

STATES OF GUERNSEY & STATES OF ALDERNEY

AN EXTENDED RUNWAY FOR ALDERNEY ECONOMIC AND FINANCIAL ANALYSES

FINAL REPORT

JANUARY 2017



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EXECUTIVE SUMMARY

- 1. York Aviation was commissioned by the States of Guernsey and the States of Alderney to undertake an economic and financial feasibility study to test and validate the potential benefits of investment in a runway extension at Alderney Airport compared against a baseline reconditioning of existing infrastructure at its existing length through resurfacing, widening and improving the drainage and lighting.
- 2. The incremental cost of extending the runway to allow larger aircraft to be operated is estimated in the range £11.49 to £19.05 million, once allowance is made for the additional costs of improving the terminal and enhancing security arrangements to permit larger aircraft to be operated. The wide range of cost is largely related to the assumptions made about the incremental cost of specialist runway construction works on Alderney, having regard to the need to import specialist labour and materials. We do not consider it prudent to assume that the project could be delivered at the lower end of the range. Based on updated information received from the engineering consultants, TPS, the baseline refurbishment works do not need to be enhanced now to facilitate a decision to extend the runway at some date in the future, albeit there would be additional costs to be incurred in future if the works are not undertaken concurrently.
- 3. Through detailed consultations with stakeholders on Alderney, we identified that there was a clear need for improvements to the reliability and peak period capacity of the air services compared to the recent service delivery and that these service improvements are essential in order to prevent further economic damage due to transport difficulties. However, the recent shortcomings in the reliability of the service are largely as a consequence of the difficulties experienced by Aurigny in transitioning from a Trislander fleet to a new fleet of Dornier228 aircraft, which will result in some capacity improvements once the transition is complete and reliability reinstated. The problems are largely unconnected to the length of the runway.
- 4. In order to test whether there is an economic case for extending the runway, the key consideration is whether a longer runway would enhance reliability and:
 - → deliver lower air fares
 - → deliver more seat capacity
 - → deliver higher frequency
 - → lower the cost of subsidies
 - → enable the operation of new routes
 - → translate to population and tourism growth

These form the key hurdles which the development of the runway extension would need to pass. We considered these issues under two broad headings; the effect on the pattern of air services and population and tourism growth.

Effect on the Pattern of Air Services

- 5. Our analysis of aircraft operating costs shows that, currently the market is simply not large enough to warrant the use of larger aircraft. If a longer runway did enable airlines to introduce larger aircraft, this would be expected to result in reduced frequencies of service to better match capacity to demand and be more likely to increase the costs of operating the routes to/from Alderney than to reduce them. There would be no scope to reduce air fares and the introduction of larger aircraft earlier than warranted by the market would result in higher operating losses for the airline concerned and potentially higher costs of subsidy. Our analysis suggests that, even at lower frequencies of service, there would be no scope for reduced operating costs to be passed onto passengers through lower fares until the total number of passengers using the routes to Guernsey and Southampton exceed c.82,000 annual air passengers, a level of demand not seen since 1995. This would require other economic factors to be addressed to deliver a population greater than 2,500 and tourist air passengers above 25,500 per annum. Even then, the routes would still be loss making and require subsidy.
- 6. Whilst an extended runway would offer airlines some greater flexibility in terms of using larger aircraft to meet specific short term peaks in demand and/or recover from delays and cancellations, such ad hoc operations are unlikely on their own to justify the costs involved in extending the runway. Refurbishment of the existing runway, including an improved surface and drainage, improved lighting and reinstated usable width, will improve the operational performance in any event, so contributing to improving reliability and provide a platform for an improvement in the quality of service based on a fully functioning fleet of Dornier228 aircraft.

Population and Tourism Growth

- 7. As the operation of larger aircraft, facilitated by a longer runway, would almost certainly lead to lower frequencies of service and with no prospect of lower air fares for the foreseeable future, it is difficult to see how any population or tourism growth on Alderney could be causally linked to extending the runway. Our analysis, on a conventional transport economic basis, demonstrates that economic welfare would be reduced, not increased, by facilitating the operation of larger aircraft in the short to medium term. Using conventional transport appraisal techniques, extending the runway would not deliver an economic return based on the target rate of return of 4.4% and would, in practice, have negative economic effects due to the expected reduced frequencies of service.
- 8. The States of Alderney and the Steering Group asked us to consider the circumstances whereby the extension of the runway might be justified if the wider benefits from increases in population or tourism could be directly attributed to its provision. For the reasons outlined above, our analysis suggests that it is not realistic to assume such causality due to the likelihood of reduced frequency of operations for the foreseeable future. Nonetheless, looked at in this way, the conditions under which extending the runway might deliver a return of 4.4% over 20 years would be if:

- ✤ it can be delivered at the lowest realistic cost (less than c.£13 million);
- → there is no consequential expenditure required to upgrade the terminal and security infrastructure to enable larger aircraft to be handled (or the costs are included within the capital cost ceiling above); and
- → assuming that the an increase in population of c.140 additional permanent residents over 10 years, and an increase in annual tourist visitors of c.1,100 over the same time period can be <u>directly</u> and solely attributable to the provision of a longer runway, i.e. without additional expenditure on such as high speed broadband, the electricity supply or improved tourist facilities.

Our analysis demonstrates the extremely low probability of any of these conditions being met in the foreseeable future.

- 9. Our recommendations are, hence, that:
 - → the case for extending the runway now would only be economically justified on the most optimistic assumptions about deliverability of population and tourism growth <u>directly</u> <u>related</u> to the extension of the runway <u>and</u> if construction of all of the required infrastructure improvements necessary to support the operation could be delivered at the lowest possible cost;
 - → these conditions are unlikely to be met given the higher costs of operating larger aircraft and the consequential effects on the frequency of service offered;
 - → the case for a runway extension should be kept under review and that the Option 3 works should be carried out in a manner which would not preclude the cost effective construction of a runway extension at a later date;
 - → all possible steps are taken to improve the reliability and capacity offered by the existing air services based on 19 seat aircraft to provide a platform for improving economic performance and delivering passenger growth.
- 10. In the light of the concerns about service reliability and resilience, it appears to us important that the refurbishment works (Option 3) are undertaken as soon as possible lest further delay, whilst the provision of an extended runway is deliberated, leads to the more occasions when the runway is not operationally fit for aircraft to land, resulting in further economic damage. We also recommend that consideration is given, as a matter or priority, to the imposition of a PSO on the routes serving Alderney in order to strengthen the incentives on the airline to deliver a robust, appropriate and resilient service.

1 INTRODUCTION AND BACKGROUND

- 1.1 In early August 2016, York Aviation was commissioned by the States of Guernsey and the States of Alderney to undertake an economic and financial feasibility study to test and validate the potential benefits of investment in a runway extension at Alderney Airport compared to a baseline reconditioning of existing infrastructure. The output of this work will be an input to the Outline Business Case (OBC) for investment, for which two of the key issues are affordability and value for money.
- 1.2 Seven options for improving the runway and airfield infrastructure at Alderney Airport have been developed by design consultants TPS, with options including works to one or more of the grass runways as well as works to the main runway. The range of options identified is:
 - → Option 0: Do nothing;
 - Option 1: Do minimal through patching and repair works, including widening the main runway to 23 metres, with an estimated life of up to 5 years;
 - Option 2: Reconstruct all paved surfaces at the airport and extend the main runway width to 23 metres;
 - Option 3: As Option 2 but with enhancements to improve runway lighting and more efficient drainage;
 - Option 4: As Option 3 but also to hard surface and extend the short grass runway to improve cross-wind capability;
 - Option 5: Extension of asphalt¹ runway to 1,100 metres from its existing 877 metres, with the width extended to 30 metres to accommodate larger GA and commercial aircraft;
 - Option 6: A hybrid scheme which delivers Option 3 with certain additional enhancements to the design to enable and minimise the costs and disruption of construction of a runway extension at a later date.
- 1.3 We understand that Option 0 was rejected early in the process as this would place the maintenance of air services to/from Alderney at severe risk due to the deterioration of the existing runway pavement.

¹ We were also asked to take account of the possibility of concrete construction at a lower cost but we understand from TPS that such construction is not likely to be a viable solution.

- 1.4 Our terms of reference (set out in **Appendix A**) require us to assess whether there is a prima facia economic case for an extension of Alderney's runway to 1,100 metres either now (Option 5) or as part of a phased approach (Option 6) against a baseline case of Option 3, comprising the reconstruction of the paved surfaces at the Airport, including widening the paved runway to 23 metres, to provide greater cross wind resilience, but without lengthening the runway². In the first instance, we are required to assess the case for an extended runway and, if a case exists, whether there is an economic argument in favour of completion of the works in a single immediate phase (Option 5) or safeguarded for implementation at a later date (Option 6). We have relied on cost estimates prepared by TPS, taking into account reasonable sensitivity tests. This is described further in **Section 4**.
- 1.5 The aim of our study is to identify which option is likely to deliver an optimum balance between cost and the broader benefit to the economy of Alderney and the Bailiwick as a whole. We understand that this is part of a wider initiative to improve the quality of air services serving Alderney, including the possibility of imposing a Public Service Obligation (PSO) on the existing routes to Guernsey and Southampton in order to ensure that an appropriate quality of service is provided at competitive fare levels with a view to stimulating greater use of the services for economic gain. Hence, ensuring that the Airport has the correct runway infrastructure to support these wider objectives is key. The study will examine the costs and benefits of the 3 identified options, having regard in particular to the potential wider economic benefits from allowing a greater range of aircraft types to serve Alderney.
- 1.6 A critical issue, therefore, is to consider the likelihood of airlines deploying larger aircraft on the routes now or in the short to medium term and whether the ability to operate larger aircraft would result in an improved quality of air service and/or at a lower cost. In particular, this requires consideration of each of the three identified options against:
 - → the potential for lower operating costs, on a seat-km basis, with larger aircraft which, if passed through to air fares, could result in higher demand, with consequential economic benefits;
 - ✤ the risk that the use of larger aircraft could result in lower frequencies of services with detrimental effects on patronage;
 - ✤ potential future changes in airline operating models and infrastructure requirements;
 - → the opening up of the market to airlines other than Aurigny, operating different types of aircraft and/or with different operating models, and which might enter the market competitively or compete to operate a PSO (potentially lowering the effective cost of any subsidy) if a longer runway was available;
 - → the extent to which a longer runway might open up the potential for additional routes and/or growth in passenger numbers.

² Consideration of the other options was excluded from our Terms of Reference.

- 1.7 Hence, a key requirement for our analysis was to develop scenarios of future growth with the different runway options in order to inform our economic assessment, taking into account the inherent uncertainties in developing such projections. This has required the assessment of the way in which the economic and social needs of Alderney can best be met through air service provision. It was, hence, recognised at the Inception Meeting that the question of the appropriate runway length could not be determined in isolation from the broader question of how to best secure the optimum service air service for Alderney in terms of the delivery of routes, frequencies of service and air fares. Understanding what level of service is likely to be delivered with each of the options is fundamental to the economic assessment.
- 1.8 Overall, the study objective is to assess whether an extended runway would deliver sufficient wider social and economic benefits to the economy over the life of the investment, specifically in stemming further economic losses on Alderney, so as to justify the incremental cost compared to Option 3 refurbishment. This requires the scope of the potential benefits and risks under each option to be clearly set out and quantified as far as possible, so as to form an effective weighted cost benefit appraisal, with the probability of benefits and risks clearly set out. In so doing, we have been required to give consideration to the strategic importance to the Alderney economy of air connectivity, including in relation to stemming population losses, sustaining and developing businesses on the island and growing tourism. Our assessment is required to take into account both direct and indirect effects, including the implications for the wider economy having regard to appropriate multiplier effects.
- 1.9 We have also considered how the development might be funded, taking into account the capital required and the alternatives available. As part of this, we have also taken account of the scope for charges to use the Airport to rise to fund all or part of the development costs and any consequential implications for growth in the air travel market if the costs are passed through to passengers.
- 1.10 The remainder of the Report is structured as follows:
 - → Section 2 we explore the economic context of Alderney;
 - → Section 3 we examine the current and historic use of air services to/from the island;
 - Section 4 we set out the options and their costs, including other costs associated with handling larger aircraft;
 - Section 5 we set out the potential pattern of air services under the three runway options and the implications for levels of demand;
 - → Section 6 we set out our assessment of the costs and benefits of the options;
 - → Section 7 we set out our analysis of the financing options;
 - → Section 8 we present the conclusions of our analysis.

AN EXTENDED RUNWAY FOR ALDERNEY – ECONOMIC AND FINANCIAL ANALYSES

2 ECONOMIC CONTEXT

2.1 Alderney is a very small island, with a population currently of just over 2,000 people³, resulting in a very 'thin' market for air services, notwithstanding the tourist influx in summer. This has implications for the level of air services which can realistically be provided, even on a subsidised basis. In this section, we set out our understanding of the current state of the economy and the emerging economic strategy to deliver growth.

Economic Issues

- 2.2 In their review of the Alderney Economy in 2014⁴, Frontier Economics noted an overarching trend of decline in both population and economic activity. These trends were expected to continue unless action was taken to reverse these trends. Key findings and recommendations from the Frontier Economics review were grouped around four key themes:
 - → Economic and population decline population decline was forecast to continue unless policy action is taken to reverse it, with particular attention focussed on the need to attract more young people to live and work on Alderney.
 - → Economic drivers the main economic drivers on Alderney were seen as public administration, business services, finance, eGaming, tourism and energy.
 - → Potential for economic recovery although signs were identified of recovery in a number of sectors, driven in part by resumed economic growth in the UK and in part by a number of initiatives already underway, caution was expressed that this may simply be cyclical change rather than an indication that there is sustainable structural change in the Alderney economy.
 - → Economic opportunities scope for change was identified building on exploiting one or two of a number of identified economic opportunities, particularly around tourism, business services, renewable energy and drawing on Alderney's recognised global strengths in regulation.
- 2.3 A number of recommendations were made, including:
 - → establishing an economic development strategy in Alderney based on more robust economic data;
 - → increasing resources to market Alderney to tourists and improve tourism data as part of a dedicated tourism strategy;
 - → marketing the ease of relocation to Alderney to businesses and individuals;

³ Alderney Electronic Census Report, 31st March 2015, Population snapshots and trends.

⁴ Alderney Economic Development Study, Frontier Economics, Draft Final Report, August 2014.

- ➔ exploring the scope for targeted tax incentives to attract business to Alderney;
- → seeking opportunities to improve ICT connectivity (e.g. to enable eGaming servers on-island) besides the possible FAB interconnector;
- → seeking to exploit any opportunities from UK and EU regulatory reform in the eGaming sector and using licensing fees generated to fund intangible capital investments;
- → identifying how best to interconnect Alderney with electricity supply from France before 2020;
- → exploring options to improve ferry connections.

Airport Issues

- 2.4 Issues around the Airport were considered separately in the Frontier Economics Report. In the first instance, there was a clear recommendation of the need to improve current facilities so that they are in line with regulatory standards and to reduce risks around weather- and infrastructure-related reliability. This basic requirement is covered by all options under consideration in this study.
- 2.5 The need for a longer runway to support the economic strategy was also discussed in the Report. Frontier Economics noted that the replacement of the Trislander fleet with Dornier aircraft did not appear to represent a significant threat to frequency, and would improve the quality and reliability of the service. They also stated that they did not consider the Southampton route to be at risk. Frontier Economics went on to note that the current facilities and runway length at the Airport provide the scope for significant passenger growth but that a longer runway, allowing larger planes to land, would tend to lead to a reduced frequency of service in the absence of significant market growth and entry by other airlines/new routes. Frequency of service was noted as important for business, tourist and residential travel to and from Alderney. Price was also recognised as an issue for air travel but Frontier Economics noted that, without a proven increase in demand, the larger aircraft facilitated by a longer runway may suffer low load factors, such that the cost per served passenger is no lower than currently.
- 2.6 Frontier Economics key recommendations regarding Alderney airport were for:
 - → the funding of the improvements to ensure regulatory compliance but that they were not persuaded, on the basis of evidence they had gathered, that an extended runway at Alderney airport is critical to unlocking economic potential in the sectors identified;
 - ✤ more detailed consideration of implementing a PSO for the Alderney routes to ensure that fares and frequencies reflect Alderney's economic needs;
 - ➔ further analysis of the extent of unmet demand on existing and new routes, with a view to re-examining the case for extending the runway in the future;

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- → any immediate improvements to the runway should not preclude its future extension.
- 2.7 In this study, we have set out to explore further the linkage between the runway length at the Airport and delivering the key economic recommendations.

Population Trends

- 2.8 A key issue identified by Frontier Economics is the reduction in population on Alderney and many of the recommended actions are aimed at reversing that decline through stimulating new economic activity.
- 2.9 The latest e-Census Report⁵ indicates a resident population as at 31st March 2015 of 2,020 based on those living on the island for more than half of the year and/or working on the island. It is believed that this data excludes second home owners. Population data is given in this report for the period since 2007⁶, as set out in **Table 2.1** below.

Table 2.1: Alderney Population 2007-2015								
2007	2008	2009	2010	2011	2012	2013	2014	2015
2,216	2,219	2,174	2,142	2,059	2,037	2,027	2,008	2,020
Source: Alderney e-Census								

2.10 Prior to 2015, population data was collected using a conventional 10-yearly census approach and historic data is set out in the Report on the Alderney 2001 Census⁷. Detailed figures are given at 10-yearly intervals from 1951. The historic trend is illustrated in Figure 2.1. What appears evident from the data is that the post-war peak in the recorded Alderney resident population was 2,294 in 2001, albeit it is unclear whether this may have included some second home owners. The decline in population since then appears, based on the data, to have been of the order of 12%, although in overall terms, population has been in the band 2,000 – 2,300 since 1981, albeit with year to year fluctuations in recorded population.

⁵ States of Guernsey Policy Council, States of Alderney, Alderney Electronic Census Report, 31st March 2015. ⁶ Information for earlier years is derived from social security records and some adjustments were made to reconcile to the e-Census approach from March 2014.

⁷ <u>https://gov.gg/CHttpHandler.ashx?id=5510&p=0</u>. It is less clear whether this earlier data did include second home owners.



- 2.11 The previous peak in population was c.2,500 in 1911 and the population had already declined substantially before the German invasion and this probably coincided with the peak of quarrying activity on Alderney. Prior to that, the population had briefly reached c.5,000 during the fortification of the island in the 1850s due to the temporary influx of construction workers.
- 2.12 A key consideration for this study is the extent to which the population decline reflects air service issues or is reflective of other issues such as the lack of fast broadband, electricity costs (reportedly most expensive in the world⁸), planning restrictions on new building or broader economic and social issues affecting island economies. This will be considered further in the next section in the context of the relatively recent manifestation of the air service issues compared to the medium term trend of population decline. Historic data would also suggest that recent/current levels of population, at over 2,000, are the highest which have been sustained for any length of time over the longer term in the history of Alderney.

⁸ http://www.bbc.co.uk/news/world-europe-guernsey-23432398.

Tourism Trends

2.13 Although the States do not keep detailed data on the number of visitors to the island, we understand from consultations and available data, that there has been a long term decline in tourism to Alderney, consistent with patterns seen across all of the Channel Islands. The recorded decline in visitors to Guernsey and Jersey may also have impacted on the number of day trip visitors to Alderney from these islands. We have estimated inbound visitor numbers as explained in **Section 3**, and these form the basis of comparison with the other Channel Islands in **Figure 2.2**.



2.14 Over the period from 1997, we estimate that visitor numbers have fallen by 53% to Alderney, compared to 30% on Guernsey, and 27% on Jersey, although the latter had also fallen by 30% to 2013, before recent up turns. Declines accelerated in the early 2000s as a result of structural changes to tourism more generally, driven to a large extent by the low fares carriers. The pattern of year on year changes is shown in Figure 2.3. The biggest declines were in the late 1990s and early 2000s, suggesting that these cannot be ascribed to the quality of the air service offer.



- 2.15 Among the structural changes which took place were:
 - → increased travel to Europe as the cost of air fares reduced significantly and could not be matched on UK regional routes;
 - → growth of the short break market, with moves away from conventional week-long holidays towards multiple short trips throughout the year;
 - → decision making driven by where cheap air fares are available to, rather than the actual destination, with travellers choosing to focus their spend on higher quality hotels and restaurants on arrival;
 - → a move away from repeat visits annually, as the number of routes increased significantly from across the UK;
 - ➔ growth in independent travel, with tourists moving away from inclusive tour package holidays towards independent travel arrangements (flights and hotel separately).
- 2.16 Historically, the product offered by the Channel Islands had largely been focused on repeat visitors from the UK, making longer stays of one to two weeks. Consequently, the product offered has become out of line with the changes over the period since the early 2000s. All three of the key Channel Islands have made changes to their products, with Jersey and Guernsey in particular seeking to develop products better aligned to the broad changes in travel patterns. However, even given these improvements, it is unlikely that either island would be able to restore visitor numbers to historic highs. The same is almost certainly true for Alderney, despite targeted growth for the island, such as in niche markets for example wildlife related visitors.

2.17 Running in parallel to the changes in tourist preferences and decision choices has been a decline in the bed stock on Alderney, as can be seen in **Figure 2.4**. There is some lag between the decline in visitor numbers and the decline in available bed spaces. Anecdotally, we understand from consultees that as tourism declined and bed occupancy levels fell, this was the point at which some accommodation dropped from the market, suggesting that bed spaces have followed demand, rather than the other way around. It could, therefore, be expected that if demand did appear to increase, it is likely that there would be an equivalent increase in bed spaces in the market. However, the key point is not so much the number of beds but in the nature of the offer, with short break consumers requiring a different product, e.g. spa facilities, high quality dining etc.



2.18 Although the bed spaces shown above are based on those officially registered with the States, we understand that there remains an unofficial market for rooms, often where former guest accommodation has retained the ability to offer stays to previous visitors who book directly. This may mean that the decline in available space has not been as dramatic over the last few years as official data suggests. However, we understand that, in reality, most of this bed space is only available during Alderney week and, as it is not advertised or visible to non-repeat travellers, such accommodation is unlikely to be seen as a way to drive forward growth in tourism. Equally, lack of bed spaces currently is unlikely to be a reason for low tourist numbers.

2.19 During consultations, we were made aware that there was a perception that some hotels had suffered from lost bed nights and revenue during 2016 due to unreliability and capacity constraints to and from the island. We discussed this with the Braye Beach Hotel and were told that the issues mainly related to the high number of cancellations in the early part of the summer, which we consider further in Section 3. However, it was acknowledged that, by August, service reliability had improved to more normal levels. In considering availability, it was highlighted that many inbound visitors book well in advance, so availability of seat capacity had not been a significant issue overall for their tourist visitors. The relatively high costs of air fares were viewed as being unattractive in expanding the market but, in part, this reflected the contract arrangements between Aurigny and Braye Beech, which did not provide the lowest possible fares. Hence, the hotel decided to suspend its block booking agreement with the airline in favour of allowing individual customers to avail of the lowest air fares in the market through advance booking.

Emerging Economic Strategy

- 2.20 Following on from the Frontier Economics Report, an economic development plan is being developed with the aim of securing growth of the economy. A key part of the economic strategy is a target to see the permanent population on the island increase to 3,000, on the basis that this is believed to represent a sustainable population having regard to housing stock and other infrastructure and of sufficient scale as to be self sustaining. In the light of the historic population trends, this is an ambitious target as it would represent a level of permanent population on the islands not seen since the fortification works in the mid 19th century and substantially higher than achieved at any time in the period since the German invasion.
- 2.21 A number of actions have been identified towards achieving this aim:
 - → Improving Transport, including:
 - improving the Airport and securing better services from Aurigny and/or through a PSO;
 - reinstatement of the 'Bumblebee' ferry from Guernsey;
 - improvement of the freight service through re-tender;
 - → Improve digital connectivity, including:
 - Provide fit for purpose broadband across the island to support technology dependent business;
 - ✤ Modifications to the financial relationship with Guernsey;
 - ➔ Development and implementation of a tourism strategy;
 - ✤ Encouraging the re-location of high net worth individuals to Alderney;
 - ✤ Exploiting regulatory opportunities to develop new digital businesses;

- → Facilitating growth in maritime industries;
- → Developing apprenticeships and entrepreneurship.

Transport Policy

- 2.22 To accompany the Economic Development Plan, a Transport Policy is being developed. The draft Policy notes that the population is in decline and that this can only be halted by making Alderney a more attractive place to do business which requires, amongst other things, improving transport links. New businesses will bring in new residents, who will spend money in the local economy and who will pay local taxes, fees and charges so generating revenues for the Bailiwick.
- 2.23 The draft states that "In order to bring about the economic development that we all desire, significant investments are now needed, particularly at our airport. While improved air-links will not guarantee economic development, we believe that, without them, there cannot be the development we all now need."
- 2.24 The draft Policy goes on to discuss the historic performance of the air service, noting that:
 - → the number of air passengers and visitor numbers have been in decline since 1990;
 - ✤ the cost of getting to and from our island is high when compared to the costs of travelling to other European destinations, which is attributed in the draft Policy to:
 - the small aircraft traditionally operating in and out of our island having high costs per seat-mile;
 - traffic volumes varying considerably by season and by days of the week;
 - lack of competition to Aurigny and the airline's financial challenges within the public ownership regime;
 - the state of the Airport, including the length and width of the runway limiting potential operators.
- 2.25 Nonetheless, it was noted that there were key questions which needed to be addressed before it could be determined which runway rehabilitation option should be adopted:
 - → are the additional costs in constructing a longer runway likely to lead to a sufficient reductions in fares if larger aircraft fly in?
 - ✤ given the thin market, would Alderney be happy to trade a small reduction in the frequency of flights for cheaper air fares?

These are questions that we set out to address in this study.

2.26 The draft Policy also envisages the States of Alderney taking control of the operation of the Airport (albeit a commercial operator might be appointed), as well as assuming responsibility for establishing a PSO for the delivery of the air services to the required standard. We understand that the terms by which such a transfer of responsibility would be achieved are under discussion between the States of Alderney and the States of Guernsey as part of the broader discussions about the financial relationship.

Stakeholder Views

- 2.27 A number of stakeholders identified by the States of Alderney were consulted either face to face in August 2016 or through telephone calls. A list of stakeholders consulted is attached at **Appendix B**.
- 2.28 Throughout the consultations, there were a number of common themes and a number of common views, although some consultees had differing views across a broad spectrum of issues in relation to the air service offer and the need, or otherwise, for a runway extension. It is notable that more consultees wanted to focus on the short term air service problems than on the long term relationship between air service provision and economic regeneration. There were, nonetheless, strongly held views on the current air service offer and its perceived deficiencies in terms of providing the service required by Alderney.
- 2.29 Virtually all consultees highlighted the significant reliance of the island on air services, being the only means of accessing Alderney, without the alternative of a regular ferry service as seen to other islands such as Guernsey, Jersey and the Isle of Man. Overall, consultees considered that the economic and social wellbeing of the island is completely reliant on good air links. However, whilst some consultees felt that air services were the number one issue in trying to regrow the population and increase business on the island, this was not a universally held view. Other material factors affecting the potential to grow the population were identified, including the need for greater broadband speed and reliability, improved electricity supplies, improved healthcare and education services, and relaxation of planning controls. There was also a focus on 'lifestyle' as an attractor of new residents, with stakeholders identifying the potential for Alderney to be attractive to those in creative industries, such as artists or those working in the IT sector, for which homeworking would be an option. However, whilst quality air transport access was seen as an important part of this 'lifestyle' vision, there is also a pre-requisite for high speed broadband and other basic infrastructure improvements before such people could be attracted to live on Alderney.

- 2.30 Whilst consultees held the view that the island was unattractive for businesses looking to relocate due to the current quality of air services, practical examples were also given of businesses that could not be attracted to the island because of the other identified issues, including in the eGaming industry, where a number of facilities have been established on Guernsey, though regulated by Alderney, because of the reliability of the broadband and electricity there. Indeed, in some cases, the power grid was highlighted as the number one issue, rather than air service provision at present. Nonetheless, some consultees highlighted that, as their businesses are split between Alderney and Guernsey, they are more inclined to grow the Guernsey element because of the greater air service reliability from the latter.
- 2.31 Based on these examples, it is clear that a number of criteria need to be met to allow for the growth of the population and, therefore, not all economic benefits from population growth could realistically be ascribed to improved air services. This goes to the heart of whether the quality of the air service offer is either a necessary or a sufficient condition to secure population growth and how the benefits of population growth can be attributed in our appraisal.
- 2.32 Consultees recognised the decline in both visitor numbers and hotel bed spaces and, in some cases, highlighted a perceived circularity between the air service offer and tourism offer of the island. Some consultees pointed toward a more general shift in travel patterns, away from traditional destinations such as Alderney, mirroring what has been seen across Jersey, Guernsey and the Isle of Man over the last 20 years. On the whole, however, consultees believed that improved air services would encourage more visitors to the island, which would itself halt the decline in bed spaces as islanders would look to capitalise on any increase in demand. Some consultees pointed to a perceived vicious circle of declining bed stock because of lower demand, which in itself meant that there were then insufficient bed spaces when demand was higher, resulting potentially in some visitors being turned away. Consultees highlighted, in particular, that there was insufficient air service capacity to enable all visitor demand during Alderney Week. However, it was noted that, to some degree, this demand is often driven by second home owners and their family/guests rather than visitors requiring more conventional holiday accommodation. Overall, it was clear that the lack of a clear tourism strategy and uncertainty over how Alderney's product offer fits within the current tourism market was a key factor in the decline in tourist numbers, regardless of the air service offer. The lack of capacity is largely, but not entirely, specific to Alderney week and concerns have been exacerbated by recent reliability issues.
- 2.33 What is clear from the consultations is that the current air service provision is not meeting the needs of the economy or residents of the Alderney. All consultees highlighted increases in air fares, reduced seat availability for sale, reduced reliability, and an inability of the airline to clear any back log of delayed passengers within a reasonable period of time. The period over which this degradation has happened was viewed as between 18 months and 6 years depending on the consultee, though the majority pointed to the last 2-3 years as being the period over which real problems with the air service provision may have impacted on business and tourism.

- 2.34 Key points made by consultees in relation to air service availability were:
 - ➔ Business users suffer from lack of availability as their booking window is often shorter, and flights are often sold out by the time they know they need to travel;
 - ✤ Resident business users increasingly now travel a day or more ahead in order to ensure users reach their destination, adding cost to their journeys in order to stay in hotels and reducing productivity overall;
 - → Business visitors may be reluctant to travel to Alderney as flight timings are not convenient and can lead to a loss of productive working time. The problems are compounded by the risk of flight cancellation. Flight connections to other services are not optimised.
 - ✤ Not being able to efficiently get on and off the island is a key bottleneck in trying to attract business growth on Alderney;
 - → There is no flexibility to cope with the peaks and, even outside of the peak periods, there remains a shortage of seats at times. However, it was acknowledged that it is difficult to fill flights during the winter months.

As a consequence of these problems, some businesses have taken to meeting their customers on Guernsey so as to bring people to the Channel Islands, but remove the risk associated with the last hop to/from Alderney.

- 2.35 Consultees highlighted the problems caused by the high number of flight cancellations, although it was recognised that these were partly related to weather (with an acknowledgement that low cloud and fog has been unusually high in summer 2016). However, it was evident that there had been a substantial number of cancellations due to difficulties arising from the introduction of new aircraft, with their own unreliability issues, which were then exacerbated by insufficient crews qualified on each aircraft type (Dornier/Trislander) to allow short notice changes to the schedules. The Braye Beach Hotel indicated that it had suffered lost bed-nights as a result of cancellations and that, during the early part of the summer 2016, this was well beyond levels previously seen. However, it was acknowledged that moving into August the problems had eased but that, nonetheless, over the year as a whole the business had suffered.
- 2.36 Compared to previous years, consultees indicated that historically there had been sufficient suitable aircraft in the fleet to allow Aurigny (and previously Blue Islands as well) to put on extra flights and catch up with any back log in passengers arising from flight cancellations. This is no longer the case as the Trislander fleet has been retired as the aircraft are near the end of their operating life. The current fleet is more limited in scale, giving less flexibility to deal with unforeseen circumstances. Consultees suggested that, in some cases, this uncertainty suppresses demand further because those living on the island now travel less for fear of not being able to get back onto Alderney.

- 2.37 When we probed consultees on what a good air service offer would be like, the majority of consultees were adamant that frequency should not be compromised and must be maintained at current levels as a minimum. However, overall reliability and seat availability needed to be improved but without sacrificing the current frequency of service. Nonetheless, some consultees felt that lower frequencies could be accepted if it would improve reliability and ensure greater seat capacity at peak times. One consultee even suggested that a single daily service would be better if the reliability could be guaranteed. There appears to be a greater tolerance for reducing frequency on the Southampton route, but high frequencies of service to Guernsey were seen as vital to enable business, health and personal trips to best be managed, with short face-to-face meetings important for business users. Some consultees suggested that additional frequency may be the best way of delivering extra capacity overall, albeit ideally with a way of providing a further boost to seat capacity during peak periods such as through the use of larger aircraft off a longer runway for key weekends in the summer period.
- 2.38 It was highlighted that reliability issues go beyond capacity and cancellations, extending to aircraft weight restrictions on the some of the Dornier fleet, often leading to passengers or bags being offloaded, and prohibitive weight restrictions applied to baggage that were inconsistent with the requirements of passengers leaving or visiting the island for any extended period of time. We understand, from discussions with Aurigny that these specific issues relate to the older Dornier aircraft and that the newer version (with another to be delivered) can operate unrestricted in all conditions over the relevant sector lengths from Alderney.
- 2.39 As with frequency, there were mixed views on air fares, although again there was an overarching agreement that fares had increased over the last few years and are currently too high. (Although this may simply be a product of the requirement imposed on Aurigny to behave more commercially.) Some consultees indicated a willingness to accept a premium for air services in recognition of the other 'lifestyle' benefits of living on an island. These consultees tended to identify that fares were ultimately less of an issue than reliability and availability, particularly for business users. Others, however, felt that high air fares disadvantaged some on the island, including critical key workers and made it a less attractive place to live, thus damaging the sustainability of the island. In most cases, it was felt that air fares were a deterrent to growing visitor demand and some felt that residents have been driven away by higher fares, making living on the island too expensive. Indeed, a combination of air fares and service quality were claimed by one consultee to be the biggest single reason for houses being up for sale on the island, although this comment covered second homes, as well as main residencies, as the island became harder and more costly to access for those seeking breaks in second homes at short notice.

- 2.40 In terms of the range of air services, most consultees were satisfied that links to Southampton and Guernsey were adequate for the Island's needs. The links and need for the Guernsey route are clear, satisfying both social and economic needs. Southampton was flagged as being the critical link to the UK, offering a great service for those accessing London due to the proximity of the rail station to the terminal at Southampton. Indeed, it was felt that Southampton was a better alternative for the island than direct flights to London. It is noted that flights to Guernsey do not offer good quality onward connections, with flight schedules not well timed in either direction to a number of destinations. In particular, the flight timings do not allow convenient travel to/from London Gatwick, which many islanders use to access leisure flights into Europe and beyond. Some consultees had aspirations for the range of air services to be expanded, with Jersey having the most support as there are business links, with some companies active across all of the Channel Islands, and the route had previously been served prior to 2006. It was felt by some that a direct link to Jersey could offer more connecting opportunities than Guernsey because of a greater range of airlines and destinations served. A number of users already use light aircraft to take them to Jersey so as to avoid long connections at Guernsey. Others suggested that Exeter and Cherbourg could offer new opportunities, with the latter felt to offer both business and tourism potential.
- 2.41 Consultees also raised concerns about the provision of Medevac services from Alderney, and the reliance on the current fleet of aircraft, which offered no actual medical facilities on board and required patients to be placed on stretchers on the floor. With health access being one of the key concerns previously highlighted, it was felt that this is not adequate and that it was an issue for some visitors to the island. There is a view among some stakeholders that access to the medevac aircraft based at Guernsey would provide a better service, but that the aircraft cannot land on the current runway length.
- 2.42 There were mixed views on the perception given to business travellers and tourists by the small aircraft that serve the Island. Overall, there is a feeling that the Trislanders, and their continued usage, do not give a good impression at all and that some travellers do not like the alternative Dornier aircraft either. Others, however, felt that the new Dornier aircraft gave the impression of just being a small airliner and did not present an image problem, being a significant improvement over the Trislanders.
- 2.43 In relation to an extended runway, consultees had mixed views on what it might offer. Key themes that were expressed by a number of consultees included:
 - → Larger aircraft could bring lower fares because of lower seat-mile costs;
 - → Larger aircraft could be more reliable in stronger crosswinds;
 - → An airline could operate smaller aircraft for most scheduled services, but then use large aircraft to cope with peak flights or to provide extra capacity to clear any back log arising from delays/cancellations.

- 2.44 However, other consultees expressed the view that it would be better to improve the current air service and get a return to growth in demand to prove the case for then extending the runway. A number of consultees recognised some tensions over what a runway extension could deliver, with a number acknowledging that, despite positive hopes, in reality there could be some frequency reduction and air fare benefits may be hard to deliver due to too many seats still being empty on most flights, even if demand could be increased.
- 2.45 A number of stakeholders felt that further niche opportunities could be facilitated by having an extended runway, in particular the ability to hold functions and conferences on the island requiring larger groups of visitors to be ferried in, so providing an opportunity to fill bed spaces outside of the peak season. It was envisaged that larger aircraft could be chartered in their entirety to bring groups to Alderney.
- 2.46 In addition to being able to handle the Guernsey based Medevac aircraft, it was highlighted that the runway extension may allow some additional corporate aircraft to use the island, making Alderney attractive to high net worth individuals as a place to be based for tax purposes, or to seek second homes. The scale of this was not quantified.

Conclusions on Economic Issues

- 2.47 It is evident that there are strongly held views that the current air service offer is deficient and is a factor in the economic decline of Alderney. However, it is clear that there are other factors impacting on the ability to turn the economy around and attract more residents to live on Alderney. Key amongst these are high speed broadband and electricity supplies.
- 2.48 The aspiration to grow the population to 3,000 residents is very ambitious and its achievability needs to be seen in the context of the broader list of requirements set out in the emerging economic strategy. Similarly, increasing visitor numbers will require a coherent tourism strategy, addressing other aspects of the product as well as the air service offer.
- 2.49 Key questions for us to consider, therefore, are:
 - → whether improvements to the Airport by way of a longer runway would lead to improvements in the air connectivity offered to Alderney and at what cost?
 - → the extent to which any improvements would represent either a necessary or a sufficient condition to deliver the desired improvement in economic performance and growth in population.

The answers to these questions are material to the level of benefit which can be ascribed to investment in the Airport infrastructure on its own, in isolation from the other required infrastructure improvements.

3 CURRENT AIR SERVICES

Historic Levels of Air Travel Demand

- 3.1 We have been provided with data on the passenger traffic using Alderney Airport since 1970 by Guernsey Airport. We have used this to analyse historic trends.
- 3.2 In the first instance, we have sought to understand how much of this traffic might be driven by the level of population and businesses based on Alderney, i.e. the sustainable year round level of demand, and how much represents the seasonal tourist flow. Our hypothesis is that levels of demand in the Winter period November to March represents the sustainable year round level of demand driven by largely population and business activity on Alderney, with additional demand in the summer representing inbound leisure tourism in the main. We have segmented the total airport traffic accordingly, taking the average of the winter months as a proxy for the year round 'residence based' demand. The results are illustrated in **Figure 3.1** along with population data.



3.3 Unsurprisingly, there is a relatively strong correlation between the level of 'residence based' demand and resident population. The correlation is illustrated in **Figure 3.2**. Whilst clearly, growth in population and business activity on Alderney leads to more passenger demand to use the air services on a year round basis, it is not possible to infer causality as between the air service offer and the likelihood of the population rising or falling for the reasons we identified in the last section. We explore the drivers further later in this section and in considering the viability and feasibility of air service options with and without a runway extension in **Section 5**.



3.4 Although some additional information is available on the types of passengers using the service in July/August 2016 based on the Alderney Travel Experience Survey⁹, this is not representative of year round travel patterns. During the survey period, the characteristics of passengers can be broken down between those inbound to Alderney and those resident and also by purpose. The results are summarised in **Table 3.1**.

