ST HELENA AIRPORT PROJECT

Dry Gut Open Channel Proposal

Planning Statement

REVISED

28 June 2013

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Aerial view of Dry Gut, 20 June 2013

Contents

1. Introduction 1

Purpose of the Statement 1

Design Build and Operate Contract 1

Legislative Context and Planning Process 1

2. The Reference Design 3

3. The Revised Proposal: Dry Gut Open Channel 4

Overview 4

Land Use 4

Technical Considerations 5

The Advantages of the Open Channel Proposal 6

Environmental Considerations: Background 8

Environmental Considerations: Implications of the Open Channel Proposal 9

Financial/Economic Considerations 13

Social Policy Considerations 14

Public Consultation/Communications 15

4. Conclusion & Recommendations 16

5. References 17

Appendix 1: Airport Development Permission 18

Appendix 2: The Airport Development Area Order 19

Appendix 3: Representations Received on the Open Channel Proposal 21

Figures

Table 1: Design and construction elements of 2007 reference design and 2013 open channel proposal considered in this EIA Addendum 4
Fig. 1: ADT transporting material into Dry Gut 7
Fig. 2: ADT offloading material in Dry Gut 7
Table 2: Topics covered in the ES Addendum 9
Table 3: Description of change between the 2007 reference design and the proposed open channel 11

Acronyms and Abbreviations

ADA	Airport Development Area
ADAO	Airport Development Area Order
ADT	Articulated Dumper Truck
DBO	Design, Build and Operate
DFID	Department for International Development
LDCP	Land Development Control Plan
PMU	Project Management Unit
SHG	St Helena Government

1. Introduction

Purpose of the Statement

1.1 This Planning Statement provides background information to aid Governor-in-Council's consideration of the request to amend the Development Permission for the Airport Project to enable the construction of an open drainage channel between Dry Gut and the neighbouring Gut (unnamed in the OS map) to the south of Dry Gut. This proposal is hereafter termed 'the Open Channel Proposal'.

1.2 The Open Channel Proposal forms part of the St Helena Airport Project. Basil Read, Contractor for the Airport Project, has put forward the Open Channel Proposal as an alternative design to that agreed at contract tender stage (see below). The proposal has been reviewed by the Project Management Unit (PMU) and further discussions have taken place between the Airport Project teams in Basil Read, PMU, St Helena Government (SHG) and the Department for International Development (DFID). The Airport Project teams from each of these organisations recommend approval of the Open Channel Proposal and have endorsed the submission of the Planning Statement and accompanying documentation.

1.3 The Planning Statement presents summary information. The full technical proposal has not been presented here. The Access Office would be happy to provide the full detail, should this be required.

Design Build and Operate Contract

1.4 The original Development Permission granted for the Airport Project in September 2008 was based on Reference Designs prepared in 2007/8. The contract signed with Basil Read in November 2011 is a Design, Build and Operate (DBO) contract. This permits Basil Read to develop and submit alternative designs that meet the contract specifications. The Open Channel Proposal is an example of such an alternative design.

Legislative Context and Planning Process

1.5 The Airport Development Ordinance (2006) makes provisions to facilitate the design, construction and operation of an airport on St Helena. In particular, it provides that nothing done in a designated 'Airport Development Area' with the consent of the Governor in Council is to be treated as done without development permission under the Land Planning and Development Control Ordinance. In effect, this means that the Governor in Council grants 'consent' (rather than the Land Development Control Authority granting 'Development Permission') for anything to do with the Airport Project.

1.6 The Governor in Council granted consent for the Airport Project in September 2008 (see Appendix 1)[1]. A condition of the consent states *"if the Contractor's Designs vary significantly from the Reference Designs separate Development Permission must be obtained" (extract from memo from Clerk of Councils, 17 September 2008).* The reference to 'separate Development Permission' must, read in the context of the Airport

[1] Consent was granted via a memorandum issued by the Clerk of Councils, which has become known as the Airport Project Development Permission (see Appendix 1).

Development Ordinance, mean a separate consent by the Governor in Council.

1.7 There has been considerable discussion as to whether the Open Channel Proposal represents a significant deviation to the Reference Design. The Proposal in itself is significant in terms of the scale of development normally found on St Helena. However, the parties under the Airport Project (see para 1.2 above) have concluded that the Proposal is entirely consistent with the original Development Permission and that it does not represent a significant variation to the original Reference Design. The Open Channel Proposal is a design change reflecting a different method of providing drainage in Dry Gut. It will take place in the original area identified for development, with some additional land use from within the Airport Development Area Order (ADAO) and will use the same or similar construction methods applied in Dry Gut and Prosperous Bay Plain. These factors are discussed further in the relevant sections of the Planning Statement below.

1.8 The Open Channel Proposal is entirely consistent with the provisions of the Land Development Control Plan (LDCP), which states *"development permission will be granted for all elements of infrastructure required in connection with construction and operation of the St Helena Airport including variations or additions to any element covered under the Airport Development Ordinance 2006 and lying outside the Airport Development Area"* (LDCP, Policy AP1, pg. 17). [This proposal does not in fact extend outside the Airport Development Area.]

