gut.

10.4.5 Residual Impacts

The residual impacts (taking into consideration mitigation measures) on the landscape resource and visual amenity during construction and once the scheme is operational are summarised below.

10.4.5.1 Landscape Character

The extent to which the Airport and supporting infrastructure proposals will affect the landscape character varies substantially depending on the individual components of the scheme, the various stages of the works and the capacity of the existing landscape to absorb the various scheme components. Table 10.1 below summarises the residual effects both during construction and once the scheme is operational, taking into account the mitigation measures described above.

Table 10.1 Summary of Residual Landscape Effects

Landscape Character Area (LCA)	Key Considerations	Residual Construction Impacts	Residual Operational Impacts
LCA 1 – Rupert's Valley	The high amenity and scenic value of some of the character area; The current use of the beach, bay and coastal landscape for amenity purposes; The presence of human influences including infrastructure, buildings and commercial and industrial activity which currently exists; The scale, design and characteristics of the proposals within the context of the local character area and adjoining seascape; The extent to which the amenity and native species mitigation planting will reduce the operational effects.	Major Adverse	Minor Adverse (Major Adverse impacts only in localised parts of the LCA)
LCA 2 - Deeply incised upper valleys and vegetated slopes	The presence of human influences including roads and buildings; The containment and perceived tranquillity resulting from the more contained and undeveloped upper valleys; The scale of the proposals within the context of this character area; The extent to which the mitigation planting will help integrate the road into the landscape	Major Adverse	Minor Adverse (Major Adverse impacts only in localised parts of the LCA)
LCA 3 – Deadwood Plain	The unique character of this landscape and the open and exposed nature; The extent to which severance of pasture land will affect the grazing function which plays an important role in contributing to the character of this landscape; The presence of existing human influences such as roads and tracks; The localised and relatively peripheral extent of the proposals.	Moderate Adverse	Minor Adverse
LCA 4 - Longwood	The presence of existing human influences and particularly linear infrastructure including roads and tracks within this character area; The limited scale of the proposals within this area; The localised impact of the proposals on the area; The extent to which the mitigation planting will reduce the level of impact.	Moderate Adverse	Minor Adverse
LCA 5 - Eroded slopes with extensive gully systems	The scale of the proposals within the wider context of the character area; The presence of existing human influences including roads, tracks, occasional properties, other built structures and fence lines; The increase in vehicle movements along existing roads in the character area; The extent to which mitigation planting and other proposals will integrate the structures into the landscape.	Moderate Adverse	Minor Adverse

Landscape Character Area (LCA)	Key Considerations	Residual Construction Impacts	Residual Operational Impacts
LCA 6 – Prosperous Bay Plain	The unique scenic quality and high value; The scale, design and characteristics of the proposals in the context of the character area and also the wider landscape; The open, expansive nature of this character area; The lack of infrastructure within this character area; The extent to which the design of the buildings and reinstatement mitigation proposals will minimise the impact of the development.	Major Adverse	Moderate Adverse
LCA 7 - Prosperous Bay and Lower Fisher's Valley	The high scenic quality and value of the landscape; The lack of human influences apparent within the landscape ; The extent to which indirect impacts from the airport operations on PBP will detract from the tranquillity and sense of remoteness which characterises much of this character area; The peripheral nature of the impacts and the resulting integrity of the key landscape components including the dramatic gorge and spectacular geological features.	Moderate Adverse	Minor Adverse
LCA 8 – Dry Gut	The high scenic quality and value of the landscape; The lack of human influence on the area and intense sense of isolation and remoteness that exists; The extent to which the wildland characteristics will be affected by the proposals; The scale, design and characteristics of the proposals in the context of the landscape character area.	Major Adverse	Major Adverse
LCA 9 – Bencoolen	The relative remoteness of the area and high landscape value; The lack of apparent human influence on the area; The open and prominent nature of this character area; The relative localised impact of the proposals in the context of the wider character area.	Moderate Adverse	Minor Adverse
LCA 10 – Sharks Valley	The high scenic quality and value of the landscape; The secluded nature of the area potentially affected and the apparent lack of human influence; The scale, design and characteristics of the proposals within the context of the character area; The level of abstraction and resulting residual flow will sustain the vegetation communities which currently exist along the valley floor which provide an important aesthetic function; The localised impact of the proposals restricted to the upper sections of the valley unless an additional temporary abstraction point is located at the waterfall by the beach.	Moderate Adverse	Minor Adverse
LCA 11 – Stone Top ridges and peaks	The high value and outstanding scenic quality of the area; The small scale nature of the development components in relation to the wider scale of this character area; The lack of human influence on the area; The localised impact of the scheme in the context of the wider character area.	Moderate Adverse	Minor Adverse