Table 3.1: Passenger Characteristic Summer 2016						
Inbound Leisure	Inbound Business	Resident Business	Resident Medical	Resident Leisure		
61%	10%	3%	6%	19%		
Source: Alderney Travel Experience Survey						

⁹ A self completion questionnaire handed out to passengers using the air services and the Bumblebee ferry between 1st July and 9th August 2016.

- 3.5 This data suggests that 71% of passengers during the summer peak period¹⁰ were inbound to Alderney, of which 61% were leisure tourist visitors. Overall, 13% of the traffic during this period was travelling for business purposes. We understand from our consultation with Aurigny, discussed further below, that there were quite severe weather problems during this period which resulted in a high number of cancellations. Whilst this is unlikely to have impacted on inbound visitors pre-booked and committed to staying on the island during this time, it is likely to have deterred some last minute resident trips or day visitors where flights were cancelled at short notice and alternatives were limited. Overall, in July 2016, out of the 6,471 passengers using Alderney Airport, the survey would indicate that almost 4,000 of these were inbound leisure visitors.
- 3.6 Traffic to/from Alderney is highly seasonal, as illustrated in **Figure 3.3** showing the seasonal pattern in recent years. This highlights the concentration of demand in the seasonal peaks in July and August, which are even more prevalent on the Southampton route than the Guernsey route.



¹⁰ The survey period included Alderney week with exceptionally high levels of inbound demand.

- 3.7 As is evident from Figure 3.1, inbound leisure visitors historically made up a much higher proportion of demand, with leisure tourism related trips reaching over 50% of total annual demand in the late 1970's falling to under 30% of the market in recent years (estimated 27% in 2015). A key consideration is the extent to which this is a function of the frequency, quality or price of the air service or reflective of other issues both local and generic to the British Islands.
- 3.8 It is likely that the seasonality was even greater in earlier years when the proportion of inbound leisure visitors was much higher. This will have presented even greater challenges for the operator of the air services in terms of operating additional flights to meet peak period demand whilst maintaining service on other routes, as airlines do not operate with large amounts of spare capacity available to be deployed on an ad hoc basis during the peak of the summer. Even at current demand levels, the extreme seasonal peak creates problems for Aurigny in matching aircraft capacity to demand and would create similar problems for any other airline that entered the market unless they were willing to switch aircraft capacity away from other profitable routes (operated commercially) during the height of the summer demand peak across the whole of the UK.

Historic Patterns of Air Service

3.9 The dominant carrier serving Alderney over the last ten years has been Aurigny, though supplemented by Blue Islands¹¹ from 2007 to 2011. Throughout this period, the core routes have been those to Guernsey and Southampton, with the latter viewed as the key routing to London, taking advantage of short rail times directly from Southampton Airport. Blue Islands also operated on the Guernsey route, and supplemented this with flights to Jersey, Bournemouth and Shoreham, with the latter two points adding to the options for inbound tourism. The impact of services from Blue Islands can be seen in **Figure 3.4**. We are aware that a route to Jersey had operated previously, carrying over 15,000 passengers a year in the mid-1990s but demand levels had fallen away before the Blue Islands operation commenced, which may be connected to the fall in tourism to Jersey, limiting the pool of potential day trip visitors to Alderney.

¹¹ Blue Islands took over the Rockhopper business but we refer to Blue Islands covering both operations.



- 3.10 Although there was an initial drop in overall capacity to Guernsey following the suspension of services by Blue Islands, Aurigny has recently increased planned seat capacity on the this route in both 2015 and 2016. We recognise that Figure 3.4 does not reflect actual cancellations, aircraft changes (i.e. where smaller Trislanders have replaced Dorniers) or restrictions on bookable seats (for weather or weight considerations), which will have restricted actual departing seats to lower levels than shown. By 2016, the number of seats available on this route was scheduled to be at its highest since 2009.
- 3.11 Over the period from 2007, scheduled seat capacity to the UK has seen a decline, from a high of nearly 31,000 departing seats in 2008 to a low of 15,200 seats in 2014. However, scheduled seat capacity has increased steadily again, growing by 21% between 2014 and 2015, and then again by 2% in 2016, putting UK capacity back above levels seen in 2007. Once again, this data will not reflect cancellations, aircraft changes or bookable seat restrictions. However, it is also likely that any additional flights, added at short notice, will also not be included in this data.

- 3.12 Based on the aircraft sizes indicated within the OAG database, capacity to/from Alderney is scheduled to be at its highest level since 2011, at 102,000 two-way seats. We go on to consider this in the context of actual flown capacity below by reference to data provided by Aurigny and the Airport.
- 3.13 Due to the seasonal nature of demand, Aurigny plan seasonal schedules to reflect this as far as they are able. Typically, on the Guernsey route, during the winter the airline plans to operate 4-5 departures per day (weekday) from Alderney, increasing to 6-7 per day during the peak summer months. On the Southampton route, the typically winter (weekday) schedule has just 2 flights a day, increasing to 3-5 over the summer period. The planned schedule for summer 2016 saw peak schedules of 9 flights per day to/from Guernsey and 8 flights per day to/from Southampton.
- 3.14 However, even within these bounds, the carrier has some fleet flexibility to add additional services, either to provide a 'catch-up' service after weather delays or to increase capacity further at times of high demand. Reflecting this, to the end of August in 2016, the carrier peaked at 11 daily departures to Guernsey and 9 departures to Southampton.
- 3.15 Since 2010, passengers on both core routes have declined as can be seen in **Table 3.2**. Over the five years, the average annual decline has been 3.5% on Guernsey and 2.4% on Southampton, although the latter did rise slightly in 2013, before continuing to decline to a low of 24,000 passengers in 2015. This is despite the marginal increase in planned seat capacity in the year.

Table 3.2: Annual Passengers							
	2010 2011 2012 2013 2014 2015						
Guernsey	42,800	42,400	38,900	36,700	36,900	35,800	
Southampton	27,200	27,100	24,900	25,900	24,400	24,000	
Source: CAA Statistics							

3.16 We recognise that services to Jersey, Bournemouth and Shoreham have previously been operated. However, in the last 10 years, the volumes of demand even for the Jersey route appear quite low, generating only a 21% load factor across 2007 and climbing to 47% in 2008 against a backdrop of significantly reduced capacity. This illustrates the difficulty in sustaining services on a viable basis for any airline. The fact that the airlines have not continued to operate these routes is a function of commercial viability, in the absence of subsidy, rather than constraints of aircraft type and runway length.

- 3.17 As highlighted by consultees, it is perceived that, despite the apparent increase in planned capacity noted above and the reduction in flown passenger numbers, seat and flight availability and reliability has dropped over the last 2-3 years or so. To test this, the Airport has provided data on actual movements flown and passengers on each aircraft. This data indicates the possible levels of seat restrictions arising from the factors outlined above. Given the variability in Aurigny's bookable seat numbers, we have applied two seat capacity factors to this data for comparison:
 - → First, assumed seating capacity in line with OAG¹², to indicate the theoretical scheduled seat capacity for direct comparison; and
 - → Secondly, restricted seat capacity for individual aircraft registrations based on typical bookable seats/passengers carried by each.
- 3.18 Although some uncertainties remain, this analysis does provide a reasonable way of comparing actual to scheduled capacity as any variance should be systematic. **Table 3.3** shows the results.

Table 3.3: Ratio of Flown Capacities					
	2013	2014	2015	2016*	
OAG Scheduled Capacity	94,650	87,090	99,396	71,128	
Flown Capacity (OAG Equivalent Seat Capacities)	118%	125%	105%	92%	
Flown Capacity (Most Likely Seat Capacities)	111%	118%	99%	85%	
Note: *Part year only Jan-Aug					
Source: OAG, ACI Airport, York Aviation					

3.19 This does suggest that through 2013 and 2014, extra services or seats were delivered above those shown in the OAG database and that, by 2015, the carrier was not adding significant extra seats or flights beyond those typically bookable for each aircraft. Over the first 8 months of 2016, the difference has been more significant, with overall capacity falling well below that published by the carrier in OAG for the period. One of the reasons for this is that, within OAG, the carrier indicates that Dornier aircraft will operate the majority of services but, in fact, a large number have continued to be flown by the Trislanders (in part due to 'teething problems' with the Dornier operation considered later in this section), which leads to a shortfall against the apparent plan and almost certainly cancels out the increases in planned capacity in the last two years indicated in Figure 3.4.

¹² Online airline guide.

- 3.20 A similar analysis for movements shows that the carrier flew 104% of scheduled flights planned in 2013, increasing to 111% in 2014 before falling again to 107% in 2015 (though a higher ratio than 2013) before a further decline to 98% in the first 8 months of 2016. This is important because, whilst the capacities shown in Table 3.3 are impacted by the swap from Dorniers to Trislanders, the movement data points to not backfilling all seats and flights after cancellations as well.
- 3.21 The comparisons between scheduled capacity/flights and actual flown capacity/movements does seem to confirm that there are problems with the air service offer to the island at present. It would appear that unreliability of bookable seats (or usable seats where passengers are offloaded), cancelled flights and the lack of backfilling of all cancelled capacity generate levels of uncertainty in the air service as highlighted by consultees. We will explore these issues further below.
- 3.22 What the evidence shows is that the steps being taken by Aurigny to improve the service through the introduction of the Dorniers have not been effective to date. If anything, capacity and reliability have declined since 2014, up to which time there is evidence of the airline putting on extra flights to ensure that demand could be accommodated. However, these issues are related to the specific difficulties with the aircraft rather than to the specific issue of runway length.

Propensity to Fly

3.23 Despite the recent declines in air service provision and usage, it must be recognised that there is a very high propensity to fly from Alderney, albeit that we recognise that this stems in part from a lack of an effective passenger ferry alternative. In 2015, there were 29.6 air passenger journeys per head of population on Alderney, significantly above that seen on other islands, as shown in **Table 3.4**. Although some of the comparators also have reasonable sea links, the difference remains significant, with Alderney close to double the next comparator, Jersey.

Table 3.4: Propensity to Fly Comparison by Total Air Passengers							
	2015 Air	2015 Population	Pronensity to Fly				
Alderney	59,843	2,020	29.6				
Jersey	1,554,390	102,700	15.1				
Tiree	9,856	653	15.1				
Guernsey	891,616	63,001	14.2				
Islay	29,346	3,228	9.1				
Barra 10,658 1,174 9.1							
Isle of Man	781,601	88,259	8.9				
Stornoway 127,282 21,031 6.							
Source: CAA Statistics and Local and National Government Data							

3.24 The high propensity to fly indicates a market that is relatively mature, reflecting the fact that when residents need to leave the Island, they only have one practical option and, therefore notwithstanding current availability issues, they already chose air services. Such markets are typically difficult to stimulate, particularly for outbound travel by residents.

Recent Air Service Problems

Change in Aircraft Type

- 3.25 The introduction of the Dornier 228 aircraft to the fleet appears to have been a factor in recent declines in the quality and reliability of service provision for a number of reasons. Aurigny started by introducing two used aircraft (now currently 28 and 31 years old) and supplemented these with a third, brand new aircraft, in 2015. A second brand new version is on order for delivery in Spring 2017.
- 3.26 However, in introducing these aircraft, the carrier faced several issues which have caused difficulties with maintaining the Alderney flight schedule. These are:
 - → The older aircraft have had significant technical problems meaning that they were unable to operate the full schedule and, instead, services had to fall back on the reducing number of Trislander aircraft in the fleet with lower seating capacity;
 - → The need to keep Trislanders operating some services has meant that Aurigny has been unable to complete pilot training for Dornier operations and, therefore, the pilot pool has been unable to switch between aircraft types as required, greatly reducing flexibility, particularly when aircraft type changes have been required at short notice. This problem appears to have been exacerbated by the new Dornier, which has a different pilot rating from the older versions;
 - → In certain weather conditions, the two older Dornier aircraft, but particularly G-SAYE, have been unable to accommodate full loads of passengers and their baggage. This means that bookable seats appear to have been suppressed in some cases and, on other occasions, passengers and/or baggage have been offloaded. Furthermore, it appears that baggage weight restrictions are imposed on some flights due to these aircraft, which consultees highlight as a particular issue in terms of being able to take full baggage away on holiday off the island. This is likely, in part, to explain the differences seen above between published seat capacity and actual bookable seat capacity;
 - An aircraft handling incident at Alderney led to the new Dornier, and the only aircraft consistently capable of operating with unrestricted passenger/baggage loads as indicated in the schedule, being out of service for a prolonged period of repair.

- 3.27 Among the concerns of consultees is that, historically, Aurigny maintained a fleet of Trislanders which was large enough to allow them to, at short notice, add extra flights, both to cope with increases in bookings and also to deal with any backlogs in passengers arising from flight cancellations. To a large extent, the ability to achieve this was linked to the large fleet of Trislanders retained to provide the high-frequency flights between Guernsey and Jersey on weekdays. The fleet was not required to the same extent at weekends or during the peak August period and this allowed the carrier to more freely add capacity to Alderney when demand was typically highest during the peak season. The Jersey service is now operated solely by Blue Islands meaning that Aurigny no longer needs to retain this Trislander fleet and has been steadily retiring the older aircraft.
- 3.28 As a result of introducing the Dornier, and the problems with flight crew incompatibility, this flexibility to add additional services appears to have been lost to some degree, although within the MOU, considered below, there remains provision for increased flights to be added at the request (and cost) of the States of Alderney. In theory, three reliable aircraft would be adequate for the core schedule (including a spare aircraft), but the plan to stabilise the fleet at three operational Dornier aircraft to serve the Alderney routes will mean that the ability to add large numbers of additional services at peak times or to catch up following periods of weather disruption, as seen historically, may be reduced in future compared to what was achievable in the past. It is in this context that the ability to, on occasion, deploy larger aircraft could help to meet short term peaks of demand.
- 3.29 We understand from Aurigny that the reluctance to add additional flights is also in part a way of them controlling the costs of operations on the Alderney routes because the cost of quickly mobilising additional flights adds to the already considerable losses on the routes. Whilst resilience could be enhanced with an additional aircraft beyond the three currently planned, the cost of acquiring a further aircraft would need to be considered in terms of depreciation, maintenance and crew capacity and the impact on losses attributable to the service. Aurigny, in common with other airlines, does not have spare aircraft available which can immediately be deployed to provide additional services to meet short term spikes in demand, such as around Alderney week.
- 3.30 These short term difficulties do not, of themselves, indicate that the Dornier 228 is not the right aircraft to operate from Alderney given the size of the market overall. Rather, the difficulties in introducing the aircraft into the fleet have underpinned significant degradation in service provision to Alderney compared to the expected schedules and capacity on the routes. Consultee views are largely positive about the Dornier experience when compared to the old Trislander aircraft, with only one consultee believing that there remained risk that the aircraft was perceived by visitors as *"small and uncomfortable"*. The Dornier 228 type remains in manufacture and is likely to remain in airline fleets and/or be available on the market for a considerable time to come.
Load Factors

- 3.31 Although we were provided with load factor data from the States of Alderney, we requested a longer time series of similar data from Aurigny in order to identify when the reported capacity problems on the services became critical. This information was not made available so we have based our analysis jointly on the short data series provided by the States, supplemented by flight data provided by the Airport, adjusted for 'likely' seats bookable, covering the period 2013 to 2016 (to end of August). In applying the 'likely' seats bookable, we recognise that Aurigny's operation shows more variability than normal in terms of making fewer seats available for sale than the aircraft can theoretically carry. Without the additional data from Aurigny, we have no way of identifying or estimating these effects. We recognise that this could lead to some marginal understatement of the actual load factor but we believe that our analysis still still shows broad load factor trends.
- 3.32 We have used the available data to establish patterns of growth in load factors which supports the views presented during the consultations and the evidence assessed by the States, that increasingly there is a lack of availability for flight bookings. **Table 3.5** illustrates the January August comparison of load factors for each of the key routes (inbound and outbound) for the comparative period from 2013 to 2016 and highlights that load factors are at their highest in 2016 across all routes on average.

Table 3.5: Jan-Aug Load Factor Comparison by Route							
Year ACI-GCI GCI-ACI ACI-SOU SOU-AC							
2013	55%	56%	65%	68%			
2014	57%	58%	64%	67%			
2015	57%	55%	63%	65%			
2016	60%	67%	67%	69%			
	Source: Alderney Airport, York Aviation						

3.33 However, as the data in Table 3.5 includes the quieter winter months when load factors are generally lower, we have also looked at the profile of load factors by day for each route over the whole period as shown in **Figures 3.5** and **3.6**, where there could be some marginal upward trend¹³ in load factor through 2015 and into 2016, but particularly on the inbound services for both Guernsey and Alderney.

¹³ Indicated by higher density of records at higher load factor.

3.34 We have looked at the number of occasions within each year on which load factors were above 90%, 95% and at or above 100%. The results are shown in **Table 3.6** and show an overall upward trend in the number of days on which flights are at the higher end of the load factor scale. The upward trend into 2016 is of more concern as this only covers the first 8 months of the year, rather than the full 12 months in the other years shown. The problem may actually be worse, based on the short time series provided by the States of Alderney for 2016 which reflect actual seats on sale rather than the aircraft capacity. This will mean that, in reality, the number of days where very few or no seats are available for booking will be higher than shown here, although the trend over time should still be consistent.

Table 3.6: Number of Days by Average Load Factor							
		Above 90%	Above 95%	100% or Above			
Alderney – Guernsey	2013	4	0	0			
	2014	4	1	0			
	2015	7	2	0			
	2016* 11 2013 0	0	0				
	2013	0	0	0			
Guernsey – Alderney	2014	3	0	0			
	2015	1	0	0			
	2016*	1	0	0			
	2013	20	2	1			
Alderney –	2014	6	0	0			
Southampton	2015	22	7	1			
	2016*	19	7	2			
	2013	6	1	1			
Southampton –	2014	1	0	0			
Alderney	2015	14	4	2			
	2016*	19	7	5			
Note: *2016 is only firs	t 8 month	s of year. All oth	ers are full year.				
	Source:	Alderney Airport,	, York Aviation				





- 3.35 Although consultees indicated that the greatest load factor constraints are perceived to occur at the peak of the summer, the Airport data indicates a greater spread of occasions when there are high load factors, with particular peaks in 2016 around March, May, June and July. To some degree, this may be the result of flight cancellations in these periods and the re-booking of passengers onto following services. We understand that July and August 2016 were particularly bad for lack of seat availability due in large part to poor weather and, indeed, some days in these months are at the higher end of the load factor data. Such events inevitably impact on seat availability, particularly for bookings in the last few days prior to flying as may be expected to impact more on business related trips and last minute decisions by local residents.
- 3.36 It must also be remembered, however, that for large parts of the year, load factors are quite low, often below levels that would be considered sustainable by airlines on a commercial basis. There are a number of flights which operate with no passengers at all. In the first 8 months of 2016, nearly 400 scheduled flights, or 11% of all passenger services, operated with 4 or less passengers, of which over 100 had no passengers on at all (3% of all flights). 25% of all passengers flights operated at less than 50% load factor over this period and by the year end this figure would be expected to be higher due to the proportion of the current data occurring in the summer peak (32% for full year 2015). This is an important consideration when determining the suitability of operating larger aircraft on a commercial or subsidised basis. Aurigny told us that it experienced particular problems due to passenger flows often being in one direction only, on or off the island, leading to difficulties in matching aircraft capacity to demand in a cost effective manner.

Reliability

- 3.37 Consultees also highlight a perception of increased levels of cancellations over the last two years, but particularly into 2016. Aurigny have provided us with some data which shows that the changeover to Dornier 228 aircraft has brought operational difficulties, which have led to some flight cancellations and also required some continued provision of service by the older, typically less reliable, Trislanders. The lack of interchangeability of the fleets has made crewing difficult as not all pilots are as yet licenced to operate both types.
- 3.38 As can be seen in **Figure 3.7**, in each month from February to August, Aurigny has operated between 87-95% of planned flights. Out of the 281 cancelled flights over that period, 88% were cancelled due to weather conditions, with technical cancellations accounting for 7% and 'other' for 5%, although we do not have clarity of what this constitutes and it may include crew issues.



- 3.39 The period from May through to July saw a significant dip in flights operated, as highlighted by consultees. However, it has been widely recognised that this period suffered unusually high levels of fog this year which disrupted the services and, indeed, in the worst month for flight cancellations, June, 94% of all cancelled flights were the result of weather. It was generally perceived that reliability had improved again from late July into August. There are two primary drivers of weather cancellations, low visibility (fog or low cloud) and crosswinds.
- 3.40 The first of these appears to have been responsible for a significant number of cancellations this year, particularly during the peak summer periods, leading to some of the difficulties in terms of flight availability as passengers were rebooked onto following services, or unable to be accommodated. Alderney Airport does not have any form of Instrument Landing System (ILS), however, and one is not proposed as part of any of the options, so cancellations related to fog will continue to apply for any aircraft type regardless of runway length, albeit the scope to accommodate displaced passengers may have been eased by more seat capacity being available with larger aircraft types, which we consider below.

- 3.41 The second of the weather conditions, crosswinds, is more dependent on the aircraft types being operated and gives rise to additional impacts at present because the narrow runway width of 18 metres has led to both the Trislander and Dornier 228 being required to operate 20% and 33% below their normal operational limits respectively. Had the runway width been increased, as planned under all options, at least some of the weather related cancellations would not have arisen. In future, a more extensive use of the Dorniers, combined with the increased runway width, would lead to fewer cancellations during crosswinds than has historically been the case. Nonetheless, it would still be the case that the introduction of larger aircraft, such as the ATR-42, could reduce the number of cancellations further as they have higher limits on operations (maximum of 35 knots of crosswind, compared to 30 knots on the Dornier 228).
- 3.42 We do not have sufficient data to establish the number of cancellations which would have been avoided had the current fleet been able to operate at their full capability or indeed if larger aircraft had been able to operate. However, as Regional and City Airports (RCA) indicated in their work for the States of Alderney, and presented below in **Figure 3.8**, the mean wind speeds for each month over the time period 1992-2011 have been at or below 15 knots (except February which is marginally above), so well within the capability of the Dorniers assuming the runway is widened as planned. Based on the maximum crosswind speeds, the ATR-42 would only have provided a crosswind capability advantage in one month compared to the Dornier 228 and there would have been a risk of cancellations at maximum crosswinds with either aircraft type.



- 3.43 Whilst most recent cancellations have been weather related, there remain non-weather related cancellations, which in combination accounted for between 0.2% and 1.5% of all planned flights throughout the early part of 2016. We have outlined some of the operational difficulties encountered by the airline earlier in this section, but understand that, as the Trislanders are finally replaced by the next new Dornier, the levels of cancellations associated with technical or crew issues should diminish. It must be recognised that aircraft technical or crew issues would continue to be a problem for larger aircraft and do afflict all airlines. Such problems are exacerbated when older aircraft are operated, so there is some tension between seeking to minimise the cost of aircraft acquisition and the risk of fleet reliability.
- 3.44 Historically, Aurigny's response to cancellations, beyond simply rebooking passengers onto planned flights with available seats, has been to add on additional services. As described earlier, this was a result of the historically large fleet of Trislanders, giving it greater flexibility. For commercial reasons, the decision has been taken not to add additional flights to the same degree, partly as the number of available aircraft has reduced. There would still remain some scope with the number of available aircraft to add some additional services if required, although it is likely the carrier would wish to be compensated for this, due to the increased operational costs of putting these services on as per the terms of its Memorandum of Understanding, outlined below.
- 3.45 There would, therefore, be some advantages for Aurigny (or other carriers) if larger aircraft could be used on occasion because it would allow some flexibility to use other aircraft in the fleet to recover from disruptions. However, as the carrier has indicated an intention to move away from the ATR-42 anyway, this would necessarily imply the use of the ATR-72, which for reasons we explain later, may not be feasible.

Memorandum of Understanding

3.46 Earlier this year, a Memorandum of Understanding (MOU) was put in place between Aurigny, the States of Alderney and the States of Guernsey regarding the levels of service to be delivered by the airline on routes to/from Alderney. The MOU acknowledges that, although the services from Alderney to Guernsey and Southampton are currently loss making, the provision of the services is fundamental to the long term economic and social sustainability of Alderney. The MOU is intended to deal with the service levels, frequencies and air fares and to strike the right balance between the needs of Alderney and the level of losses being incurred by Aurigny in operating the services. Medevac services and postal services are covered by separate contractual arrangements.

- 3.47 The terms of this MOU need to be seen within the context of an overarching Memorandum of Understanding between Aurigny and the Treasury and Resources Department of the States of Guernsey (as shareholder), which sets out a commercial and financial objective for the airline to achieve break even on its operation but, significantly, excludes the lifeline services to/from Alderney from this requirement. We note that, currently, Aurigny is still recording sizeable losses across the whole operation which cannot be entirely explained by the losses on the Alderney services.
- 3.48 The key provisions of the MOU are:
 - ✤ the assumption that the services will be operated by Trislander or Dornier 228 aircraft with seating capacity up to 18 seats, with the transition to an all Dornier fleet during 2016;
 - → specified daily frequencies of service, which vary by day of the week and month of the year, including a provision for an additional number of rotations to be operated in most of the months over and above the core schedule to meet variable demand;
 - → on both routes, specified frequencies are higher at weekends and in summer, particularly in August;
 - → it is assumed that the specified frequencies can be operated with between 1.25 and 2 aircraft, including the postal services, but that a 3rd aircraft will be available on standby to cover maintenance and to recover from weather related and other disruptions;
 - → fare bands are specified (discussed further below).
- 3.49 The MOU recognises that there may be operational circumstances, e.g. weather, that are beyond Aurigny's control and which may result in the number of services actually operated being below those set out in the MOU. There are also provisions allowing Aurigny and/or the Treasury and Resources Department of the States of Guernsey to amend the service levels in the event of competitive entry of another airline onto either of the routes or onto competing ferry services, changes affecting the opening hours of any of the airports or their capability to handle the services or changes to the number of bedspaces or visitor facilities on Alderney.
- 3.50 There are also obligations on the States of Alderney to market the services, particularly to improve load factors in off-peak periods and to address the problems of one-directional flows during peak periods (more inbound visitors in particular weeks of the year and different directions of flow on different days of the week), all of which contribute to the operational inefficiencies which ultimately contribute to Aurigny's operating losses on the routes as we discuss further below.
- 3.51 It should be noted that the MOU is, in essence, a 'reasonable endeavours' agreement and lacks the contractually binding terms and penalties for non-performance which would be in place with a Public Service Obligation. This is one reason why the imposition of a PSO would be beneficial to Alderney as it would provide greater incentives to delivery, albeit it might come at the expense of higher subsidy levels required compared to today's losses.

3.52 We understand that it is intended that the MOU will be revised in the coming months to respecify the requirements for 2017.

Fare Levels

3.53 The MOU specifies the proportion of seats which can be sold by fare band and we understand from Aurigny that achieved fares are consistent with this banding as shown in **Table 3.7**.

Table 3.7: Fare Bands specified in the MOU									
Alderney – Guernsey									
Fare Band	£10-31	£32-41	£42-53	£54-66					
Percentage of Passengers	7%	34%	21%	37%					
Alderney – Southampton	Alderney – Southampton								
Fare Band	£10-42	£43-78	£79-116	£117-£145					
Percentage of Passengers	6%	17%	38%	39%					
Source: MOU									

- 3.54 We requested data on actual air fares achieved from Aurigny but this has not been provided. One way of assessing the average air fare achieved would be to assume that the airline achieves the mid-point of the range in each band as set out in the MOU. On this base, the average fare yield achieved should be £46 each way on the Alderney to Guernsey route and £52 each way on Alderney to Southampton route. However, we note that the fares on sale this winter for the Alderney to Guernsey route are in the range £46 to £61 and for the Alderney to Southampton route in the range £77 to £140, with the top of the range being a fully flexible ticket in each case. This would suggest that a reasonable proportion of tickets must be sold at lower than the published adult fare to comply with the requirements of the MOU, however this is not obvious from the website, possibly because these lower fares are not fully available for public sale.
- 3.55 There is a perception on the island that fares are higher than paid elsewhere for comparative routes. One of the arguments for larger aircraft is that they could deliver lower fares comparable with the prices offered by Flybe on some of its routes in the UK. It must be recognised, though, that lower fares on larger aircraft will only be achieved with more passengers, as the aircraft themselves are more expensive to buy and operate. This is often accompanied by a reduction in frequency to ensure that high load factors are attained to enable the low fares to be offered.

- 3.56 The use of larger aircraft does, in large part, explain why Flybe is able to offer some very cheap fares on higher volume routes with 78-seat aircraft (i.e. larger than could operate off an extended runway on Alderney). With the exception of new routes where fares are often lower to encourage initial bookings, 'Lead-In-Fares', i.e. the lowest price usually available on a route, may be of the order of £25-30 one-way on Flybe routes, but fares at these low levels often apply only to their largest routes, carrying 250-300,000 passengers a year. Furthermore, these fares will only be applicable to limited numbers of passengers, so higher than the 6-7% seen in the MOU for Alderney, but not by a significant margin. The relationship of air fares to operating costs is considered further in Section 5.
- 3.57 To consider how Alderney's fares compare to similar routes, we have undertaken some air fare searches for routes to/from and between the Channel Islands and between the Isle of Man and Liverpool (as a comparator to the Southampton route). The results can be seen in **Table 3.8**.

Table 3.8: Air Fare Search Comparison										
Day Return Business Trip Example	Cheapest			Flexible			2015 Passeng ers	Notes:		
Tue 1st Nov 2016 - Day Return	O/w (£)	Ret (£)	Total (£)	O/w (£)	Ret (£)	Total (£)				
Alderney - Southampton	122	122	244	140	140	280	24,000			
Guernsey - Southampton	100	101	201	228	241	469	140,425			
Jersey - Southampton	58	82	140	218	242	460	118,862			
Isle of Man - Liverpool	-	-	-	-	-	-	200,784	easyJet – no day return		
	79	59	138	195	185	380		Flybe		
Alderney - Guernsey	57	57	114	61	61	122	35,778			
Guernsey - Jersey	63	64	127	70	70	140	126,838			
Weekend Break Example		Cheapes	t		Flexible		2015	Notes:		
							Passeng ers			
Fri 2nd - Sun 4th Dec 2016	O/w (£)	Ret (£)	Total (£)	O/w (£)	Ret (£)	Total (£)				
Alderney - Southampton	122	101	223	140	140	280	24,000			
Guernsey - Southampton	77	61	138	218	242	460	140,425			
Jersey - Southampton	43	67	110	217	242	459	118,862			
Isle of Man - Liverpool	49	34	84	105	105	210	200,784	easyJet		
	51	31	82	195	185	380		Flybe		
Alderney - Guernsey	46	46	92	61	61	122	35,778			
Guernsey - Jersey	59	40	99	66	47	112	126,838			

Week Away Example		Cheapest	t		Flexible		2015 Passeng ers	Notes:		
Sat 21st - Sat 28th Jan 2017	O/w (£)	Ret (£)	Total (£)	O/w (£)	Ret (£)	Total (£)				
Alderney - Southampton	77	77	154	140	140	280	24,000			
Guernsey - Southampton	18	42	60	218	242	460	140,425			
Jersey - Southampton	18	42	60	218	242	460	118,862			
Isle of Man - Liverpool	24	26	51	62	61	123	200,784	easyJet		
	37	27	64	195	185	380		Flybe		
Alderney - Guernsey	46	46	92	61	61	122	35,778			
Guernsey - Jersey	40	40	80	46	47	93	126,838			
Search Date: 24th October	Search Date: 24th October 2016, showing fares at 1-week, 6-weeks and 3-month booking timeframe.									
	Sourc	e: Airline	booking v	vebsites,	CAA Statis	stics				

3.58 The results are a mixed picture, but a few key points are:

- → On the Alderney Guernsey route, in two of the three examples, non-flexible fares are actually cheaper than on the equivalent Guernsey Jersey flights, including for travel at short notice (one week away). This is despite the Guernsey Jersey route having more passengers and larger aircraft at a four daily frequency;
- → For flights to the UK, Alderney is consistently the highest priced fare across all booking periods for non-flexible tickets booked in advance. Booking one week ahead shows fares around 21% higher than from Guernsey and around 75% higher than from both Jersey and the Isle of Man on comparative routes. Given the passenger volumes on these routes, it seems likely that passengers do benefit from the combination of higher volume demand and larger aircraft delivering lower operating costs;
- → In contrast, fully flexible tickets from Alderney to Southampton (the maximum price sold) are significantly cheaper than the same routes from Jersey and Guernsey. In so far as some passengers find only fully flexible tickets available at last minute from Alderney, this works in their favour, although the likelihood of passengers only being able to book fully flexible tickets from the larger islands is minimised by the total available capacity on those routes.
- 3.59 However, to some extent, the higher fares need to be seen in the context of the heavy losses being sustained by Aurigny on the routes and the airline is simply seeking to minimise the losses which it makes. Other airlines would seek to do the same.
- 3.60 Although we have not seen detailed fare data from Aurigny, which would have allowed us to look in more detail at seasonality and availability of fares, we understand anecdotally that fares over the summer are often pushed higher for residents because tourists tend to have a longer booking period ahead of flights, so taking up the cheaper fares early. In line with typical airline yield management systems, fares closer to the day of travel would be expected to be at the higher end of the available fares when residents come to book within a shorter time horizon.

- 3.61 On this basis, Aurigny's approach to fare management is in line with almost all airlines, except the low fares carriers such as Ryanair and easyJet, who may sometimes lower fares closer to the time of travel if they need to sell more seats to reach load factor targets. For most conventional airlines, and certainly most in the regional airline business, fares will typically increase closer to the time of travel regardless of the number of seats sold.
- 3.62 With no fare data available from Aurigny, we have been unable to establish how any additional flights beyond those originally scheduled are charged for, or made available.

Commercial Viability

- 3.63 Whereas the losses on the Alderney services were previously reported to the States of Guernsey to be of the order of £900,000 a year in 2014, Aurigny has advised us that, based on internal audit reports, the losses are now closer to the order of £1.5 million a year when all the costs are properly allocated. This will, in part, reflect the operation of the newer Dornier aircraft rather than the older Trislander fleet, which were fully depreciated, and may also reflect the recent service difficulties and inefficiencies.
- 3.64 Whatever the levels of air fare yield achieved, they are clearly insufficient to cover the costs of operating with the current fleet of aircraft. This is partly a reflection of the year round, as distinct from peak period, load factors and a reflection of the uni-directional nature of the flows, particularly in summer and connected with Alderney week, with it being relatively common for some services to operate full in one direction but virtually empty in the opposite direction. This pattern of demand creates challenges for any airline operator. At present, the airline or, rather, the States of Guernsey is effectively providing an average subsidy for each one way passenger carried of around £25, although we recognise that this may reflect to some degree the additional costs incurred during the transition to the Dornier fleet such that they may revert to a more 'normal' level in future.
- 3.65 What the analysis does tell, however, is that services to Alderney are not commercially viable, not least because of the asymmetry of the passenger flows and the extreme peaking in the height of summer period. If the routes to Guernsey and Southampton are not commercially viable, it is unlikely that regular services to other destinations would be so. Introducing larger aircraft well ahead of increased levels of demand would be likely to worsen losses on the routes as we go on to examine in Section 5.

Conclusion on the Current Performance of the Air Services

- 3.66 Overall, whilst there is evidence that there has been some suppression of demand over the last couple of years due to unreliability, cancellations and flights being full, preventing bookings at short notice, we have no evidence to suggest that this has been a long term problem. There appears to have been a general level of satisfaction with the services offered up until around 2010 and no suggestion that the air service offer was a factor in the economic decline of Alderney over the longer term.
- 3.67 The relatively high air fares may well have been a deterrent to some travel by both residents and visitors but, in the absence of time series data for air fares, we are not able to estimate any elasticity effect over time. However, the fare levels have to be seen in the context of the operating losses sustained by Aurigny, which mean that lower fares could only be offered if the additional costs of subsidy could be borne by Alderney or the Bailiwick.
- 3.68 It is important not to concatenate short term operational difficulties with the longer term market trends. The former are almost entirely unrelated to the planned level of service capable of using the existing infrastructure but reflect the problems of flying aging Trislander aircraft and the problems encountered in transitioning to a Dornier fleet. We consider further in Section 6 the appropriate baseline against which to consider whether there is a case for a runway extension.

Requirement for Improved Air Services

- 3.69 It is clear from our discussions with stakeholders, set out in Section 2, that there is a need for an improvement in the quality and reliability of the air services, ideally at lower fare levels. Whilst there are aspirations for additional routes, such as Jersey, to be offered, the principal concerns relate to reliability, relatively high fare levels and shortage of seats at peak times or following periods of disruption. What is less clear is the extent to which these issues are a material factor in key economic drivers, such as resident population or tourist numbers, not least as the latter tend to book in advance and avail of whatever lower fares are on sale in advance when making their plans.
- 3.70 We go onto consider in the Section 5, the extent to which an extended runway, allowing the operation of larger aircraft, would address the shortcomings, perceived and actual, of the current air services.

4 RUNWAY OPTIONS AND COSTS

Runway Options

- 4.1 We have based our understanding of the runway options under consideration on the TPS Report of August 2014¹⁴, the Terms of Reference and subsequent discussions with TPS.
- 4.2 The Terms of Reference for this study define the three options we are asked to consider as follows:
 - → Option 3: Reconstruct all paved surfaces at the Airport and extend the runway width to 23 metres with enhancements to improve runway lighting and more efficient drainage;
 - Option 5: Extension of asphalt runway to 1,100 metres, from its current 877 metres, and extend width to 30 metres to accommodate larger GA and commercial aircraft – with consideration of options for both concrete and asphalt products;
 - Option 6: A hybrid scheme which delivers Option 3 with certain additional enhancements to the design that would facilitate a less expensive and less disruptive move to a runway extension at some point when the business need is more apparent.
- 4.3 Our task is to consider the incremental costs and benefits of delivering Option 5 or Option 6 compared to the baseline of completing the Option 3 works.
- 4.4 The TPS study of August 2014 examined a broader range of runway improvement options, including options to surface, lengthen or relocate one or more of the current grass crosswind runways. The options in relation to the grass runways do not form part of our study and we understand that these are no longer under consideration.
- 4.5 As noted above, the runway is currently 877 metres in length and operates as a Code 2B runway. We discuss further, in the next section, the limitations this imposes on the aircraft types which can operate. Option 3 preserves the physical length of the runway but reinstates the width to 23m (currently 18m) so improving cross wind capability, improves its surface, which is currently subject to some deterioration, and improves the drainage and lighting so providing some greater resilience to the effect of weather.
- 4.6 The TPS study of August 2014 does not set out further details of the required reconstruction of the main runway which comprises Option 3 above. It is our understanding that the requirements for this reconstruction follow the recommendations of the earlier Mott MacDonald Report¹⁵.

¹⁴ Alderney Airport Runway Options Study, Final Report, August 2014.

¹⁵ Mott MacDonald, Alderney Airport Runway Review Report, May 2012.

- 4.7 In terms of the potential for extending the runway, these were considered in terms of the ability to handle aircraft of 42 seat capacity, with the ATR42¹⁶ taken as the reference aircraft giving a requirement for a runway 1,100 metres long x 30 metres wide (Category 2C) with strength PCN 11. We consider further the types of aircraft which could use such a runway in the next section. Consideration was not given to the requirements for substantially larger aircraft types, such as the ATR72, and accommodating larger aircraft still would have consequential cost implications.
- 4.8 In considering the options for extending the runway, TPS anticipated that space for a full RESA (Runway End Safety Area) would be needed at each end of the runway. Widening of the taxiway to meet 'Code C' criteria would also be needed. TPS considered that the existing apron should be adequate to allow the operation of a single ATR42 aircraft at any one time. Two options for extending the runway were considered, having regard also to the need to ensure that existing Dornier 228 operations would need to be maintained during the construction phase to ensure continuity of service. The two options were to extend the runway by 223 metres to the east or to the west:
 - → West extension extension of the runway westwards would require some earthworks to reprofile the 08 end of the existing runway and the land forming the extended runway strip and RESA, taking into account the need to re-route the road and protect the La Hougue de la Taillie tumulus. New runway lights would be required for the extended runway at the 08 end, which would be difficult given the need to extend across the Vallee des Trois Vaux. There is also potential for some significant operational issues related to the potential for turbulence from westerly or south-west winds on take-off, which were identified by Aurigny.
 - → East extension extension of the runway to the east would involve more extensive earthworks to re-profile the ground west of the intersection with Runway 03/21. This would include raising the ground levels at the head of the Vau du Sud to form the extended runway strip. A new approach light system to Runway 26 would be necessary requiring relocation of the existing Non Directional Beacon (NDB). Associated works would involve re-routing existing roads around the runway extension and RESA and new runway drainage as with the westward extension.