2. The Reference Design

2.1 The original Reference Design for Dry Gut (2007) that formed part of the original Development Application in 2008 proposed that two culverts be constructed beneath the Dry Gut fill to convey the runoff from the Dry Gut catchment and the south western portions of the Airfield footprint. One culvert was proposed for operation and the other to be served as a backup in the case of an emergency and to provide safe access for any maintenance requirements.

2.2 The original Reference Design was replaced at tender stage. Basil Read proposed a design involving a single culvert coupled with an attenuation dam upstream of the culvert inlet. This was adopted as the Reference Design within the DBO Contract.

2.3 The earlier drawings are available at http://www.sainthelenaaccess.com/application/documents/Application-Drawings/ The Access Office would be happy to make available hard copies, if so required.

2.4 As noted in the Basis of Design for the Open Channel and in the ES Addendum (section 4.3), the single culvert proposed by Basil Read would have been positioned in the centre of the valley, on the stream bed and starting at invert level 215m. The 2007 design also included a 15m high dam wall with the storage capacity of 100,000 cubic metres in upper Dry Gut. The aim of the temporary dam was to protect the bulk fill from stormwater runoff during construction of the culvert. The dam would have been removed once the culvert was in place.

2.5 During the design stage a number of alignment options were investigated for the culvert, but significant risks were associated with them all, relating primarily to the risk of culvert subsidence (Worley Parsons, 2013).

2.6 Basil Read has therefore had to consider alternatives and this has resulted in the Open Channel Proposal (see Section 3 below).

3. The Revised Proposal: Dry Gut Open Channel

Overview

3.1 The Open Channel Proposal represents a design solution for drainage of storm water from Dry Gut away from the toe of the rockfill, as required within the contract specifications.

3.2 The Open Channel Proposal replaces the design proposed in (2.2) above with a proposal to construct an open drainage diversion channel through the ridge to the south of Dry Gut. This is shown on the drawings attached to the Development Application.

3.3 For ease of reference, the table below (extracted from the Addendum to the Environmental Statement, June 2013) compares the Reference Design (2007) with the Open Channel Proposal (2013).

Table 1: Design and construction elements of 2007 reference design and 2013 open channel proposal considered in this EIA Addendum[2]

2007 reference design: design and construction elements	2013 proposal: design and construction elements
Dry Gut Concrete Culvert	Open Channel
Dry Gut Attenuation Dam Wall	Open Channel Haul/Maintenance Road
Culvert Haul/ Maintenance Road	-
Dry Gut Fill quarry site outside of ADA/ADAO	-

3.4 It should be noted that the fill in Dry Gut must proceed regardless of which design option is chosen for the drainage of storm water. A significant design difference between the Reference Design (2007) and the Open Channel Proposal (2013) is that the latter will result in suitable rockfill material for use in the Dry Gut fill, reducing the need to find additional material from outside of the construction boundary at Prosperous Bay Plain. This is discussed further below.

Land Use

3.5 The Open Channel proposal will involve construction in an area of approximately 1.7ha outside the original construction boundary planned under the current design. This is shown in the attached drawing dated 5 June 2013.

3.6 Reference should be made to Section 4 (Designation of Land for Airport Development) of the Airport Development Ordinance (2006). For the purposes of the Ordinance, Airport Development is defined as "*the carrying out of a building, engineering, or other physical operation in, on, over or under any land that has been designated to be an Airport Development Area.*"

3.7 All of the land required for the construction of the Open Channel, the additional 1.7ha

[2] Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013, Table 4.1

inclusive, is within the designated Airport Development Area (ADA) under the Airport Development Areas Order (2008) (hereafter referred to as the ADAO).

3.8 Therefore, whilst the Open Channel Proposal does extend the construction boundary compared to the 2007 Reference Design, this extension is within an area already designated for airport development.

3.9 No alternative or competing use has been identified for the additional 1.7ha of land: the site is currently undeveloped and thus its current use is natural.

Technical Considerations

3.10 The Open Channel will be cut into the ridge to the south of Dry Gut. The total length of the channel will be approximately 391m.

3.11 The following is extracted from Basil Read's Basis of Design for the Open Channel Proposal[3]:

- The purpose for the open drainage channel is to adequately convey storm water runoff generated from the Dry Gut catchment, and the storm water runoff from the southern portion of the airfield footprint and the terraced embankments of the Dry Gut fill. The open channel is to discharge storm flows into the neighbouring valley immediately south of the Dry Gut.