Landscape Character Area (LCA)	Key Considerations	Residual Construction Impacts	Residual Operational Impacts
LCA 12 - Upper Slopes covered by flax and woodland planting interspersed with settlements	The temporary period in which a limited part of the character area will be impacted; The nature and visibility of the existing corridors of disturbance; The presence of existing human influences through this character area.	Minor Adverse	Minor Adverse
LCA 13 - Steep eroded coastal slopes	The high scenic quality and value of the landscape; The lack of infrastructure within this character area; The localised impact of the haul road on this character area; The limited scale of the proposals within this area.	Minor Adverse	Minor Adverse
LCA 14 – The Barn	The value of the area as inaccessible, wild land, a resource which has the potential to become limited and fragmented with future development on the island; The small scale nature of the development components in relation to the substantial mass of this character area; The lack of human influence on the area; The localised impact of the scheme in the context of the wider character area.	Moderate Adverse	Minor Adverse

10.4.5.2 Visual Amenity

The visual impact assessment has involved consideration of the extent to which the proposals will change the composition of the existing view (magnitude of change) and the sensitivity to change which considers the nature of the receptor, for example, a residential dwelling is generally more sensitive to change than an industrial building. The importance of the view experienced by the receptor also contributes to an understanding of how sensitive that receptor is to change. Therefore, where the changed landscape is an important element in the view for a particular receptor and the development causes a very significant change in the existing view, major visual impacts will result.

A detailed explanation of the visual impacts is contained in Appendix 10.1, volume 4 and significant impacts (moderate or major adverse) are summarised in Table 10.2 below.

Table 10.2 Summary of Significant Residual Visual Effects

Principal Receptors	Residual Construction Impacts	Residual Operational Impacts
Views from Buildings		
Residential properties in Rupert's Valley with immediate views of the haul/access road and oblique mid-ground views of the construction activity, plant, compounds around Rupert's Bay (construction only).	Major Adverse	Neutral
Residential properties in Deadwood with both immediate views of the haul/access road and elevated mid-ground views of the haul/access road, BFI and quarry site.	Major/Moderate Adverse	Minor Adverse (moderate adverse for one property)
Residential properties in Millfields Gardens with mid-ground, elevated	Moderate	Minor

Principal Receptors	Residual Construction Impacts	Residual Operational Impacts
and often oblique views of the haul/access road between Deadwood Plain and Coltshed Road.	Adverse	Adverse
Residential properties along Coltshed Road with both immediate foreground views as well as oblique mid-ground views of the haul/access road.	Major Adverse	Minor Adverse
Residential properties to the north of Longwood Avenue with mid-ground to distant views of the haul/access road between Deadwood Plain and Coltshed Road.	Moderate Adverse	Minor Adverse
Residential properties at Ropery Field with direct to oblique mid-ground views of the haul/access road.	Moderate Adverse	Minor Adverse
Two residential properties overlooking Bilberry Field Gut with immediate views of the haul/access road.	Major Adverse	Moderate Adverse
Residential properties in Longwood Hangings with oblique and distant views of the airfield site at PBP.	Moderate Adverse	Minor Adverse
Residential properties at Bottom Woods with immediate views of the haul/access road and mid-ground to distant views of the airfield site at PBP.	Major-Moderate Adverse	Moderate-Minor Adverse
Two residential properties at Bradleys Government Garage with immediate foreground views of the haul/access road, construction camps and airfield site PBP.	Major Adverse	Moderate Adverse
Residential properties in Level Wood, Silver Hill and Woody Ridge with elevated and more distant views of the airfield site at PBP and mid-ground views of the works associated with water abstraction at Sharks Valley.	Major-Moderate Adverse	Minor Adverse
Residential properties in Two Gun Saddle and Alarm Forest with elevated mid-ground views of the haul/access road and quarry.	Major – Moderate Adverse	Minor Adverse
Views from Outdoor Locations		
The Millennium Forest with elevated panoramic views of the airfield site at PBP and immediate foreground views of the haul/access road.	Major Adverse	Moderate Adverse
Rupert's Beach with immediate foreground views of the temporary wharf, compounds and materials storage and handling facilities during construction and the wharf and commercial port area during operation.	Major Adverse	Moderate Adverse
Scenic vantage points within the Peaks (Diana's Peak, Mount Actaeon and Cuckold's Point) with more distant but panoramic views of the haul/access road and airfield site at PBP.	Moderate Adverse	Moderate-Minor Adverse
High Knoll Fort with panoramic views of the haul/access road and quarry site.	Moderate Adverse	Minor Adverse
Various footpaths, including post box walks, fisherman's routes with immediate views of the haul/access road and airfield site at PBP/Dry Gut/Sharks Valley/Gill Point (for details of specific routes where the visual amenity will be impacted refer to Appendix 10.1 Volume 4)	Major Adverse	Moderate Adverse