Because of the operational and maintenance issues associated with an extension to the west, it was recommended that the preferred option would be to extend the runway by 223m to the east.

- 4.9 To achieve the required pavement strength (indicated above in accordance with the ICAO ACN/PCN Aircraft/Pavement Classification Number system for ATR-42 aircraft), pavement works are based on:
 - ✤ 100mm bituminous overlay of existing runway pavement, or

¹⁶ Which carries 48 seats.

→ 275mm bituminous materials on 225mm granular sub-base for new construction including widening.

It was noted, however, that the detailed requirements would be subject to verification through the design process. Nonetheless, the feasibility study did indicate that it would be technically feasible to extend and widen Runway 08/26 for operations by 42-seater aircraft types. It would also be necessary to widen and realign the taxiway from Runway 08/26 to the apron to meet Code C regulatory criteria, including addressing the gradient of the existing taxiway through realignment.

4.10 In their 2014 report, TPS addressed the question of the options for extending the runway as a single phase exercise, i.e. Option 5. They have recently considered how a phased development could best be achieved (Option 6), including some works to safeguard the ability to construct the extension at a later date whilst minimising disruption to operations. Their current view on the works required under each option are set out in **Appendix C**.

Costs

- 4.11 Details of the costs relating to each of the runway options were provided by TPS and are set out in further detail in Appendix C. The costs have been built up by estimating the cost of the equivalent works if undertaken on the UK mainland then adjusting the relevant elements of the costs by an 'island factor' to reflect the additional costs involved by the need to import materials and labour to Alderney. An 'island factor' adjustment is required because material, labour and staff costs for this type of specialist work will all be higher than in UK:
 - → Material costs are higher because of the cost of their transhipment to Alderney, plus the associated charges from double or even triple handling of the product;
 - → Labour costs are higher because the skilled labour needed for this type of work will be supplied from the UK on a rotational shift system, with associated travel costs and local accommodation costs to be met for this type of working;
 - → Staff costs are higher because staff will be supplied from either the UK or Guernsey and will be subject to similar travel and local accommodation costs as are the labourers.

These higher costs will be incurred by the successful contractor throughout the contract period.

4.12 The basis for this 'island factor' is more fully explained in Appendix C. These additional costs relate to the construction activity and are not applied to professional fees, site surveys and land lease/purchase. In summary, the current 'feasibility' costs estimates, with a range of estimates for the 'island factor' for each option are as set out in **Table 4.1**.

Table 4.1: Runway Option Costs ¹⁷								
	Island Factor Range							
	2.00 2.75							
Option 3	£7,220,000	£9,760,000						
Option 5	£19,590,000	£26,510,000						
Incremental Cost	£12,370,000	£16,750,000						
Option 6	£24,175,000	£32,705,000						
Incremental Cost	£16,955,000	£22,945,000						
Source: TPS								

- 4.13 It has been suggested to us by consultees that the incremental cost between Options 3 and 5 should be less because the costs of mobilisation (getting people to the island) will be incurred for Option 3 and so the incremental costs of Option 5 should be lower (clearly, mobilisation will be incurred twice for Option 6). TPS has advised us that mobilisation is only a relatively small part (only around 6-7% of the base cost of Option 3) of the costs and the majority of the work will be subject to the effects of the 'island factor' relating to the cost of getting all materials to the island and of providing specialist labour on Alderney for the life of the project, both of which are distinct from the mobilisation costs. This mobilisation cost largely comprises the cost of transporting and erecting the specialist asphalt batching plant and its associated equipment at the outset of the project. This is not double counted into the incremental cost of Option 5 as TPS advise that the same mobilisation costs are assumed to be incurred as part of Option 3 as for Option 5. To the extent that there might be some economies of scale as a consequence of the greater extent of works under Option 5, these would marginal relative to the range of the 'island factor' uplifts assumed of between 2 and 2.75 applied to the incremental costs. However, this uncertainty is one reason why we take the range of incremental costs forward to the appraisal rather than a single point estimate.
- 4.14 It should be noted that these costs relate only to the defined airfield works. In addition, there will be other consequential costs at the Airport associated with handling larger aircraft, as discussed further later in this section.
- 4.15 It is highly likely that seeking to handle a wider range of aircraft types, such as the ATR72, would require additional strengthening of the runway to c.PCN14. This would increase the costs and also require additional cost to expand the apron area. We have not allowed for these additional costs within our appraisal at this stage.

¹⁷ All costs are stated at Q4 2015 prices.

4.16 We are aware that alternative costs have been suggested by some parties. In particular, Regional & City Airports Ltd (RCA) has suggested that costs could be lower than suggested in the TPS Feasibility Study. We attended a presentation given by RCA on 24th August 2016, at which they presented their preliminary cost estimates. Their costs are not strictly comparable as they include for hardening of the crosswind grass runways, which does not form part of any of the options that we have been asked to consider. For the airfield works, the relevant comparators, stripping out these costs, are as follows:

Table 4.2: RCA Comparative Cost Estimates									
£m ¹⁸	Airfield Works (Option 3)		Runway Extension Incremental Cos (Option 5)						
	RCA	TPS	RCA	TPS					
Base UK Price	£2.541	£3.377	£6.662	£5.844					
Contingency	£0.295		£1.199						
Fees and Land		£0.470		£0.680					
Costs									
Alderney Island	£0.661	£3.373 – £5.913	£1.332	£5.846 – £10.226					
Factor									
Total	£3.497	£7.220 - £9.760	£9.194	£12.370 –					
				£16.750					
	Source: RCA/TPS								

4.17 The figures may still not be strictly comparable as RCA did not include the land acquisition costs (estimated at £200,000 for the runway extension) and also assumed that the costs for the batching plant could be excluded as this would also be used for other purposes on Alderney (e.g. road repairs), which TPS advise is not a realistic assumption. It is also not entirely clear whether these costs also included for all the necessary fees. On the other hand, RCA did make a specific allowance for contingency, which is not directly included within the TPS costs, other than encompassed within the 'island factor' range. Nonetheless, on a comparative cost at UK prices basis, the cost estimates are relatively similar, with RCA having slightly lower costs for the base case airfield works but slightly higher costs for the runway extension. In practice, the differences at this level may simply reflect how costs have been apportioned between the two parts of the project as RCA presented its cost for a single all-inclusive option only.

¹⁸ Figures may not sum due to rounding.

- 4.18 The principal difference lies in the assumed 'island factor' which RCA assumed be in the range 0.2-0.3 for the civil engineering works compared to TPS's advice of 2-2.75 should be allowed. Whilst we recognise that RCA had benchmarked its estimate of the 'island factor' on discussions with a contractor who carried out works to refurbish the runway at the Isles of Scilly Airport recently, it did indicate that further work would be required to verify its costs, including the 'island factor', the specific ground conditions and the source of fill material, which we understand may have been underestimated. The magnitude of the difference to those 'island factor' estimates used by TPS based on actual Guernsey/Alderney experience leads us to the view that it would be high risk to assume that the cost impact of working on Alderney could be contained to the level suggested by RCA, although we have illustrated the effect of assuming lower costs as a low cost sensitivity test as summarised below and carried forward into the appraisal in Section 6.
- 4.19 In addition, we are aware that some parties on Alderney have suggested that material savings could be made by constructing the runway extension in concrete based on the costs of converting the runway at Sywell in the UK from grass to concrete. For the reasons explained by TPS in Appendix C, this may be a feasible option for a completely new hard surfaced runway but would give rise to issues of construction feasibility and regulatory risk given that the Alderney runway has an existing asphalt surface. It is not entirely clear whether the runway at Sywell was constructed to the standards required by the regulator for commercial passenger operations. For the purpose of our appraisal, we have discounted this option, not least as we have not been provided with any evidence of what might be proposed and included within the costs.
- 4.20 A further consideration in this appraisal is the treatment of 'optimism bias'. UK Treasury Guidance on appraisal notes the tendency for project appraisers to be optimistic in terms of the outturn cost of projects at the business case appraisal stage. For specialist engineering works, such as runway refurbishment and extension, the recommended adjustment for optimism bias is in the range 6-66% of the initial cost estimates¹⁹. Given the range of the projected 'island factor' on construction costs, we consider it inappropriate to add a further adjustment for 'optimism bias' but the recommended range of such an adjustment is broadly consistent with the difference between the upper and lower end of the range of recommended 'island factors'.

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191507/Optimism_bias.pdf, Table 1.

Other Consequential Costs

4.21 Handling larger aircraft at Alderney Airport would not only require a longer runway but there would be other consequential costs without which larger aircraft could not be operated even if the extended runway was provided. TPS have not been asked to address these costs but some estimates were given by RCA. In this case, the potential 'island factors' are less of a concern as the incremental costs relate to equipment, extension of the terminal and operating costs where there would not be the same requirement for high cost materials and specialist construction labour to be brought in specifically to undertake the works. However, adoption of RCA's cost estimates may be on the conservative side and outturn costs could be higher for these items.

Security

- 4.22 The principal issue relates to the need for enhanced security procedures to be in place to allow the handling of aircraft with more than 19 seats/10 tonnes MTOW. It has been confirmed with the Office of the Director of Civil Aviation that there would a requirement to comply in full with these requirements if aircraft larger than the current Dorniers were to operate. This would include full security screening procedures, including screening of hold baggage.
- 4.23 RCA have estimated this would require an upfront investment of c.£1 million, principally to comply with the hold baggage rules. There would be additional operating costs of this equipment which, if passed on to passengers would simply increase air fares. For the purpose of our appraisal of the extended runway options, we have assumed a potential operating cost increase of £50,000 a year, if larger aircraft are operated, reflecting the security cost uplift assumed by RCA at higher traffic levels, as well as the additional capital costs to provide the necessary screening equipment and designated area perimeter security.

Terminal

4.24 It is also evident that the existing terminal infrastructure would not be able to handle larger passenger loads, and comply with security requirements, principally in terms of the lack of adequate holding area 'airside' of security screening as well as the space to provide hold baggage screening. RCA have estimated that the costs of increasing the capacity of the terminal to handle larger aircraft to be of the order of £1.3 million. We have included this in our appraisal of the extended runway option as it would undermine the economic case for the runway extension if the extension was constructed to allow larger aircraft to operate but their operation was precluded due to security or terminal operation reasons. There would also be some incremental operating costs for a larger terminal but we have made not specific allowance for these as a newer building might also have some lower maintenance costs for example.

AN EXTENDED RUNWAY FOR ALDERNEY – ECONOMIC AND FINANCIAL ANALYSES

4.25 In summary, we will add £2.3 million to the incremental capital costs estimates provided for the runway extension works to allow for the costs associated with security and passenger handling of larger aircraft as well as an ongoing £50,000 a year in operating costs, including maintenance of the additional pavement in the short term²⁰.

Summary

- 4.26 On the basis that the works to the terminal and improved security are a necessary requirement to ensure that the benefits of an extended runway can be realised through allowing larger aircraft, the incremental costs associated with the runway extension and the ability to handle larger aircraft are in the range for Option 5:
 - → Low: £9.194 million + £2.3 million = £11.494 million according to RCA;
 - → Medium: £12.37 million + £2.3 million = £14.67 million at the low end of the TPS estimates;
 - → High: £16.75 million + £2.3 million = £19.05 million at the high end of the TPS estimates;
- 4.27 We note that the advice from TPS is that the Low end of the range is not realistic but it is included as a sensitivity test to illustrate the extent to which, if lower construction costs could be achieved, the project might attain a viability threshold.
- 4.28 If the lengthening of the runway was not carried out concurrently with the Option 3 refurbishment work, then the incremental costs would be even higher due to the requirement to integrate the works into the existing runway and due to remobilisation of the work. We do not have an estimate from RCA on this basis but assuming it would be in the same proportion as for Option 5, we have a range of costs for Option 6 of:
 - ✤ Low: £12.602 million + £2.3 million = £14.902 million based on RCA costings;
 - → Medium: £16.955 million + £2.3 million = £19.025 million at the low end of the TPS estimates;
 - → High: £22.945 million + £2.3 million = £24.245 million at the high end of the TPS estimates;

²⁰ The initial impact on maintenance costs of having a longer runway will be negligible. In the longer term, the greater length of pavement would add to the costs when the next runway refurbishment is due. This may reasonably be expected to be beyond the current appraisal period.

- 4.29 It should be noted that our initial understanding was that the initial Option 3 costs would be higher in the circumstances where preparatory work would be undertaken to prepare the ground for Option 6 to be carried out at a later date but we are now advised by TPS that the costs associated with Option 3 refurbishment would not need to vary whether the runway extension was constructed as part of the same project or at a later date. This has implications for the appraisal as we no longer need to consider additional cost in the short term to facilitate the later extension of the runway. Option 6 can, hence, be appraised as a free standing project which would be undertaken at some future (unknown) date.
- 4.30 The costs outlined above have been taken forward to appraisal in Section 6

5 AIR SERVICE OPTIONS

Aircraft Capability

5.1 The runway redevelopment schemes focus on two runway lengths, either the existing 877m, or an extension to 1,100m. Retention of the current runway length would see the Airport continue to be restricted to maximum 19-seat aircraft types. The proposed extension was designed around the capability of handling the 48-seat ATR-42 aircraft, but would in fact allow a broader range of aircraft to be handled. **Table 5.1** illustrates the aircraft which may viably operate from each runway length and current airline operators in the UK market. Where airlines do not yet operate these aircraft in the UK, this would not necessarily be a barrier as aircraft could be acquired by carriers that were interested in operating to Alderney and/or procured by the States as part of a PSO operation (based on the example of the Scottish Government which acquired two Twin Otter aircraft to guarantee the continued operation of the PSO routes to Campbeltown, Tiree and Barra), which rely on that aircraft type being available.

	Table 5.1: Viable Aircraft By Runway Length							
	Aircraft Type	UK Operators						
	Trislander (17 seat)	Aurigny						
877m	Dornier 228 (19 seat)	Aurigny						
Length	Let 410 (19 seat)	CityWing						
8	Twin Otter (18 seat)	Isle of Scilly Skybus						
	Dornier 328 (32 seat)	Loganair						
1 100m	Dash-8-Q100/Q200 (30-36 seat)	None						
1,100m Runway	Dash-8-Q300 (50 seat)	None						
Length	ATR-42 (48 seat)	Aurigny, Blue Islands (Flybe), Stobart Air (Flybe/Aer Lingus)						
	Saab 340B+WT (36 seat)*	Loganair						
Note: *Ma	ay have some payload restrictions							
	Source: York A	viation						

- 5.2 There may be other types which could operate with greater payload restrictions than those shown above, such as the SAAB 2000, and, based on the runway length alone, it could be possible for Aurigny to operate their ATR-72 aircraft from 1,100m runway (there are examples of this aircraft type operating from similar runway lengths in the UK, albeit on an ad-hoc basis and with weight restrictions). Whilst we can see some merit in enabling Aurigny to deploy on its ATR-72 aircraft capability on a tactical basis to provide greater resilience and to cope with short term peaks in demand, this would require the runway to be stronger²¹ than proposed under the current design. Hence, the costs would be higher and the benefits probably relatively marginal provided that greater reliability can be attained with the Dornier fleet. The ATR-72 would remain subject to similar weather cancellations as noted earlier in this report, due to the restricted length of runway in any event and would only be deployed on relatively few days in the year.
- 5.3 A further consideration in assessing the need for a longer runway is the availability of suitable aircraft over the longer term that would be compatible with the existing short runway. If the number of aircraft capable of using the existing runway were to decline in future, this would place the services at severe risk and, over and above any commercial or market growth considerations, may make the provision of a runway extension essential.
- 5.4 However, it must be recognised that neither the existing nor the extended runway length would be immune to the potential recurrence a runway length issue at some point in the future if smaller aircraft types were to fall out of production. Whilst it is easy to identify this as a potential concern, it is difficult to be precise about the point in time at which such a circumstance could arise. This is because it will depend on what age of aircraft an individual airline is willing to operate. In the case of Aurigny, it has shown a willingness to operate aircraft as old as 41 years the Trislanders, but this is not typical and, indeed, was probably less than ideal for the carrier given maintenance and reliability issues which have arisen in operating such elderly aircraft. The first two (second hand) Dorniers that were acquired are around 30 years old, and have demonstrated some reliability problems (to be overcome with the arrival of the new aircraft). More typically, regional aircraft have a lifespan of 20-30 years which suggests that from the end of production, there will be availability of suitable aircraft for up to 30 years.

²¹ with a higher Pavement Classification Number (PCN) than currently used as a design parameter.

- 5.5 Of the aircraft listed in Table 5.1, only 5 types are still in production, including three 19-seat types (Dornier 228, Twin Otter and Let 410), the Dornier 328 (recently restarted production under new ownership after a hiatus of 16 years) and the ATR-42. For other aircraft types, including the Saab340 and the Dash-8, the 20-30 year period of operating life is now rolling as production has stopped²². Despite concerns raised during the consultations over longer term availability of smaller aircraft, more of the smaller 19 seat types remain in production than the 32-34 and 48 seaters, suggesting that, at this time, the lack of aircraft capable of using the short runway is not likely to be a valid concern for at least 30 years and possible longer. It also important to note that the niche nature of the 19-seat market extends well beyond Alderney and the requirement for these aircraft may remain strong globally over the longer term in order to maintain service to remote locations or smaller islands, such as Alderney, where larger aircraft are less likely to be viable and/or operating or infrastructure constraints limit the aircraft types which can be used. It is not inconceivable, therefore, that following the recent investment by Viking and RUAG in updating the Twin Otter and Dornier respectively, this would be replicated in the future to keep production going into the long term to ensure that aircraft are available to satisfy these niche markets. It is equally possible that enhancements will be made to the ATR-42 to keep these in production. Hence, we do not believe that availability of aircraft of either size is likely to be a problem for the next 20-30 years. The issue is more of commercial viability and the attractiveness of the Alderney market.
- 5.6 As highlighted in Table 5.1, the number of operators with suitable aircraft types to operate from either runway length currently within their fleets is relatively small. Hence, the medium to long term risk may be more in terms of the willingness of airlines to serve the market than in terms of aircraft availability. These airlines will be reluctant to introduce new aircraft types into their fleets specifically for the Alderney market because crew training and maintenance costs are high for any new type in a fleet (as can be seen with Aurigny's experience in transitioning to the Dorniers). Furthermore, airlines will be less likely to want to operate and maintain fleets of substantially mixed aircraft types because of costs and lack of operational flexibility which arise as a consequence. With or without a runway extension, there will remain a small pool of airlines able to serve Alderney.

Aircraft Operating Costs

5.7 We are aware that one of the cited advantages of lengthening the runway is to allow larger aircraft to be operated and that such larger aircraft would have lower seat mile operating costs, which conventionally would be passed through to lower air fares so contributing to an increase in demand. We consider the price elasticity of demand later in this section.

²² Dash-8-Q200/Q300 production ceased in 2009, and the last Saab340 was produced in 1999, meaning the youngest aircraft are approaching 20 years old.

- 5.8 Larger aircraft do, nonetheless, have higher overall operating costs than the current smaller aircraft operated on the routes. Hence, improvements in seat mile costs will only translate into improved passenger mile costs if the passenger volumes increase to fill more of the seats.
- 5.9 Implicit in our analysis here is the assumption that airlines will seek to operate no greater frequency of service than necessary to serve demand at a reasonable average load factor (taken as c.80% for services operated commercially). The same applies to the size of aircraft used, i.e. there is a balance to be struck between aircraft size and frequency of service to match the number of seats offered as closely as possible to demand. The maintenance of a higher frequency or operation of a larger aircraft on the routes than an airline would otherwise operate commercially is considered below in relation to subsidy/PSO issues.
- 5.10 We have estimated the direct operating cost per passenger²³ for each of the Alderney to Guernsey and Southampton routes for a range of relevant aircraft types at varying annual passenger volumes on the route, taking into account the relevant sector length and different potential daily frequencies of service where suitable to better match overall aircraft capacity to demand. The results for the Guernsey route are shown in **Figure 5.1** and for the Southampton route in **Figure 5.2**. This gives the order of magnitude difference in cost per passenger carried for different types of aircraft operating at up to an industry average load factor of 80%. It is important to recognise that these costs do not include the costs of any 'stand by' non-operational aircraft and crews or the necessary contribution to airline overheads. It is these factors in combination which contribute to Aurigny's current losses on the routes. The analysis, nonetheless, provides an indication of the scope for lower operating costs per seat of larger aircraft to be passed through by way of lower air fares.
- 5.11 In the case of the Guernsey route, for the purpose of illustrating the relative operating costs, we have assumed an average of 5 flights a day if the service is operated as currently with Trislander or Dornier aircraft utilising a single aircraft sufficient overall to carry current passenger volumes at a reasonable average load factor. For the future, the costs of the Dornier represent the relevant baseline²⁴. For the other aircraft types, including the 32-34 seat DO328/Saab340B aircraft, we have assumed that the frequency would be reduced to 3 flights a day on average as airlines would seek to avoid operating with very low average load factors.

²³ Manufacturer data, Flightglobal and confidential information.

²⁴ We also considered costs for a Twin Otter aircraft which would be similar to the DO228 and for the Saab340B which would be similar to the DO328. ATR72 aircraft would have higher costs per passenger than the ATR across the range of annual passenger volumes that we have considered should the runway be further strengthened to allow them to operate.

- 5.12 We recognise that on some days the number of services is less and on others higher which, in the latter case, requires an additional aircraft to be deployed at increased cost, including crews, depreciation and direct operating costs. This would equally apply to the other aircraft types and airlines if higher frequencies of operation were required to meet peaks of demand. For the purpose of examining operating costs, we have assumed a ceiling on average load factor of 80%, indicated by dotted lines on Figure 5.1.
- 5.13 In estimating the operating cost per passenger, we have assumed that the Trislander fleet is already depreciated and that spare parts are also fully depreciated and held by Aurigny based on comments made by the airline. We are aware that some Alderney residents believe the Trislander could be brought back into limited production to re-equip the fleet serving the island in lieu of Dorniers. We doubt this is a realistic option unless there were other markets for such aircraft and, in any event, it seems likely that cost of production and of spare parts would be very high for such a limited run of aircraft. Taking into account the depreciation costs if new Trislanders were to be constructed, the operating costs of a new Trislander fleet would be very similar to those of the Dornier fleet, taking into account the higher cost of fuel for the Trislanders as well. Information about the costs of Trislander operation are, hence, included simply to provide a baseline cost for the current operation against which future costs can be compared. Historically, the effective operating costs will have been higher up until the point when the aircraft were fully depreciated.

Guernsey

- 5.14 Examining the relative costs shown in Figure 5.1, it is evident that passenger numbers would need to increase by around 9,000 passengers a year on the route, around 25%, to deliver the same average cost per passenger for an ATR-42 operating 3 times a day compared to the current 5 times a day service operated entirely with DO228 aircraft. At that point, the DO228 would be operating at an average 80% load factor and additional capacity would be required, increasing average costs per passenger until all flights reached 80% again. The same would apply to a 3 times a day operation by the larger DO328 type. The cost of operation by 32-34 seat aircraft, such as the DO328, are similar at 3 a day to a 5 a day service using DO228 aircraft. Hence, this aircraft would not appear to offer any advantages as it too would require a reduction in frequency to balance operating costs to current levels.
- 5.15 When the concerns expressed about current air fares are taken into account, it should be recognised that to match the costs of the current hybrid Dornier/Trislander operation, passengers would need to increase to around 60,000 a year (a 66% increase) to match the current operating costs. This is material in considering the scope for larger aircraft to enable lower air fares to be offered even at reduced frequencies of service.



5.16 This analysis would suggest that, in order to ensure that air fares do not rise as a consequence of facilitating the operation of larger aircraft on the route, a lower frequency operation (3 per day on average) by a larger ATR-42 type aircraft would only generate benefits in terms of the ability to pass on lower costs into lower fares than would otherwise be offered beyond a threshold of around 45,000 passengers per annum on the route, at which point additional Dornier 228 capacity would be required to carry the demand. In both cases, however, the cost per passenger carried would be higher than current levels (with a risk of higher air fares if the losses on the route are not to be increased) due to excess capacity being provided until the threshold of 60,000 passengers per annum is reached. There would be fewer benefits with DO328 aircraft as the frequency would need to be increased to accommodate any increase in demand above 45,000 passengers, so adding to costs as with the smaller DO228 aircraft. There might be some prospect of small fare reductions beyond the threshold of 60,000 passengers per annum but, in the meantime, there would be a risk of subsidy costs rising to maintain fares at the current levels.

Southampton

5.17 The equivalent operating cost graph for the Southampton route is shown in **Figure 5.2**. A first point to note is that current passenger numbers on the route are close to the threshold where capacity would need to increase to meet demand if the demand profile was smooth over the year. However, this could be met through the introduction of a 4th DO228 service on an average basis but there will remain a summer-winter differential which means flights may be operating with very low load factors in winter whilst summer flying is oversubscribed. If there was a consistent year round pattern of demand, the increase in cost would be marginal as it would, in essence, be extra flying by the same aircraft.



5.18 As with the Guernsey route, passengers would need to increase substantially to reach the point where the cost per passenger of using larger aircraft would fall below current levels, requiring of the order of 45,000 passengers a year (87% increase over current volumes) for a 2 per day ATR-42 service and 55,000 passengers per year (130% increase) for a 3 a day ATR-42 service. There would be little fares benefit from a 32-34 seat aircraft on this route as additional frequency would result in a cost profile very similar to a 4 times a day service with a DO228 aircraft.

- 5.19 Taking into account the need to increase to an average of 4 flights a day with a DO228 aircraft if passengers on the route increase above c.27,000 per annum again the level of demand on the route prior to 2011, a 2 a day ATR-42 service could offer some potential to reduce fares above 37,000 passengers per annum on the route compared to the level required for a 4 per day DO228 service. However, a 3 per day service with an ATR-42 would be required to carry the volume of passengers at 45,000 passengers per annum, resulting in an increase in cost per passenger above current levels until volumes reach 50,000 passengers per annum. Overall, this suggests little scope to reduce fares compared to current levels (based on a hybrid type operation).
- 5.20 Hence, in order to ensure that air fares do not rise as a consequence of facilitating the operation of larger aircraft on the route, a lower frequency operation (2 per day on average) by a larger ATR-42 type aircraft would generate benefits in terms of the ability to lower fares only beyond a threshold of around 37,000 passengers per annum on the route. A higher frequency operation could be warranted above 45,000 passengers per annum but with some remaining risk of higher fares in the short to medium term until a threshold volume of 50,000 passengers per annum is exceeded.

Potential Service Pattern

5.21 Simply enabling larger aircraft to operate from the runway will not guarantee that airlines will operate such aircraft. If left to make purely commercial decisions, airlines will always seek to deploy aircraft assets in the most profitable way and right size the capacity that they provide to the market. The small size of the Alderney market will ultimately limit the size of aircraft which an airline will be willing to operate and the potential for either a shortfall in passengers (low load factors) or low yield will make the routes more vulnerable. This will typically mean that airlines will favour larger markets over smaller ones, not only because they will have more passengers on their aircraft, but also because it will give them the greatest chance of maximising revenue per passenger (yield).

- 5.22 Furthermore, in a typical operation, regional airlines may seek to fly a given route at each end of the day in order to offer business connectivity and maximise yields from business passengers. Such flights will normally be priced to cover the fixed cost of the operation. In between, they may offer additional frequencies but only if the marginal revenues that can be earned from extra passengers cover the marginal costs of operation. If this is not the case, it is more efficient for airlines to park aircraft through the day rather than fly below cost. Hence, if larger aircraft were operated on a commercial basis, this is likely to see flight frequencies reduced as passenger volumes are insufficient to justify the marginal cost of middle of the day flying. At current passenger levels, the Southampton route might only sustain a once-daily service by a 48-seat aircraft, whilst the Guernsey route would require two flights a day to handle current passenger volumes. By way of illustration, at current total passenger volumes on these routes, the aircraft would be operating at an average load factor of 58%, which could only be sustained with higher, rather than lower, fares. This also does not take account of the cost of any back-up aircraft capacity to ensure resilience and to cope with particular peaks of demand.
- 5.23 A further consideration, in terms of meeting the aspiration for a service pattern that is adaptable to varying levels of demand, is that regional airlines do not tend to have 'spare' aircraft because of the costs of acquisition and maintenance. Spare aircraft tend to be retained in fleets purely to cover maintenance periods and to serve as backup aircraft if the operational fleet has technical issues. Airlines tend not to keep dedicated crews for these aircraft. This means that, on the whole, regional airlines do not have lots of spare capacity to deploy on routes beyond their core schedules, i.e. they could not easily deploy aircraft at short notice if they see an immediate opportunity due to a sudden surge in demand, such as the extreme peaks of traffic around Alderney week. To the extent that spare capacity exists, this tends to be in the winter periods and does not coincide with the peaks of demand to/from Alderney. In other words, it may be difficult to meet the aspiration of consultees for additional capacity to be put on, for example during Alderney week, on a commercial basis. A small number of operators in Europe do maintain aircraft available for charter, but at inflated rates during peak periods. The only realistic way of securing additional peak capacity would be through by underwriting, through a PSO or otherwise, the retention of an aircraft available at short notice to operate top up flights.
- 5.24 Similarly, as evidenced earlier in this report, even significant stimulation would be unlikely to create commercially viable load factors on larger aircraft for large periods of the year to Alderney. Hence, an airline would almost certainly be unwilling to maintain a fleet of smaller aircraft for winter operations and larger aircraft for summer operations as this would add significantly to the cost and complexity of their business. This approach would require fleets and pilots not to be used at all for long periods of the year, and the costs of this would need to be allowed for in the air fares or otherwise covered through subsidy or PSO support. Again, we will consider this further below.

- 5.25 Ultimately, we would expect the introduction of larger aircraft to result in lower frequencies of service on the core routes and, because of the cost of having standby aircraft available, potentially not lead to any improvement in service resilience. Whilst there might be a larger pool of airlines with suitable aircraft, there is unlikely to be substantial spare capacity to operate additional flying in the summer peak although there might be opportunities for ad hoc charters around Alderney week and these might be operated from other points along the South Coast of England as in the past but fare levels are likely to reflect a peak period premium. Even so, overall levels of tourist demand and the low numbers of passengers seen on these and the route to Jersey when operated by Blue Islands would suggest that the incremental effect of such services on the market overall would be very small.
- 5.26 Our analysis would indicate that larger aircraft operations would require significant growth in the market before they could be introduced without the risk of higher fares or substantially increased costs of subsidy (losses for the airline):
 - → Guernsey
 - DO228 operations would provide adequate capacity up to 45,000 passengers per annum at an average of 5 flights a day with a single aircraft;
 - ATR-42 operations would be cost effective above 45,000 passengers per annum, with an average of 3 flights per day with a single aircraft.
 - → Southampton
 - DO228 operations would provide adequate capacity up to 37,000 passengers per annum, subject to an average frequency of 4 a day;
 - ATR-42 operations would be cost effective above 37,000 passengers per annum, with an average of 2 flights a day.

We recognise that these are simplified assumptions and may not fully reflect the variability and complexity of the actual services operated, including the need to deploy a spare aircraft at times of high demand. We do not believe that these complexities would, in practice, be impacted substantially by the ability to operate larger aircraft or not and that the 'typical' year round frequencies set out above are the appropriate basis for undertaking our option assessment.

Impact on Level of Subsidy

5.27 Based on our analysis of the operating costs of relevant aircraft types, discussed above, the scope for ATR-42 type operations to lower the per passenger operating costs, even at lower than current frequencies of service, is limited and would only arise at higher volumes of passengers. In considering the scope for larger aircraft to deliver lower air fares and stimulate the market, almost all patterns of service which could be reasonably considered are more likely to increase the costs to an airline of delivering the service than reduce it at foreseeable passenger volumes.

- 5.28 To the extent that, at higher passenger volumes above the thresholds identified above, there might be some small reductions in cost per passenger carried of the order of 19% per passenger on the Guernsey route compared to current blended Dornier/Trislander costs and around 11.5% per passenger on the Southampton route if passengers reached c.60,000 per annum on each route. In overall terms, if passenger volumes increased above 82,000 overall, based on the viability thresholds for ATR-42 operations outlined above and on the basis of an integrated operation of larger aircraft across the two routes, it would be reasonable to assume that there could be a reduction in cost per passenger of around 15% on average if the overall passengers volume reached 120,000 per annum. However, this threshold volume of passengers would mean regrowth in the market to deliver passenger volumes to/from Alderney on all routes higher than seen other than in the years 1988-1990, when market conditions were very different and both population and tourist numbers were at their peak. We discuss below, the scope to stimulate the market even with this level of fare reduction.
- 5.29 In practice, the potential for reductions in cost per passenger across the routes need to be set against the current losses on the routes reported by Aurigny at around £25 per one way passenger. It is far from clear that any cost reductions would be passed through to air fares and may be more likely to be used to reduce losses and subsidy costs compared to current levels. Whilst this would be a longer term benefit of a longer runway permitting operations by larger aircraft, it only arises if the market grows sufficiently to deliver these lower per passenger costs. As we go onto explain, this seems highly unlikely and beyond the bounds of probability.
- 5.30 In which case, the effect of the introduction of larger aircraft would increase losses/subsidy costs in the short to medium term until the point at which the cost per passenger of the larger aircraft matched those of the current operation, i.e. c.82,000 annual passengers to/from Alderney, beyond which there would be incremental scope for per passenger cost reduction. Using the cost data outlined above, the immediate effect of the introduction of larger aircraft would be to increase airline costs per passenger by around $\pm 6^{25}$, declining as volumes increase towards 82,000 annual passengers. We have built this additional cost of subsidy into our appraisal model as a consequential cost associated with larger aircraft using the longer runway.

Scope for Market Growth

5.31 A key question is whether the reduced operating costs which larger aircraft might bring would be passed on to passengers through lower air fares and the consequential effect on demand.

²⁵ Note, this is based on incremental operating costs and does not reflect the current losses by Aurigny on the routes which would persist in any event, subject to any efficiency improvements which the airline can make.

- 5.32 Although this may be somewhat academic given the threshold volume of passengers which would have to be reached before there would be cost savings which could be passed through by way of lower air fares, we did examine the extent to which the entry of new airlines onto UK-island routes, as cited as examples by RCA in their presentation to the States of Alderney, have delivered lower air fares and increased passenger volumes.
- 5.33 We used UK Civil Aviation Authority survey data to examine the impact of the entry of easyJet onto routes between London Gatwick and Jersey and Liverpool and the Isle of Man in 2014 and 2010 respectively in terms of the effect on air fares and demand between London and Jersey and the Northwest of England and the Isle of Man (recognising that, in this case, the easyJet entry reflected the use of large jet aircraft which is not feasible in the case of Alderney). At the outset, it should be noted that the air fare sample collected by the CAA is relatively small and, therefore, subject to some tolerance for error. Nonetheless, the analysis presented in Tables 5.2 and 5.3 below provides some indication of the order of magnitude of the effects.

Та	Table 5.2: The Effect of easyJet entry on the London – Jersey Market								
	Inbound Business	Inbound Leisure	Total Inbound	O'bound Business	Outboun d Leisure	Total Outboun d	Total Business		
Single Ticket Cost (2013)	£75.61	£63.38	£65.99	£79.19	£56.31	£66.11	£77.63		
Single Ticket Cost (2015)	£47.37	£47.47	£47.43	£60.91	£49.38	£51.36	£52.50		
% Change	-37%	-25%	-28%	-23%	-12%	-22%	-32%		
Passengers (2013)	57,998	234,560	292,559	84,319	206,264	290,583	142,318		
Passengers (2015)	139,631	240,637	380,268	57,081	254,910	311,992	196,712		
% Change	141%	3%	30%	-32%	24%	7%	38%		
Elasticity	-3.8	-0.1	-1.1	1.4	-1.9	-0.3	-1.2		
Route easyJet year of Entry	London - Jer	rsey							

Table 5.3: 1	Table 5.3: The Effect of easyJet entry on the Northwest England – Isle of Man Market								
	Inbound Business	Inbound Leisure	Total Inbound	O'bound Business	Outbound Leisure	Total Outbound	Total Business		
Single Ticket Cost									
(2007)	£104.28	£122.16	£114.14	£80.76	£71.03	£73.33	£95.81		
Single Ticket Cost									
(2015)	£52.65	£39.51	£42.93	£53.79	£42.88	£43.26	£52.77		
% Change	-50%	-68%	-62%	-33%	-40%	-41%	-45%		
Passengers (2007)	55,617	68,524	124,141	39,207	124,246	163,453	94,823.8 1		
Passengers (2015)	60,416	118,059	178,475	29,755	161,766	191,521	90,171.1 7		
% Change	9%	72%	44%	-24%	30%	17%	-5%		
Elasticity	-0.2	-1.1	-0.7	0.7	-0.8	-0.4	0.1		
Route	North West Man	- Isle of							
EasyJet year of									
Entry	2010								

5.34 In overall terms, passengers travelling between London and Jersey rose by 19% and average fares fell by 23%, suggesting a relatively inelastic market, with an elasticity of -0.8 to changes in air fares. Similarly, in the case of the Isle of Man example, passengers rose by 29% whilst average air fares fell by 51%, an elasticity less than of -0.6. In both cases, this suggests that markets between the UK and its associated islands are relatively mature and inelastic. We would not expect the Alderney market to show any greater elasticity to air fare changes. The results which we have derived in these two markets are actually higher than calibrated by the UK Department for Transport²⁶, which suggest the appropriate air fare elasticities at -0.7. Whilst other analyses, such as Intervistas for IATA²⁷ suggest that individual route level air fare elasticities can reach -1.4 where there is substantial passenger switching between routes, this is not valid in the case of Alderney given the nature of the market and the fare levels which already exist in competitive tourism markets.

²⁶ Department for Transport, UK Aviation Forecasts, January 2013, paragraph 2.16, Table 2.1.

²⁷ Intervistas, Estimating Air Travel Demand Elasticities, 2007
- 5.35 At the potential fare reductions which might be achieved in the long term, at the point when larger aircraft would deliver lower cost per passenger than current operations, and if these were passed through to air fares (rather than simply used to reduce subsidy costs), the effect on demand would be marginal. If a 15% reduction could be achieved the effect on demand might be no more than 12% at an air fare elasticity of -0.8 (at the upper end of our range and higher than recommended by the UK DfT), i.e. an additional 10,000 passengers in the very long term. However, the fare reductions at this level would not kick in until the air passenger numbers approached 120,000 per annum to/from Alderney, far in excess of levels of air passenger demand previously reached in the late 1980s, albeit some more marginal fare reductions might be realised once demand exceeded 82,000 passengers per annum. In other words, introduction of larger aircraft in the short term would not enable lower fares to be offered and, even in the longer term, any cost reductions with the types of aircraft possible would not be sufficient to act as a stimulus to market growth. The level of stimulation, even if fares were artificially reduced in advance through increasing the subsidy to act as a market stimulus, would not be sufficient to generate viable demand levels for larger aircraft for the foreseeable future.
- 5.36 A further consideration in terms of the scope for market growth is the potential impact of the reductions in frequency which would be the inevitable consequence of operating larger aircraft, assuming that the further additions to the cost of subsidy to sustain the current frequencies would not be sustainable.
- 5.37 At reduced frequencies of service, necessary to enable lower costs per passenger to be realised with larger aircraft in operation above the relevant demand thresholds, there would be effective time cost penalties due to lower frequencies of operation that would negate the beneficial effects of any fare reduction in terms of the generalised cost of travel. In considering this, we have used the UK Department for Transport's approach to frequency change, which relates to an extra wait time factor between flights and derives a cost related to the loss of time utility. For existing users, decreasing from 5 flights per day to Guernsey to 3 with a larger aircraft would translate to a cost penalty of £6.28 per passenger at current prices. On the route to Southampton, the drop from 3 flights to 2 with a larger aircraft would cost £5 per passenger for all existing users. This penalty would be greater when set against the potential for an increase to 4 flights a day if the market grows and the existing Dornier fleet continues to be used. Combining both markets leads to an average cost increase per current user due to lower frequencies of service of £5.84. In other words, the time cost penalties from reductions in service frequency would negate any possible fare reductions which might be achieved even if the market grew beyond the threshold for larger aircraft operations of 82,000 annual passengers up until close to 120,000 passengers per annum using the services, i.e. there would be no net benefit to users from larger aircraft until passenger numbers are virtually double today's levels. Until that time, the total cost of travel to/from Alderney would effectively increase (in time and money terms) as a consequence of any use of larger aircraft rather than reduce when compared to the current and potential pattern of operation if the routes continue to be operated by smaller aircraft.