- The Open Drainage Channel is to comply with the following criteria:

    - Minimum 4m wide channel base suitable for vehicle access for maintenance;
    - To convey the 1 in 100 year storm flows from the Dry Gut Catchment, together with storm water flows from the southern portion of the airfield footprint;
    - To provide suitable energy dissipaters at the channel outlet to spread the storm flows down the natural gulleys of the valley sides to the neighbouring valley; and
    - To provide erosion protection measures in the form of a rock face or concrete berm at the inlet of the open channel to protect the toe of the main Dry Gut fill from erosion.
    - Careful environmental design of the open channel to maximise the regeneration potential of the area and provide a channel with a natural appearance

3.12 The design for the Open Channel Proposal has been assessed under the Airport Project internal review mechanisms. It has been confirmed that it presents a viable alternative design solution for the drainage of storm water from Dry Gut away from the toe of the rockfill.

3.13 In relation to the Reference Design (2007 and that submitted at tender stage), during the design stage a number of alignment options were investigated for the culvert, but significant risks were associated with each, relating primarily to the risk of culvert subsidence. In comparison, the Open Channel Proposal (2013) is the preferred technical option.

[3] Basis of Design, Dry Gut Open Channel Drain, Revision D, pg. 13, Basil Read, June 2013

The Advantages of the Open Channel Proposal

3.14 The advantages of the Open Channel Proposal (2013) in comparison to the reference design (2007) are listed below (not in any order of priority).

a) The upstream attenuation dam is not required.

b) The Open Channel Proposal results in lower carbon emissions than constructing a culvert and dam wall[4].

c) The area is outside of and not abutting a proposed national protected area[4].

d) There will be lower visual impact[4].

e) The open channel offers easy access for maintenance to open stormwater channel (see also Financial/Economic considerations).

f) Reinstatement is possible to similar existing natural drainage conditions4.

Under the original proposal, in excess of 600m of ephemeral stream would have been lost and replaced by a concrete culvert which would have been unlikely to sustain any flora and fauna for most of its course. A key finding from the ES Addendum is that in this respect the proposed open channel drain could provide a beneficial impact (if selected) as it will provide a continuous open channel for the conveyance of water from upstream of the Dry Gut fill to the downstream channel. Furthermore, through careful design and maintenance this channel could become an ephemeral stream providing habitat for species supported by the previous alignment of Dry Gut Stream.

g) The additional cut into the ridge to the South of Dry Gut can be used as fill material in Dry Gut.

Since commencing excavation on Prosperous Bay Plain, Basil Read has encountered unforeseen quantities of unsuitable bulk fill material. This has resulted in a shortage of approximately 800,000m^3 of quality fill material to construct the runway extension over the Dry Gut.

Following geological assessments, it has been determined that one of the main benefits of the Open Channel Proposal is that it will result in approximately 600,000m^3 of suitable fill material.

To clarify, 600,000m^3 is the anticipated volume of compacted material that could be gained from excavating the open channel. This is equivalent to 720,000m^3 of loose excavated material. In turn, a single load (based on a 40 tonne articulated dumper truck [ADT]) is equivalent to 15m^3 of loose (non-compacted) material. Hence the volume of material gained from the open channel is equivalent to **48,000 ADT loads of material.**

[4] See also the Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013

Fig. 1: ADT transporting material into Dry Gut

Fig. 2: ADT offloading material in Dry Gut

Geotechnical surveys conducted in February 2013 indicated that the volumes of suitable material from the Prosperous Bay runway alignment area would not meet the technical specifications for the Dry Gut fill nor meet the standards for the aggregate needed to construct the concrete dam and culvert.

No alternative source of suitable fill material has been found within the construction boundary on Prosperous Bay Plain. If a decision is taken not to proceed with the Open Channel Proposal, it will be necessary to source suitable fill material from elsewhere in the Airport Development Area. Alternative locations under consideration are Ruperts, lower Ben Coolen, and King and Queen Rocks.

The need to open additional quarry sites and transport 48,000 truckloads of material from elsewhere in the Airport Development Area Order was not envisaged in the original Development Application. Separate assessments would be required should this need arise but initially it can be determined that there would be:

- Financial and economic implications (see Financial/Economic Considerations below).
- Environmental implications (e.g. potential impact on land take, invertebrates, lichens, flora, and aesthetics dust, noise and visual), as well as carbon emissions due to extensive hauling distance [5]).
- Social implications (e.g. increased traffic through or near residential areas).

It is not possible to quantify these impacts until the locations for the additional quarry sites are confirmed. It can be assumed that the impacts of transporting 48,000 ADT loads from elsewhere in the Airport Development Area Order will be significant. Impacts are multiplied the further that the quarry location is from Dry Gut due to the need to transport materials. The extent of the Airport Development Area is shown at Appendix 2.

In comparison, the Open Channel Proposal will provide a sufficient quantity of suitable fill at minimal additional impact, lowest cost and within the available Airport Development Area Order and project time frame. This is discussed further in the ES Addendum.

Environmental Considerations: Background

3.15 In considering the environmental implications of the Open Channel Proposal, it must be recognised that the proposal is a design alternative to the reference design for Dry Gut. The plans for Dry Gut have been the subject of considerable environmental assessment and much of this remains relevant, regardless of which design option is chosen.