10.5 SUMMARY

A development of this magnitude on an island where the landscape resource is unique and fragile and extremely vulnerable to change along with receptors who often experience open, un-interrupted views across the landscape and to sea will inevitably result in some adverse impacts on the landscape character and visual amenity both during construction and once the airport and its supporting infrastructure are operational.

The LEMP in Appendix 10.2 and the EMP in Volume 5 of this ES will continue to be developed in conjunction with the Contractor's detailed design and will provide an essential mechanism to minimise the adverse landscape impacts from the Airport and

supporting infrastructure project both during construction and in the long term. It has been an essential mechanism in minimising the residual impacts of the Airport and supporting infrastructure proposals on the landscape character. It is therefore essential that considerable effort is applied in realising and implementing the mitigation plan to ensure that the airport and supporting infrastructure are successfully and effectively integrated into St Helena's complex, diverse and unique landscape resource.

10.5.1 Landscape Character

During the construction phase of works the assessment findings have indicated that the Airport and supporting infrastructure proposals will result in significant adverse impacts (major or moderate adverse impacts) on twelve of the fourteen landscape character areas. The only landscape character areas which will not be significantly affected by the construction phase of works will be LCAs 12 and 13 where the works will be peripheral to the character area with minor adverse impacts. The significant adverse impacts will be associated with the various activities required to construct the permanent infrastructure as well as the substantial amount of temporary works required to enable and to support the Contractor during the construction period.

In the long term once the airport and supporting infrastructure is operational only two LCAs (LCA 6 and 8) will retain significant adverse residual impacts. LCA 6, Prosperous Bay Plain will experience Moderate Adverse impacts associated with the extensive earthworks and remodelling of the landscape required to facilitate the airfield and the resulting changes to key features of this unique semi-desert landscape. LCA 8, Dry Gut will also experience Major Adverse impacts due to the fundamental change in character resulting from the expansive embankment structure which infill the gut. Localised Moderate Adverse impacts will also remain in localised areas of LCA 1, Rupert's Valley associated with the change in character of Rupert's bay with the permanent wharf and associated commercial port facility. Whichever quarry location is selected will also result in localised Moderate Adverse residual impacts on landscape character.

10.5.2 Visual Amenity

During the construction phase of works, significant impacts (major and moderate adverse impacts) will result for residential properties in Rupert's Valley, Deadwood Plain, Longwood and Bottom Woods where the construction of the haul road and associated construction activity will impact on immediate foreground views. Residential properties at Bradleys Government Garage will also accrue major adverse impacts as a result of the visual disturbance associated with the extensive construction activity at PBP. The visual amenity from various footpaths and scenic vantage points will also experience significant adverse impacts during construction associated with the visual intrusion of the haul road and construction activity at PBP.

Upon scheme completion, the majority of significant visual impacts will reduce with the landscape and visual mitigation planting, further reducing the residual impact of the airport development on the visual amenity of the majority of receptors. Significant adverse impacts (moderate adverse) will remain for limited residential properties and footpaths where the access road and airport development will form a prominent element within their immediate views. These are restricted to the properties at Bradleys Government Garage, Bottom Woods and Bilberry Field Gut and the footpaths which cross PBP or Dry Gut.