5.38 Overall, then we see little scope for the use of larger aircraft in themselves to stimulate the market, although we recognise that there may be some perception of quality benefits. Against a baseline scenario of ensuring the current service problems with the Dornier fleet are resolved and the two core aircraft and the standby aircraft can be used effectively to deliver resilience and additional frequencies in peak periods, there are significant risks attached to encouraging operations by aircraft of 32 or 48 seats, which are inherently too large for the current size of the market. The risk of damaging the market is illustrated in **Figure 5.3** below.



5.39 Our best estimate would, therefore, be that the case for the runway extension would be stronger once the air travel market recovers to the level seen around 2000 of over 82,000 passengers per annum but the real benefits would not be seen until demand levels reach 120,000 passengers per annum. Even then, the market risk of lower frequencies of service with larger aircraft would remain. It should be noted that delivering this passenger volume would suggest resident population increasing to at least 2,500 and leisure tourism delivering at least 25,500 air passengers a year, i.e. higher population than seen on the island since the early years of the 20th Century and tourism back to the levels seen at the turn of the millennium.

6 ASSESSING THE ECONOMIC VALUE OF THE OPTIONS

- 6.1 At the outset, it should be noted that our ability to assess the economic value of a runway extension under the two options is limited by the lack of detailed economic and demand data for Alderney and particularly by the lack of any real evidence that there is a definitive causality between declines in population and business and the air service offer. When coupled with the highly provisional nature of the existing cost estimates, in particular the estimates of the actual construction costs on Alderney, our appraisal is necessarily heavily assumption driven. For this reason, we have undertaken a number of sensitivity tests in terms of both construction costs and economic effects to illustrate the range of outcomes under different conditions.
- 6.2 In order to carry out this assessment, we have had to define hypothetical scenarios for the effect of a runway extension on the economy and on passenger demand using the air services but without the underpinning evidence which would support these scenarios as being deliverable in practice. Hence, these hypotheses provide an illustration of the circumstances under which investment in a runway extension could be economically justified rather than a definitive economic justification for its provision.
- 6.3 We have assessed the options on the basis that a longer runway will automatically result in the operation of larger aircraft and deliver any benefits that such larger aircraft might bring as well as the costs associated with handling/operating such aircraft from the first year after runway completion. If that were not to be the case, it would imply that the construction of the runway extension was premature in any event.
- 6.4 As requested by the client Steering Group, we have appraised the case for extending the runway using both the conventional transport economics/economic welfare approach, as would be applied in accordance with UK Treasury Green Book guidelines and commonly applied to airport related investments by the public sector, and a development economics approach at the specific request of the States of Alderney and the Steering Group. Whilst we understand that the development economics approach, taking into account the wider economic benefits of development, is adopted in circumstances where the infrastructure is regarded as an essential enabler to economic growth, we note that it is more usual to appraise airport development projects using the transport economics/consumer welfare approach.

6.5 In the development economics approach, we have necessarily had to base our appraisal on the hypothesis that improving the air service offer requires an extended runway to be available so enabling the operation of larger aircraft, with fewer restrictions on the availability of seats at critical peak periods. However, for the reasons outlined in Section 5, this is not necessarily the case. Furthermore, we have had to assume that improvements in air services so delivered are both necessary and sufficient to secure an increase in population and tourism numbers such that it would, therefore, be appropriate to ascribe a value related to such increases to the delivery of a runway extension. As will become clear when the results of the transport economics appraisal are considered, these conditions are highly unlikely to arise due to the disbenefits to users which would result from the premature introduction of larger aircraft when tested against the hypothetical increases in passenger volume. This has implications for the weight that can be attached to the outputs from the development economics approach, which assumes a direct linkage between the provision of a longer runway and uplifts in population and tourism that may in fact have the opposite effect.

Basis for Appraisal Scenarios

- 6.6 Although, ideally, we would have been able to set out future demand scenarios for both Option 5 and Option 6 by reference to projected economic growth, enabling us to establish the time when the introduction of larger aircraft into the market would be viable, there are no robust economic projections for Alderney.
- 6.7 There is an economic aspiration founded on the target to see the resident population increase to 2,300 and to grow tourist visitors. The Economic Development Plan is framed in terms of a number of specific actions aimed at creating the conditions for particular business sectors to grow. Improving the air service offer is seen as a fundamental part of that plan, including the upgrading of the Airport infrastructure. Improving the Airport and air services are seen as critical enablers to delivering other aspects of the plan. Other elements include improved broadband, education and electricity supply, along with softer measures such as an improved planning regime, review of business legislation, further tax amendments and encouragement of apprenticeships and entrepreneurship through funding and mentoring.

- 6.8 However, whilst improving the air service offer is clearly important, as we note in Section 2 there is no hard evidence that declines in population over the medium to long term have been as a consequence of failings in the air service offer until very recently. At the time when Blue Islands was still operating to and from Alderney, we understand that the air service offer was considered appropriate and not a particular impediment, although the population was declining more rapidly during this period than it has reportedly done since. Hence, it would not be appropriate to attribute any longer term decline in population to deficiencies in air connectivity per se. Recent fluctuations in recorded resident population since 2011 cannot explicitly be linked to the recent problems with the air service, albeit those problems are evident in a relative reduction in the number of passengers carried on the routes. This is material to the extent to which the benefits of the any achieved uplift in population might be wholly or in part ascribed to improving air services. This impacts on the extent to which it would be safe to assume that an uplift in resident population would necessarily follow an improvement in the air service and, to the extent there is a linkage, the proportion of the target uplift in population that could be so ascribed.
- 6.9 In terms of inbound tourism, we note that the recent peak was in 2008, when Blue Islands served a number of routes. On our estimation (see Figure 3.1) the volume of tourism reached around 22,000 air passengers (11,000 visitors coming by air) which was the highest since the late 1990s. We have assumed that this is a reasonable target for increased visitor numbers if there was an improved air service offer given structural changes in tourism which occurred after the previous peaks seen in earlier years.
- 6.10 Although, as we have outlined earlier in the report, there would be no real case for the introduction of a fleet of larger aircraft operating the routes to/from Alderney until the combined volume of passengers reaches c.82,000 passengers per annum, we have developed illustrative scenarios assuming such aircraft were introduced onto the routes on completion of the runway extension in the short to medium term as the basis for appraising whether there is an economic case for such an extension in the near future, i.e. if it were built and larger aircraft operated immediately, what would be the benefit.
- 6.11 There are two further considerations in developing scenarios for assessment:
 - → First of all, delivery of the uplift in population relies on a number of other economic or infrastructure improvements being delivered, including the provision of fit for purpose broadband access, improved and reliable electricity supply, healthcare initiatives (in part already delivered) and reviewing education provision on the Island among others. Hence, it would be inappropriate to attribute the full increase in target population to the delivery of improved air services alone.
 - → Secondly, given the inability to assume that the market can be stimulated by lowering air fares to/from the island until threshold passenger volumes are reached, it is less clear how the use of larger aircraft would deliver a step change in tourist numbers.

- 6.12 Although, as noted above, we have not been able to establish any causal link, we have adopted the assumption of 2,300 for resident population and 11,000 tourist visits travelling by air as upper bound target values to support the economic development strategy as a basis for testing whether, if such numbers could be achieved and were directly linked to the operation of larger aircraft, the provision of a runway extension allowing the operation of larger aircraft would be economically justified. However, it is important to note that our analysis should not be read as indicating that we believe that the provision of a longer runway and operation of larger aircraft will deliver this uplift in population and tourism.
- 6.13 We have used the relationship of air passengers to population illustrated in Figure 3.2 to estimate the increase in population related air passengers and directly added the target number of tourist related passengers to provide a basis for assessment the costs and benefits of delivering an extended runway. Achievement of the full population and tourism targets would result in annual passenger demand volumes across the two routes of c79,500 (last seen in 2000), still well below the threshold for lower fares with a larger aircraft. For the reasons which we go onto explain, this illustrates the hypothetical nature of the scenarios which we have developed as in reality, the passenger volumes justifying the use of larger aircraft c.82,000 across the two routes, would not be achieved.
- 6.14 It is important to note that the ability to achieve this increase in passengers using the air services to/from Alderney is entirely hypothetical as, for the reasons outlined earlier in the report, it would not be driven for the foreseeable future by lower air fares derived from lower operating costs or from frequency increases, rather the converse would be the case with larger aircraft operating. The only drivers for growth would have to rely on the perception value of larger aircraft alone, coupled with the availability of spare seats on the aircraft to meet peak period demand. This mismatch between demand and capacity is a key factor which influences the results of our appraisal due to the higher costs of operation and lower frequencies of service required to minimise the discrepancy between demand and capacity with larger aircraft in operation.
- 6.15 As a consequence, it would certainly be unrealistic to assume that the full target increases in population or tourism would be achieved without substantial reductions in air fares, which would not be delivered by the premature introduction of larger aircraft relative to the size of the market. In order to illustrate the underlying economic conditions which would need to be achieved to support the economic viability of a runway extension, we have tested core <u>hypothetical</u> scenarios based on the achievement of 50% of the uplift in population and tourist visitors. Even this is a highly optimistic assumption given the evidence. We do also show the effect of assuming the full uplift in population and tourism for illustrative purposes only, although the probability of this being achieved is very low without substantial other initiatives being undertaken not directly related to the air service offer, thus rendering the attribution of the full uplifts to the runway extension highly questionable.

Costs

Runway and Airfield Costs

- 6.16 The runway and airfield capital costs which we have assumed for the appraisal are set out in Section 4. As noted there, we have not further adjusted the costs included in the appraisal to reflect 'optimism bias' as we are currently assuming that the range of optimism bias will be subsumed within the range of values for the 'island factor'. This does mean, however, that we may have been conservative in our estimates of cost and that there could be a risk of costs being even higher at the outturn. Whilst we have included the Low cost estimates as a sensitivity test in our assessment, based on the information supplied by RCA, a very high degree of risk should be attached to the ability to deliver the runway extension at this low cost.
- 6.17 In summary, we have appraised Option 5 on the basis of a range of additional costs of £9.194 million to £16.75 million (at 2015 prices) incurred in years 1 and 2, with the most likely cost towards the upper end of the range (between our Medium and High cost cases) based on the detailed advice from TPS. We note that the costs of Option 6 would be higher at £12.602 million to £22.945 million (at 2015 prices). The revised cost estimates prepared by TPS no longer assume that there would be any upward adjustment to the cost for the baseline Option 3 refurbishment to prepare for the later implementation of Option 6. Hence, the case for Option 6 can be considered on a free-standing basis when market conditions suggest that some benefits might be attained from the introduction of larger aircraft as necessary enabling works would have been undertaken in Option 3 in any event.
- 6.18 TPS do refer in their reports to the possibility of some value engineering as the design is developed. However, given the wide range of cost estimates for construction on Alderney, we do not consider a further lower cost sensitivity test to be necessary as it seems likely, on balance, that the costs would still lie within the range outlined above. This is broadly consistent to the approach we have adopted in not specifically adjusting the costs upwards for optimism bias.

Terminal and Security Costs

6.19 As noted in Section 4, there are also consequential costs to ensure that the terminal can process the larger number of passengers carried if larger aircraft were operated and to comply with the necessary security regulations for aircraft carrying more than 19 seats. Based on the cost estimates provided to the States of Alderney by RCA, we have assumed £2.3 million as a best estimate for these additional capital costs and £50,000 ongoing increment to annual operating costs. Although we do not consider that the benefits from the longer runway, i.e. enabling larger aircraft to operate, could be obtained without incurring these costs, we have carried out our economic appraisal with and without these costs included to illustrate the effect of the runway extension costs alone. Nonetheless, in our view, it would be imprudent to exclude these consequential costs from the consideration of the economic case for the runway extension.

Subsidy Costs

- 6.20 As noted in Section 3, the current air services realise operating losses of c.£1.5 million a year. The operating costs may be expected to rise once the Trislanders are fully replaced by Dornier aircraft, not least as the former aircraft will be fully or virtually fully depreciated with lower effective operating costs. These cost increases may be offset in part by some recovery of the passenger volume lost in the last 2 years since the service difficulties began. Given the transitional period that Aurigny is going through, we have not based the estimate of increased subsidy costs on the current levels of losses on the route but worked from the difference in operating costs between Dorniers and potential larger aircraft going forwards.
- 6.21 Nonetheless, as we set out in the last section, introduction of larger aircraft following the extension of the runway is likely to result in increased operating costs, even at lower frequencies of service. As explained at paragraph 5.30, we estimate that the additional operating cost per passenger of using larger aircraft earlier than warranted by the market is around £6 per passenger at current demand levels. We have assumed that the quantum of additional subsidy required would start at £360,000²⁸ in year 1 and decline pro-rata to passenger growth up until the 82,000 passenger threshold is reached. At that point, the lower operating costs with larger aircraft, albeit still at lower frequencies of service, could be used to reduce subsidy costs or to reduce air fares. In practice, our scenarios do not reach this passenger threshold as, without the stimulus of lower fares and with lower frequencies of service, we do not believe it would be prudent to assume growth of the market to that level within the 20 year period for our appraisal. That is not to say that such circumstances could not arise at some future date if other measures have made a material contribution to securing economic, population and tourism growth on Alderney.
- 6.22 To some extent, the subsidy costs are included on an optimistic basis based on incremental operating costs alone as we have not taken into account the required contribution to central fixed costs, which we understand from Aurigny may not be fully reflected in the reported £1.5 million current loss. We have also not included the costs of the spare aircraft required under all circumstances to provide service resilience. For larger aircraft, the cost of this could be significantly higher because of the increased cost of purchase (4-6 times higher potentially) and with higher depreciation costs applicable to the cost of operation as any spare aircraft would not directly contribute to revenue generation. This is a further area where we have been conservative in our approach to cost increases.

²⁸ Slightly less than £6 per incremental passenger reflecting a small allowance for growth above current traffic levels in the baseline case.

Benefits

6.23 For the purpose of assessing the economic case for the extension of the runway, we have assumed that larger aircraft operations commence from the year after completion of construction. If this were not to be the case, no benefits could be ascribed to the extension until such aircraft were to operate.

Baseline Case (Option 3)

- 6.24 We recognise the views of some consultees that the baseline for our assessment should be one of continued economic and population decline on Alderney in the absence of a longer runway. However, for the reasons set out in Sections 2 and 3, we have not been able to link the overarching declines in population and tourist visitors specifically to issues related to the air services, save for the current operational performance deficiencies. To the extent that other factors are at play, it would be inappropriate to include their effects within our appraisal.
- 6.25 Our baseline assumption is rather that the recent service difficulties are related to the introduction of the Dornier fleet, rather than the length of the runway on Alderney, and that these will be resolved by 2017 and through the effective working of the MOU. This would allow tourist demand levels to recover to the level seen in 2013, prior to recent difficulties. However, simply fixing the service is unlikely to be sufficient to act as a stimulus to population growth. We have, thus, assumed as a baseline that passengers using the services would recover in the short term to 62,650, of which 17,650 would be leisure tourist related passengers (8,825 visitors).
- 6.26 We believe that there would be further scope to improve the services exploiting the capacity of the 3 Dornier aircraft to operate additional services in the peak but, for the purpose of appraising the potential benefits of a runway extension, we have conservatively assumed that there would be no further improvements or increases in tourist or population numbers arising from any of the other economic initiatives in the short term without the introduction of larger aircraft operations. This will tend to overstate the benefits as increased frequencies of service using the Dornier aircraft would increase capacity and give rise to frequency benefits as well.
- 6.27 Clearly, at some future date, if Option 6 were to be considered, this baseline would need to be updated to reflect intervening developments on Alderney (e.g. improved electricity supply), which may well improve the baseline performance materially above current levels assuming recent air service shortcomings are overcome. In the event that there were further declines in economic performance and reductions in population, this would simply defer the time period over which the operation of larger aircraft on the routes might be realistic.

Option 5 Impacts

- 6.28 For the purpose of illustrating the potential benefits of extending the runway, we have worked with the premise, commonly held by many stakeholders on Alderney, that population and economic growth can only be attained through facilitating the operation of larger aircraft on services to and from the island. To the extent that growth could be delivered through other means, this approach will tend to overstate the benefits but this will be compensated for to some extent as we have also included the incremental costs of such operations within our appraisal.
- 6.29 As we set out above, we have tested a hypothesis that larger aircraft operations could improve the perception of travelling to Alderney and that this could contribute 50% towards the achievement of the population growth target to 2,300, i.e. an additional 140 residents, and supports 50% of the recovery of tourism to 2008 levels, i.e. an additional 1,088 visitors each year, with the remainder of the uplift ascribed to other economic measures and/or not deliverable without an effective reduction in air fares. This forms our core illustrative appraisal case.
- 6.30 For the purpose of appraisal, we have assumed that the uplift is achieved over 10 years from the operation of larger aircraft, following the completion of the runway works in Year -1 and Year 0. We have assumed no further growth as it would not be realistic to assume that lower air fares would be offered so as to stimulate further market growth without other economic measures delivering increased air travel demand to reach the threshold of 82,000, beyond which there could be some reduction in air fares and/or subsidy costs compared to today.
- 6.31 On this basis, air passenger demand levels reach c.70,600, equivalent to 2010 levels, with no further growth directly attributable to the extended runway. It is important to recognise that the assumptions underpinning this are highly optimistic given the lower frequencies of service which would be the consequence of larger aircraft being operated.

Option 6

6.32 As noted above, it is difficult to define when the demand threshold might be reached which would enable the operation of larger aircraft without increasing the costs of operation. It is possible that other economic initiatives might deliver population growth such that increased numbers of passengers would use the air services, although we recognise that this may not deliver a step change in passenger volume or economic performance.

- 6.33 Paradoxically, the more successful that other initiatives are in achieving economic and population growth to increase demand, the more likely it is that deferring construction of the runway extension would enable the circumstances to be reached where larger aircraft could deliver lower fares and contribute to a virtuous circle of economic growth if an underlying demand threshold of 82,000 annual passengers could be reached. However, there is nothing in the Economic Plan which suggests these circumstances might be realised for the foreseeable future nor whether higher population or tourist numbers would be feasible or desirable. Hence, we do not have any visibility as to when these conditions might arise and are not able to produce robust demand scenarios against which to appraise the increase in costs associated with Option 6 at some future point in time, not least as we cannot predict baseline conditions without a runway extension without some visibility as to the likely success of other initiatives in stimulating the economy and levels of demand as a baseline.
- 6.34 Clearly, deferring construction would have the effect of increasing costs but, if the negative impacts associated with premature introduction of larger aircraft could be avoided, it is possible that a more positive appraisal outcome could be attained at some date in the future. We are not in a position to carry out such an appraisal based on the current economic evidence.

Economic Appraisal

- 6.35 We have appraised the difference between Option 5 and Option 3 (the base case), taking into account some potential for improvement in the air service offer and recovery of tourist numbers in the absence of larger aircraft operations. We believe that we have been conservative in our assessment of the improvements which could be made with Option 3 in place and through commitments under a PSO, which we will describe further in Section 8.
- 6.36 We have appraised the case over a 20 year period against a target rate of return of RPI+4% as specified by the Bailiwick²⁹. Currently, this equates to a target rate of return of 4.4%.
- 6.37 We have assumed that the runway extension and terminal would have an effective life of 40 years and assumed a residual value of 50% at year 20 after opening. We consider this to be reasonable as we have not explicitly allowed for any increase in maintenance costs in the intervening period.

²⁹ By e-mail 13th September 2016.

Sensitivity Tests

- 6.38 We have tested Low, Medium and High construction costs for the difference between Option 3 and Option 5 as set out in Table 4.2, albeit we have presented the Low estimate for illustrative purposes only in the light of the advice received from TPS. Whilst we consider that the introduction of larger aircraft operations would require the provision of full security screening and an enlarged terminal, we have tested the circumstances where these additional costs are not required as a further sensitivity test albeit that we do not consider this a prudent assumption.
- 6.39 Whilst we do not believe that it would be right to ascribe the achievement of the full target uplift in population and tourism solely to the introduction of larger aircraft operating at lower frequencies of service without any reduction in air fares, we have considered the impact on the appraisal if the full uplift was assumed in order to see if a runway extension could be economically justified even on the most optimistic basis.

Transport Economics Approach

- 6.40 The potential for the runway extension at Alderney Airport to impact on socio-economic welfare in the Bailiwick of Guernsey has been considered in the first instance using a conventional transport economics approach. This considers the impact of the change in the market brought about by the runway extension in terms of how it impacts on the different costs and benefits facing key actors over a 20 year period. We are not able to ascribe the costs and benefits definitively to the States of Alderney and the States of Guernsey as this will depend on decisions taken as to the apportionment of construction and air service support costs between the two islands. It would theoretically be possible to make some apportionment of user benefits but we do not have sufficient information to be certain as to the allocation of passenger trips between those resident on Guernsey and those resident on Alderney, albeit we make some assumptions regarding inbound and outbound business and leisure travel to inform the appraisal, based on precedents on other small island services.
- 6.41 In terms of costs, we have adopted the costs set out above and applied the range of sensitivity tests.
- 6.42 In terms of benefits:
 - → The Airport we have included additional airport charges revenue from the uplift in passengers based on current revenue per passenger, less the allowance for the additional operating cost of £50,000 per annum.
 - → **The Airline** we have included the incremental costs of subsidy as set out above.

- → Passengers we have considered two groups of passengers separately in this analysis as the effects on them are different. We have assumed no change in air fares, consistent with our analysis of the threshold volumes which would need to be reached to enable lower fares to be contemplated:
 - Existing Passengers the only change to their costs and benefits will come from the reduction in frequency, which in the absence of reduced fares, will result in a loss of utility. The size of the loss has been estimated using the UK Department for Transport formula developed for its traffic forecasting model, which takes into account the extent to which passengers are able to adapt their travel patterns to airline schedules to a reasonable degree rather than using a simple half headway approach. The change in wait times is then monetised separately for business and leisure passengers using values of time for air travellers taken from the recent UK Airports Commission work uplifted to 2015 values:
 - Business Passengers £0.78 per minute;
 - Leisure Passengers £0.12 per minute.
 - Stimulated Passengers we have assumed that the uplift in passengers will in effect have been stimulated to travel by the improved accessibility that comes about as a result of the development of the runway. As already discussed, it is not entirely clear how this would arise at lower frequencies of service and no reduction in air fares, albeit that release in peak period capacity constraints may effectively stimulate some additional passengers on the margin. The benefits to these passengers are assumed to come from the change in accessibility between the new pattern of air services and the current next best option, which we have taken currently to be the twice weekly ferry from Guernsey. We have used appropriate journey time saving and wait time value estimates as above. However, the use of the ferry as the alternative may overstate the benefits to these passengers. As is standard, we have applied the rule of a half to the calculated benefits.
- 6.43 The results of our analysis are set out in **Tables 6.1** and **6.2** overleaf. Full results are given in **Appendix D**.

Table 6.1: Summary of Economic IRRs Option 5 – Transport Economics Approach						
		Option 5 over Option 3				
		Low Cost	Medium Cost	High Cost		
Core Case: 50% of Target Growth	Without Terminal Cost	-8%	-7%	-6%		
	With Terminal Cost	-8%	-7%	-6%		
Maximum Case: Target Growth	Without Terminal Cost	-2%	-2%	-2%		
	With Terminal Cost	-3%	-3%	-3%		

Table 6.2: Summary of Economic NPVs – Transport Economics Approach						
		Option 5 over Option 3				
		Low Cost	Medium Cost	High Cost		
Core Case: 50% of Target Growth	Without Terminal Cost	-£11.6m	-£13.9m	-£17.2m		
	With Terminal Cost	-£14.0m	-£16.3m	-£19.6m		
Maximum Case: Target Growth	Without Terminal Cost	-£6.6m	-£8.9m	-£12.2m		
	With Terminal Cost	-£8.7m	-£11.3m	-£14.6m		

6.44 It is evident that when considered in terms of economic welfare, the extension of the runway, facilitating operations by larger aircraft in the short term, would result in negative IRRs and NPVs under all circumstances. In other words, the Bailiwick would be materially worse off as a result of the investment in the infrastructure before it is required. This is driven principally by the increased costs to users due to the loss of frequency and increased subsidy which are not compensated for by lower air fares or increased revenues to producers (airport and airline).

6.45 The negative economic welfare results highlight why it may not be realistic to assume that the extended runway could make a material contribution in the short term to achieving target population and economic growth. Rather, the risks to the quality of the air service could have negative impacts. Hence, the realism of the development economics appraisal set out below has to be viewed in the low likelihood of an extended runway delivering the conditions which would stimulate population and tourism growth.

Development Economics Approach

6.46 This approach considers the impact on GVA directly from the potential for improved air services to result in an increase in population on Alderney and incremental tourist visits. Along with the costs noted above, the key components of this approach are the GVA values associated with the increased population and tourism.

<u>Tourism</u>

- 6.47 We have taken data on spending by tourists from the Alderney Visitor Survey carried out in July/August 2016. We have assumed that the values are broadly consistent with the Q4 2015 prices used as a basis for the construction cost estimates. This survey shows that the average expenditure per tourist visit is £240 per visitor (taking an average across day visitors and those staying for longer). However, this expenditure is not a direct equivalent to the GVA effect of increased tourism due to the need to import goods and services to serve the visitors.
- 6.48 In the UK³⁰, the ratio of direct GVA to turnover is typically around 0.3 and, in the absence of specific data for Alderney (or Guernsey), we have applied this ratio to estimate a direct GVA figure per trip of around £72. To this direct GVA figure, we need to apply an indirect and induced multiplier. The recent Visit Guernsey Strategic Plan 2015-2025 implies a multiplier of 1.8 for these effects as appropriate for Guernsey. We are unclear the basis of this multiplier but the UK Homes and Communities Agency would suggest a multiplier of 1.1 for neighbourhood level effects and 1.5 at a regional level³¹. The former may be too low for Alderney but we would not expect a multiplier of a regional scale. We have, thus, adopted a multiplier of 1.15. In other words, for every £ of tourism spend, the GVA effect on Alderney would be £0.345. This gives a GVA value per incremental visitor of £83.

³⁰ UK Office of National Statistics, Annual Business Survey 2014.

³¹ Homes and Communities Agency: Additionality Guide, Fourth Edition 2014, Table 4.14.

Population

- 6.49 We have based our estimate of the GVA value of an additional resident on the 2013 Household Income survey for Alderney³². This report shows that the average income per household in 2013 was £40,928, with an average household size of 1.9, i.e. average income per head of population was £21,210 in 2013. We have assumed that, in nominal terms, this will have risen by 2% the end of 2015 (Q4), to give an estimate of the average income per head of population of the order of £22,000.
- 6.50 We do not have data available to us to convert household income to GVA on Alderney. In the absence of detailed data, we have assumed that the relationship is broadly similar to that to turnover outlined above, i.e. allowing for the proportion of the income which is spent on imported goods and services. Hence, taking the multiplier effects into account, the GVA value of an additional permanent resident would be approximately £7,615 at Q4 2015 values. This will include tax revenues to the Bailiwick.
- 6.51 In relation to both GVA values, relating to population and tourists, we assume that the real value of income grows over time at 2% p.a. and this converts into increased tourist expenditure as well. This is consistent with the standard approach adopted to increase the values of time described above over time.

<u>Results</u>

6.52 The results of our analysis are given in **Table 6.3**, with the full workings in Appendix D.

Table 6.3: Summary of Economic IRRs – Development Economics Approach							
		Option 5 over Option 3					
		Low Cost	Medium Cost	High Cost			
Core Case: 50% of Target Growth	Without Terminal Cost	7.5%	5.5%	3.7%			
	With Terminal Cost	5.6%	4.1%	2.8%			
Maximum Case: Target Growth	Without Terminal Cost	15.2%	12.2%	9.5%			
	With Terminal Cost	12.6%	10.4%	8.3%			

³² States of Alderney, Alderney Household Income Report Trial using 2013 Data.

- 6.53 Whilst the analysis above might suggest that investment in an extended runway could deliver an economic return if it successfully delivered the full target uplift in population and tourist visitors, for the reasons explained above, we do not consider it realistic to assume that this could be the case given the reduced frequencies of service and the absence of lower air fares, leading to a reduction in economic welfare as a consequence of larger aircraft being introduced before the market requires, and taking account of the other deliverables required to secure growth in the population.
- 6.54 If a 50% uplift towards the population and tourism targets could be attributed to the runway extension, it would only deliver an economic return if there was confidence that the project could be delivered at the lowest capital costs, which may not fully reflect the construction costs on the island, and/or the operation of larger aircraft does not trigger investment in additional security measures and an extended terminal. Both of these would appear high risk assumptions. Within the realistic range of costs Medium to High, and assuming that the costs of the terminal works are required, the project would not meet its cost of capital of 4.4%.
- 6.55 In any event, the achievability of even this hypothetical demand outcome needs to be seen in the context of the disbenefits to users, including existing users, from lower frequencies of service and the absence of lower air fares as taken into account in the transport economics approach set out earlier. Hence, all of the results set out in Table 6.1 need to be viewed as illustrative only of the circumstances which might deliver a positive economic return given the extremely low probability of these outcomes arising.

Other Benefits

- 6.56 We recognise that there are other social benefits from improved air services, such as access to education and healthcare, but these factors do not lend themselves to quantification. However, the delivery of these benefits relate to both the attained frequencies of service and the ability to deliver lower fares. Our assessment would suggest that premature operation of larger aircraft, ahead of the market requirement may be more likely to have negative rather than positive impacts.
- 6.57 Other specific issues relate to:

Medevac

- 6.58 As was highlighted at the consultation stage, the runway extension could offer additional social benefits in relation to the Medevac service. Currently, the Alderney based fleet of Aurigny aircraft provide this service, with casualties stretchered onto the aircraft and laid on the floor. We understand that the current runway length is deemed to be too short for the Medevac aircraft based on Guernsey, though this is unusual as the runway requirements of the Piper Chieftain, which provides the service, are usually well below the current runway length on Alderney. We are not certain of the reasons for the lower than typical performance for the aircraft in this case. However, accepting that the aircraft is not able to operate currently, it may be reasonable to assume that an extended runway could allow the aircraft to use Alderney. In its own right, the aircraft may be better equipped for medical emergencies, but it is not clear how it would offer a better solution overall. We see a number of difficulties in relying on this aircraft over the Aurigny fleet based on the Island, including:
 - → Relying on an externally based aircraft will leave the community exposed during times of high winds or low visibility as the aircraft is unlikely to be able to operate. The maximum crosswind performance of the smaller Medevac aircraft is likely to be a further impediment. The current based aircraft arrangement has the advantage that aircraft will be able to depart from Alderney in lower visibility than aircraft arriving to collect patients and, with greater crosswind capabilities, will have a higher reliability in landing at Guernsey with patients;
 - → Whilst there is currently some delay in getting aircraft activated on Alderney through the night, the same will be true for activating an aircraft based on Guernsey, i.e. pilots will still need to make their way to the Airport, as will ground staff, and the aircraft will need to be prepared. Even if the Medevac aircraft is kept in a more prepared state for operation, any time savings this may offer will almost certainly be eroded when the flight time from Guernsey is also taken into account, thereby slowing the speed of getting patients off the Island; and
 - → The cost of this service could be greater, with Alderney likely to have to make bigger contributions to the service being available as standby, compared to the ad-hoc nature of cost allocation that we understand exists with the current arrangements with Aurigny.
- 6.59 It could be argued that in extreme weather conditions, any based passenger aircraft could then operate the service, but this provides no real benefit over the existing arrangement. Furthermore, if the based aircraft was a larger type, for example a Saab 340 or ATR-42, it would be far less suited to the nature of the operation, likely requiring further start-up time and making access of patients on stretchers difficult due to the extra height from the ground as well as adding to the cost of providing the service. In the alternative, a smaller appropriate aircraft could be acquired to provide a dedicated Medivac service based on Alderney but this would not necessarily require an extended runway.

Business Aviation

6.60 Although the Airport already handles a large number of general aviation aircraft, some of which, according to our consultations, are already used for business activities, a runway extension may provide opportunities for further business aviation usage, with a capability to handle larger corporate turboprops and jets. During consultations, a view was expressed that high-net worth individuals may be more inclined to consider Alderney as a base if they could arrive and depart freely on their aircraft, as seen on Jersey and Guernsey, so supporting the population growth targets for Alderney. Whilst this could be an added benefit from an extended runway, it is unclear to what extent this could be used as a justifying argument for the runway extension in circumstances where the broader economic benefits are hard to justify. The tax regime on Alderney caps the maximum level at which individuals pay income tax at £50,000, so whilst the runway extension may be attractive to a very limited number of individuals, they are unlikely to bring any specific additional economic gain over and above those who could be attracted through better provision of scheduled air services. The number of additional residents this could deliver would likely be very limited, particularly as Alderney would need to compete with the likes of Jersey and Guernsey, where other aspects, such as quality broadband, better health provision and reliable electricity supplies, along with a greater array of social activities, is likely to be a deciding factor.

Conclusions

- 6.61 Our analysis would suggest that, for the foreseeable future, extending the runway would only be economically justified if there is absolute confidence that provision of a runway extension and the mere fact of introducing larger aircraft will deliver a material increase in population and in tourist visitors. The results of the transport economics appraisal strongly suggest that this is unlikely to arise given the higher operating costs of larger aircraft leading to lower frequencies of service and no potential to reduce air fares, resulting in increased costs to users and reduced economic welfare relative to the base case of refurbishing the runway only.
- 6.62 Even taking into account the view of some stakeholders that larger aircraft are essential to deliver any improved economic performance, the extended runway would only deliver the required rate of return in terms of its potential wider economic impacts if it can be delivered at the lowest potential cost and/or assuming that there is no consequential expenditure required to upgrade the terminal and security infrastructure. We believe these to be high risk assumptions.

7 FINANCIAL ANALYSIS

- 7.1 Whilst the economic appraisal in the previous section shows the circumstances under which there could be economic return from investment in a runway extension, this does not of itself demonstrate affordability. The sources of incremental revenues would relate to:
 - → Additional airport revenues from the additional passengers generated;
 - → Additional tax revenues from incremental population and tourism.
- 7.2 In both cases, the additional income forms part of the economic appraisals set out in the previous section, with additional revenues included as a producer benefit within the economic welfare approach and taxes already included in the GVA uplift estimated relating to population and tourism.

Affordability Analysis

Airport Revenues

7.3 The maximum additional contribution from incremental revenues earned at the Airport would be c.£170,000 after 10 years, continuing on an annual basis. This could make a contribution towards the overall project costs but would be insufficient to fund the entire scheme. Although airport charges could increase to generate further revenues, this would simply transfer into the air service losses or, if passed through to passengers, result in lower demand and negate much of any potential economic benefit.

Tax Revenues

7.4 We are not in a position to make a robust estimate of the incremental tax revenues which would be earned from increased population and tourism and, in any event, we would have to caveat this by the uncertainties in the linkage between the operation of larger aircraft, consequent upon the works, and the achievability of the growth in population and tourist visitors. Assuming that, at 20% tax on incomes, increased tax revenue per additional head of population could be of the order of £4,400 (see para 6.48). There would be some further tax revenue as a proportion of tourism spend but it is difficult to estimate this and we are unclear the effect on property incomes, given that the property to support the expanded population is already in place. Overall, if air service improvement as a consequence of the extended runway delivers 50% of the target uplift in population and tourism, we could be looking at additional tax revenues after 10 years of the order of £600,000 per annum. Overall, this would suggest the additional income accruing to the Bailiwick would at best be c.£800,000 per annum after 10 years, including incremental airport revenues.

7.5 If all of the increased income (tax and airport revenues) from a 50% uplift towards population and tourism targets was used to repay the principal and interest on a loan taken out for the purpose of undertaking the works, it would take a minimum of 18 years to repay a loan to cover the lowest possible capital costs from the point at which the increase in population and airport passengers was achieved and could be substantially longer dependent on the rate of interest on the loan and the actual costs of the works. The payback period could exceed 36 years.

Funding Options

- 7.6 In reality, at least a part of the cost will need to be provided from the public purse by diverting tax revenues away from alternative uses in some manner. This then becomes a matter of affordability of the project in relation to the overall budget and priorities at the level of the Bailiwick or the States of Alderney.
- 7.7 Based on our discussion with the Deputy Chair of the States of Alderney Policy and Finance Committee, the mechanism by which a public contribution towards the cost of extending the runway at Alderney Airport is inextricably linked to broader discussions regarding greater financial autonomy for Alderney. These discussions include whether responsibility for operating the Airport and subsidising the operation of the air services should transfer to the States of Alderney rather than continuing to be part of the overall Bailiwick responsibility. These discussions include consideration of the extent to which the States of Guernsey should make some contribution to the costs, in part to ensure that the Airport asset is fit for purpose at the point of handover.
- 7.8 Our understanding is that there is an expectation by the States of Alderney that the States of Guernsey would provide the finance for the required runway improvement works, drawing on already approved bond finance, and some initial cash to support the loss making operations of the Airport.
- 7.9 Responsibility for the losses on the air service are less clear but the current losses of Aurigny as an airline fall on the States of Guernsey. However, responsibility for the cost of a PSO subsidy could transfer to the States of Alderney.
- 7.10 Given the complexities of the financial relationship and the linkage between discussions about the Airport and the broader financial relationship between the two States, we are not in a position to apportion benefit to each party separately or to assess separately the costs and benefits to each of the States separately.

8 CONCLUSIONS

- 8.1 We have examined the potential for an extended runway to deliver improved air services and considered the extent to which this could feed through to improved economic performance. We do not dispute that improvements to the reliability and peak period capacity of the air services compared to the recent service delivery are essential in order to prevent further economic damage.
- 8.2 We set out to address a number of specific questions in terms of would a longer runway:
 - → deliver lower fares
 - → deliver more seat capacity
 - → higher frequency
 - → lower subsidy
 - → enable the operation of new routes
 - → translate to population and tourism growth

These form the key hurdles which the development of the runway extension would need to pass. In essence, these fall into two groups – the effect on the pattern of air services and the relationship between air service provision and population and tourism growth.

Effect on the Pattern of Air Services

- 8.3 Our analysis of aircraft operating costs would strongly suggest that early introduction of larger aircraft would be more likely to increase the costs of operating the routes to/from Alderney than to reduce them, leading to higher operating losses for the airline concerned and potentially higher costs of subsidy, even on the basis of reduced frequencies of service and no reduction in air fares. The scope for larger aircraft to deliver lower costs than the current operation, which could be passed onto passengers, would not arise before a threshold of c.82,000 annual air passengers across the two main routes, a level of demand not seen since 1995, requiring a population greater than 2,500 and tourist air passengers above 25,500 per annum (or some equivalent combination) to support that level of air passenger demand. Even then, the routes would still be loss making and require subsidy.
- 8.4 Whilst an extended runway would offer airlines some greater flexibility in terms of using larger aircraft to meet specific short term peaks in demand and/or recover from delays and cancellations, such ad hoc operations are unlikely on their own to justify the costs involved in extending the runway. Refurbishment of the existing runway, including an improved surface and drainage, improved lighting and reinstated usable width, will improve the operational performance in any event, so contributing to improving reliability and provide a platform for an improvement in the quality of service based on a fully functioning fleet of Dornier228 aircraft.