3.16 Reference should therefore be made to the Environmental Statement (ES) that formed

[5] Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013, pg. 5

part of the original Development Application for the Airport Project. The ES assessed the planned development in Dry Gut and put in place appropriate mitigation. In particular, reference should be made to:

- Appendix 7: Air Quality and Dust
- Appendix 9: Terrestrial Ecology
- Appendix 10: Landscape, Visual and Ecological Mitigation Plan
- Appendix 11: Cultural Heritage
- Appendix 12: Traffic and Footpaths
- Appendix 13: Geology, Contaminated Land and Hydrogeology; and
- Appendix 15: Surface Water Detailed Assessment

3.17 Reference should also be made to the following documents which include study areas in Dry Gut. These reports have been used to develop appropriate environmental mitigation:

- The Invertebrates of Prosperous Bay Plain, Ashmole and Ashmole, 2004; and
- Habitat Survey Report: Dry Gut and the Southern Ridge of Prosperous Bay Plain, Cairns-Wicks and Lambdon, 2012.
- Invertebrate Survey, Dry Gut, Pryce, 2013

Environmental Considerations: Implications of the Open Channel Proposal

3.18 Basil Read has prepared an Environmental Impact Assessment (EIA) for the Open Channel Proposal. This has been reviewed by the Environmental Monitor in the Project Management Unit and by Halcrow's Head Office Environmental specialist. This forms an addendum to the St Helena Airport Project ES[6].

3.19 As noted above, the Open Channel Proposal needs to be considered in the context that it is a design alternative. The ES Addendum therefore compares the environmental impacts of the Dry Gut Reference Design (2007) and the Dry Gut Open Channel Proposal (2013).

3.20 The key topics covered in the ES Addendum are shown in the table below.[7]

Table 2: Topics covered in the ES Addendum

ES Topics	Coverage in this addendum
Land Use	Effects of reduced land take in upper Dry Gut and increased land take in the valley to the south of Dry Gut
Noise and Vibration	Changes resulting from the increase in blasting and excavating in Dry Gut and the valley south to Dry Gut.

[6] See Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013

[7] See Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013, Table 3.1

ES Topics	Coverage in this addendum
Air Quality and Dust	Changes resulting from the increase in blasting, excavation and hauling of material
Carbon Emissions	Changes resulting from the reduced use of concrete batching and crusher plant for the culvert and the reduced hauling distance of viable fill material
Terrestrial Ecology and Nature Conservation	Key issues covered are the footprint and land take on the valley to the south of Dry Gut (with regards to impacts on invertebrates and lichens) and reduced footprint in upper Dry Gut as well as the southern ridge of PBP and the implications for Wirebird habitat.
Landscape and Visual Amenity	Key issues covered are the works in the valley to the south of Dry Gut as well as the reduced works in upper Dry Gut
Geology and Hydrogeology	The geology and hydrogeology of the southern flank of Dry Gut and south-western end of the runway.
Surface Water	The introduction of an open watercourse as the diversion of surface water from Dry Gut into the valley to the south of Dry Gut, but no attenuation of flow in lower Dry Gut. Issues of in-channel erosion will be addressed.
Waste Management	Spoil material, concrete waste, construction rubble (attenuation dam) and empty cement bags
Archaeology and heritage	There are no features of archaeological or heritage interest in the area.
Traffic and footpaths	The proposed project will not affect any roads. The open channel may affect one footpath.
Buried ordnance	Not applicable.

3.21 A summary of the findings is shown in the table overleaf.

3.22 For full details of the environmental considerations relating to the Open Channel Proposal, reference should be made to the detailed impact assessment in the ES Addendum and also to the sections of the Environmental Statement referenced above.

Table 3: Description of change between the 2007 reference design and the proposed open channel[8]

Topic	Description of change between the reference design and the residual impacts of the proposed 2013 design for Dry Gut open channel	Positive, negative or neutral change
Land use	Increase in landtake on southern face of Dry Gut; decrease in footprint upstream from Dry Gut Fill • 2007 ES significance: **Not assessed** • Revised significance: **Minor adverse** (permanent)	Negative
Noise and vibration	Displacement of noise and vibration impacts due to blasting (from attenuation dam site to southern face of Dry Gut) • 2007 ES significance: **Minor adverse** (construction only) • Revised significance: **Minor adverse** (construction only)	Neutral
Air quality and dust	Increase in dust emissions due to quarrying activities on southern face of Dry Gut • 2007 ES significance: **Very significant to major adverse** (construction only) • Revised significance: **Very significant to major adverse** (construction only); **minor adverse** (permanent)	Neutral
Carbon emissions	No cement, rebar, water or crushed stone required to fabricate concrete culverts and therefore reduction in carbon emissions associated with their production, shipping and trucking to site. • 2007 ES significance: **Minor adverse** (construction only) • Revised significance: **Minor adverse** (construction only)	Neutral
Terrestrial ecology and nature conservation	Temporary attenuation dam site overlapped with a proposed national protected area; new site does not overlap with any areas of ecological constraints as shown in Figure 9.1 of 2007 ES. • 2007 ES significance: **Minor adverse** (temporary) • Revised significance: **None**	Ecological constraints: Positive Wirebirds: Positive

[8] See Addendum to the 2007 Environmental Statement: Dry Gut Open Channel, June 2013, Table 6.1

Topic	Description of change between the reference design and the residual impacts of the proposed 2013 design for Dry Gut open channel	Positive, negative or neutral change
	Wirebird territories were affected by the temporary attenuation dam option but will not be affected by the open channel proposal • 2007 ES significance: **Moderate adverse** (permanent) • Revised significance: **None** Possible impact on Madeiran storm petrels if breeding in lower Bencoolen area • 2007 ES significance: **Not assessed** • Revised significance: **Unknown** Lichens: none identified in Aptroot, 2007 (2007 ES) in either area, but significant spp. found by Pryce (Appendix B) on southern slope of Dry Gut • 2007 ES significance: **Not assessed** • Revised significance: **Minor adverse** (temporary) Rare and endangered plants: none identified at either site • 2007 ES significance: **Not assessed** • Revised significance: **Negligible** Rare and endangered invertebrates: no study sites at either location in 2007 ES. • 2007 ES significance: **Not assessed** • Revised significance: **Minor to moderate adverse** (permanent) depending on final channel design	Madeiran storm petrels: Unknown Lichens: Negative Plants: Neutral Invertebrates: Negative
Landscape and visual amenity	Works on the southern slope of Dry Gut will not appear in views from residential areas; visual impact reduced by removing dam wall • 2007 ES significance: Bencoolen: **Minor adverse** (permanent); Dry Gut**: Major adverse** (temporary) • Revised significance: Bencoolen: **Moderate adverse** (permanent); Dry Gut: **Minor adverse** (permanent)	Bencoolen: Negative Dry Gut: Positive
Geology and hydrogeology	The route chosen for the open channel has avoided the zone of infiltration above the ecologically important cliffs and caves of lower Bencoolen • 2007 ES significance: **Not assessed** • Revised significance: **Minor adverse** (permanent)	Negative
Surface water	The temporary attenuation dam would have caused a reduction in flows downstream in Dry	Positive

Topic	Description of change between the reference design and the residual impacts of the proposed 2013 design for Dry Gut open channel	Positive, negative or neutral change
	Gut, both immediately below the dam and beyond the culvert outfall, which would have adversely affected aquatic species in the stream channel. The new open drain will create a new rocky bed habitat and flows downstream of the fill will be maintained. • 2007 ES significance: **Minor adverse** (temporary) • Revised significance: **Negligible**	
Waste management	Open channel excavation provides a source of suitable rock for the Dry Gut bulk fill close to the works area and largely within the current ADAB. • 2007 ES significance: **Not assessed** • Revised significance: **Moderate beneficial** (permanent)	Positive

3.23 Section 6 of the ES Addendum concludes that the main impacts of the open channel proposal will be on invertebrates and lichens – rated by the entomologist as **minor to moderate adverse** before mitigation is applied, but careful re-routing of the channel has ensured that the most sensitive areas will be avoided thus minimising the impact on the ecology to **minor adverse**. The open channel site will provide an opportunity for scientific research into the re-establishment of lichens and invertebrates, recreate an open watercourse and will greatly reduce the waste and carbon footprint of the airport site compared to the reference design.

3.24 The major benefit of this proposal is that it will provide most of the rock short fall for the Dry Gut fill from an area largely within the Airport Development Area Boundary and certainly within the area of disturbance, without having to develop quarries elsewhere on the island.

Financial/Economic Considerations

3.25 The Contractor has advised that the Open Channel Proposal is cost-neutral: the proposal will not result in additional capital costs.

3.26 The removal of the requirement for a culvert and attenuation dam significantly reduces maintenance requirements. The Open Channel design also enables ease of access for maintenance. Long-term savings in terms of maintenance are therefore anticipated.

3.27 Reference should be made to the economic case for the Airport Project as summarised in the Atkins Feasibility Study and in the Socioeconomic Appraisal of the Project (see Volume 6 of the Environmental Statement).

3.28 The Open Channel Proposal is a design change that will enable the delivery of the

Airport Project and realisation of the benefits identified in the earlier studies. No additional post-construction economic benefits have therefore been identified as a result of the Open Channel Proposal.

3.29 There are a number of economic implications for the construction phase of the Airport Project. In the scenario that a decision is taken not to proceed with the Open Channel Proposal, the practical benefit of gaining suitable fill material for the Dry Gut fill will not be realised. As discussed in Section 3.14(g) above, under this scenario, there will be a need to open additional quarry sites and to transport material (48,000 ADT loads) from elsewhere in the Airport Development Area to Dry Gut. This will result in increased costs including, for example:

- establishment costs of quarries;
- increased transport costs;
- increased material handling costs;
- increased road maintenance costs;
- extended project construction period – or alternatively increased equipment and staffing costs to deliver the project to the original deadline. This could potentially have negative implications for the post-construction phase of the airport project, for example, the impact on airport opening date would reduce private sector confidence and thus investment into economic development ventures.