Population and Tourism Growth

- 8.5 Our analysis demonstrates that, for the foreseeable future, extending the runway would only be economically justified if there is absolute confidence that provision of a runway extension and the mere fact of introducing larger aircraft will deliver increased population and tourism. The results of the transport economics appraisal, for the reasons set out above, strongly suggest that this is unlikely to arise given the higher operating costs of larger aircraft leading to lower frequencies of service and no potential to reduce air fares. Economic welfare would be reduced not increased. Taking steps, such as extending the runway, so as to facilitate or encourage the use of larger aircraft before the market warrants would lead to lead to economic disbenefits, making any increase in population or tourism highly unlikely as a consequence. In the circumstances, the outputs from the development economics approach to appraisal, which we have undertaken at the request of the States of Alderney and the Steering Group, must be regarded as spurious as they depend on this underpinning assumption being realistic and likely to occur.
- 8.6 Whilst we recognise the views of some stakeholders that larger aircraft are essential to deliver any improved economic performance, we have not been able to identify any substantive evidence of a direct link between the performance of the air services and the longer term economic trends of population and tourism decline. However, anecdotally, the recent performance shortcomings on the routes to Guernsey and Southampton are one factor deterring business activity on the island and impacting on tourist visitor numbers in the summer peak. However, these operational problems are unrelated to the runway length at the Airport.

Project Costs

- 8.7 We have received updated cost estimates from TPS and, whilst there may be some scope for value engineering as design progresses, we believe that it would be not be prudent at this stage to assume that the project could be delivered at the Low (RCA) cost estimate and that the regular operation of larger aircraft could be achieved without incurring the cost of enhancing security and improving the terminal facilities. Hence, it is unlikely that the project could deliver an economic return above the target of 4.4%, even on the basis of the development economics approach, which for the reasons outlined above depends on a relationship between extending the runway and population and tourism growth which is highly unlikely to exist.
- 8.8 Whereas the original advice given was that there be additional costs incurred now in implementing Option 3 to enable the later extension of the runway (Option 6), the latest information provided by TPS suggests that it is no longer considered necessary to enhance the Option 3 scheme to facilitate the later construction of the runway extension. This would have the added benefit of allowing cost estimates for extending the runway at a later date to be refined, taking into account the actual costs of the Option 3 works undertaken on Alderney.

Overall Assessment

- 8.9 If there was any validity to our appraisal based on hypothetical scenarios that assume some causality between the provision of a runway extension and population and tourism growth, the runway extension would only be justified now (Option 5) if certain conditions could be met. In summary, even on this hypothetical basis, the extended runway would only deliver the required rate of return in terms of its potential wider economic impacts if:
 - → it can be delivered at the lowest realistic cost (less than c.£13 million);
 - → there is no consequential expenditure required to upgrade the terminal and security infrastructure to enable larger aircraft to be handled (or the costs are included within the capital cost ceiling above); and
 - → assuming that at least 50% of the target increase in population 140 additional residents over 10 years, and an increase in annual tourist visitors of c.1,100 over the same time period can be directly attributable to the provision of a longer runway.
- 8.10 We believe the first two of these to be high risk assumptions and the latter simply unsustainable given the likely effect of the introduction of larger aircraft on the frequency of air services offered. Fundamentally, this conclusion is driven by our analysis of the effect of a longer runway leading to the operation of larger aircraft and so reducing the effective frequency of air services offered without any compensatory reduction in air fares. The negative economic effects of this are clearly illustrated in the transport economic appraisal such that it would simply not be realistic to assume that the premature introduction of larger aircraft onto the routes, which forms the rationale for extending the runway, would result in an uplift in population and tourism.
- 8.11 In the light of the advice from TPS that there are would be no substantive changes required to Option 3 to enable the later extension of the runway (Option 6), the decision whether to implement a runway extension can be deferred to a later date. This would allow time for improvements to be made to the existing air services to improve resilience and reliability, and act as a driver for a return to growth. At a date in the future, when there has been growth in demand, the case for using larger aircraft will be stronger and could produce a service pattern which might deliver some reductions in air fares. However, this does look to be some way into the future and the threshold passenger volume for larger aircraft to deliver lower operating costs (82,000 annual air passengers to/from Alderney albeit with lower frequencies of service) may not be reached.
- 8.12 Our recommendations are, hence, that:
 - → the case for extending the runway now would only be economically justified on the most optimistic assumptions about deliverability of population and tourism growth <u>directly</u> <u>related</u> to the extension of the runway <u>and</u> if construction of all of the required infrastructure improvements necessary to support the operation could be delivered at the lowest possible cost;

- ✤ these conditions are unlikely to be met given the higher costs of operating larger aircraft and the consequential effects on the frequency of service offered;
- → the case for a runway extension should be kept under review and that the Option 3 works should be carried out in a manner which would not preclude the cost effective construction of a runway extension at a later date;
- → all possible steps are taken to improve the reliability and capacity offered by the existing air services based on 19 seat aircraft to provide a platform for improving economic performance and delivering passenger growth.
- 8.13 We are aware that discussions regarding the refurbishment of the runway have been going on for some time, during which the runway condition will have deteriorated further. Hence, given the concerns about service reliability and resilience, it appears to us important that the refurbishment works (Option 3) are undertaken as soon as possible lest further delay, whilst the provision of an extended runway is deliberated further, leads to the more occasions when the runway is not operationally fit for aircraft to land.

PSO Considerations

- 8.14 Our analysis has recognised that there are deficiencies in the current air service performance and offer. To a substantial extent, these are a function of short term operational difficulties experienced by Aurigny in introducing the Dornier aircraft. These have been compounded by periods of poor weather during the peak summer season, resulting in a high number of cancellations and consequent overbooked flights over the last two summers.
- 8.15 Although the air services are now covered by a Memorandum of Understanding between the States of Alderney, the States of Guernsey and Aurigny which sets out targets for the performance of the air services, this agreement lacks the enforcement provisions for failure to perform which would be included under a formal Public Service Obligation contract. Under a PSO contract, a failure of an airline to deliver the specified number of services (or other failures in deliver within their control) results in financial penalties in terms of a reduction in the subsidy payable. Clearly, given Aurigny is a loss making airline and is owned by the States of Guernsey, there would be no effective difference between an overt subsidy payable linked to the Alderney operations and a de facto increases in the loss because of a compensatory reduction in the subsidy. Nonetheless, we believe there would be substantial improvements in accountability if the costs associated with the Alderney operations were specifically accounted for and the cost penalties associated with service failures transparently recorded.
- 8.16 Furthermore, many of the clauses of the MOU are, in effect, little more than 'best endeavours' provisions and there is no real obligation to deliver. In particular, the requirements to ensure sufficient capacity to meet demand in the summer peak lack specificity.

- 8.17 There are, of course, challenges for any airline in dealing with traffic which has such a limited duration of summer peak and with traffic flows which show strong uni-directionality. This contributes greatly to the inefficiency and high cost of the operation relative to the overall level of passenger demand. It is in this context that the scope which a runway extension would provide to operate larger aircraft at times of peak demand looks attractive. However, the reality is that few airlines will have spare capacity during the summer peak to switch to Alderney operations even if the runway was long enough. For airlines to contemplate switching aircraft away from other profitable routes, they would need to see a yield premium from the Alderney operation, in other words they would look to charge passengers more rather than less which would not have the desired effect in acting as a stimulus to increased tourism. The most cost effective way to meet these peaks of demand is likely to be to incentivise Aurigny to work its fleet of Dornier aircraft to the maximum possible.
- 8.18 We recognise that there is a reluctance to seek a formal PSO on the route whilst it is perceived that Aurigny would be the only bidder as this could increase the cost of subsidy. However, it can be far from certain that there would be other bidders in any event. It is unlikely that airlines with larger aircraft would bid for the routes, even if the runway extension was in place, as they would be well aware that they could not match Aurigny's operating costs with smaller aircraft at current demand levels and would be aware of the economics of seeking to stimulate the market through lower fares given the balance between load factors and operating costs of larger aircraft. Other airlines would also need to set up local bases on Alderney and Guernsey which would add to costs. In these circumstances, other airlines may be reluctant to incur the costs of preparing a bid. In other words, extending the runway before demand warrants is unlikely to increase the number of bidders for a PSO and these would be limited to airlines with 19 seat aircraft competitive with Aurigny's operating costs in any event.
- 8.19 In our view, the priority should be to seek greater control over the delivery of the current air service offer through the imposition of a PSO as soon as practicable to better incentivise delivery of service improvements and to ensure that the cost of subsidy is transparent. We believe this would provide the best mechanism for improving the air service offer and contributing to economic recovery, which in turn could provide a platform in future for further enhancements to the service.

APPENDIX A – TERMS OF REFERENCE



An Extended Runway for Alderney – Economic and Financial Analyses

Background

Consultants TPS have been advising Guernsey Airport, who are also the operators of Alderney Airport, on an *Outline Business Case*³³ (OBC) and Options for rehabilitating the runway at Alderney.

This is the first of a two-pronged initiative to revitalise the Alderney civil aviation sector. The second prong will be to instigate a more competitive operating environment for commercial air services, which it is hoped will lead to lower air fares and more reliable services. It is recognised that the Alderney market is 'thin' and that, therefore, there may be insufficient traffic to support more than one operator. For this reason, consideration is being given to competitively letting a concession to which a Public Service Obligations component would be attached.

Recent Developments

The OBC for the project is being compiled and to that end a series of Risk and Benefit Workshops have been arranged for engagement with stakeholders, including The States of Alderney, Alderney Chamber of Commerce, Airport Technical Managers, Aurigny and GA representatives.

The workshops included as a reference 7 options (0-6 below) although the intention was that only Options 1-6 would be advanced into the Outline Business Case:

Option 0: Do nothing – this is not, however, being taken forward and is not considered a realistic solution;

Option 1: Do minimal – effectively larger patch and repair works with a likely maximum five years life enhancement to the current runway paved areas – this would include widening of the runway back to 23m;

³³ This is a document required by the States of Guernsey in support of an investment – a project procurement or scheme. The required template for the OBC is attached for reference purposes.

Option 2: Reconstruct all paved surfaces at the airport and extend the runway width to 23m; **Option 3**: as Option 2 but with enhancements to improve runway lighting and more efficient drainage;

Option 4: As Option 3 – but also hard surface and extend the short grass runway to improve cross-wind capability;

Option 5: Extension of asphalt runway to 1100m³⁴ and extend width to 30m to accommodate larger GA and commercial aircraft – with consideration of options for both concrete and asphalt products;

Option 6: A hybrid scheme which delivers Option 3 with certain additional enhancements to the design that would preclude a less expensive and less disruptive move to a runway extension at some point when the business need is more apparent.

This range of options varies considerably in terms of the extent and cost of the works and to assist the research and business case evaluation of each option, Guernsey Airport wishes to engage a consultant to conduct an economic and financial feasibility study to test and validate the potential benefits of the investment in a full runway extension against a baseline reconditioning of the existing infrastructure.

The output of this study will greatly assist the States of Alderney and the States of Guernsey in determining the "Value-for-Money" of this large investment and its affordability.

The economic aspects are deemed to be critical and, it is agreed, must centre on the holistic benefits to the Alderney economy. At a Workshop held on Monday 16th May in Alderney to discuss rehabilitation works, the Alderney stakeholders were of the opinion that Option 5 was the most desirable. It was the overwhelming opinion of those present that this was the key enabler for delivering, immediately-needed wider economic development in Alderney.

Objectives

The key objective is to assess whether there is a prima facia economic case for an extension of Alderney's runway to 1100m either now (Option 5) or as part of a phased approach (Option 6). Secondly, if this case exists, whether there exists an economic argument in favour of completion of the works in a single immediate phase.

The advisor will be required to critically assess the costs and benefits to Alderney of upgrading the airfield above and beyond the baseline (Option 3) and assess the economic and other risks associated with the retention of the present runway length (877m). In

³⁴ Currently 877 metres.

assessing the alternative options (5 or 6) the advisor will be expected to assess the wider economic benefits that may be gained both by the States of Alderney and the States of Guernsey, against the costs of these enhanced options and against the alternative baseline case.

The advisor will be expected to assess and quantify possible additional benefits including:

- Reduced operating costs per seat-km using larger aircraft (that is, when compared to Dorniers and Trislanders and subject to achieving adequate load factors, albeit at the short and possible longer-term cost of reduced frequencies of services);
- The extent to which this could lead to lower fares, higher patronage and more sustainable air services;
- The potential for increased runway length to attract other airlines that might be prepared to tender for an air-service PSO contract potentially at a lower cost to the States;
- The opportunity for increased or enhanced air routes and passenger growth; and
- An assessment of whether the additional investment required for Option 5 or 6 is justified with reference to the potential economic gains that might be made over the lifetime of the investment and/or with reference to the reduced risk of further economic loss to the Alderney economy.

The advisor will be expected to provide a weighted analysis outlining the scope and probability of benefits and risks under the alternative options and the baseline case.

Consideration has to be given to the strategic importance to the Alderney Economy of air connectivity and each option needs to be evaluated against potential future developments in airline operating models that any runway extension may unlock.

The advisor will be expected to be able to support its conclusions with appropriate analysis and to justify its conclusions.

The successful advisor will be expected to draw upon their practical and academic expertise and place this in the context of both Alderney and Guernsey, taking into account the key economic areas of activity, its experience of the aviation and travel industry and the specific issues of Alderney.

Scope of the Project

In realising the project objectives the successful tenderer will need to:

- Use the current cost estimates for the proposed upgrading points as a starting point³⁵
- Assess Option 3, 5 and Option 6 against current airline operating models and aircraft performance.
- Assess the three options against potential air transport developments, including changing airline and airport operating requirements and models and the impacts on Alderney's connectivity now and in the medium term future. The Consultant will have to assess whether the baseline option would have a material impact on economic activity and population and at what rate this might occur.
- Assess options against the likely direct and indirect economic and social benefits that may be realised by the Bailiwick including, but not limited to, the scope for opening new and retention of existing routes and/or operators to and from Alderney, the likelihood of new operators being attracted to apply for a PSO contract and the scope to open Alderney wider economic growth³⁶ and new tourism possibilities. To this end it is important that any direct or indirect impacts on GDP and any economic multiplier effects are included in the appraisal.
- Provide an assessment of potential catalytic economic benefits for each option. It is particularly important to assess the extent that these developments might be a key enabler for future economic recovery/development. To this end it should be noted that a population increase from the present 2,000 to about 3,000 is seen by many in Alderney as both desirable and a target to be aimed at. The output should include estimated Economic Internal Rates of Return and Net Present Values. An agreed Opportunity Cost of Capital will be fundamental to the analysis. The indications are that, in the current economic climate, this is currently some 4-5%, but this will need to be reviewed as part of the study.
- It is expected that the Consultant will undertake a cost-benefit analysis for Option 3, 5 and 6, to support the Business Case process.
- The Consultant will, consequently, prepare forecasts of air passengers 'with' and 'without' the extended runway – forecasts may be divided into two categories:
 - Normal traffic growth/decline based on the pragmatic capacity of aircraft capable of using the option 3

³⁵ Sensitivity test should examine the impact if reduced construction costs can be obtained – there is some evidence that lower costs might be achievable – these will be discussed with the Consultants at the outset of the study.

³⁶ Complementary already on-going enabling initiatives under consideration include (i) a digital revolution and (ii) an electrical cable between France and the UK that would deliver energy to both nations and which would at a later date enable Alderney to feed macro-renewable energy into the cable to supply either nation. Other mooted projects include increased provision of visitor accommodation.

specification and with more rotations/additional aircraft, if necessary; and

- Additional traffic generated by on-going new 'enabling' infrastructure – specifically, the longer runway.
- Engage with key stakeholders (airlines, airport management, States of Alderney, States of Guernsey, user groups etc) in both islands and such other expert sources as may be required to canvas view and provide empirical estimates, on demand and likely future developments to enable the construction of a number of different development scenarios for the medium and longer term given the asset life.
- The Consultant will prepare a financing plan based on funds presently available, capital and loans likely to be available from Guernsey, Alderney and other sources and with repayment of any loans over an acceptable time-frame via user charges and any other acceptable methods. This matter will be further discussed with the Consultant at the commencement of the work
- To prepare a report for the STSB and the States of Alderney outlining the key conclusions and recommendations, to include the economic and empirical analysis together with a full risk and sensitively analysis for example, Monte-Carlo ("@risk"), modelling.
- To present the findings of the report at a meeting of the States of Alderney and the States Trading Supervisory Board.

Personnel

The Consultant is required to provide named expertise (with cvs) in the following professional disciplines:

- *Transport/development economics:* an economist/transport planner with 10+ years' experience in the economic appraisal of airport developments and knowledge of/experience in applying development economics
- *Financial analyst:* a financial analyst with 5+ years' experience in transport projects

Reporting and Client/Stakeholder Liaison

An initial kick-off meeting with Guernsey Airport and the nominated SoA liaison officer is required. The Consultant will have day-on-day access to both during the course of the study.

It is envisaged that the Consultant will have to undertake some primary research in Alderney, for example:

- with businesses that have recently moved to/moved out of Alderney to ascertain the push/pull factors involved and the importance of reliable/affordable air services;
- with entrepreneurs currently promoting new Alderney-based investments;
- with residents who have recently settled in or are about to depart Alderney to ascertain the push/pull factors involved and the importance of reliable/affordable air services;

The Consultant will have to work with the TPS team who are producing financial cost estimates and will amongst other things have to translate these financial costs into economic costs. Indicative estimates will also have to be made of operating and maintenance costs. A parallel Environmental Impact Assessment may, additionally, require mitigating measures. It is anticipated that Environmental Impact Assessment would include indicative costs.

A residual value may be assigned to the infrastructure at the end of the appraisal period. An appropriate value will be derived after consultation with TPS. As a minimum, the earthworks might be expected to have a useful life well beyond a normal 20-year economic appraisal period.

The SoA and Alderney Chamber of Commerce will assist with identifying such businesses/residents.

A Draft Report that can populate relevant sections of the OBR is required within two months following appointment which we anticipate to be ratified by end July.

The SoA and Guernsey Airport will comment within one month of the receipt of the Draft Report and a Final Report is expected two weeks thereafter.

A list of available useful reference reports, which the SoA and Guernsey will assist in making available is attached as **Appendix 1**

Appendix 1 Previous Reports that can be made available to the Consultant

Economics

1 Alderney Economic Development Plan (available on SoA web site)

Airport³⁷

- 1 "Alderney Airport Masterplan", BurksGreen, March 2006;
- 2 "Alderney Airport Runway Review Report" Mott McDonald, May 2012;
- 3 "Alderney Airport Runway Review Stage 2", Mott McDonald August 2013;
- 4 "Ground Model Data"
- 5 "Alderney Airport Runway Options Study", TPS, August 2014;
- 6 "Alderney Economic Development Study, Draft Final Report, Frontier Economics, August 2014
- 7 "Summary of Assessments of Importance of Airfield Improvements to Alderney's Economic Strategy", DRASS Economics, 2014;
- 8 "The Airport and Economic Development in Alderney"; Policy Council (Guernsey), September 2014;
- 9 "Alderney Future A position Paper", January 2016;
- 10 "Alderney Airport Project", Sywell, February 2016.
- 11 Alderney Transport Policy³⁸;
- 12 "Alderney Air Services an assessment of Future Options" Aviation Economics, June, 2014.

Other-Civil Aviation Related

- 13 "Proposal to the States of Alderney for a Service Level Agreement proposed by CityWing Aviation Services Limited with Vanair Europe AS, May 2015 and Report to States of Alderney – Independent Review, S Taylor, February 2015;
- 14 "An Alderney Airline for Alderney" Powerpoint Presentation, AYFly,
- 15 "Memorandum of Understanding between States of Guernsey, the States of Alderney and Aurigny Air Services", February 2016 and "Memorandum of Understanding between the Treasury and Resources Department (Guernsey) and the Aurigny Group", January 2015

³⁷ The value of these documents is more related to engineering – however they are available and may contain useful background information

³⁸ Currently in draft form.
APPENDIX B - LIST OF STAKEHOLDERS CONSULTED

Andrew Eggleston – President of Chamber of Commerce/Bell & Co Estate Agent Anne Wilby – Stenhams Malcolm Matthews – Islands Insurance Sharon Donaldson – Blanchards Nigel Lawrence – Shipping Magazine Ann Hodgson Richard Proctor – Braye Beach Hotel Helen Ackrill – Fort Group Brendan Noone – Noone & Associates Alan Fulford – Alderney Estate Agents Nicky Burland & Team - Alderney Gambling Commission Paul Veron – States of Alderney Paul Clarke – FAB & Entrepreneur Norma Paris – States Member

APPENDIX C: TPS COST ESTIMATES



Alderney Airport Pavements Project:

Supporting Description of the Options Shortlisted Through Risk and Benefit Workshops

The following "Long List" was submitted to the Workshop selection process

Option 1 – Do Minimal

Work to the existing paved areas would be limited to patching and repairs, maximum life enhancement +5 years, plus widening the existing main runway (08/26) to 23m wide.

Option 2 – Basic Resurfacing of existing paved areas

Resurface all the paved surfaces at the airport, including widening the existing runway to 23m.

Option 3 – Option 2 with some minimal improvements

As Option 2, with enhancements to improve runway lighting and more efficient drainage.

Option 4 – Option 3 + paved crosswind runway (03/21)

As Option 3, plus extending and hard surfacing the short grass runway (03/21)

Option 5 – Extension of the existing Runway to 1100m

Extension of the asphalt runway (08/26) to 1100m length, and increase width to 30m, to accommodate larger GA and commercial aircraft.

Option 6 – Option 3 + improvements to enable extension to 1100m at a later stage

A hybrid (two-stage) scheme which delivers Option 3 initially, with certain additional enhancements to the design that would facilitate a less expensive and less disruptive move to a runway extension to 1100m at a future stage when the business need is more apparent.

Short List

Following consultations and Stakeholder Workshops, the following shortlist has been selected for more detailed examination:

Option 3 – Resurface all surfaces, and widen Runway 08/26 along with some minimal improvements

Runway 08/26 will be widened on both sides to create a minimum paved width (declared width) of 23m, throughout its existing length of 877m, retaining the existing turning blisters. The widened runway will then be overlaid with new asphalt surface course throughout. The widening works will include drainage enhancements at the runway edges by the incorporation of filter drains, to supplement and assist natural land drainage.



In conjunction with the runway resurfacing, the runway lighting (AGL) circuits will be rewired and the fittings upgraded to a modern LED lighting system. Runway centreline lights will also be installed; although not a mandatory requirement for this length of runway, they have been identified as a desirable safety enhancement. A new standby generator will replace the existing aged unit.

The existing paved taxiway (Taxiway Bravo) will also be resurfaced with asphalt.

The existing apron will be resurfaced, using a grouted macadam surfacing to enhance resistance to minor fuel spillages.

Operational considerations: The construction works will need to be carried out during night possessions of the paved areas, to allow continuity of operational use.

Option 5 – Extension of the existing Runway to 1100m in a single phase

Runway 08/26 will be extended eastwards to 1100m length and 30m width to provide a Code 2C runway (PCN 11) suitable for operations by aircraft up to 42 seat capacity. The work will include resurfacing and strengthening the existing runway pavement to accommodate the larger aircraft types. The works will use asphalt as the surfacing material of choice.

The extension of the runway will require significant earthworks beyond the existing 26 Threshold, infilling the existing access track at the airport perimeter and requiring realignment of all affected access roads outside the airport boundary.

In conjunction with the runway resurfacing, the runway lighting (AGL) circuits will be rewired and the fittings upgraded to a modern LED lighting system. Runway centreline lights will also be installed; although not a mandatory requirement for this length of runway, they have been identified as a desirable safety enhancement. A new standby generator will replace the existing aged unit.

The existing 08 Approach lights will be retained and refurbished, and a new 26 Approach light system installed.

To achieve compliant Code C taxiway gradients on Taxiway Bravo it will be necessary to construct a new taxiway alignment to the Apron, utilising a part of the existing taxiway, but connecting to Runway 08/26 west of the existing taxiway intersection.

The existing apron will be resurfaced, using a grouted macadam surfacing to enhance resistance to minor fuel spillages.

Operational considerations: Option 5 is based on the outline scheme developed in the Runway Options Study report by TPS (August 2014). This included extensive earthworks to re-profile the ground east of the intersection with Runway 03/21, reducing the level of the runway beyond the intersection and using the excavated material to build up the ground east of the existing runway threshold (at the head of the Vau du Sud). This avoids the need to import fill material.

The necessary work would restrict the existing runway length to approximately 630 m for the period of the major earthworks. The two grass runways would be available for use, but the reduced take-off



and landing distances (TORA/LDA) available on the paved runway would impose restrictions on aircraft payloads (and aircraft types) using this runway for the period of major earthworks, until the construction of sufficient new pavement to reinstate the present runway length. Provisions for temporary approach lights (for 26 Approach) for reduced declared distances would be developed and agreed with the regulator.

The details of this phase, and construction methodology to minimise the period of disruption (e.g. phasing of works, and 24 hour working), will be addressed in the development of a detailed design if Option 5 is the selected option.

Option 6 – Phased extension of the runway to 1100m

Stage 1 – widening and resurfacing, equivalent to Option 3.

Stage 2 – extend the runway from 877m to 1100m and widen to 30m.

This is a hybrid, two-stage scheme which delivers "Option 3" initially as Stage 1 of the development. This will include certain additional enhancements to the design, which will facilitate future extension of the runway to 1100m as stage 2 of the development. The works will use asphalt as the surfacing material of choice.

In the initial phase of work, Runway 08/26 will be widened on both sides to a minimum paved width (declared width) of 23m, throughout its existing length of 877m, retaining the existing turning blisters. The widened runway will then be overlaid with new asphalt surface course throughout. This corresponds to the refurbished Code 2B runway provided by Option 3. However, drainage and AGL works, would be positioned outside of the 30m zone so as to facilitate future runway widening in stage 2

During Stage 1 the runway AGL circuits will be rewired and the fittings upgraded to a modern LED lighting system for the existing 877m length. Runway centreline lights will also be installed, as in Option 3. Detailed design of the works will take account of the future lighting layout of the future extension, to safeguard for the future light configuration. A new standby generator will replace the existing aged unit at Stage 1.

The existing Taxiway Bravo will be resurfaced with asphalt.

The existing apron will be resurfaced, using a grouted macadam surfacing to enhance resistance to minor fuel spillages.

During Stage 2 the 23m wide runway will be widened to 30m, with earthworks at the east of the runway re-graded so that the pavement can be extended. This will include realignment of all affected access roads outside the airport boundary.

The 30m wide runway will be extended, to 1100m length, then a new surface course laid over the whole length to strengthen the existing runway pavement to accommodate the larger aircraft types.

All AGL circuits will be extended as necessary to serve the extended runway. AGL fittings installed in Stage 1 will be moved out to 30m width at a suitable time in the development.



The existing 08 Approach lights will be retained and refurbished, and a new 26 Approach light system installed.

A new Code C Taxiway Bravo will be constructed, on the same alignment as Option 5.

Operational and cost considerations: Option 6 Stage 1 is based on the resurfacing of the existing runway length. Retention of its full length at Stage 2, which would minimise the impact of the works east of Runway 03/21 intersection on the airport operation, would entail significant additional importation and placement of fill material (in the order of 70,000m3 = 150,000 tonnes) to build up levels at the head of the Vau du Sud. This would represent a significant cost element in the order of £6m (based upon an island factor of 2), which might be reduced if a quarry or borrow pit on island can provide sufficient material of suitable quality. The more economical approach, on which TPS costings are based, is to apply a similar solution to Option 5 and restrict the existing runway length to approximately 630 m for the period of the major earthworks. Rebuilding 244m of runway to the east of Runway 03/21 to a reduced level then generates the fill needed to create the embankment for the runway extension. The two grass runways will still be available for use, but the reduced take-off and landing distances (TORA/LDA) available on the paved runway would impose restrictions on aircraft payloads (and aircraft types) using this runway for the period of major earthworks, until the construction of sufficient new pavement to reinstate the present runway length..

The construction works will need to be carried out during night possessions of the paved areas, to allow continuity of operational use.

Provisions for temporary approach lights (for 26 Approach) at different stages of the development, will need to be devised and agreed with the regulator.

Options 5 / 6 – Concrete as an Alternative Material

All the option costings have been based on flexible pavements utilising asphalt surfacing. The reasons for this become clear when comparing with concrete as an alternative material:

The existing runway pavement is asphalt, and can thus be readily built up (and extended) in thin asphalt layers during a number of time limited (night time) possessions, with the runway re-open for operation the following morning.

Concrete is not a thin layer solution and so the option of surfacing with concrete pavement would entail either a significant depth of overslab to the existing asphalt (that would present difficulties matching levels with existing taxiways, grass runways and apron) or excavation of the existing pavement structure and reconstruction in concrete. This approach would require an extended full closure of the airport for a number of months (to include 28 days curing time for the concrete to achieve the desired strength development).

To avoid such a closure one could consider a concrete construction purely for the extension part of options 5 & 6. This would necessitate the need for both a concrete plant as well as an asphalt plant,



each with its own differing aggregate needs, with associated increased mobilisation costs, which would limit or completely wipe out any potential cost savings.

Notwithstanding cost factors, there is the almost unsurmountable challenge of gaining regulatory and operator approval to a change in runway surfacing part way along the runway's length. Such a solution would inevitably lead to different friction values between the asphalt and the concrete, which would create uncertainty for pilots as they transition between "black" and "white" portions (or vice versa) whilst under breaking. We think this would be a unique situation in aviation and not one that TPS would propose or support.

In conclusion, concrete is a viable material for a new build runway remote from operational pavements or where an existing runway can be closed for a period of months during its reconstruction. Staged runway rehabilitation construction with asphalt is necessary where a surface must be back in operation the following morning (e.g. runways at almost all civil airports around the world).

Prepared by David Wilbraham

Approved by Gerry Prickett

5th October 2016



<u>Alderney Airport Pavements Project:</u> Order of Cost Estimates - Basis of Estimates

- 1 Costs have been calculated based on UK prices and then adjusted for Alderney.
- 2 For this Order of Cost estimate we have assessed a location factor for works on Alderney at between 2 and 2.75 times UK costs. In practice this will depend on a number of factors, which are difficult to assess without more detailed planning and early contractor involvement:
 - i) On-costs for transport of materials to the island.
 - ii) Mobilisation of specialist plant (e.g. asphalt batching) to the island.
 - iii) Size and productivity of construction plant suitable for use on island roads.
 - iv) The contractor's strategy for resourcing, transporting and accommodating the staff and workforce required for this project.
 - v) We have been unable to identify a recent civil engineering project on Alderney of comparable size for benchmarking.
 - vi) Overall size of project. A larger project may be towards the lower end of the range, a smaller project towards the top.

As this location factor is only an assessment, we have presented total estimated costs based at both upper and lower ends of this range. As the project progresses it will be possible to test the assumptions to refine this location factor and reduce its range.

- 3 Mobilisation costs are included and assume a batching plant and site laboratory are established within the airport vicinity
- 4 Site Surveys and investigations allow for topographic surveys and pavement testing on all options, ground investigations for the extended land take required for Options 5 & 6 and materials investigation of local borrow pits (if available) for option 6.
- 5 Land will be required in the vicinity of the airport but outside the protected surfaces for the installation of the batching plant. It is likely that appropriate locations will be in private ownership, necessitating a lease agreement for the duration of construction works. This is included for options 3, 5 and 6. Land purchase for the runway extension will be required in Options 5 and 6
- 6 Potential costs for enhancement of other Airport infrastructure (Terminal building, parking, fire cover etc), to accommodate operations by larger aircraft, have not been allowed for in the works cost estimate.
- 7 Costs are based at 4Q15.



TPS Cost Estimates (base Date Q4 2015)

			Island Factor	
			Range	
			2.00	2.75
			E	
Option 3	Construction Cost - UK Prices		£3,377,000	£3,377,000
	Construction Cost - Alderney Prices		£6,750,000	£9,290,000
	Professional Fees	12%	£410,000	£410,000
	Site Surveys & investigations		£10,000	£10,000
	Land Lease for Plant Compound		£50,000	£50,000
	Total Option 3		£7,220,000	£9,760,000
Option 5	Construction UK Prices		£9,221,000	£9,221,000
	Construction Alderney Prices		£18,440,000	£25,360,000
	Professional Fees	10%	£920,000	£920,000
	Site Surveys & investigations		£30,000	£30,000
	Land Purchase and land lease for Plant Compound		£200,000	£200,000
	Total Option 5		£19,590,000	£26,510,000
Option 6	Construction UK Prices			
		Stage 1	£3,377,000	£3,377,000
		Stage 2	£7,999,000	£7,999,000
		Total	£11,376,000	£11,376,000
	Construction Alderney Prices		£22,750,000	£31,280,000
	Professional Fees	10%	£1,140,000	£1,140,000
	Site Surveys & investigations		£35,000	£35,000
	Land Purchase		£250,000	£250,000
	Total Option 6		£24,175,000	£32,705,000



In 2014 TPS held initial consultations with States of Guernsey's Project Services division regarding their experience in relation to the uplift factor they apply to construction projects in Alderney. They indicated that an uplift factor between 2.5 - 3.5 times mainland rates would be a normal uplift range for costs of typical works carried out on Alderney.

TPS reviewed this in the context of:

- 1. economies of scale from the larger size of the Alderney Airport Pavement Project compared to these typical works and
- 2. some 'big-ticket' items (e.g. AGL equipment) the price of which is likely to be less dependent on location.

And we concluded that for the type of work envisaged, a range between 2.0 to 2.75 should be used for the purposes of high level estimating at this Feasibility stage.

The range of 'Island Factor' values from 2.0 to 2.75 reflects uncertainty in the on-island costs of particular elements and in particular the lack of any comparable recent project on Alderney that could be used for benchmarking purposes. The sheer volume of labour, materials and machinery that will need to be imported to the island is a significant aspect in preparing our option costings. Due to these uncertainties we have always presented total estimated costs based at both upper and lower ends of this range of factors.

Island Factor Comparisons

The Building Cost Information Service of the Royal Institute of Chartered Surveyors (BCIS) produce 'location factors' for all regions of the UK. They have featured an 'Islands' category including Isle of Man, Scilly and Channel Islands as well as the Scottish Islands. The format does change from year to year, probably due to the number of sample projects available. The following are extracts from BCIS around the time of our 2014 cost analysis:

Channel Islands

2012 had a weighted average of 1.76 for the Channel Islands as a whole, with a range of 1.24 to 2.71. The majority of sample projects from which this data was produced would have been in Jersey and Guernsey. It would be logical to assume that compared to Jersey and Guernsey, Alderney would be towards, if not above, the top of this range.

Scottish Islands

Shetlands and Orkneys historically average 1.23 with a range of 0.77 to 1.82. Due to the limited size and scale of infrastructure in Alderney compared to Shetland and Orkney, it is likely that Alderney will be more expensive than the Scottish Islands.

Isle of Man

Historically has been 1.66 and a range of 1.32 - 2.13. Using the same logic we have applied to Orkney and Shetland, Alderney should sit higher than Isle of Man.

These historic comparators suggest to us that the range we have selected for current use is appropriate.



Just one slight word of caution is that across all 3 areas (Scottish Islands/Isle of Man/Channel Islands) the current factors are positioned lower than they were in 2012. We can't see any logical reason for that, and so are still inclined to think 2-2.75 is where we need to be positioned at the present time. As the project progresses into the design stage it will be essential for accurate budgetary control purposes to refine the location factor and reduce the range through further research. The most appropriate means of refinement would be through analysis of costs for a major project tendered recently in Alderney, should one be available. An alternative approach would be through the appointment of a civil engineering construction company to undertake an island costing exercise through a detailed analysis of logistics and procurement specifically for the typical elements of this project.

In the meantime we continue to have confidence in our 2014 assessment.