3.30 It is not possible to quantify the above costs at this stage; this is dependent on the exact location of the quarries and the route that the ADTs would have to traverse. However, it is clear that transportation of material at this scale (48,000 ADT loads) from elsewhere in the Airport Development Area would have significant cost implications.

3.31 A major benefit arising from the Open Channel Proposal is therefore the gaining of suitable fill material within Dry Gut itself and avoidance of costs associated with opening new quarries and transporting material from elsewhere in the Airport Development Area.

Social Policy Considerations

3.32 Reference should be made to the Socioeconomic Impact Assessment (Volume 6 of the Environmental Statement). The Socioeconomic Impact Assessment examined the potential impacts of the Airport Project under 7 key headings and assessed these impacts for both the construction and operations periods of the project.

3.33 Particular reference should be made to Table 5.2 of the Socioeconomic Impact Assessment. This assessed construction period effects. The findings in Table 5.2 remain applicable.

3.34 The only additional consideration for the construction phase is that if the Open Channel Proposal does not go ahead, there will not be the added benefit of gaining suitable material for fill. This will result in the need to open new quarries elsewhere within the Airport Development Area and to transport significant quantities of material (48,000 ADT

loads) back to Dry Gut. Depending on the location of these new quarries, there could be social implications resulting from significantly increased heavy vehicle movements through or near residential areas.

3.35 A comparison was not undertaken with Table 6.2 of the Socioeconomic Impact Assessment. This assessed permanent operation phase impacts. The issues involved in this assessment relate to airport opening and beyond and are therefore wider issues dependent on the overall impact of the airport itself: none of these issues are impacted by a design change intended to contribute to delivery of the Airport Project.

Public Consultation/Communications

3.36 As noted in para 1.7 above, the Open Channel Proposal is not a significant deviation from the Reference Design. The Open Channel Proposal reflects a design change that is within the Airport Development Area. It is entirely in keeping with the original Development Application.

3.37 The original Development Application for the Airport Project was extensively consulted upon. The Airport Development Areas Order and the provisions of the LDCP in respect of the Airport were also extensively consulted upon. In light of this, it is not thought necessary to engage in further public consultation at this time.

3.38 Information has already been released into the public domain via the Airport Update (Airport Update No. 29, April 2013). Subsequent to this, queries have been received from the Royal Society for the Protection of Birds (RSPB) and the St Helena National Trust. Appendix 3 summarises the queries raised and responses given. The Planning Statement and accompanying documentation addresses these queries in full. Particular reference should be made to the ES Addendum.

3.39 These documents will be released into the public domain following Governor in Council's consideration of the Open Channel Proposal.

4. Conclusion & Recommendations

4.1 The Open Channel Proposal meets the required output specifications under the Airport Project. The proposal has been appraised on technical, environmental, financial and economic grounds. The parties under the Airport Project have concluded that this is the preferred design option.

4.2 Governor-in-Council is therefore requested to approve an amendment to the original Development Permission for the Airport Project to enable the Open Channel Proposal to proceed.

5. References

- Airport Development Ordinance (2006)
- Land Development Control Plan 2012-2022, Adopted Revised Plan, SHG, April 2012
- St Helena Airport and Supporting Infrastructure: Planning Statement, Atkins, March 2008
- Development Permission for the Airport Project, September 2008
- Basis of Design, Dry Gut Open Channel Drain, Basil Read, June 2013
- Environmental Statement for the Airport Project, 2008
- The Invertebrates of Prosperous Bay Plain, Ashmole and Ashmole, 2004
- Habitat Survey Report: Dry Gut and the Southern Ridge of Prosperous Bay Plain, Cairnswicks and Lambdon, 2012
- St Helena Access Feasibility Study, Atkins, 2005
- Airport Update No. 29, April 2013

Appendix 1: Airport Development Permission

OFFICE OF THE CHIEF SECRETARY
GOVERNMENT OF ST HELENA

MEMORANDUM

From: Clerk of Councils | **To:** APM

Ref: CO 200/17 |
Date: 17 September 2008 | **Ref:**

This is to advise that Executive Council has agreed:

That permission should be given, in accordance with section 8 of the Airport Development Ordinance, 2006, for the construction of an airport, together with associated infrastructure, as described in the application and supporting documents, subject to the following conditions:

(1) Except as may from time to time be authorised by the Governor in Council, or in accordance with procedures described in the contractual arrangements, the social and environmental mitigation measures described in the Environmental Management Plan must be strictly adhered to.

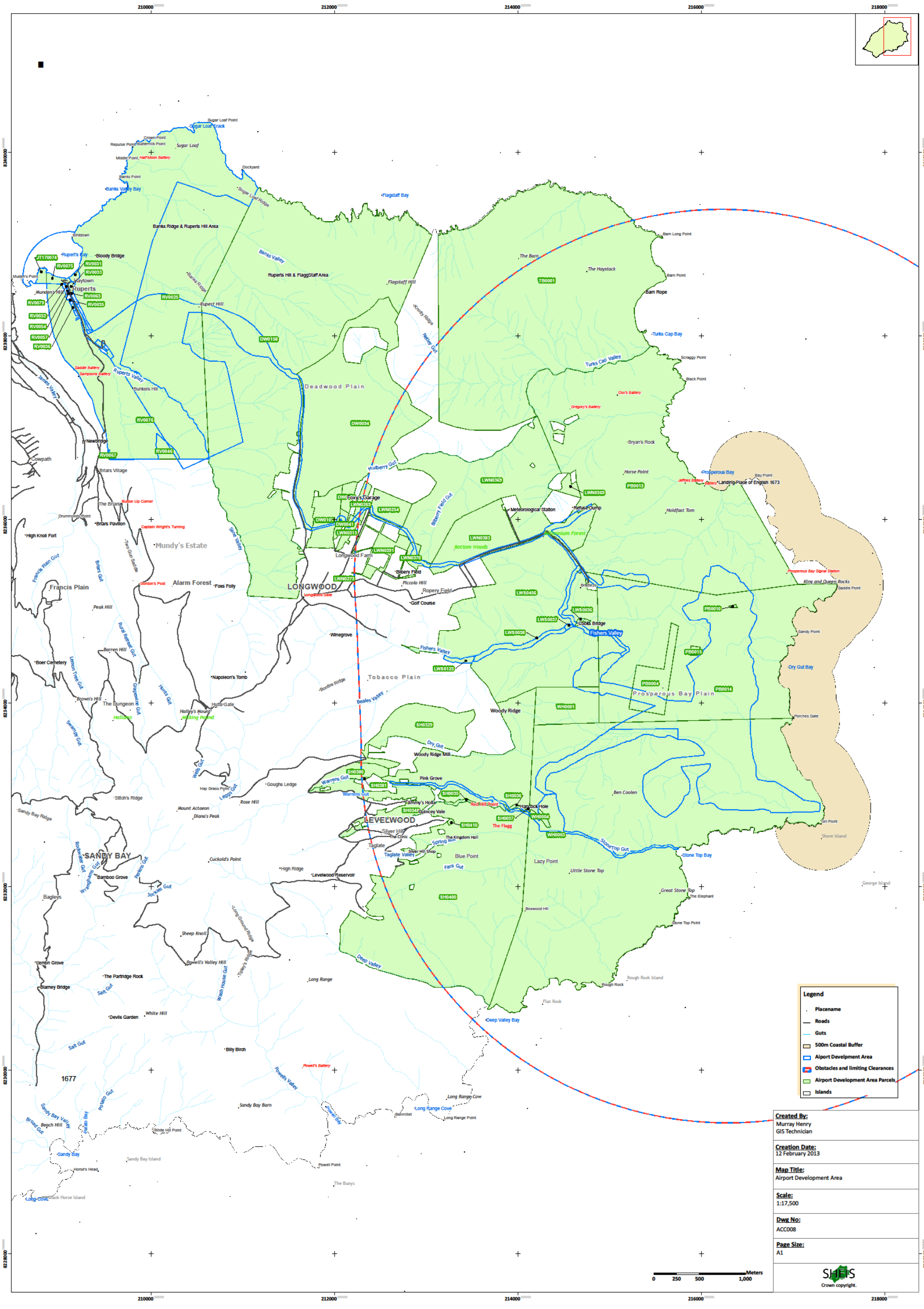
(2) Detailed designs for the external finishes of the terminal and combined buildings must be approved by the Governor in Council in accordance with the contractual arrangements mentioned above.

(3) If the Contractor's Designs vary significantly from the reference Designs separate Development Permission must be obtained.

Please find attached as requested, as requested, a copy of the document 'Air Access Development Permission Application – Moving Towards a Decision' as was circulated to Executive Council.

Clerk of Councils

Appendix 2: The Airport Development Area Order



Appendix 3: Representations Received on the Open Channel Proposal

1a. Extract from Letter from RSPB[9]

Diversion of the ephemeral stream in Dry Gut We understand that a culvert was not placed underneath the embankment being constructed in Dry Gut as originally planned, and that an alternative is therefore now required. The further loss of very rare ephemeral watercourse habitat in Dry Gut is a significant environmental cost in itself. We have additional concerns about apparent proposals to excavate an open culvert through into a neighbouring gut. This would significantly increase the impacts of the airport project on the environment as the site apparently being considered for the open culvert is of particular ecological value and appears very unlikely to be the least damaging option. We would be grateful if you could please let us know as a matter of urgency what environmental impact assessments have been conducted on this proposal , what alternatives have been considered, and what independent oversight has been shown by DfID on this matter. Such a site has not been properly investigated before due to its position on the very edge of the Airport Development Area. Questions also need to be answered as to what routes would be used to transport equipment to, and rock from, this site, the methods which would be used for excavation, and what consideration has been given to 21inimizing these wider impacts. At the very minimum, if it can be clearly demonstrated that no alternatives will be less environmentally-damaging, the destruction of such a site for the construction of an open culvert should only take place once the LEMP is fully operational and in a position to implement a rigorous mitigation programme for this area. Any excavation that takes place in this area before this is the case would be a cause for major concern .