Prepared by Rob Jenkins Approved by Gerry Prickett 29th September 2016

APPENDIX D: ECONOMIC APPRAISAL OUTPUTS

Transport Economics Approach Option 5 Core Case, Low Cost No Terminal

SCENARIO ASSUMPTIONS	6																							
Cost Option	Low																							
Construction Time Split			Year 1 50%	Year 2 50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built	No		50%	50%																				
Pax Scenario	0.5																							
Year			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast Guernsey			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Average Daily One Way Frequency	4		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business Outbound Leisure			8,041	8,041	8,041 17.112	8,041 17.112	8,041	8,041 17.112	8,041	8,041	8,041	8,041	8,041 17.112	8,041	8,041	8,041 17.112	8,041	8,041 17.112	8,041	8,041	8,041	8,041	8,041	8,041 17.112
Inbound Business			3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Southampton			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency	4		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business Outbound Leisure			5,360	5,360	5,360 8,466	5,360 8,466	5,360	5,360 8,466	5,360	5,360	5,360	5,360	5,360 8,466	5,360	5,360	5,360 8.466	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Inbound Business			2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency	4		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Outbound Business Outbound Leisure			13,401 25.579	13,401 25.579	13,401 25.579	13,401 25.579	13,401 25.579	13,401 25.579	13,401 25,579	13,401 25.579	13,401 25,579	13,401 25.579	13,401 25.579	13,401	13,401	13,401 25.579	13,401 25.579	13,401 25.579	13,401	13,401 25,579	13,401 25.579	13,401 25.579	13,401	13,401 25.579
Inbound Business			6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Inbound Leisure Change Scenario Traffic Forecast			17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey																								
Average Daily One Way Frequency Outbound Business	V		5 8.041	5 8.041	3 8.137	3 8.235	3 8.335	3 8.435	3 8.537	3 8.640	3 8.744	3 8.849	3 8.956	3	3	3 9.064	3 9.064	3 9.064	3 9.064	3 9.064	3	3 9.064	3 9.064	3 9.064
Outbound Leisure			17,112	17,112	17,324	17,539	17,756	17,976	18,198	18,424	18,652	18,883	19,117	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353
Inbound Business Inbound Leisure			3,612	3,612	3,656	3,700	3,745	3,790	3,835	3,882	3,928	3,976	4,024	4,072 9,884	4,072 9.884	4,072	4,072	4,072	4,072	4,072	4,072 9.884	4,072	4,072	4,072
Southampton																								
Average Daily One Way Frequency Outbound Business	V		5,360	3 5,360	2 5,425	2 5,490	2 5,556	2 5,623	2 5,691	2 5,760	2 5,829	2 5,899	2 5,970	6,042	6,042	2 6,042	2 6,042	2 6,042	2 6,042	2 6,042	6,042	6,042	2 6,042	2 6,042
Outbound Leisure			8,466	8,466	8,574	8,683	8,794	8,906	9,019	9,134	9,250	9,368	9,487	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608
Inbound Business			2,408	2,408	2,437	2,467	2,496	2,526	2,557	2,588	2,619	2,650	2,682	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715
Total			2	C	5	5	5	-	-		-	-	-	-		-	5	5	-	-	-	-	-	r
Average Daily One Way Frequency Outbound Business	Y		8 13,401	8 13,401	5 13,562	5 13,726	5 13,891	5 14,058	5 14,228	5 14,399	5 14,573	5 14,748	5 14,926	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106	5 15,106
Outbound Leisure			25,579	25,579	25,898	26,222	26,549	26,881	27,217	27,557	27,902	28,250	28,603	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961
Inbound Leisure			6,021 17,650	6,021 17,650	6,093 17,851	6,167 18,055	ь,241 18,260	6,316 18,469	6,392 18,679	6,469 18,892	6,547 19,107	6,626	6,706 19,545	6,787 19,768	6,787 19,768	6,787 19,768	ь,787 19,768	ь,787 19,768	6,787 19,768	6,787 19,768	6,787 19,768	6,787 19,768	6,787 19,768	6,787 19,768
CONSTRUCTION COSTS																								
Runway Extension Terminal			-£4,597,000 £0	-£4,597,000 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0	£0	£0 £0	£0	£0 £0	£0 £0	£4,597,000 £0						
Total			-£4,597,000	-£4,597,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£4,597,000
Airport																								
New Passenger Revenue	Estimated Revenue per Pax	£10	£0	£0	£7,621	£15,334	£23,139	£31,039	£39,035	£47,126	£55,316	£63,604	£71,992	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482
Airline			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£U	£U	£U	£U	£U	£0	£U	£0	£0	£0	£U	£U
C. haid.	Total Increase in Cubeidu				245.052	221 750	217.266	202.807	288.074	272.162	258.071	242 707	227.220	211.005	211.605	211.605	211 605	211 605	211.005	211 605	211.605	211 605	211.005	211.605
USER IMPACTS	Total increase in Subsidy	1			-343,963	-331,750	-317,300	-302,807	-288,074	-273,162	-238,071	-242,797	-227,339	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,693	-211,695	-211,695	-211,695
Existing Passengers - Wait Time In	mpacts																							
Change in Frequency / Wait Time	Business		7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
	Leisure	VoT non Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business		£0.78	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Outbound Leisure		£0.12	£23,168	£23,701	-£37,125	-£37,978	-£38,852	-£39,746	-£40,660	-£41,595	-£42,552	-£43,530	-£44,531	-£45,556	-£46,603	-£47,675	-£48,772	-£49,894	-£51,041	-£52,215	-£53,416	-£54,645	-£55,901	-£57,187
Inbound Leisure		£0.12	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,731	-£26,323	-£26,928	-£27,548	-£28,181	-£28,829	-£29,492
Southampton	Puripore		0	0	12	12	13	12	12	12	12	12	12	12	12	12	13	12	12	12	12	12	12	13
Change in Frequency / Wait Time	Leisure		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
Outbound Rusineers		VoT per Minute	60	60	651 719	652.907	654 124	655 260	656 642	657.045	650.279	660 641	662.026	662.462	664.922	EEE 416	667.042	669 506	671 104	672 740	674 412	676 134	£77.975	670 666
Outbound Leisure		£0.12	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Business		£0.78	£0	£0	-£23,235	-£23,770	-£24,317	-£24,876	-£25,448	-£26,033	-£26,632	-£27,245	-£27,871	-£28,512	-£29,168	-£29,839	-£30,525	-£31,227	-£31,945	-£32,680	-£33,432	-£34,201	-£34,987	-£35,792
Total		20.12	20	20	125,645	223,643	223,643	223,043	223,043	223,043	223,643	223,645	223,843	223,043	223,645	223,643	123,043	123,643	223,043	123,643	223,645	223,643	223,043	223,043
Outbound Business Outbound Leisure			£44,451 £23,168	£45,473 £23,701	-£111,410 -£67,087	-£113,973 -£68,630	-£116,594 -£70,209	-£119,276 -£71,823	-£122,019 -£73,475	-£124,826	-£127,697 -£76,894	-£130,634 -£78,663	-£133,638 -£80,472	-£136,712 -£82,323	-£139,856 -£84,216	-£143,073 -£86,153	-£146,364 -£88,135	-£149,730 -£90,162	-£153,174 -£92,236	-£156,697 -£94,357	-£160,301 -£96,527	-£163,988 -£98,747	-£167,759 -£101.018	-£171,618 -£103,342
Inbound Business			£19,971	£20,430	-£50,054	-£51,205	-£52,383	-£53,588	-£54,820	-£56,081	-£57,371	-£58,690	-£60,040	-£61,421	-£62,834	-£64,279	-£65,758	-£67,270	-£68,817	-£70,400	-£72,019	-£73,676	-£75,370	-£77,104
Inbound Leisure	7/f)		£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-£55,574	-£56,166	-£56,771	-£57,391	-£58,024	-£58,672	-£59,335
Frequency / Wait Time vs The Boa	at																							
Guernsey Change in Frequency / Wait Time	Business		44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	Leisure		106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Outbound Business		VoT per Minute £0.78	£0	£0	£1.082	£2.228	£3.439	£4.719	£6.072	£7.499	£9.004	£10.591	£12.264	£14.025	£14.348	£14.678	£15.015	£15.361	£15.714	£16.075	£16.445	£16.823	£17.210	£17.606
Outbound Leisure		£0.12	£0	£0	£1,029	£2,118	£3,271	£4,489	£5,776	£7,135	£8,569	£10,082	£11,676	£13,355	£13,662	£13,976	£14,298	£14,626	£14,963	£15,307	£15,659	£16,019	£16,388	£16,765
Inbound Business Inbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£486 £488	£1,001 £1.005	£1,545 £1.551	£2,120 £2.128	£2,728 £2,736	£3,369 £3.378	£4,045 £4.055	£4,758 £4,768	£5,510 £5,520	£6,301 £6.310	£6,446 £6.455	£6,594 £6,604	£6,746 £6,756	£6,901 £6.911	£7,060 £7.070	£7,222 £7,233	£7,388 £7.399	£7,558 £7,569	£7,732 £7,743	£7,910 £7.921
Southampton							,																	
cnange in Frequency / Wait Time	Business Leisure		27	27	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49	16 49
		VoT per Minute															c							
Outbound Leisure		£0.12	£0	±0 £0	£410 £333	£685	£1,303 £1,057	£1,788 £1,451	£2,300 £1,868	£2,840 £2,308	£3,411 £2,772	£4,012 £3,261	£4,645 £3,778	£4,322	£4,435	£4,523	£4,627	£5,818 £4,733	£4,842	£4,954	£5,068	£5,184	£5,303	£5,425
Inbound Business		£0.78	£0	£0	£184	£379	£585	£803	£1,033	£1,276	£1,532	£1,802	£2,087	£2,387	£2,442	£2,498	£2,555	£2,614	£2,674	£2,736	£2,799	£2,863	£2,929	£2,996
Total		10.12	10	10	1310	1033	1300	-1,332	-1,739	-2,14/	-2,3//		-3,308	14,011	14,105	-4,13/	£4,234	-+, <i>33</i> 3	<u>~</u> +,+34	-4,397	14,705	-4,011	-4,322	
Outbound Business			£0	£0	£1,492	£3,072	£4,742	£6,507	£8,371	£10,339	£12,415	£14,603	£16,909	£19,338	£19,782	£20,237	£20,703	£21,179	£21,666	£22,164	£22,674	£23,196	£23,729	£24,275
Inbound Business			£0	£0	£670	£1,380	£2,130	£2,923	£3,761	£4,645	£5,578	£6,561	£7,597	£8,688	£8,888	£9,092	£9,301	£9,515	£9,734	£9,958	£10,187	£10,421	£10,661	£10,906
Inbound Leisure Journey Time vs The Boat			£0	£0	£799	£1,644	£2,537	£3,480	£4,475	£5,526	£6,633	£7,799	£9,028	£10,321	£10,558	£10,801	£11,050	£11,304	£11,564	£11,830	£12,102	£12,380	£12,665	£12,956
Guernsey																								
Change in Journey Time	Business Leisure		130	130	130 130	130 130	130	130	130 130	130	130	130	130 130	130	130	130 130	130	130 130	130	130	130	130	130 130	130 130
0.00 J 0.10		VoT per Minute																						
Outbound Business Outbound Leisure		£0.78 £0.12	£0 £0	±0 £0	£5,140 £1,730	£10,581 £3,561	£16,334 £5,499	£22,415 £7,547	£28,836 £9,710	£35,615 £11,995	£42,765 £14,406	£50,303 £16,948	£58,246 £19,627	£66,611 £22,450	£68,143 £22,966	£69,711 £23,495	£71,314 £24,035	£72,954 £24,588	£74,632 £25,153	£76,349 £25,732	£78,105 £26,324	£79,901 £26,929	£81,739 £27,549	£83,619 £28,182
Inbound Business		£0.78	£0	£0	£2,309	£4,754	£7,339	£10,070	£12,956	£16,001	£19,213	£22,600	£26,168	£29,927	£30,615	£31,319	£32,040	£32,777	£33,530	£34,302	£35,091	£35,898	£36,723	£37,568
Inbound Leisure Southampton		£0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	Leisure	VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business		£0.78	£0	£0	£3,427	£7,054	£10,889	£14,943	£19,224	£23,743	£28,510	£33,535	£38,831	£44,408	£45,429	£46,474	£47,543	£48,636	£49,755	£50,899	£52,070	£53,268	£54,493	£55,746
Outbound Leisure Inbound Business		£0.12 £0.78	£0 £0	£0 £0	£879 £1,540	£1,811 £3,169	£2,796 £4,892	£3,839 £6,714	£4,940 £8,637	£6,103 £10,667	£7,331 £12,809	£8,626 £15,067	£9,992 £17,446	£11,431 £19,951	£11,694 £20,410	£11,963 £20,880	£12,238 £21,360	£12,519 £21,851	£12,807 £22,354	£13,102 £22,868	£13,403 £23,394	£13,711 £23,932	£14,027 £24,482	£14,349 £25,045
Inbound Leisure		£0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Outbound Business			£0	£0	£8,567	£17,635	£27,224	£37,358	£48,061	£59,358	£71,274	£83,838	£97,077	£111,019	£113,572	£116,185	£118,857	£121,591	£124,387	£127,248	£130,175	£133,169	£136,232	£139,365
Outbound Leisure			£0	£0	£2,609	£5,372	£8,295	£11,385	£14,650	£18,098	£21,737	£25,574	£29,619	£33,881	£34,660	£35,457	£36,273	£37,107	£37,961	£38,834	£39,727	£40,641	£41,575	£42,531
Inbound Business Inbound Leisure			£0 £0	±0 £0	£3,849 £1,642	£7,923 £3,379	£12,231 £5,214	£16,784 £7,153	£21,593 £9,200	£26,668 £11,358	£32,022 £13,634	£37,666 £16,032	£43,614 £18,557	£49,878 £21,215	£51,025 £21,703	£52,199 £22,203	£53,399 £22,713	£54,628 £23,236	£55,884 £23,770	£57,169 £24,317	£58,484 £24,876	£59,829 £25,448	£61,206 £26,034	£62,613 £26,632
Total Producer & User Benefits			£99,537	£101,827	-£248,928	-£224,697	-£199,225	-£172,457	-£144,337	-£114,805	-£83,801	-£51,259	-£17,113	£18,705	£17,971	£17,219	£16,451	£15,665	£14,860	£14,037	£13,195	£12,334	£11,453	£10,552
Total Costs & Benefits			-£4,497,463	-£4,495,173	-£594,892	-£556,447	-£516,591	-£475,265	-£432,411	-£387,968	-£341,871	-£294,056	-£244,452	-£192,989	-£193,724	-£194,475	-£195,244	-£196,030	-£196,835	-£197,657	-£198,499	-£199,361	-£200,242	£4,395,857
Discount Factor				0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits			-£4,497,463	-£4,343,162	-£555,338	-£501,884	-£450,179	-£400,160	-£351,767	-£304,939	-£259,621	-£215,758	-£173,297	-£132,187	-£128,203	-£124,348	-£120,618	-£117,009	-£113,516	-£110,135	-£106,864	-£103,699	-£100,635	£2,134,500
NPV	-£11,076,280																							
TIMA	-7%																							

Option 5 Core Case, Low Cost with Terminal

SCENARIO ASSUMPTIONS														1		1		ĺ				
Cost Option Low								_														
Construction Time Split	Year 1 50%	Year 2 50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built Yes Pax Scenario 0.5																						
TRAFFIC & FREQUENCY			2	2		-		-	0		40		40	10		45	46	47	10	40	20	24
Year Baseline Traffic Forecast	Vear 1	1 Year 2	2 Year 3	Year 4	4 Year 5	5 Year 6	6 Year 7	7 Year 8	Year 9	9 Year 10	10 Year 11	11 Year 12	12 Year 13	13 Year 14	14 Year 15	15 Year 16	16 Year 17	17 Year 18	18 Year 19	19 Year 20	20 Year 21	21 Year 22
Guernsey Average Daily One Way Frequency	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Inbound Business	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Inbound Leisure Southampton	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business Outbound Leisure	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466
Inbound Business	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Total	0,023	0,020	0,025	0,025	0,025	0,023	0,025	0,023	0,023	0,023	0,020	0,025	0,023	0,023	-	0,023	0,023	0,023	0,023	0,020	0,023	0,025
Average Daily One Way Frequency Outbound Business	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401
Outbound Leisure	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579
Inbound Leisure	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Change Scenario Traffic Forecast Guernsey																						
Average Daily One Way Frequency	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Leisure	17,112	17,112	17,324	17,539	17,756	17,976	18,198	18,424	18,652	18,883	19,117	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353
Inbound Business Inbound Leisure	3,612	3,612	3,656	3,700	3,745	3,790	3,835	3,882	3,928	3,976	4,024	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072
Southampton		2						2		2	2				2					2		
Outbound Business	5,360	5,360	5,425	5,490	5,556	5,623	5,691	5,760	5,829	5,899	5,970	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042
Outbound Leisure	8,466	8,466	8,574	8,683	8,794	8,906	9,019	9,134	9,250	9,368	9,487	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608
Inbound Leisure	8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business Outbound Leisure	13,401	13,401	13,562	13,726	13,891	14,058	14,228	14,399	14,573	14,748	14,926	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106
Inbound Business	6,021	6,021	6,093	6,167	6,241	6,316	6,392	6,469	6,547	6,626	6,706	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787
CONSTRUCTION COSTS	17,650	17,650	17,851	18,055	18,260	18,469	18,679	18,892	19,107	19,325	19,545	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768
Runway Extension	-£4,597,000	-£4,597,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£4,597,000
Total	-£5,747,000	-£5,747,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£5,747,000
PRODUCER IMPACTS Airport																						
New Passenger Revenue Estimated Revenue per Pax £10	£0	£0	£7,621	£15,334	£23,139	£31,039	£39,035	£47,126	£55,316	£63,604	£71,992	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482
Airline	ĒŪ	EU	-£30,000	-£30,000	-£30,000	-£30,000	-£30,000	-£50,000	-£50,000	-£30,000	-£30,000	-£30,000	-£30,000	-£50,000	-£30,000	-£30,000	-£30,000	-£30,000	-£50,000	-£50,000	-£30,000	-£30,000
Subsidy Total Increase in Subsidy			-345,963	-331,750	-317,366	-302,807	-288,074	-273,162	-258,071	-242,797	-227,339	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695
USER IMPACTS																						
Guernsey																						
Change in Frequency / Wait Time Business Leisure	7	7	-9	-9	-9 -17	-9	-9	-9	-9	-9 -17	-9 -17	-9	-9	-9	-9 -17	-9	-9	-9	-9	-9 -17	-9 -17	-9 -17
VoT per Minute	644.451	CAE 472	650 603	661.066	662.470	662.007	665.277	666 881	668.410	660.003	671.602	672.240	674.024	676 657	679 431	680.224	682.060	682.057	COT 000	697.962	690.994	601.053
Outbound Leisure £0.12	£23,168	£23,701	-£39,695	-£37,978	-£82,470 -£38,852	-£83,907 -£39,746	-£40,660	-£41,595	-£68,419 -£42,552	-£43,530	-£71,602 -£44,531	-£73,249 -£45,556	-£46,603	-£47,675	-£78,421 -£48,772	-£49,894	-£51,041	-£52,215	-£83,888	-£87,863 -£54,645	-£55,901	-£91,932 -£57,187
Inbound Business £0.78 Inbound Leisure £0.12	£19,971 £11.948	£20,430 £12,223	-£26,819 -£19,146	-£27,435 -£19,586	-£28,066 -£20.037	-£28,712 -£20,497	-£29,372 -£20,969	-£30,048 -£21,451	-£30,739 -£21,945	-£31,446 -£22,449	-£32,169 -£22,966	-£32,909 -£23,494	-£33,666 -£24,034	-£34,440 -£24,587	-£35,232 -£25,152	-£36,043 -£25,731	-£36,872 -£26,323	-£37,720 -£26,928	-£38,587 -£27,548	-£39,475 -£28,181	-£40,383 -£28.829	-£41,312 -£29,492
Southampton		0	12	12	12	12	12	12	12	12	12	12	12	12	10	12	12	12	12	12	12	12
Leisure	0	0	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28	-12 -28							
VoT per Minute Outbound Business £0.78	£0	£0	-£51.718	-£52.907	-£54,124	-£55.369	-£56.642	-£57.945	-£59.278	-£60.641	-£62.036	-£63.463	-£64.922	-£66.416	-£67.943	-£69.506	-£71.104	-£72.740	-£74.413	-£76.124	-£77.875	-£79.666
Outbound Leisure £0.12	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Business £0.78 Inbound Leisure £0.12	£0 £0	£0 £0	-£23,235 -£29,843	-£29,843	-£29,843	-£29,843	-£25,448 -£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£28,512 -£29,843	-£29,168 -£29,843	-£29,839 -£29,843	-£30,525 -£29,843	-£31,227 -£29,843	-£31,945 -£29,843	-£29,843	-£33,432 -£29,843	-£29,843	-£34,987 -£29,843	-£35,792 -£29,843
Total Outbound Business	£44.451	£45.473	-f111.410	-£113.973	-f116.594	-f119.276	-f122.019	-f124.826	-£127.697	-f130.634	-f133.638	-f136.712	-f139.856	-f143.073	-£146.364	-f149.730	-f153.174	-f156.697	-£160.301	-£163.988	-f167.759	-£171.618
Outbound Leisure	£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business Inbound Leisure	£19,971 £11,948	£20,430 £12,223	-£48,989	-£49,429	-£52,383 -£49,880	-£53,588 -£50,341	-£54,820 -£50,812	-£51,294	-£57,371 -£51,788	-£52,292	-£60,040 -£52,809	-£53,337	-£62,834 -£53,877	-£54,430	-£55,758 -£54,996	-£55,574	-£56,166	-£70,400	-£72,019 -£57,391	-£73,676	-£58,672	-£77,104 -£59,335
New Passengers (inc. Rule of a Half) Frequency / Wait Time vs The Boat																						
Guernsey			27		27		27		27	27	27	27	0.7		27	27				27	27	
Leisure	106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
VoT per Minute Outbound Business £0.78	£0	£0	£1.082	£2.228	£3.439	£4.719	£6.072	£7.499	£9.004	£10.591	£12.264	£14.025	£14.348	£14.678	£15.015	£15.361	£15.714	£16.075	£16.445	£16.823	£17.210	£17.606
Outbound Leisure £0.12	£0	£0	£1,029	£2,118	£3,271	£4,489	£5,776	£7,135	£8,569	£10,082	£11,676	£13,355	£13,662	£13,976	£14,298	£14,626	£14,963	£15,307	£15,659	£16,019	£16,388	£16,765
Inbound Business £0.78 Inbound Leisure £0.12	£0	£0	£486 £488	£1,001 £1,005	£1,545 £1,551	£2,120 £2,128	£2,728 £2,736	£3,369 £3,378	£4,045	£4,758 £4,768	£5,510 £5,520	£6,301 £6,310	£6,446 £6,455	£6,604	£6,756	£6,901 £6,911	£7,050	£7,222	£7,388	£7,558 £7,569	£7,743	£7,910 £7,921
Southampton Change in Frequency / Wait Time Business	27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Leisure	77	77	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business £0.78	£0	£0	£410	£844	£1,303	£1,788	£2,300	£2,840	£3,411	£4,012	£4,645	£5,313	£5,435	£5,560	£5,688	£5,818	£5,952	£6,089	£6,229	£6,372	£6,519	£6,669
Outbound Leisure £0.12 Inbound Business £0.78	£0 £0	£0 £0	£333 £184	£685 £379	£1,057 £585	£1,451 £803	£1,868 £1,033	£2,308 £1,276	£2,772 £1,532	£3,261 £1,802	£3,778 £2,087	£4,322 £2,387	£4,421 £2,442	£4,523 £2,498	£4,627 £2,555	£4,733 £2,614	£4,842 £2,674	£4,954 £2,736	£5,068 £2,799	£5,184 £2,863	£5,303 £2,929	£5,425 £2,996
Inbound Leisure £0.12	£0	£0	£310	£639	£986	£1,352	£1,739	£2,147	£2,577	£3,031	£3,508	£4,011	£4,103	£4,197	£4,294	£4,393	£4,494	£4,597	£4,703	£4,811	£4,922	£5,035
Outbound Business	£0	£0	£1,492	£3,072	£4,742	£6,507	£8,371	£10,339	£12,415	£14,603	£16,909	£19,338	£19,782	£20,237	£20,703	£21,179	£21,666	£22,164	£22,674	£23,196	£23,729	£24,275
Outbound Leisure Inbound Business	£0 £0	£0 £0	£1,362 £670	£2,803 £1,380	£4,328 £2,130	£5,941 £2,923	£7,644 £3,761	£9,443 £4,645	£11,341 £5,578	£13,343 £6,561	£15,453 £7,597	£17,677 £8,688	£18,083 £8,888	£18,499 £9,092	£18,925 £9,301	£19,360 £9,515	£19,805 £9,734	£20,261 £9,958	£20,727 £10,187	£21,203 £10,421	£21,691 £10,661	£22,190 £10,906
Inbound Leisure	£0	£0	£799	£1,644	£2,537	£3,480	£4,475	£5,526	£6,633	£7,799	£9,028	£10,321	£10,558	£10,801	£11,050	£11,304	£11,564	£11,830	£12,102	£12,380	£12,665	£12,956
Guernsey																						
Change in Journey Time Business Leisure	130 130	130 130	130	130 130	130 130	130 130	130	130 130														
VoT per Minute	60	60	55.140	610 591	616 224	622.415	C28 826	635.645	642.765	650.202	659.246	666 611	669.142	660 711	671.214	672.054	674.622	676.240	678 105	670.001	681 730	682 610
Outbound Leisure £0.12	£0	£0	£1,730	£3,561	£5,499	£7,547	£9,710	£11,995	£14,406	£16,948	£19,627	£22,450	£22,966	£23,495	£24,035	£24,588	£25,153	£25,732	£26,324	£26,929	£27,549	£28,182
Inbound Business £0.78 Inbound Leisure £0.12	£0 £0	£0 £0	£2,309 £821	£4,754 £1,689	£7,339 £2,607	£10,070 £3,577	£12,956 £4,600	£16,001 £5,679	£19,213 £6,817	£22,600 £8,016	£26,168 £9,279	£29,927 £10,608	£30,615 £10,852	£31,319 £11,101	£32,040 £11,357	£32,777 £11,618	£33,530 £11,885	£34,302 £12,158	£35,091 £12,438	£35,898 £12,724	£36,723 £13,017	£37,568 £13,316
Southampton	120	120	120	120	120	120	130	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
VoT per Minute Outbound Business £0.78	£0	£0	£3,427	£7,054	£10,889	£14,943	£19,224	£23,743	£28,510	£33,535	£38,831	£44,408	£45,429	£46,474	£47,543	£48,636	£49,755	£50,899	£52,070	£53,268	£54,493	£55,746
Outbound Leisure £0.12	£0	£0	£879	£1,811	£2,796	£3,839	£4,940	£6,103	£7,331	£8,626	£9,992	£11,431	£11,694	£11,963	£12,238	£12,519	£12,807	£13,102	£13,403	£13,711	£14,027	£14,349
Inbound Leisure £0.12	£0	£0	£1,540 £821	£3,169 £1,689	£2,607	£5,/14 £3,577	£4,600	£10,667 £5,679	£6,817	£15,067 £8,016	£17,446 £9,279	£19,951 £10,608	£20,410 £10,852	£11,101	£11,357	£11,618	£11,885	£12,868	£12,438	£12,724	£24,482 £13,017	£13,316
Total Outbound Business	£0	£0	£8,567	£17,635	£27,224	£37,358	£48,061	£59,358	£71,274	£83,838	£97,077	£111,019	£113,572	£116,185	£118,857	£121,591	£124,387	£127,248	£130,175	£133,169	£136,232	£139,365
Outbound Leisure	£0	£0	£2,609	£5,372	£8,295	£11,385	£14,650	£18,098	£21,737	£25,574	£29,619	£33,881	£34,660	£35,457	£36,273	£37,107	£37,961	£38,834	£39,727	£40,641	£41,575	£42,531
Inbound business	£0 £0	£0 £0	£3,849 £1,642	£7,923 £3,379	±12,231 £5,214	±16,784 £7,153	£9,200	±26,668 £11,358	±32,022 £13,634	±37,666 £16,032	£43,614 £18,557	±49,878 £21,215	£51,025 £21,703	£52,199 £22,203	£53,399 £22,713	£54,628 £23,236	£55,884 £23,770	£57,169 £24,317	±58,484 £24,876	£59,829 £25,448	£26,034	£62,613 £26,632
Total Producer & User Benefits Total Costs & Benefits	£99,537 -£5,647,463	£101,827 -£5.645.173	-£298,928 -£644.892	-£274,697 -£606.447	-£249,225 -£566.591	-£222,457 -£525.265	-£194,337 -£482.411	-£164,805 -£437.968	-£133,801 -£391.871	-£101,259 -£344.056	-£67,113 -£294.452	-£31,295 -£242.989	-£32,029 -£243.724	-£32,781 -£244.475	-£33,549 -£245.244	-£34,335 -£246.030	-£35,140 -£246.835	-£35,963 -£247.657	-£36,805 -£248.499	-£37,666 -£249.361	-£38,547 -£250.242	-£39,448 £5,495,857
Discourt		0.055	0.002	0.000	0.074	0.040	0.000	0 395	0 750	0 794	0 700	0.505	0.550	0.690	0.610	0 503	0.533	0 553	0.530	0 500	0.592	0.495
	1	0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits	-£5,647,463	-£5,454,274	-£602,013	-£546,981	-£493,751	-£442,259	-£392,442	-£344,239	-£297,592	-£252,444	-£208,743	-£166,435	-£161,292	-£156,318	-£151,507	-£146,853	-£142,351	-£137,996	-£133,782	-£129,706	-£125,763	£2,668,628
NPV -£13,465,574																						
IRR -7% BCR -0.2																						

Option 5 Core Case, Medium Cost No Terminal

SCENARIO ASSUMPTIONS Contruction Cost Scenario	5																							
Cost Option Construction Time Split	Medium		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built	No		50%	50%																				
Pax Scenario TRAFFIC & FREQUENCY	0.5																							
Year Baseline Traffic Forecast			0 Year 1	1 Year 2	2 Year 3	3 Year 4	4 Year 5	5 Year 6	6 Year 7	7 Year 8	8 Year 9	9 Year 10	10 Year 11	11 Year 12	12 Year 13	13 Year 14	14 Year 15	15 Year 16	16 Year 17	17 Year 18	18 Year 19	19 Year 20	20 Year 21	21 Year 22
Guernsey Average Daily One Way Frequency	/		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business			8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Inbound Business			3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Southampton Average Daily One Way Frequency	/		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business			5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Inbound Leisure			2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Total			7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Outbound Business			13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Inbound Business			6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Change Scenario Traffic Forecast			17,050	17,050	17,050	17,050	17,050	17,050	17,050	17,050	17,030	17,030	17,050	17,050	17,050	17,050	17,050	17,030	17,050	17,050	17,050	17,050	17,050	17,030
Average Daily One Way Frequency	,		5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business Outbound Leisure Inhound Ruciness			17,112	17,112	17,324	17,539	17,756	17,976	18,198	18,424	18,652	18,883	19,117	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353
Inbound Leisure			8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency	/		3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business Outbound Leisure Inbound Rusiness			8,466	8,466	8,574	8,683	8,794	8,906	9,019	9,134	9,250	9,368	9,487	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608
Inbound Leisure			8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency	/		8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business Outbound Leisure			25,579	25,579	25,898	26,222	26,549	26,881	27,217	27,557	27,902	28,250	28,603	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961
Inbound Leisure			17,650	17,650	17,851	18,055	18,260	18,469	18,679	18,892	19,107	19,325	19,545	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768
Runway Extension			-£6,185,000	-£6,185,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£6,185,000
			-£6,185,000	-£6,185,000	£0 £0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£6,185,000
Airport	Cationated Davages and Dav	C10	60	60	67 (21	645 224	(22.120	621.020	630.035	647.126	655.216	662.604	671.000	680 483	680 482	680 482	680 482	680 483	680 482	680 483	680 483	680 483	680,482	690 493
OPEX	Estimated Revenue per Pax	EIU	£0	£0	£0	£13,334 £0	£0	£0	£39,035	£47,126 £0	£0	£05,604	£0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0	£80,482 £0
Subsidy	Total Increase in Subsidy				-345 963	-331 750	-317 366	-302 807	-288.074	-273 162	-258 071	-242 797	-227 339	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695	-211 695
USER IMPACTS Existing Passengers - Wait Time In	nnacts	l			0.0,000							,		,	/	,		,	,	,	,	,	,	
Guernsey Change in Frequency / Wait Time	Business		7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
	Leisure	VoT per Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business		£0.78	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Inbound Business		£0.78 £0.12	£19,971 £11 948	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Southampton Change in Frequency / Wait Time	Business	10.11	0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
enange in requercy / wate nine	Leisure	VoT per Miputo	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Outbound Business		£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Inbound Business		£0.78	£0	£0	-£23,235	-£23,770	-£24,317	-£24,876	-£25,448	-£26,033	-£26,632	-£27,245	-£27,871	-£28,512	-£29,168	-£29,839	-£30,525	-£31,227	-£31,945	-£32,680	-£33,432	-£34,201	-£34,987	-£35,792
Total		10.12	£44.451	£45,472	£111 410	£112.072	£116 504	£110.276	£122,043	£124,826	-123,843	£120.624	£122,643	-125,645 6126 712	£120.956	£142.072	-123,843	£149.720	£152 174	-123,843	£160 201	£162.089	-123,843	£171 619
Outbound Leisure			£23,168 £19,971	£23,701 £20,430	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Leisure	.16)		£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-£55,574	-£56,166	-£56,771	-£57,391	-£58,024	-£58,672	-£59,335
Frequency / Wait Time vs The Boa	it																							
Change in Frequency / Wait Time	Business		44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Outbound Duninger	Leisure	VoT per Minute	601	100	(1.082	(2.228	62,420	CA 710		67.400	60.004	610 501	612.264	614.025	(14.248	C14 C70	C15 015	C15 261	615 714	616 075	C1C 445	(16, 822	(17.210	617.606
Outbound Leisure		f0.12	£0 £0	£0 £0	£1,002 £1,029	£2,118 £1,001	£3,271 £1,545	£4,489 £2,120	£5,776	£7,135 £3,369	£8,569	£10,082	£11,676	£13,355	£13,662	£13,976	£14,298	£14,626	£14,963	£15,307	£15,659	£16,019	£16,388	£16,765
Inbound Leisure		£0.12	£0	£0	£488	£1,001	£1,545	£2,120	£2,736	£3,378	£4,055	£4,768	£5,520	£6,310	£6,455	£6,604	£6,756	£6,911	£7,070	£7,233	£7,399	£7,569	£7,743	£7,921
Change in Frequency / Wait Time	Business		27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Outbound Business		VoT per Minute	£0	£0	£410	£844	f1 303	£1 788	£2 300	£2.840	£3.411	£4.012	£4.645	f5 313	£5.435	£5.560	+5 688	£5.818	£5.952	£6.089	£6.229	f6 372	£6.519	f6 669
Outbound Leisure		£0.12 £0.78	£0 £0	£0 £0	£333 £184	£685 £379	£1,057	£1,451 £803	£1,868	£2,308	£2,772	£3,261 £1,802	£3,778	£4,322	£4,421	£4,523	£4,627	£4,733	£4,842	£4,954	£5,068	£5,184	£5,303	£5,425
Inbound Leisure		£0.12	£0	£0	£310	£639	£986	£1,352	£1,739	£2,147	£2,577	£3,031	£3,508	£4,011	£4,103	£4,197	£4,294	£4,393	£4,494	£4,597	£4,703	£4,811	£4,922	£5,035
Outbound Business			£0	£0	£1,492	£3,072	£4,742	£6,507	£8,371	£10,339	£12,415	£14,603	£16,909	£19,338	£19,782	£20,237	£20,703	£21,179	£21,666	£22,164	£22,674	£23,196	£23,729	£24,275
Inbound Business			£0	£0	£670	£1,380	£2,130	£2,923	£3,761	£4,645	£5,578	£6,561	£7,597	£8,688	£8,888	£9,092	£9,301	£9,515	£9,734	£9,958	£10,187	£10,421	£10,661	£10,906
Journey Time vs The Boat			10	10	2733	11,044	12,557	13,480	14,473	13,320	10,033	27,733	19,028	110,321	110,558	110,801	11,050	111,304	11,504	111,830	112,102	112,380	112,005	112,950
Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business		VoT per Minute	£0	£0	£5.140	£10.581	£16.334	£22.415	£28,836	£35.615	£42 765	£50 303	£58.246	£66.611	£68 143	£69.711	£71 314	£72.954	£74.632	£76.349	£78 105	£79.901	£81 739	£83.619
Outbound Leisure		£0.12	£0	£0	£1,730	£3,561	£5,499	£7,547	£9,710	£11,995	£14,406	£16,948	£19,627	£22,450	£22,966	£23,495	£24,035	£24,588	£25,153	£25,732	£26,324	£26,929	£27,549	£28,182
Inbound Leisure		£0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Rusinger		VoT per Minute	60	60	62.427	67.054	610 990	614.942	610.224	622.742	628 510	622.525	620 021	644.409	645.429	£46.474	647 542	648 636	640 755	650,800	652.070	652.269	654.492	655 746
Outbound Business Outbound Leisure		£0.12	£0	£0	£879	£1,811	£2,796	£3,839	£4,940	£6,103	£7,331	£8,626	£9,992	£11,431	£11,694	£11,963	£12,238	£12,519	£12,807	£13,102	£13,403	£13,711	£14,027	£14,349
Inbound Leisure		£0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Outbound Business			£0	£0	£8,567	£17,635	£27,224	£37,358	£48,061	£59,358	£71,274	£83,838	£97,077	£111,019	£113,572	£116,185	£118,857	£121,591	£124,387	£127,248	£130,175	£133,169	£136,232	£139,365
Inbound Leisure			£0	£0	£3,849	£7,923	£12,231	£11,385 £16,784	£21,593	£18,098 £26,668	£32,022	£37,666	£43,614	£49,878	£51,025	£35,457 £52,199	£53,399	£54,628	£55,884	£38,834 £57,169	£58,484	£59,829	£41,575 £61,206	£42,531 £62,613
Total Producer & User Benefits			£99,537	£101,827	£1,642 -£248,928	£3,3/9 -£224,697	£5,214 -£199,225	£7,153 -£172,457	-£144,337	-£11,358 -£114,805	£13,634 -£83,801 -£341,971	-£51,259	-£18,557 -£17,113	£18,705	£17,971	£17,219	£16,451	£15,665	£14,860	£14,037	£13,195	£12,334	£11,453	£10,552
Discount Easter			-1	0.965	0.924	0.902	0 974	0.942	0.814	0.7%	0.750	0 724	0 700	0.695	0.662	0.620	0.619	0 507	0.577	0.557	0.520	0.520	0.502	0.486
Discount Pactor			-£6.085.462	-65 877 462	-6555 229	-6501.884	-6450 170	-6400 160	-6351.767	-6304.920	-6259 621	-6215 759	-6172 207	-6132 197	-6128 202	-6124 249	-6120.619	-6117.009	-6112 516	-6110.125	-6106 864	-6102 699	-6100 625	62 905 597
NPV	£12 427 403		20,003,403	23,677,462	2333,338	1301,884				2304,959					21128,205	2124,346								
IRR BCR	-6%																							