1b. Extract from response to RSPB[10]

It is common for the design of a project to evolve and change in the course of a design and build contract such as the St Helena Airport Project. In the case of the Dry Gut fill and associated culvert, a review of the reference design presented several complications, particularly with regard to constructability and future maintenance. The Contractor subsequently developed a number of options including an open channel drain, or open culvert as referred to in your letter.

Under the original proposal, in excess of 600m of ephemeral stream would have been lost and replaced by a concrete culvert that would have been unlikely to sustain any flora and fauna for most of its course. We are therefore uncertain as to where the 'further loss', referred to in your letter, would occur.

In practice, the proposed open channel drain could (if selected) provide a beneficial impact as it would create a continuous open watercourse from upstream of the Dry Gut fill to the downstream channel. Furthermore, through careful design and maintenance this channel could become an ephemeral stream, once again providing habitat for species supported by the previous alignment.

During the development of such alternative proposals, the Contractor is obliged to consider

[9] Letter from Clare Stringer, Head of UK Overseas Territories Unit, Royal Society for Protection of Birds (RSPB) to Beverley Warmington, Director of Asia, Caribbean & Overseas Territories Division, Department for International Development (DFID), dated 21st May 2013.

[10] Return letter to that in (6) above dated 6th June 2013

all environmental, technical, economic and social aspects of each one. This includes a consideration of associated issues such as site access, equipment required and construction methodologies. Furthermore, any changes to the reference design need to be acceptable to the Project Management Unit, which provides independent oversight on behalf of DFID and the St Helena Government.

On your question about an EIA for the proposed change from closed culvert to an open channel drain, the environmental screening of this proposal by St Helena Government 's planning authorities indicated that there was insufficient evidence available to determine whether an EIA was required. In order to make this decision a baseline invertebrate survey was needed, as this area had not been surveyed previously. Basil Read commissioned an invertebrate survey and on the basis of the findings decided to commission an EIA. The EIA was undertaken by the CECO under the supervision of Basil Read's senior environmental consultant contracted from the Southern African Institute of Environmental Assessment. The results of this will be submitted by Basil Read to the Project Management Unit and then form part of the application for development permission. In addition to the normal development application process, further independent oversight is provided on behalf of DFID by the Project Management Unit's Environmental Monitor.

Mitigation of any environmental impacts of the construction of either a culvert or an open channel drain does not fall within the scope of the LEMP. This is entirely the responsibility of the Contractor, and implementation of mitigation measures will be monitored by the Project Management Unit.

2a. Extract from Letter from the St Helena National Trust[11]

We understand that assessments are on-going regarding the re-routing of the channel of Dry Gut, and that various options are still in consideration. Given that this development, the scale of which is likely to be substantial, was not proposed as part of the original planning and has neither been part of a full EIA or open to public consultation, we seek assurance that any new designs will be subject to such procedures, including the consideration of alternatives. We also draw your attention to the fact that the crest of Pig Hill, which would be destroyed if an open channel is routed through it, has already been identified as an important site for its ecological and landscape features, and we hope that these factors will be given high priority in the evaluation of the best approach to the realignment of the watercourse. Advantages of reduced maintenance to an open channel, the consequences of which may be felt for a decade or two, are trivial in relation to the long-term damage to the landscape of St Helena, which will last for millions of years. Neither is the provision of extra rock for the in-fill a reasonable justification for the damage to this site unless it can be proved that no alternative exist and can be extracted from a less damaging site.

We would like to know what was the scope of the EIA, what the findings of the EIA were and what mitigation has been identified. We also seek confirmation of who peer reviewed the EIA and whether the planning application will be gazetted so that the proposed development with its Environmental Statement, will be available for public comment in advance of a decision being made.

We are seriously concerned about the potential scale of the open channel which we perceive to be significant, but as we don't have information about it we are rather in the dark. Can we meet with the PMU to discuss the proposal?

[11] Letter from Dr Chris Hillman, Ag. Director St Helena National Trust, Dr Phil Lambdon, Andrew Darlow, Dr Rebecca Cairnswicks to Janet Lawrence, Director Air Access, dated 18 June 2013

2a. Response to the Letter from the St Helena National Trust

A site visit has been undertaken with two of the signatories to the letter from the St Helena National Trust and a formal written response is currently being prepared.

The issues raised in the letter are addressed within the ES Addendum. Furthermore, the Open Channel Proposal is not a significant deviation from the Reference Design. The Open Channel Proposal reflects a design change that is within the Airport Development Area. It is entirely in keeping with the original Development Application.

The original Development Application for the Airport Project was extensively consulted upon. The Airport Development Areas Order and the provisions of the LDCP in respect of the Airport were also extensively consulted upon. In light of this, it is not thought necessary to engage in further public consultation at this time.

The Planning Statement and supporting documentation will be made available for public information following consideration by Governor in Council.