Option 5 Core Case, Medium Cost with Terminal

SCENARIO ASSUMPTIONS		1						1	1			1							1	1		
Cost Option Medium										N		N						N	N 10			N
	50%	50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Pax Scenario 0.5																						
TRAFFIC & FREQUENCY Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Average Daily One Way Frequency	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business Outbound Leisure	17,112	8,041	17,112	8,041	17,112	8,041	17,112	8,041	8,041	8,041	8,041	8,041	17,112	8,041	17,112	8,041	17,112	8,041	8,041	8,041	8,041	8,041
Inbound Business Inbound Leisure	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825	3,612 8,825
Southampton Average Daily One Way Frequency	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Inbound Business	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Total	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency Outbound Business	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401
Outbound Leisure Inbound Business	25,579 6.021	25,579 6.021	25,579 6.021	25,579 6.021	25,579 6.021	25,579 6.021	25,579 6.021	25,579	25,579	25,579 6.021	25,579 6.021	25,579 6.021	25,579	25,579 6.021	25,579 6.021							
Inbound Leisure	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey																						
Average Daily One Way Frequency Outbound Business	5 8,041	5 8,041	3 8,137	3 8,235	3 8,335	3 8,435	3 8,537	3 8,640	3 8,744	3 8,849	3 8,956	3 9,064	3 9,064									
Outbound Leisure Inbound Business	17,112 3,612	17,112 3,612	17,324 3,656	17,539 3,700	17,756 3,745	17,976 3,790	18,198 3,835	18,424 3,882	18,652 3,928	18,883 3,976	19,117 4,024	19,353 4,072	19,353 4,072	19,353 4,072	19,353 4,072							
Inbound Leisure	8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business Outbound Leisure	5,360 8,466	5,360 8,466	5,425 8,574	5,490 8,683	5,556 8,794	5,623 8,906	5,691 9,019	5,760 9,134	5,829 9,250	5,899 9,368	5,970 9,487	6,042 9,608	9,608	6,042 9,608	6,042 9,608							
Inbound Business Inbound Leisure	2,408 8,825	2,408 8,825	2,437 8,926	2,467 9,027	2,496 9,130	2,526 9,234	2,557 9,340	2,588 9,446	2,619 9,554	2,650 9,662	2,682 9,773	2,715 9,884	2,715 9,884									
Total Average Daily One Way Frequency	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business	13,401	13,401	13,562	13,726	13,891	14,058	14,228	14,399	14,573	14,748	14,926	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106	15,106
Inbound Business	6,021	6,021	6,093	6,167	6,241	6,316	6,392	6,469	6,547	6,626	6,706	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787
Inbound Leisure CONSTRUCTION COSTS	17,650	17,650	17,851	18,055	18,260	18,469	18,679	18,892	19,107	19,325	19,545	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768
Runway Extension Terminal	-£6,185,000 -£1,150,000	-£6,185,000 -£1,150,000	£0 £0	£6,185,000 £1.150.000																		
Total	-£7,335,000	-£7,335,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£7,335,000
Airport													1									
New Passenger Revenue Estimated Revenue per Pax £10 OPEX	£0 £0	£0 £0	£7,621 -£50,000	£15,334 -£50,000	£23,139 -£50,000	£31,039 -£50,000	£39,035 -£50,000	£47,126 -£50,000	£55,316 -£50,000	£63,604 -£50,000	£71,992 -£50,000	£80,482 -£50,000	£80,482 -£50,000									
Airline																						
Subsidy Total Increase in Subsidy			-345,963	-331,750	-317,366	-302,807	-288,074	-273,162	-258,071	-242,797	-227,339	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695
Existing Passengers - Wait Time Impacts																						
Change in Frequency / Wait Time Business	7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Leisure VoT per Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business £0.78 Outbound Leisure £0.12	£44,451 £23,168	£45,473 £23,701	-£59,693 -£37,125	-£61,066 -£37,978	-£62,470 -£38,852	-£63,907 -£39,746	-£65,377 -£40,660	-£66,881 -£41,595	-£68,419 -£42,552	-£69,993 -£43,530	-£71,602 -£44,531	-£73,249 -£45,556	-£74,934 -£46,603	-£76,657 -£47,675	-£78,421 -£48,772	-£80,224 -£49,894	-£82,069 -£51,041	-£83,957 -£52,215	-£85,888 -£53,416	-£87,863 -£54,645	-£89,884 -£55,901	-£91,952 -£57,187
Inbound Business £0.78	£19,971	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Southampton	/	,	10	10			10			10	10			10	10	10	10	10			12	10
Leisure	0	0	-12 -28	-12 -28																		
Outbound Business £0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Outbound Leisure £0.12 Inbound Business £0.78	£0 £0	£0 £0	-£29,963 -£23,235	-£30,652 -£23,770	-£31,357 -£24,317	-£32,078 -£24,876	-£32,816 -£25,448	-£33,571 -£26,033	-£34,343 -£26,632	-£35,133 -£27,245	-£35,941 -£27,871	-£36,767 -£28,512	-£37,613 -£29,168	-£38,478 -£29,839	-£39,363 -£30,525	-£40,268 -£31,227	-£41,194 -£31,945	-£42,142 -£32,680	-£43,111 -£33,432	-£44,103 -£34,201	-£45,117 -£34,987	-£46,155 -£35,792
Inbound Leisure £0.12	£0	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843
Outbound Business	£44,451	£45,473	-£111,410	-£113,973	-£116,594	-£119,276	-£122,019	-£124,826	-£127,697	-£130,634	-£133,638	-£136,712	-£139,856	-£143,073	-£146,364	-£149,730	-£153,174	-£156,697	-£160,301	-£163,988	-£167,759	-£171,618
Inbound Business	£19,971	£20,430	-£50,054	-£68,630 -£51,205	-£52,383	-£53,588	-£54,820	-£75,185 -£56,081	-£78,894 -£57,371	-£58,690	-£60,040	-£82,323 -£61,421	-£62,834	-£64,279	-£65,758	-£90,182 -£67,270	-£68,817	-£94,337	-£98,527 -£72,019	-£98,747 -£73,676	-£101,018 -£75,370	-£103,342 -£77,104
Inbound Leisure New Passengers (inc. Rule of a Half)	£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-£55,574	-£56,166	-£56,771	-£57,391	-£58,024	-£58,672	-£59,335
Frequency / Wait Time vs The Boat Guernsev																						
Change in Frequency / Wait Time Business	44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
VoT per Minute	100	100																				
Outbound Business £0.78 Outbound Leisure £0.12	£0	£0 £0	£1,082 £1,029	£2,228 £2,118	£3,439 £3,271	£4,719 £4,489	£5,776	£7,499 £7,135	£9,004 £8,569	£10,591 £10,082	£12,264 £11,676	£14,025 £13,355	£14,348 £13,662	£14,678 £13,976	£15,015 £14,298	£15,361 £14,626	£15,714 £14,963	£15,307	£15,659	£16,823 £16,019	£16,388	£16,765
Inbound Business £0.78 Inbound Leisure £0.12	£0 £0	£0 £0	£486 £488	£1,001 £1,005	£1,545 £1,551	£2,120 £2,128	£2,728 £2,736	£3,369 £3,378	£4,045 £4,055	£4,758 £4,768	£5,510 £5,520	£6,301 £6,310	£6,446 £6,455	£6,594 £6,604	£6,746 £6,756	£6,901 £6,911	£7,060 £7,070	£7,222 £7,233	£7,388 £7,399	£7,558 £7,569	£7,732 £7,743	£7,910 £7,921
Southampton Change in Frequency / Wait Time Business	27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Leisure	77	77	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business £0.78	£0	£0	£410	£844	£1,303	£1,788	£2,300	£2,840	£3,411	£4,012	£4,645	£5,313	£5,435	£5,560	£5,688	£5,818	£5,952	£6,089	£6,229	£6,372	£6,519	£6,669
Inbound Business £0.78	£0	£0	£333 £184	£685 £379	£1,057 £585	£1,451 £803	£1,868 £1,033	£2,308 £1,276	£2,772 £1,532	£3,261 £1,802	£3,778 £2,087	£4,322 £2,387	£4,421 £2,442	£4,523 £2,498	£4,627 £2,555	£4,733 £2,614	£4,842 £2,674	£4,954 £2,736	£2,799	£5,184 £2,863	£2,929	£2,996
Inbound Leisure £0.12 Total	£0	£0	£310	£639	£986	£1,352	£1,739	£2,147	£2,577	£3,031	£3,508	£4,011	£4,103	£4,197	£4,294	£4,393	£4,494	£4,597	£4,703	£4,811	£4,922	£5,035
Outbound Business Outbound Leisure	£0 £0	£0 £0	£1,492 £1,362	£3,072 £2,803	£4,742 £4,328	£6,507 £5,941	£8,371 £7,644	£10,339 £9.443	£12,415 £11.341	£14,603 £13,343	£16,909 £15,453	£19,338 £17,677	£19,782 £18,083	£20,237 £18,499	£20,703 £18,925	£21,179 £19,360	£21,666 £19,805	£22,164 £20,261	£22,674 £20,727	£23,196 £21,203	£23,729 £21,691	£24,275 £22,190
Inbound Business	£0	£0	£670	£1,380	£2,130	£2,923	£3,761	£4,645	£5,578	£6,561	£7,597	£8,688	£8,888	£9,092	£9,301	£9,515	£9,734	£9,958	£10,187	£10,421	£10,661	£10,906
Journey Time vs The Boat	10	20	2735	11,044	22,557	23,400	24,475	23,320	20,035	27,755	23,020	210,521	210,550	210,001	211,050	111,504	11,504	211,050	112,102	112,500	212,005	212,550
Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business £0.78 Outbound Leisure £0.12	£0 £0	£0 £0	£5,140 £1.730	£10,581 £3.561	£16,334 £5,499	£22,415 £7.547	£28,836 £9,710	£35,615 £11,995	£42,765 £14,406	£50,303 £16,948	£58,246 £19.627	£66,611 £22,450	£68,143 £22,966	£69,711 £23,495	£71,314 £24.035	£72,954 £24,588	£74,632 £25.153	£76,349 £25,732	£78,105 £26,324	£79,901 £26,929	£81,739 £27,549	£83,619 £28.182
Inbound Business £0.78	£0	£0	£2,309	£4,754	£7,339	£10,070	£12,956	£16,001	£19,213	£22,600	£26,168	£29,927	£30,615	£31,319	£32,040	£32,777	£33,530	£34,302	£35,091	£35,898	£36,723	£37,568
Southampton The Southampton So	10	10	1821	1,089	12,007	13,377	14,000	13,073	10,817	18,010	19,279	10,008	110,852		111,337			112,158	112,438	112,724	113,017	113,310
Change in Journey Time Business Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business £0.78	£0	£0	£3,427	£7,054	£10,889	£14,943	£19,224	£23,743	£28,510	£33,535	£38,831	£44,408	£45,429	£46,474	£47,543	£48,636	£49,755	£50,899	£52,070	£53,268	£54,493	£55,746
Outbound Leisure £0.12 Inbound Business £0.79	£0 £0	£0 £0	£879 £1.540	£1,811 £3.169	£2,796 £4.892	£3,839 £6,714	£4,940 £8.637	£6,103	£7,331 £12,809	£8,626	£9,992 £17.446	£11,431 £19,951	£11,694 £20,410	£11,963 £20,880	£12,238	£12,519 £21.851	£12,807	£13,102 £22,868	£13,403 £23,394	£13,711 £23,932	£14,027 £24.482	£14,349 £25.045
Inbound Leisure £0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Outbound Business	£0	£0	£8,567	£17,635	£27,224	£37,358	£48,061	£59,358	£71,274	£83,838	£97,077	£111,019	£113,572	£116,185	£118,857	£121,591	£124,387	£127,248	£130,175	£133,169	£136,232	£139,365
Outbound Leisure Inbound Business	£0 £0	£0 £0	£2,609 £3,849	£5,372 £7,923	£8,295 £12,231	£11,385 £16,784	£14,650 £21,593	£18,098 £26,668	£21,737 £32,022	£25,574 £37,666	£29,619 £43,614	£33,881 £49,878	£34,660 £51,025	£35,457 £52,199	£36,273 £53,399	£37,107 £54,628	£37,961 £55,884	£38,834 £57,169	£39,727 £58,484	£40,641 £59,829	£41,575 £61,206	£42,531 £62,613
Inbound Leisure Total Producer & User Benefits	£0 £99.537	£0 £101.827	£1,642 -£298,928	£3,379 -£274.697	£5,214 -£249,225	£7,153 -£222,457	£9,200 -£194,337	£11,358 -£164.805	£13,634 -£133.801	£16,032 -£101.259	£18,557 -£67.113	£21,215 -£31.295	£21,703 -£32.029	£22,203	£22,713 -£33,549	£23,236 -£34,335	£23,770 -£35,140	£24,317 -£35,963	£24,876 -£36.805	£25,448 -£37.666	£26,034 -£38,547	£26,632 -£39,448
Total Costs & Benefits	-£7,235,463	-£7,233,173	-£644,892	-£606,447	-£566,591	-£525,265	-£482,411	-£437,968	-£391,871	-£344,056	-£294,452	-£242,989	-£243,724	-£244,475	-£245,244	-£246,030	-£246,835	-£247,657	-£248,499	-£249,361	-£250,242	£7,083,857
Discount Factor		0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits	-£7,235,463	-£6,988,573	-£602,013	-£546,981	-£493,751	-£442,259	-£392,442	-£344,239	-£297,592	-£252,444	-£208,743	-£166,435	-£161,292	-£156,318	-£151,507	-£146,853	-£142,351	-£137,996	-£133,782	-£129,706	-£125,763	£3,439,715
NPV -£15,816,787																						
IRR -6% BCR -0.1																						

Option 5 Core Case, High Cost No Terminal

BCR

SCENARIO ASSUMPTIONS	5													1							1	1		
Cost Option	High		Voar 1	Voor 2	Voor 2	Voor 4	Voor E	Voor 6	Voor 7	Voor 9	Voor 9	Voor 10	Voor 11	Yoor 12	Voor 12	Voor 14	Voor 15	Voor 16	Voor 17	Voor 19	Voor 10	Vors 20	Vor 21	Voar 22
			50%	50%	Tear 5	fear 4	rear 5	fearo	rear 7	rear o	rear 9	Tear 10	fearin	fear 12	Teal 15	rear 14	Tear 15	fear 10	fear 17	rear 10	Teal 19	fear 20	fear 21	fear 22
Pax Scenario	0.5																							
TRAFFIC & FREQUENCY Year			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast Guernsey			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Average Daily One Way Frequency	·		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Leisure			17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112
Inbound Business			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Southampton Average Daily One Way Frequency			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business Outbound Leisure			5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360 8,466	5,360
Inbound Business			2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Total			8,823	8,825	0,025	8,825	8,823	8,825	8,825	0,025	8,825	8,823	8,825	8,825	8,825	0,025	8,825	8,823	8,823	8,823	8,825	8,823	8,825	8,825
Outbound Business			13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Outbound Leisure Inbound Business			25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021
Inbound Leisure Change Scenario Traffic Forecast			17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey				-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business			8,041	8,041	8,137	8,235	8,335	8,435	8,537	8,640	8,744	8,849	8,956	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064
Inbound Business			3,612	3,612	3,656	3,700	3,745	3,790	3,835	18,424 3,882	3,928	18,883 3,976	4,024	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072	4,072
Inbound Leisure Southampton			8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency			3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Leisure			8,466	8,466	8,574	8,683	8,794	8,906	9,019	9,134	9,250	9,368	9,487	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608	9,608
Inbound Leisure			8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Total Average Daily One Way Frequency			8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business Outbound Leisure			13,401 25,579	13,401 25,579	13,562 25,898	13,726 26,222	13,891 26,549	14,058 26,881	14,228 27,217	14,399 27,557	14,573 27,902	14,748 28,250	14,926 28,603	15,106 28,961	15,106 28,961	15,106 28,961	15,106 28,961							
Inbound Business			6,021	6,021	6,093	6,167	6,241	6,316	6,392	6,469	6,547	6,626	6,706	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787	6,787
			CR 275 000	58.375.000	17,001	10,000	10,200	10,405	10,075	10,032	13,107	13,523	10,545	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	CR 375 000
Terminal			-£8,373,000 £0	-£8,373,000 £0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£8,373,000 £0
PRODUCER IMPACTS			-£8,375,000	-£8,375,000	£Ο	ΕŪ	£Ο	£Ο	ΞO	£Ο	£Ο	£Ο	£Ο	£Ο	ΞŪ	ΞO	£Ο	£8,375,000						
Airport New Passenger Revenue	Estimated Revenue per Pax	£10	£0	£0	£7,621	£15,334	£23,139	£31,039	£39,035	£47,126	£55,316	£63,604	£71,992	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482
OPEX			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
					245.052	224 750	247.265	202.007	200.074	070.460	250.074	242 202	227.222	244.605	244.005	244 525	244 505	211.005	244.505	244 605	211.005	211.005	244 605	211 605
USER IMPACTS	Total Increase in Subsidy				-345,963	-331,750	-317,366	-302,807	-288,074	-273,162	-258,071	-242,797	-227,339	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695
Existing Passengers - Wait Time In Guernsey	npacts																							
Change in Frequency / Wait Time	Business Leisure		7	7	-9 -17	-9																		
Outbound Business		VoT per Minute	£44.451	£45.473	-659 693	-£61.066	-£62.470	-63 907	-£65.377	-£66.881	-668 419	-669 993	-F71 602	-£73.249	-£74.934	-£76.657	-£78.421	-£80 224	-£82.069	-£83.957	-f85 888	-687 863	-£89.884	-f91 952
Outbound Leisure		£0.12	£23,168	£23,701	-£37,125	-£37,978	-£38,852	-£39,746	-£40,660	-£41,595	-£42,552	-£43,530	-£44,531	-£45,556	-£46,603	-£47,675	-£48,772	-£49,894	-£51,041	-£52,215	-£53,416	-£54,645	-£55,901	-£57,187
Inbound Leisure		£0.12	£19,971 £11,948	£20,430 £12,223	-£26,819 -£19,146	-£27,435 -£19,586	-£28,066 -£20,037	-£28,712 -£20,497	-£29,372 -£20,969	-£30,048 -£21,451	-£30,739 -£21,945	-£31,446 -£22,449	-£32,169 -£22,966	-£32,909 -£23,494	-£33,666 -£24,034	-£34,440 -£24,587	-£35,232 -£25,152	-£36,043 -£25,731	-£36,872 -£26,323	-£37,720 -£26,928	-£38,587 -£27,548	-£39,475 -£28,181	-£40,383 -£28,829	-£41,312 -£29,492
Southampton Change in Frequency / Wait Time	Business		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
	Leisure	VoT per Minute	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Outbound Business		£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Inbound Business		£0.78	£0	£0	-£23,235	-£23,770	-£24,317	-£24,876	-£25,448	-£26,033	-£26,632	-£27,245	-£27,871	-£28,512	-£29,168	-£29,839	-£30,525	-£31,227	-£31,945	-£32,680	-£33,432	-£34,201	-£34,987	-£35,792
Total		£0.12	£U	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843
Outbound Business Outbound Leisure			£44,451 £23,168	£45,473 £23,701	-£111,410 -£67,087	-£113,973 -£68,630	-£116,594 -£70,209	-£119,276 -£71,823	-£122,019 -£73,475	-£124,826 -£75,165	-£127,697 -£76,894	-£130,634 -£78,663	-£133,638 -£80,472	-£136,712 -£82,323	-£139,856 -£84,216	-£143,073 -£86,153	-£146,364 -£88,135	-£149,730 -£90,162	-£153,174 -£92,236	-£156,697 -£94,357	-£160,301 -£96,527	-£163,988 -£98,747	-£167,759 -£101,018	-£171,618 -£103,342
Inbound Business Inbound Leisure			£19,971 £11,948	£20,430 £12,223	-£50,054 -£48,989	-£51,205 -£49,429	-£52,383 -£49,880	-£53,588 -£50,341	-£54,820 -£50,812	-£56,081 -£51,294	-£57,371 -£51,788	-£58,690 -£52,292	-£60,040 -£52,809	-£61,421 -£53,337	-£62,834 -£53,877	-£64,279 -£54,430	-£65,758 -£54,996	-£67,270 -£55,574	-£68,817 -£56,166	-£70,400 -£56,771	-£72,019 -£57,391	-£73,676 -£58,024	-£75,370 -£58,672	-£77,104 -£59,335
New Passengers (inc. Rule of a Ha	lf) +																							
Guernsey											27		27		27		27				27	27		
Change in Frequency / Wait Time	Leisure		106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Outbound Business		VoT per Minute £0.78	£0	£0	£1,082	£2,228	£3,439	£4,719	£6,072	£7,499	£9,004	£10,591	£12,264	£14,025	£14,348	£14,678	£15,015	£15,361	£15,714	£16,075	£16,445	£16,823	£17,210	£17,606
Outbound Leisure Inbound Business		£0.12 £0.78	£0 £0	£0 £0	£1,029 £486	£2,118 £1.001	£3,271 £1.545	£4,489 £2.120	£5,776 £2,728	£7,135 £3.369	£8,569 £4.045	£10,082 £4,758	£11,676 £5.510	£13,355 £6.301	£13,662 £6,446	£13,976 £6,594	£14,298 £6,746	£14,626 £6.901	£14,963 £7.060	£15,307 £7.222	£15,659 £7.388	£16,019 £7.558	£16,388 £7,732	£16,765 £7.910
Inbound Leisure		£0.12	£0	£0	£488	£1,005	£1,551	£2,128	£2,736	£3,378	£4,055	£4,768	£5,520	£6,310	£6,455	£6,604	£6,756	£6,911	£7,070	£7,233	£7,399	£7,569	£7,743	£7,921
Change in Frequency / Wait Time	Business		27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Leisure	VoT per Minute	//	//	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business Outbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£410 £333	£844 £685	£1,303 £1,057	£1,788 £1,451	£2,300 £1,868	£2,840 £2,308	£3,411 £2,772	£4,012 £3,261	£4,645 £3,778	£5,313 £4,322	£5,435 £4,421	£5,560 £4,523	£5,688 £4,627	£5,818 £4,733	£5,952 £4,842	£6,089 £4,954	£6,229 £5,068	£6,372 £5,184	£6,519 £5,303	£6,669 £5,425
Inbound Business Inbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£184 £310	£379 £639	£585 £986	£803 £1,352	£1,033 £1,739	£1,276 £2,147	£1,532 £2,577	£1,802 £3,031	£2,087 £3,508	£2,387 £4,011	£2,442 £4,103	£2,498 £4,197	£2,555 £4,294	£2,614 £4,393	£2,674 £4,494	£2,736 £4,597	£2,799 £4,703	£2,863 £4,811	£2,929 £4,922	£2,996 £5,035
Total Outbound Business			£0	£0	£1.492	£3.072	£4 742	£6 507	f8 371	£10.339	£12.415	£14.603	£16.909	£19.338	£19.782	£20.237	£20,703	£21 179	£21.666	£22.164	£22.674	£23.196	£23 729	£24.275
Outbound Leisure			£0	£0	£1,362	£2,803	£4,328	£5,941	£7,644	£9,443	£11,341	£13,343	£15,453	£17,677	£18,083	£18,499	£18,925	£19,360	£19,805	£20,261	£20,727	£21,203	£21,691	£22,190
Inbound Leisure			£0	£0	£799	£1,380 £1,644	£2,130 £2,537	£2,923 £3,480	£3,761 £4,475	£4,645 £5,526	£5,578 £6,633	£6,561 £7,799	£9,028	£8,688 £10,321	£8,888 £10,558	£9,092 £10,801	£9,301 £11,050	£9,515 £11,304	£9,734 £11,564	£9,958 £11,830	£10,187 £12,102	£10,421 £12,380	£10,661 £12,665	£10,906 £12,956
Journey Time vs The Boat Guernsey																								
Change in Journey Time	Business Leisure		130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130	130 130	130 130							
Outbound Business		VoT per Minute	f0	£0	£5.140	£10.581	£16.334	£22.415	£28,836	£35.615	£42 765	£50 303	£58.246	£66.611	£68 143	£69 711	£71 314	£72.954	£74.632	£76.349	£78 105	£79.901	£81 739	£83.619
Outbound Leisure		£0.12	£0	£0	£1,730	£3,561	£5,499	£7,547	£9,710	£11,995	£14,406	£16,948	£19,627	£22,450	£22,966	£23,495	£24,035	£24,588	£25,153	£25,732	£26,324	£26,929	£27,549	£28,182
Inbound Business Inbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£2,309 £821	£4,754 £1,689	£7,339 £2,607	£10,070 £3,577	£12,956 £4,600	£16,001 £5,679	£19,213 £6,817	£22,600 £8,016	£26,168 £9,279	£29,927 £10,608	£30,615 £10,852	£31,319 £11,101	£32,040 £11,357	£32,777 £11,618	£33,530 £11,885	£34,302 £12,158	£35,091 £12,438	£35,898 £12,724	£36,723 £13,017	£37,568 £13,316
Southampton Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	Leisure	VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business		£0.78	£0	£0	£3,427	£7,054	£10,889	£14,943	£19,224	£23,743	£28,510	£33,535	£38,831	£44,408	£45,429	£46,474	£47,543	£48,636	£49,755	£50,899	£52,070	£53,268	£54,493	£55,746
Inbound Business		±0.12 £0.78	£0	£0 £0	£879 £1,540	£1,811 £3,169	£2,796 £4,892	£3,839 £6,714	£4,940 £8,637	£6,103 £10,667	£7,331 £12,809	£8,626 £15,067	£9,992 £17,446	£11,431 £19,951	£11,694 £20,410	£11,963 £20,880	£12,238 £21,360	£12,519 £21,851	£12,807 £22,354	£13,102 £22,868	£13,403 £23,394	£13,711 £23,932	£14,027 £24,482	£14,349 £25,045
Inbound Leisure Total		£0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Outbound Business Outbound Leisure			£0 £0	£0 £0	£8,567 £2.609	£17,635 £5.372	£27,224 £8.295	£37,358 £11.385	£48,061 £14.650	£59,358 £18.098	£71,274 £21.737	£83,838 £25.574	£97,077 £29.619	£111,019 £33.881	£113,572 £34,660	£116,185 £35,457	£118,857 £36.273	£121,591 £37.107	£124,387 £37.961	£127,248 £38.834	£130,175 £39.727	£133,169 £40.641	£136,232 £41.575	£139,365 £42.531
Inbound Business			£0	£0	£3,849	£7,923	£12,231	£16,784	£21,593	£26,668	£32,022	£37,666	£43,614	£49,878	£51,025	£52,199	£53,399	£54,628	£55,884	£57,169	£58,484	£59,829	£61,206	£62,613
Total Producer & User Benefits	1	1	£99,537	£101,827	-£248,928	-£224,697	-£199,225	-£172,457	-£144,337	-£114,805	-£83,801	-£51,259	-£17,113	£18,705	£17,971	£17,219	£16,451	£15,665	£14,860	£14,037	£13,195	£12,334	£11,453	£10,552
Total Costs & Benefits			-£8,275,463	-£8,273,173	-£594,892	-£556,447	-£516,591	-£475,265	-£432,411	-£387,968	-£341,871	-£294,056	-£244,452	-£192,989	-£193,724	-£194,475	-£195,244	-£196,030	-£196,835	-£197,657	-£198,499	-£199,361	-£200,242	£8,173,857
Discount Factor				0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits			-£8,275,463	-£7,993,404	-£555,338	-£501,884	-£450,179	-£400,160	-£351,767	-£304,939	-£259,621	-£215,758	-£173,297	-£132,187	-£128,203	-£124,348	-£120,618	-£117,009	-£113,516	-£110,135	-£106,864	-£103,699	-£100,635	£3,968,987
NPV	-£16,670,035																							
BCR	-6%																							

Option 5 Core Case, High Cost with Terminal

SCENARIO ASSUMPTIONS		1												1								
Cost Option High																						
Construction Time Split	Year 1 50%	Year 2 50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built Yes Pax Scenario 0.5																						
TRAFIC & FREQUENCY	-		-	-		_	-	_	-	_												
Year Baseline Traffic Forecast	0 Year 1	1 Year 2	2 Year 3	3 Year 4	4 Year 5	Year 6	6 Year 7	7 Year 8	Year 9	9 Year 10	10 Year 11	11 Year 12	12 Year 13	13 Year 14	14 Year 15	15 Year 16	16 Year 17	17 Year 18	18 Year 19	19 Year 20	20 Year 21	21 Year 22
Guernsey Average Daily One Way Frequency	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Inbound Business	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Inbound Leisure Southampton	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business Outbound Leisure	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
Inbound Business Inbound Leisure	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408	2,408
Total	-		-		-	-		-		-	-	-	-					-	-	-	7	-
Outbound Business	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Outbound Leisure Inbound Business	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021																	
Inbound Leisure	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey																						
Average Daily One Way Frequency Outbound Business	8,041	5 8,041	3 8,137	8,235	3 8,335	3 8,435	3 8,537	3 8,640	3 8,744	3 8,849	3 8,956	3 9,064										
Outbound Leisure	17,112	17,112	17,324	17,539	17,756	17,976	18,198	18,424	18,652	18,883	19,117	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353	19,353
Inbound Leisure	8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Southampton Average Daily One Way Frequency	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business Outbound Leisure	5,360	5,360	5,425	5,490	5,556	5,623	5,691	5,760	5,829	5,899	5,970	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042	6,042
Inbound Business	2,408	2,408	2,437	2,467	2,496	2,526	2,557	2,588	2,619	2,650	2,682	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715	2,715
Total	8,825	8,825	8,926	9,027	9,130	9,234	9,340	9,446	9,554	9,662	9,773	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
Average Daily One Way Frequency Outbound Business	8 13.401	8 13.401	5	5	5	5	5	5	5	5	5	5 15.106	5	5 15.106	5 15.106	5	5 15.106	5	5	5	5	5
Outbound Leisure	25,579	25,579	25,898	26,222	26,549	26,881	27,217	27,557	27,902	28,250	28,603	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961	28,961
Inbound Business Inbound Leisure	17,650	17,650	17,851	18,055	18,260	18,469	18,679	18,892	19,107	19,325	19,545	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768	19,768
CONSTRUCTION COSTS Runway Extension	-£8,375,000	-£8,375,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£8,375,000
Terminal	-£1,150,000	-£1,150,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£1,150,000
PRODUCER IMPACTS	-19,323,000	-19,323,000	fo	fo	£U	EU	EU	EU	EU	EU	EU	£0	£U	fo	EU	EU	EU	EU	EU	EU	fo	19,525,000
Airport New Passenger Revenue Estimated Revenue per Pax £10	£0	£0	£7,621	£15,334	£23,139	£31,039	£39,035	£47,126	£55,316	£63,604	£71,992	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482	£80,482
OPEX Airline	£0	£0	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000
Subsidy Total Increase in Subsidy USER IMPACTS		l.	-345,963	-331,750	-317,366	-302,807	-288,074	-273,162	-258,071	-242,797	-227,339	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695	-211,695
Existing Passengers - Wait Time Impacts Guernsey																						
Change in Frequency / Wait Time Business	7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Leisure VoT per Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business £0.78 Outbound Leisure £0.12	£44,451 £23,168	£45,473 £23,701	-£59,693 -£37,125	-£61,066 -£37,978	-£62,470 -£38.852	-£63,907 -£39,746	-£65,377 -£40.660	-£66,881 -£41,595	-£68,419 -£42,552	-£69,993 -£43.530	-£71,602 -£44,531	-£73,249 -£45,556	-£74,934 -£46,603	-£76,657 -£47.675	-£78,421 -£48,772	-£80,224 -£49,894	-£82,069 -£51.041	-£83,957 -£52,215	-£85,888 -£53,416	-£87,863 -£54,645	-£89,884 -£55.901	-£91,952 -£57,187
Inbound Business £0.78	£19,971	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Southampton	111,548	112,223	-119,140	-119,580	-120,037	-120,437	-120,909	-121,451	-121,945	-122,449	-122,900	-123,494	-124,034	-124,587	-125,152	-125,751	-120,323	-120,928	-127,548	-128,181	-120,829	-123,432
Change in Frequency / Wait Time Business Leisure	0	0	-12 -28																			
VoT per Minute	60	60	651 719	652.907	654 124	655 260	656 642	657.045	650.279	660 641	662.026	662 462	664.922	£66.416	667.042	669 506	671 104	672 740	674 412	676 134	£77.975	670 666
Outbound Leisure £0.12	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Business £0.78 Inbound Leisure £0.12	£0 £0	£0 £0	-£23,235 -£29,843	-£23,770 -£29,843	-£24,317 -£29,843	-£24,876 -£29,843	-£25,448 -£29,843	-£26,033 -£29,843	-£26,632 -£29,843	-£27,245 -£29,843	-£27,871 -£29,843	-£28,512 -£29,843	-£29,168 -£29,843	-£29,839 -£29,843	-£30,525 -£29,843	-£31,227 -£29,843	-£31,945 -£29,843	-£32,680 -£29,843	-£33,432 -£29,843	-£34,201 -£29,843	-£34,987 -£29,843	-£35,792 -£29,843
Total Outbound Business	£44.451	£45.473	-f111.410	-f113.973	-f116 594	-f119.276	-f122.019	-f124.826	-f127.697	-£130.634	-£133.638	-£136.712	-f139.856	-f143.073	-£146.364	-f149.730	-£153.174	-f156.697	-£160.301	-£163.988	-f167.759	-f171.618
Outbound Leisure	£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business Inbound Leisure	£19,971 £11,948	£12,223	-£48,989	-£51,205 -£49,429	-£49,880	-£50,341	-£54,820 -£50,812	-£51,294	-£57,371 -£51,788	-£52,292	-£52,809	-£61,421 -£53,337	-£53,877	-£54,430	-£55,758 -£54,996	-£55,574	-£68,817 -£56,166	-£56,771	-£72,019 -£57,391	-£73,676	-£75,370 -£58,672	-£77,104 -£59,335
New Passengers (inc. Rule of a Half) Frequency / Wait Time vs The Boat																						
Guernsey Church Ten David			27	27		27			27					27	27	27				27	27	27
Leisure	106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
VoT per Minute Outbound Business £0.78	£0	£0	£1,082	£2,228	£3,439	£4,719	£6,072	£7,499	£9,004	£10,591	£12,264	£14,025	£14,348	£14,678	£15,015	£15,361	£15,714	£16,075	£16,445	£16,823	£17,210	£17,606
Outbound Leisure £0.12	£0	£0	£1,029	£2,118	£3,271	£4,489	£5,776	£7,135	£8,569	£10,082	£11,676	£13,355	£13,662	£13,976	£14,298	£14,626	£14,963	£15,307	£15,659	£16,019	£16,388	£16,765
Inbound Leisure £0.12	£0	£0	£480	£1,001	£1,545	£2,128	£2,736	£3,378	£4,045	£4,768	£5,520	£6,310	£6,455	£6,604	£6,756	£6,911	£7,000	£7,233	£7,399	£7,569	£7,743	£7,921
Southampton Change in Frequency / Wait Time Business	27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Leisure VoT ner Minute	77	77	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business £0.78	£0	£0	£410	£844	£1,303	£1,788	£2,300	£2,840	£3,411	£4,012	£4,645	£5,313	£5,435	£5,560	£5,688	£5,818	£5,952	£6,089	£6,229	£6,372	£6,519	£6,669
Inbound Business £0.78	£0	£0	£184	£379	£585	£803	£1,033	£1,276	£1,532	£1,802	£2,087	£2,387	£2,442	£2,498	£2,555	£2,614	£2,674	£2,736	£2,799	£2,863	£2,929	£2,996
Inbound Leisure £0.12 Total	£0	£0	£310	£639	£986	£1,352	£1,739	£2,147	£2,577	£3,031	£3,508	£4,011	£4,103	£4,197	£4,294	£4,393	£4,494	£4,597	£4,703	£4,811	£4,922	£5,035
Outbound Business	£0	£0	£1,492	£3,072	£4,742	£6,507	£8,371	£10,339	£12,415	£14,603	£16,909	£19,338	£19,782	£20,237	£20,703	£21,179	£21,666	£22,164	£22,674	£23,196	£23,729	£24,275
Inbound Business	£0	£0	£670	£1,380	£2,130	£2,923	£3,761	£4,645	£5,578	£6,561	£7,597	£8,688	£8,888	£9,092	£9,301	£9,515	£9,734	£9,958	£10,187	£10,421	£10,661	£10,906
Inbound Leisure Journey Time vs The Boat	£0	£0	£799	£1,644	£2,537	£3,480	£4,475	£5,526	£6,633	£7,799	£9,028	£10,321	£10,558	£10,801	£11,050	£11,304	£11,564	£11,830	£12,102	£12,380	£12,665	£12,956
Guernsey Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business £0.78	£0	£0	£5,140	£10,581	£16,334	£22,415	£28,836	£35,615	£42,765	£50,303	£58,246	£66,611	£68,143	£69,711	£71,314	£72,954	£74,632	£76,349	£78,105	£79,901	£81,739	£83,619
Outbound Leisure £0.12 Inbound Business £0.78	£0 £0	£0 £0	£1,730 £2,309	£3,561 £4,754	£5,499 £7,339	£7,547 £10,070	£9,710 £12,956	£11,995 £16,001	£14,406 £19,213	£16,948 £22,600	£19,627 £26,168	£22,450 £29,927	£22,966 £30,615	£23,495 £31,319	£24,035 £32,040	£24,588 £32,777	£25,153 £33,530	£25,732 £34,302	£26,324 £35,091	£26,929 £35,898	£27,549 £36,723	£28,182 £37,568
Inbound Leisure £0.12	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business £0.78 Outbound Leisure £0.12	£0 £0	£0 £0	£3,427 £879	£7,054	£10,889 £2,796	£14,943 £3,839	£19,224 £4,940	£23,743	£28,510 £7,331	£33,535 £8,626	£38,831 £9.992	£44,408 £11,431	£45,429 £11,694	£46,474 £11,963	£47,543 £12,238	£48,636	£49,755 £12,807	£50,899 £13,102	£52,070 £13,403	£53,268 £13,711	£54,493 £14,027	£55,746
Inbound Business £0.78	£0	£0	£1,540	£3,169	£4,892	£6,714	£8,637	£10,667	£12,809	£15,067	£17,446	£19,951	£20,410	£20,880	£21,360	£21,851	£22,354	£22,868	£23,394	£23,932	£24,482	£25,045
Inbound Leisure £0.12 Total	£0	£0	£821	£1,689	£2,607	£3,577	£4,600	£5,679	£6,817	£8,016	£9,279	£10,608	£10,852	£11,101	£11,357	£11,618	£11,885	£12,158	£12,438	£12,724	£13,017	£13,316
Outbound Business Outbound Leisure	£0 £0	£0 £0	£8,567 £2.609	£17,635 £5.372	£27,224 £8.295	£37,358 £11.385	£48,061 £14.650	£59,358 £18.098	£71,274 £21.737	£83,838 £25.574	£97,077 £29.619	£111,019 £33.881	£113,572 £34,660	£116,185 £35.457	£118,857 £36.273	£121,591 £37.107	£124,387 £37.961	£127,248 £38.834	£130,175 £39.727	£133,169 £40.641	£136,232 £41.575	£139,365 £42.531
Inbound Business	£0	£0	£3,849	£7,923	£12,231	£16,784	£21,593	£26,668	£32,022	£37,666	£43,614	£49,878	£51,025	£52,199	£53,399	£54,628	£55,884	£57,169	£58,484	£59,829	£61,206	£62,613
Total Producer & User Benefits	£99,537	£0 £101,827	£1,642 -£298,928	£3,379 -£274,697	£5,214 -£249,225	£7,153 -£222,457	£9,200 -£194,337	±11,358 -£164,805	±13,634 -£133,801	±16,032 -£101,259	±18,557 -£67,113	±21,215 -£31,295	£21,703 -£32,029	±22,203 -£32,781	£22,713 -£33,549	±23,236 -£34,335	±23,770 -£35,140	±24,317 -£35,963	±24,876 -£36,805	±25,448 -£37,666	£26,034 -£38,547	±26,632 -£39,448
Total Costs & Benefits	-£9,425,463	-£9,423,173	-£644,892	-£606,447	-£566,591	-£525,265	-£482,411	-£437,968	-£391,871	-£344,056	-£294,452	-£242,989	-£243,724	-£244,475	-£245,244	-£246,030	-£246,835	-£247,657	-£248,499	-£249,361	-£250,242	£9,273,857
Discount Factor		0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits	-£9,425,463	-£9,104,515	-£602,013	-£546,981	-£493,751	-£442,259	-£392,442	-£344,239	-£297,592	-£252,444	-£208,743	-£166,435	-£161,292	-£156,318	-£151,507	-£146,853	-£142,351	-£137,996	-£133,782	-£129,706	-£125,763	£4,503,115
NPV -£19,059,329																						
IRR -6%																						

Option 5 Maximum Case, Low Cost No Terminal

SCENARIO ASSUMPTIONS																						
Cost Option Low																						
Construction Time Split	Year 1 50%	Year 2 50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built No Pax Scenario Max																						
TRAFFIC & FREQUENCY				2			6				10		40	43		45	45	47	40	10	20	24
Year Baseline Traffic Forecast	Year 1	Year 2	Year 3	3 Year 4	4 Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	14 Year 15	Year 16	Year 17	Year 18	18 Year 19	Year 20	Year 21	Year 22
Guernsey Average Daily One Way Frequency	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Inbound Business	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Southampton	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Average Daily One Way Frequency Outbound Business	3 5.360	3	3	3	3 5.360	3 5.360	3 5.360	3	3	3	3	3	3	3	3 5.360	3	3 5.360	3 5.360	3 5.360	3 5.360	3	3
Outbound Leisure	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
Inbound Business	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Total Average Daily One Way Frequency	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Outbound Business	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Inbound Business	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Inbound Leisure Change Scenario Traffic Forecast	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey Average Daily One Way Frequency	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business	8,041	8,041	8,234	8,433	8,637	8,845	9,058	9,277	9,500	9,730	9,964	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205
Inbound Business	3,612	3,612	3,700	3,789	3,880	3,974	4,070	4,168	4,268	4,371	4,477	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585
Inbound Leisure Southampton	8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Average Daily One Way Frequency	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Leisure	8,466	8,466	8,687	8,913	9,145	9,382	9,626	9,877	10,134	10,398	10,668	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946
Inbound Business Inbound Leisure	2,408 8,825	2,408	2,466 9,022	9,223	2,587 9,428	2,649 9,638	2,713 9,853	2,779	2,846	2,914 10,526	2,984	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056
Total Average Daily One Way Frequency	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business Outbound Leisure	13,401	13,401	13,724	14,055	14,394	14,741	15,097	15,461	15,834	16,216	16,607	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008
Inbound Business	6,021	6,021	6,166	6,315	6,467	6,623	6,783	6,946	7,114	7,285	7,461	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641
Inbound Leisure CONSTRUCTION COSTS	17,650	17,650	18,043	18,445	18,856	19,276	19,705	20,144	20,593	21,052	21,521	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
Runway Extension	-£4,597,000	-£4,597,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£4,597,000
Total	-£4,597,000	-£4,597,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£4,597,000
Airport																						
New Passenger Revenue Estimated Revenue per Pax £10 OPEX	£0 £0	£0 £0	£15,253 £0	£30,874 £0	£46,874 £0	£63,260 £0	£80,043 £0	£97,232 £0	£114,836 £0	£132,867 £0	£151,334 £0	£170,247 £0										
Airline																						
Subsidy Total Increase in Subsidy			-331,899	-303,111	-273,628	-243,431	-212,503	-180,828	-148,386	-115,159	-81,128	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274
Existing Passengers - Wait Time Impacts																						
Change in Frequency / Wait Time Business	7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Leisure VoT per Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business £0.78 Outbound Laisure £0.13	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Inbound Business £0.78	£19,971	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Southampton	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,731	-£26,323	-£26,928	-£27,548	-£28,181	-£28,829	-£29,492
Change in Frequency / Wait Time Business Leisure	0	0	-12 -28	-12	-12 -28																	
VoT per Minute	50	60	651 719	652.907	654 124	655 260	656 642	657.045	650.279	660 641	662.026	662 462	664.922	666 A16	667.042	660 506	671 104	672 740	674 412	676 124	677.975	670 666
Outbound Leisure £0.12	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Business £0.78 Inbound Leisure £0.12	£0 £0	£0 £0	-£23,235 -£29,843	-£23,770 -£29,843	-£24,317 -£29,843	-£24,876 -£29,843	-£25,448 -£29,843	-£26,033 -£29,843	-£26,632 -£29,843	-£27,245 -£29,843	-£27,871 -£29,843	-£28,512 -£29,843	-£29,168 -£29,843	-£29,839 -£29,843	-£30,525 -£29,843	-£31,227 -£29,843	-£31,945 -£29,843	-£32,680 -£29,843	-£33,432 -£29,843	-£34,201 -£29,843	-£34,987 -£29,843	-£35,792 -£29,843
Total Outbound Business	£44.451	£45.473	-£111.410	-£113.973	-£116.594	-£119.276	-£122.019	-£124.826	-£127.697	-£130.634	-£133.638	-£136.712	-£139.856	-£143.073	-£146.364	-£149.730	-£153.174	-£156.697	-£160.301	-£163.988	-£167.759	-£171.618
Outbound Leisure	£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Leisure	£19,971 £11,948	£12,223	-£48,989	-£49,429	-£32,383 -£49,880	-£50,341	-£50,812	-£58,081 -£51,294	-£57,371 -£51,788	-£52,292	-£60,040 -£52,809	-£61,421 -£53,337	-£53,877	-£64,279 -£54,430	-£53,738 -£54,996	-£67,270 -£55,574	-£56,166	-£70,400 -£56,771	-£72,019 -£57,391	-£58,024	-£73,370 -£58,672	-£59,335
New Passengers (inc. Rule of a Half) Frequency / Wait Time vs The Boat																						
Guernsey Change in Frequency / Wait Time Business	44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Leisure	106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Outbound Business £0.78	£0	£0	£2,167	£4,487	£6,968	£9,620	£12,452	£15,473	£18,694	£22,126	£25,780	£29,668	£30,350	£31,048	£31,762	£32,493	£33,240	£34,005	£34,787	£35,587	£36,406	£37,243
Outbound Leisure £0.12 Inbound Business £0.78	£0 £0	£0 £0	£2,083 £973	£4,314 £2,016	£6,704 £3,131	£9,259 £4,322	£11,990 £5,594	£14,907 £6,952	£18,019 £8,399	£21,337 £9,941	£24,873 £11,582	£28,638 £13,329	£29,297 £13,636	£29,971 £13,949	£30,660 £14,270	£31,365 £14,598	£32,087 £14,934	£32,825 £15,278	£33,580 £15,629	£34,352 £15,988	£35,142 £16,356	£35,950 £16,732
Inbound Leisure £0.12	£0	£0	£955	£1,975	£3,064	£4,226	£5,465	£6,785	£8,190	£9,684	£11,273	£12,960	£13,258	£13,563	£13,875	£14,194	£14,521	£14,855	£15,196	£15,546	£15,903	£16,269
Change in Frequency / Wait Time Business	27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
VoT per Minute			49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business £0.78 Outbound Leisure £0.12	£0 £0	£0 £0	£821 £680	£1,699 £1,409	£2,639 £2,190	£3,644 £3,027	£4,717 £3,921	£5,861 £4,878	£7,081 £5,899	£8,381 £6,988	£9,765 £8,151	£11,238 £9,389	£11,496 £9,605	£11,761 £9,826	£12,031 £10,052	£12,308 £10,283	£12,591 £10,520	£12,881 £10,762	£13,177 £11,009	£13,480 £11,262	£13,790 £11,521	£14,107 £11,786
Inbound Business £0.78	£0	£0	£369	£764	£1,186	£1,637	£2,119	£2,633	£3,181	£3,765	£4,387	£5,049	£5,165	£5,284	£5,405	£5,530	£5,657	£5,787	£5,920	£6,056	£6,196	£6,338
Total	20	50	62.007	66,406	50,500	612,000	647.460	624.024	625,225	620 507	COE 545	540.005	544.047	642.000	20,015	£3,022	£3,223	545.005	23,033	540.057	650.405	654.250
Outbound Business Outbound Leisure	£0 £0	£0 £0	£2,987 £2,762	£6,186 £5,723	£9,608 £8,894	£13,264 £12,286	£17,168 £15,912	£21,334 £19,784	£25,775 £23,918	£30,507 £28,326	£35,545 £33,024	£40,906 £38,027	£41,847 £38,902	£42,809 £39,797	£43,794 £40,712	£44,801 £41,648	£45,831 £42,606	£46,885 £43,586	£47,964 £44,589	£49,067 £45,614	£50,196 £46,663	£51,350 £47,737
Inbound Business Inbound Leisure	£0 £0	£0 £0	£1,342 £1,561	£2,779 £3,230	£4,316 £5,012	£5,959 £6,913	£7,713 £8,939	£9,585 £11,098	£11,580 £13,395	£13,706 £15,839	£15,970 £18,437	£18,378 £21,197	£18,801 £21,685	£19,233 £22,184	£19,675 £22,694	£20,128 £23,216	£20,591 £23,750	£21,064 £24,296	£21,549 £24,855	£22,045 £25,426	£22,552 £26,011	£23,070 £26,609
Journey Time vs The Boat																						
Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business £0.78 Outbound Leisure £0.12	£0 £0	£0 £0	£10,291 £3,501	£21,309 £7,253	£33,095 £11,269	£45,690 £15,565	£59,139 £20,156	£73,489 £25,059	£88,787 £30,291	£105,087 £35,869	£122,441 £41,813	£140,907 £48,142	£144,148 £49,250	£147,463 £50,382	£150,855 £51,541	£154,324 £52,727	£157,874 £53,939	£161,505 £55,180	£165,219 £56,449	£169,019 £57,748	£172,907 £59,076	£176,884 £60,434
Inbound Business £0.78	£0	£0	£4,623	£9,574	£14,869	£20,527	£26,570	£33,017 £11,406	£39,890	£47,213	£55,010 £18,950	£63,306	£64,762	£66,251	£67,775	£69,334	£70,929	£72,560	£74,229	£75,936	£77,683	£79,470
Southampton	10	10	1,005	13,320	13,151	17,105	19,188	111,400	113,708	110,275	118,930	121,780	122,200	122,800	123,323	123,801	124,410	124,971	123,340	120,133	120,734	127,345
Change in Journey Time Business Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
VoT per Minute Outbound Business £0.78	£0	£0	£6,861	£14,206	£22,063	£30,460	£39,426	£48,992	£59,192	£70,058	£81,627	£93,938	£96,098	£98,309	£100,570	£102,883	£105,249	£107,670	£110,146	£112,680	£115,271	£117,923
Outbound Leisure £0.12	£0	£0	£1,798	£3,726	£5,793	£8,005	£10,371	£12,900	£15,601	£18,483	£21,557	£24,833	£25,404	£25,988	£26,586	£27,197	£27,823	£28,463	£29,118	£29,787	£30,472	£31,173
Inbound Leisure £0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Total Outbound Business	£0	£0	£17,151	£35,515	£55,158	£76,150	£98,565	£122,481	£147,979	£175,145	£204,069	£234,845	£240,246	£245,772	£251,424	£257,207	£263,123	£269,175	£275,366	£281,699	£288,178	£294,806
Outbound Leisure Inbound Business	£0 	£0 £0	£5,299 £7,706	£10,979 £15.956	£17,062 £24.781	£23,570 £34.212	£30,528 £44.283	£37,960 £55.028	£45,892 £66.483	£54,352 £78.688	£63,370 £91.683	£72,975 £105,510	£74,654 £107.937	£76,371 £110.419	£78,127 £112.959	£79,924 £115.557	£81,762 £118.215	£83,643 £120.934	£85,567 £123.715	£87,535 £126,560	£89,548 £129.471	£91,608 £132.449
Inbound Leisure	£0	£0	£3,209	£6,639	£10,302	£14,210	£18,375	£22,812	£27,535	£32,559	£37,899	£43,573	£44,575	£45,600	£46,649	£47,722	£48,820	£49,942	£51,091	£52,266	£53,468	£54,698
Total Costs & Benefits	-£4,497,463	-£4,495,173	-£552,168	-£468,467	-£380,687	-£288,635	-£192,104	-£90,881	£15,259	£126,551	£243,242	£365,591	£371,835	£378,222	£384,756	£391,440	£398,278	£405,274	£412,430	£419,751	£427,240	£5,031,902
Discount Factor		0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits	-£4,497,463	-£4,343,162	-£515,455	-£422,530	-£331,747	-£243,023	-£156,277	-£71,432	£11,588	£92,855	£172,439	£25 <u>0,410</u>	£246,074	£24 <u>1,837</u>	£237,695	£233,647	£229,690	£225,820	£222,036	£218,336	£214,716	£2,443,345
NPV£5.540.601																						
IRR -1% BCR 0.5																						

Option 5 Maximum Case, Low Cost with Terminal

SCENARIO ASSUMPTIONS																							
Cost Option Low																							
Construction Time Split		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built Yes		50%	50%																				
Pax Scenario Max																							
TRAFFIC & FREQUENCY Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Guernsey Average Daily One Way Frequency		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business		8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Outbound Leisure Inbound Business		3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Inbound Leisure		8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Southampton Average Daily One Way Frequency		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business		5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Outbound Leisure		8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
Inbound Leisure		8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Total		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Outbound Business		13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Outbound Leisure		25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579
Inbound Leisure		17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Change Scenario Traffic Forecast																							
Average Daily One Way Frequency		5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business		8,041	8,041	8,234	8,433	8,637	8,845	9,058	9,277	9,500	9,730	9,964	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205
Inbound Business		3,612	3,612	3,700	17,981 3,789	18,431 3,880	18,893	19,367	19,852	20,350	20,860	21,382	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918 4,585
Inbound Leisure		8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Southampton Average Daily One Way Frequency		3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business		5,360	5,360	5,490	5,622	5,758	5,897	6,039	6,184	6,334	6,486	6,643	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803
Outbound Leisure		8,466	8,466	8,687	8,913	9,145	9,382	9,626	9,877	10,134	10,398	10,668	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946
Inbound Leisure		8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Total		0	0	5	5	c	c	5	6	c	5	E	6	c	5	6	c	E	c	E	E	E	6
Outbound Business		13,401	13,401	13,724	14,055	14,394	14,741	15,097	15,461	15,834	16,216	16,607	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008
Outbound Leisure		25,579	25,579	26,228	26,893	27,576	28,276	28,993	29,729	30,483	31,257	32,050	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864
Inbound Leisure		17,650	17,650	18,043	18,445	18,856	19,276	19,705	20,144	20,593	21,052	21,521	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
CONSTRUCTION COSTS		64 507 000	64 507 000	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	64 507 000
Terminal		-£4,597,000	-£1,150,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£1,150,000
Total		-£5,747,000	-£5,747,000	£0	£0	£0	£0	£0	£0	£0	£0	£O	£0	£0	£0	£0	£0	£0	£0	£0	£0	£O	£5,747,000
PRODUCER IMPACTS Airport																							
New Passenger Revenue Estimated Revenue p	r Pax £10	£0	£0	£15,253	£30,874	£46,874	£63,260	£80,043	£97,232	£114,836	£132,867	£151,334	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247
OPEX Airline		£0	£0	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000
Subsidy Total Increase in Subs	dy			-331,899	-303,111	-273,628	-243,431	-212,503	-180,828	-148,386	-115,159	-81,128	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274
Existing Passengers - Wait Time Impacts																							
Guernsey Change in Frequency (Wait Time Rusiness		7	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0	9
Leisure		11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17		-17	-17	-17	9	-17	-17	-17	-9	-17	
	VoT per Minute	644.454	645.470	650.600	664.066	662.470	662.007			660.440	660.000	674 600	670.040	674.004	636 653	670.404	600.004	600.050	602.057	605 000	607.062	500 00 t	604.052
Outbound Business Outbound Leisure	£0.78 £0.12	£44,451 £23,168	£45,473 £23,701	-£37,125	-£61,066 -£37,978	-£38,852	-£39,746	-£40,660	-£66,881 -£41,595	-£68,419 -£42,552	-£69,993 -£43,530	-£71,602 -£44,531	-£45,556	-£46,603	-£47,675	-£78,421 -£48,772	-£49,894	-£82,069 -£51,041	-£83,957 -£52,215	-£53,416	-£54,645	-£89,884 -£55,901	-£91,952 -£57,187
Inbound Business	£0.78	£19,971	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Southampton	£0.12	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,/31	-£26,323	-£26,928	-£27,548	-£28,181	-128,829	-£29,492
Change in Frequency / Wait Time Business		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
Leisure	VoT per Minute	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Outbound Business	£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Outbound Leisure	£0.12 £0.78	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Leisure	£0.12	£0	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843
Total Outbound Business		£44.451	£45.473	-£111.410	-£113 973	-£116 594	-£119.276	-£122.019	-£124.826	-£127.697	-£130.634	-£133.638	-£136 712	-£139.856	-£143.073	-£146.364	-£149 730	-£153.174	-£156.697	-£160 301	-£163.988	-6167 759	-£171.618
Outbound Leisure		£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business		£19,971	£20,430	-£50,054	-£51,205	-£52,383	-£53,588	-£54,820	-£56,081	-£57,371	-£58,690	-£60,040	-£61,421	-£62,834	-£64,279	-£65,758	-£67,270	-£68,817	-£70,400	-£72,019	-£73,676	-£75,370	-£77,104
New Passengers (inc. Rule of a Half)		211,540	111,113	240,505	143,423	143,000	250,541	150,011	151,254	191,700	151,252	132,005	233,337	233,677	254,450	234,550	233,374	230,100	230,771	237,331	230,024	130,072	233,333
Frequency / Wait Time vs The Boat																							
Change in Frequency / Wait Time Business		44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Leisure		106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Outbound Business	£0.78	£0	£0	£2,167	£4,487	£6,968	£9,620	£12,452	£15,473	£18,694	£22,126	£25,780	£29,668	£30,350	£31,048	£31,762	£32,493	£33,240	£34,005	£34,787	£35,587	£36,406	£37,243
Outbound Leisure	£0.12	£0	£0	£2,083	£4,314	£6,704	£9,259	£11,990	£14,907	£18,019	£21,337	£24,873	£28,638	£29,297	£29,971	£30,660	£31,365	£32,087	£32,825	£33,580	£34,352	£35,142	£35,950
Inbound Leisure	£0.78	£0	£0	£955	£1,975	£3,064	£4,322	£5,465	£6,785	£8,190	£9,684	£11,582 £11,273	£12,960	£13,258	£13,563	£13,875	£14,598 £14,194	£14,934 £14,521	£13,278 £14,855	£15,829 £15,196	£15,546	£15,903	£16,269
Southampton		27		4.5	4.5	15	15	15	15	46	4.5	46	46	10	4.5	16	46	4.5	4.6	15	4.5	16	46
Leisure		77	77	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	VoT per Minute	60		6024	64.600	62.620	62.644	64.747	65.064	67.004	60.004	60.765	644.000	644.405	644.764	643.034	643.300	642 504	643.004	642.477	64.2,400	643 700	611107
Outbound Leisure	£0.78	£0	£0	£680	£1,409	£2,190	£3,027	£3,921	£4,878	£5,899	£6,988	£8,151	£9,389	£9,605	£9,826	£10,052	£10,283	£10,520	£10,762	£11,009	£13,480 £11,262	£11,521	£11,786
Inbound Business	£0.78	£0	£0	£369	£764	£1,186	£1,637	£2,119	£2,633	£3,181	£3,765	£4,387	£5,049	£5,165	£5,284	£5,405	£5,530	£5,657	£5,787	£5,920	£6,056	£6,196	£6,338
Total	£0.12	£0	£0	£607	£1,255	£1,948	£2,686	£3,474	£4,313	£5,205	£6,155	£7,165	£8,237	£8,427	£8,621	£8,819	£9,022	£9,229	£9,441	£9,659	£9,881	£10,108	£10,340
Outbound Business		£0	£0	£2,987	£6,186	£9,608	£13,264	£17,168	£21,334	£25,775	£30,507	£35,545	£40,906	£41,847	£42,809	£43,794	£44,801	£45,831	£46,885	£47,964	£49,067	£50,196	£51,350
Inbound Business		£0 £0	£0 £0	£2,762 £1,342	£5,723 £2,779	£8,894 £4,316	£12,286 £5,959	£15,912 £7,713	£19,784 £9,585	£23,918 £11,580	£28,326 £13,706	£33,024 £15,970	£38,027 £18,378	£38,902 £18,801	£39,797 £19,233	£40,712 £19,675	£41,648 £20,128	£42,606 £20,591	£43,586 £21,064	£44,589 £21,549	£45,614 £22,045	£46,663 £22,552	£47,737 £23,070
Inbound Leisure		£0	£0	£1,561	£3,230	£5,012	£6,913	£8,939	£11,098	£13,395	£15,839	£18,437	£21,197	£21,685	£22,184	£22,694	£23,216	£23,750	£24,296	£24,855	£25,426	£26,011	£26,609
Journey Time vs The Boat Guernsev																							
Change in Journey Time Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure	VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business	£0.78	£0	£0	£10,291	£21,309	£33,095	£45,690	£59,139	£73,489	£88,787	£105,087	£122,441	£140,907	£144,148	£147,463	£150,855	£154,324	£157,874	£161,505	£165,219	£169,019	£172,907	£176,884
Outbound Leisure	£0.12 £0.78	£0	£0	£3,501	£7,253	£11,269	£15,565	£20,156	£25,059	£30,291	£35,869	£41,813	£48,142	£49,250	£50,382	£51,541	£52,727	£53,939	£55,180	£56,449	£57,748	£59,076	£60,434
Inbound Leisure	£0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Southampton		120	120	120	120	120	120	120	120	120	120	120	120	130	120	120	120	120	120	120	130	120	120
Change in Journey Time Business Leisure		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	VoT per Minute																						
Outbound Business Outbound Leisure	£0.78 £0.12	£0 £0	£0 £0	£6,861 £1.798	£14,206 £3,726	£22,063 £5.793	£30,460 £8.005	£39,426 £10.371	£48,992 £12.900	£59,192 £15.601	£70,058 £18,483	£81,627 £21.557	£93,938 £24.833	£96,098 £25,404	£98,309 £25,988	£100,570 £26,586	£102,883 £27.197	£105,249 £27.823	£107,670 £28,463	£110,146 £29,118	£112,680 £29,787	£115,271 £30,472	£117,923 £31.173
Inbound Business	£0.78	£0	£0	£3,082	£6,382	£9,912	£13,685	£17,713	£22,011	£26,593	£31,475	£36,673	£42,204	£43,175	£44,168	£45,184	£46,223	£47,286	£48,373	£49,486	£50,624	£51,789	£52,980
Inbound Leisure Total	£0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Outbound Business		£0	£0	£17,151	£35,515	£55,158	£76,150	£98,565	£122,481	£147,979	£175,145	£204,069	£234,845	£240,246	£245,772	£251,424	£257,207	£263,123	£269,175	£275,366	£281,699	£288,178	£294,806
Outbound Leisure		£0	£0 £0	£5,299 £7.706	£10,979 £15,956	£17,062 £24,781	£23,570 £34,212	£30,528 £44.283	£37,960 £55.028	£45,892 £66.483	£54,352 £78,688	£63,370 £91,683	£72,975 £105.510	£74,654 £107,937	£76,371 £110,419	£78,127 £112,959	£79,924 £115.557	£81,762 £118,215	£83,643 £120.934	£85,567 £123.715	£87,535 £126,560	£89,548 £129.471	£91,608 £132.449
Inbound Leisure		£0	£0	£3,209	£6,639	£10,302	£14,210	£18,375	£22,812	£27,535	£32,559	£37,899	£43,573	£44,575	£45,600	£46,649	£47,722	£48,820	£49,942	£51,091	£52,266	£53,468	£54,698
Total Producer & User Benefits Total Costs & Benefits		£99,537	£101,827	-£270,269	-£215,355 -f518.467	-£157,060	-£95,204	-£29,601	£39,947 -f140 881	£113,645	£191,710 £76 551	£274,371 f193.242	£361,865 £315 591	£368,109	£374,496 £328,222	£381,030	£387,715 £341.440	£394,553 £348.279	£401,548 £355.274	£408,704	£416,025	£423,515 £377.240	£431,176
Discount Factor			0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits		-£5,647,463	-£5,454,274	-£562,130	-£467,627	-£375, <u>319</u>	-£285,121	-£196,952	-£110,731	-£26,383	£56,168	£136,993	£216,163	£212,985	£209,866	£206,806	£203,802	£200,854	£197,960	£195,118	£192,328	£189,588	£2,977,473
IRR -	-2%																						
BCR	0.3																						

Option 5 Maximum Case, Medium Cost Option No Terminal

SCENARIO ASSUMPTIONS							r								0									
Contruction Cost Scenario Cost Option	5 Medium																							
Construction Time Split			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built	No		50%	50%																				
Pax Scenario	Max																							
TRAFFIC & FREQUENCY			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Guernsey Average Daily One Way Frequency			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Outbound Business			8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Outbound Leisure			17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112
Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Southampton			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business			5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Outbound Leisure			8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
Inbound Business Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Total			_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_	_	-
Average Daily One Way Frequency Outbound Business			7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401	7 13,401
Outbound Leisure			25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579
Inbound Business			6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Change Scenario Traffic Forecast				,					,										,		,			
Guernsey Average Daily One Way Frequency			5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business			8,041	8,041	8,234	8,433	8,637	8,845	9,058	9,277	9,500	9,730	9,964	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205
Outbound Leisure			17,112	17,112	17,541	17,981	18,431	18,893	19,367	19,852	20,350	20,860	21,382	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918
Inbound Business Inbound Leisure			8,825	8,825	9,022	9,223	9,428	9,638	9,853	4,168	4,268	4,371	10,760	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585
Southampton				-	-												-		-				_	
Average Daily One Way Frequency Outbound Business			5.360	3 5.360	2	2	2	2	6.039	6.184	6.334	6.486	6,643	6.803	6.803	6.803	6.803	6.803	6.803	6.803	6.803	6.803	6.803	6.803
Outbound Leisure			8,466	8,466	8,687	8,913	9,145	9,382	9,626	9,877	10,134	10,398	10,668	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946
Inbound Business			2,408	2,408	2,466	2,526	2,587	2,649	2,713	2,779	2,846	2,914	2,984	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056
Total			0,025	0,023	3,022	3,223	3,420	3,030	3,033	10,072	10,250	10,520	10,700	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Average Daily One Way Frequency			8	8	5	5	5	5	5	5	15 924	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business Outbound Leisure			25,579	25,579	26,228	26,893	27,576	28,276	28,993	29,729	30,483	31,257	32,050	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864	32,864
Inbound Business			6,021	6,021	6,166	6,315	6,467	6,623	6,783	6,946	7,114	7,285	7,461	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641
Inbound Leisure CONSTRUCTION COSTS			17,650	17,650	18,043	18,445	18,856	19,276	19,705	20,144	20,593	21,052	21,521	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
Runway Extension			-£6,185,000	-£6,185,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£6,185,000
Terminal Total			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
PRODUCER IMPACTS	- <u>-</u>		10,103,000	10,103,000	20	20	20	20	10	20	20	10	10	20	10	10	20	20	20	20	20	20	20	20,105,000
Airport	Estimated Revenue per Pay	610	60	60	616 262	620 874	EAG 974	662.260	680.042	697 222	6114 926	6122.967	6151 224	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247
OPEX	Estimated Revenue per Pax	110	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Airline																								
Subsidy	Total Increase in Subsidy				-331,899	-303,111	-273,628	-243,431	-212,503	-180,828	-148,386	-115,159	-81,128	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274
USER IMPACTS																								
Guernsey	npacts																							
Change in Frequency / Wait Time	Business		7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
	Leisure	VoT por Minuto	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business		£0.78	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Outbound Leisure		£0.12	£23,168	£23,701	-£37,125	-£37,978	-£38,852	-£39,746	-£40,660	-£41,595	-£42,552	-£43,530	-£44,531	-£45,556	-£46,603	-£47,675	-£48,772	-£49,894	-£51,041	-£52,215	-£53,416	-£54,645	-£55,901	-£57,187
Inbound Business Inbound Leisure		£0.12	£19,971 £11.948	£20,430 £12.223	-£26,819 -£19.146	-£27,435 -£19.586	-£28,066	-£28,712 -£20,497	-£29,372 -£20,969	-£30,048 -£21,451	-£30,739 -£21.945	-£31,446	-£32,169 -£22,966	-£32,909	-£33,666	-£34,440 -£24.587	-£35,232 -£25,152	-£36,043 -£25,731	-£36,872 -£26,323	-£37,720	-£38,587 -£27,548	-£39,475 -£28.181	-£40,383 -£28.829	-£41,312 -£29,492
Southampton																								
Change in Frequency / Wait Time	Business		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
	Leisure	VoT per Minute	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-20	-20	-28	-20	-20	-28	-28	-28
Outbound Business		£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Outbound Leisure		£0.12 £0.78	£0 £0	£0 £0	-£29,963 -£23,235	-£30,652	-£31,357 -£24,317	-£32,078 -£24,876	-£32,816 -£25.448	-£33,571 -£26,033	-£34,343 -£26,632	-£35,133 -£27,245	-£35,941 -£27,871	-£36,767	-£37,613 -£29,168	-£38,478 -£29,839	-£39,363 -£30,525	-£40,268 -£31,227	-£41,194 -£31,945	-£42,142 -£32,680	-£43,111 -£33,432	-£44,103 -£34,201	-£45,117 -£34,987	-£46,155 -£35,792
Inbound Leisure		£0.12	£0	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843
Total Outbound Rusiness			644 451	£45 472	6111.410	6112.072	6116 594	6110 276	6122.019	6124.926	6127 697	6120 624	6122.629	6126 712	6120.956	6142.072	6146 264	6149 720	6152 174	£156 607	6160 201	6162.089	6167 759	6171 619
Outbound Leisure			£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£130,712 -£82,323	-£133,830	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business			£19,971	£20,430	-£50,054	-£51,205	-£52,383	-£53,588	-£54,820	-£56,081	-£57,371	-£58,690	-£60,040	-£61,421	-£62,834	-£64,279	-£65,758	-£67,270	-£68,817	-£70,400	-£72,019	-£73,676	-£75,370	-£77,104
New Passengers (inc. Rule of a Hal	lf)		£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-155,574	-£56,166	-£56,771	-£57,391	-£58,024	-158,672	-£59,335
Frequency / Wait Time vs The Boat	t																							
Guernsey	Business		44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
change in requency / wait time	Leisure		106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
		VoT per Minute	60		62.462	64.407		60.600	640.450	645.470	640.604	633.436	635 700	620.660	630.350	624.040	624 762	633.403	622.240	634.005	624 202	635 507	535.495	607.040
Outbound Leisure		£0.12	£0	£0	£2,083	£4,314	£6,704	£9,820	£12,452 £11,990	£14,907	£18,094	£21,337	£24,873	£28,638	£29,297	£29,971	£30,660	£31,365	£32,087	£32,825	£33,580	£34,352	£35,142	£35,950
Inbound Business		£0.78	£0	£0	£973	£2,016	£3,131	£4,322	£5,594	£6,952	£8,399	£9,941	£11,582	£13,329	£13,636	£13,949	£14,270	£14,598	£14,934	£15,278	£15,629	£15,988	£16,356	£16,732
Inbound Leisure Southampton		£0.12	£0	£0	£955	£1,975	£3,064	£4,226	£5,465	£6,785	£8,190	£9,684	£11,273	£12,960	£13,258	£13,563	£13,875	£14,194	£14,521	£14,855	£15,196	£15,546	£15,903	£16,269
Change in Frequency / Wait Time	Business		27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Leisure	VoT per Minute	77	77	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Outbound Business		£0.78	£0	£0	£821	£1,699	£2,639	£3,644	£4,717	£5,861	£7,081	£8,381	£9,765	£11,238	£11,496	£11,761	£12,031	£12,308	£12,591	£12,881	£13,177	£13,480	£13,790	£14,107
Outbound Leisure		£0.12	£0	£0	£680	£1,409	£2,190	£3,027	£3,921	£4,878	£5,899	£6,988	£8,151	£9,389	£9,605	£9,826	£10,052	£10,283	£10,520	£10,762	£11,009	£11,262	£11,521	£11,786
Inbound Leisure		£0.12	£0	£0	£607	£1,255	£1,948	£2,686	£3,474	£4,313	£5,205	£6,155	£7,165	£8,237	£8,427	£8,621	£8,819	£9,022	£9,229	£9,441	£9,659	£9,881	£10,108	£10,338
Total																								
Outbound Business Outbound Leisure			£0 £0	£0	£2,987 £2,762	£5,186	£9,608 £8,894	£13,264 £12,286	£17,168 £15.912	£21,334 £19,784	£25,775 £23.918	£30,507	£35,545	£38.027	£41,847 £38.902	£42,809 £39,797	£43,794 £40.712	£44,801 £41.648	£45,831 £42.606	£46,885 £43.586	£47,964 £44.589	£49,067	£46,663	£47,737
Inbound Business			£0	£0	£1,342	£2,779	£4,316	£5,959	£7,713	£9,585	£11,580	£13,706	£15,970	£18,378	£18,801	£19,233	£19,675	£20,128	£20,591	£21,064	£21,549	£22,045	£22,552	£23,070
Inbound Leisure			£0	£0	£1,561	£3,230	£5,012	£6,913	£8,939	£11,098	£13,395	£15,839	£18,437	£21,197	£21,685	£22,184	£22,694	£23,216	£23,750	£24,296	£24,855	£25,426	£26,011	£26,609
Guernsey																								
Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	Leisure	VoT per Minute	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business		£0.78	£0	£0	£10,291	£21,309	£33,095	£45,690	£59,139	£73,489	£88,787	£105,087	£122,441	£140,907	£144,148	£147,463	£150,855	£154,324	£157,874	£161,505	£165,219	£169,019	£172,907	£176,884
Inbound Business		£0.12 £0.78	£0 £0	£0 £0	£4,623	£9,574	£11,269 £14,869	£15,565 £20,527	£20,156 £26,570	£33,017	£30,291 £39,890	£47,213	£41,813 £55,010	£63,306	£64,762	£50,382 £66,251	£51,541 £67,775	£69,334	£70,939	£72,560	£74,229	£75,936	£59,076 £77,683	£79,470
Inbound Leisure		£0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Southampton Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	Leisure		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Buringer		VoT per Minute	60	60	£6.961	614 206	633.063	620.460	629.426	648 002	650 102	670.058	691 627	602.029	696.098	608 300	6100 570	6102 992	6105 349	6107 670	5110 146	6112 680	£115 371	6117.022
Outbound Leisure		£0.12	£0	£0	£1,798	£3,726	£5,793	£8,005	£10,371	£12,900	£15,601	£18,483	£21,557	£24,833	£25,404	£25,988	£26,586	£27,197	£27,823	£28,463	£29,118	£29,787	£30,472	£31,173
Inbound Business		£0.78	£0	£0	£3,082	£6,382	£9,912	£13,685	£17,713	£22,011	£26,593	£31,475	£36,673	£42,204	£43,175	£44,168	£45,184	£46,223	£47,286	£48,373	£49,486	£50,624	£51,789	£52,980
Total		£0.12	£0	£0	±1,605	±3,320	±5,151	±7,105	±9,188	±11,406	±13,768	±16,279	±18,950	±21,786	±22,288	±22,800	±23,325	±23,861	±24,410	±24,971	±25,546	±26,133	±26,734	±27,349
Outbound Business			£0	£0	£17,151	£35,515	£55,158	£76,150	£98,565	£122,481	£147,979	£175,145	£204,069	£234,845	£240,246	£245,772	£251,424	£257,207	£263,123	£269,175	£275,366	£281,699	£288,178	£294,806
Outbound Leisure			£0	£0	£5,299	£10,979	£17,062	£23,570	£30,528	£37,960	£45,892	£54,352	£63,370	£72,975	£74,654	£76,371	£78,127	£79,924	£81,762	£83,643	£85,567	£87,535	£89,548	£91,608
Inbound Leisure			£0	£0	£3,209	£6,639	£10,302	£14,210	£18,375	£22,812	£27,535	£32,559	£37,899	£43,573	£44,575	£45,600	£46,649	£47,722	£48,820	£49,942	£51,091	£52,266	£53,468	£54,698
Total Producer & User Benefits			£99,537	£101,827	-£220,269	-£165,355	-£107,060	-£45,204	£20,399	£89,947	£163,645	£241,710	£324,371	£411,865	£418,109	£424,496	£431,030	£437,715	£444,553	£451,548	£458,704	£466,025	£473,515	£481,176
Total Costs & Benefits			-£6,085,463	-16,083,173	-£552,168	-£468,467	-£380,687	-£288,635	-£192,104	-£90,881	£15,259	£126,551	£243,242	£365,591	£371,835	±378,222	£384,756	£391,440	£398,278	£405,274	£412,430	£419,751	£427,240	16,619,902
Discount Factor				0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Repofite			-6.085.462	-f5.877.462	-6515 455	-f422 520	-f331 747	-f243 022	-f156 277	-f71 422	£11 599	f92.855	f172 429	f250 410	£246.074	f241 827	f237 695	£233 647	£229.690	f225 820	£222.026	f218 326	£214 716	f3 214 422
control contents																								
	-£7,891,814																							

Option 5 Maximum Case, Medium Cost with Terminal

SCENARIO ASSUMPTIONS																						
Contruction Cost Scenario 5 Cost Option Modium																						
Construction Time Split	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
	50%	50%																				
Terminal Built Yes																						
TRAFFIC & FREQUENCY	1				l		l		l				Į.			l		l				
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Baseline Traffic Forecast	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Guernsey Average Daily One Way Frequency	4	4	4	4	4	4	4	4	4	4	4	4	4	Α	Α	4	4	4	4	A	4	4
Outbound Business	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041
Outbound Leisure	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112
Inbound Business	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612
Southampton	0,025	0,025	0,025	0,025	0,025	0,025	0,020	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025	0,025
Average Daily One Way Frequency	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Inhound Rusiness	2 408	2 408	2 408	2 408	2 408	2 408	2 408	2 408	2 408	2 408	2 408	2,408	2,408	2 408	2 408	2,408	2,408	2 408	2,408	2,408	2 408	2 408
Inbound Leisure	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Total		-	_	_	-	-	_	-	-	-		-	-	_	_	-	-	-		_	_	_
Average Daily One way Frequency Outbound Business	13.401	13.401	13.401	13 401	13.401	13.401	13.401	13.401	13 401	13.401	13.401	13 401	13.401	13 401	13 401	13.401	13 401	13.401	13.401	13 401	13.401	13 401
Outbound Leisure	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579	25,579
Inbound Business	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Inbound Leisure	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey																						
Average Daily One Way Frequency	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business	8,041	8,041	8,234	8,433	8,637	8,845	9,058	9,277	9,500	9,730	9,964	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205	10,205
Inbound Business	3,612	3,612	3,700	3,789	3,880	3,974	4,070	4,168	4,268	4,371	4,477	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585
Inbound Leisure	8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Southampton	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business	5,360	5,360	5,490	5,622	5,758	5,897	6,039	6,184	6,334	6,486	6,643	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803
Outbound Leisure	8,466	8,466	8,687	8,913	9,145	9,382	9,626	9,877	10,134	10,398	10,668	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946	10,946
Inbound Business	2,408	2,408	2,466	2,526	2,587	2,649	2,713	2,779	2,846	2,914	2,984	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056	3,056
Total	8,825	8,825	9,022	9,223	9,428	9,638	9,855	10,072	10,296	10,526	10,780	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Average Daily One Way Frequency	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business	13,401	13,401	13,724	14,055	14,394	14,741	15,097	15,461	15,834	16,216	16,607	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008
Inbound Business	6.021	6.021	6.166	6.315	6.467	6.623	6,783	6,946	30,483	7.285	7,461	7.641	32,864	32,864	32,864	32,864	32,864	32,864	7.641	32,864	7.641	32,864
Inbound Leisure	17,650	17,650	18,043	18,445	18,856	19,276	19,705	20,144	20,593	21,052	21,521	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
CONSTRUCTION COSTS																						
Runway Extension	-£6,185,000	-£6,185,000	£0	£0	£0 £0	£0	£0	£0 £0	£0 £0	£0 £0	£0	£0	£0	£0	£0	£0 £0	£0	£0	£0	£0	£0	£6,185,000
Total	-£7,335,000	-£7,335,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£7,335,000
PRODUCER IMPACTS																						
Airport New Pasconger Percention Fittimated Percention per Pay Fit	60	60	615 252	620.874	646 974	662.260	680.042	607 222	6114 926	6122.967	6151 224	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247	6170 247
OPEX	£0	£0	-£50.000	-£50,074	-£50.000	-£50.000	-£50,043	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000	-£50.000
Airline																						
Subridy Total Increase in Subridy			221 800	202 111	272 629	242 421	212 502	100 020	149 296	115 150	01 1 20	46.374	46.274	46 374	46 374	46.274	46.274	46.274	46.274	46.374	46 274	46.274
USER IMPACTS			-331,899	-303,111	-273,028	-243,431	-212,505	-180,828	-148,380	-115,155	-81,128	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274	-40,274
Existing Passengers - Wait Time Impacts																						
Guernsey Change in Frequency / Wait Time Business	7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Leisure	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
VoT per Minute																						
Outbound Business £0.78 Outbound Loisure £0.13	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Inbound Business £0.78	£19,971	£20,430	-£26,819	-£27,435	-£28,066	-£28,712	-£29,372	-£30,048	-£30,739	-£31,446	-£32,169	-£32,909	-£33,666	-£34,440	-£35,232	-£36,043	-£36,872	-£37,720	-£38,587	-£39,475	-£40,383	-£41,312
Inbound Leisure £0.12	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,731	-£26,323	-£26,928	-£27,548	-£28,181	-£28,829	-£29,492
Southampton Change in Frequency / Wait Time Business	0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
Leisure	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
VoT per Minute																						
Outbound Business £0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Inbound Business £0.78	£0	£0	-£23,235	-£23,770	-£24,317	-£24,876	-£25,448	-£26,033	-£26,632	-£27,245	-£27,871	-£28,512	-£29,168	-£29,839	-£30,525	-£31,227	-£31,945	-£32,680	-£33,432	-£34,201	-£34,987	-£35,792
Inbound Leisure £0.12	£0	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843
Total Outbound Buringer	644 451	645 472	6111.410	6112.072	6116 504	6110.276	6122.019	6124 826	6127 607	6120 624	6122.629	6126 712	6120 956	6142.072	6146 264	6149 720	6152 174	6156 607	6160 201	6162.089	6167 750	6171 619
Outbound Leisure	£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£133,038	-£130,712	-£133,830	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business	£19,971	£20,430	-£50,054	-£51,205	-£52,383	-£53,588	-£54,820	-£56,081	-£57,371	-£58,690	-£60,040	-£61,421	-£62,834	-£64,279	-£65,758	-£67,270	-£68,817	-£70,400	-£72,019	-£73,676	-£75,370	-£77,104
Inbound Leisure	£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-£55,574	-£56,166	-£56,771	-£57,391	-£58,024	-£58,672	-£59,335
Frequency / Wait Time vs The Boat																						
Guernsey																						
Change in Frequency / Wait Time Business	44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
VoT per Minute	100	100	,,	,,,				,,	,,			,,,			,,	,,	,,,			,,		
Outbound Business £0.78	£0	£0	£2,167	£4,487	£6,968	£9,620	£12,452	£15,473	£18,694	£22,126	£25,780	£29,668	£30,350	£31,048	£31,762	£32,493	£33,240	£34,005	£34,787	£35,587	£36,406	£37,243
Outbound Leisure £0.12	£0	£0	£2,083	£4,314	£6,704	£9,259	£11,990	£14,907	£18,019	£21,337	£24,873	£28,638	£29,297	£29,971	£30,660	£31,365	£32,087	£32,825	£33,580	£34,352	£35,142	£35,950
Inbound Leisure £0.12	£0	£0	£955	£1,975	£3,064	£4,226	£5,465	£6,785	£8,190	£9,684	£11,273	£12,960	£13,258	£13,563	£13,875	£14,194	£14,534	£14,855	£15,196	£15,546	£15,903	£16,269
Southampton																						
Change in Frequency / Wait Time Business	27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
VoT per Minute		,,	45	49	49	43	43	49	49	49	49	49	49	49	49	49	49	49	43	43	45	49
Outbound Business £0.78	£0	£0	£821	£1,699	£2,639	£3,644	£4,717	£5,861	£7,081	£8,381	£9,765	£11,238	£11,496	£11,761	£12,031	£12,308	£12,591	£12,881	£13,177	£13,480	£13,790	£14,107
Outbound Leisure £0.12	£0	£0	£680	£1,409	£2,190	£3,027	£3,921	£4,878	£5,899	£6,988	£8,151	£9,389	£9,605	£9,826	£10,052	£10,283	£10,520	£10,762	£11,009	£11,262	£11,521	£11,786
Inbound Leisure £0.12	£0	£0	£607	£1,255	£1,948	£2,686	£3,474	£4,313	£5,205	£6,155	£7,165	£8,237	£8,427	£8,621	£8,819	£9,022	£9,229	£9,441	£9,659	£9,881	£10,108	£10,340
Total																						
Outbound Business	£0	£0	£2,987	£6,186	£9,608	£13,264	£17,168	£21,334	£25,775	£30,507	£35,545	£40,906	£41,847	£42,809	£43,794	£44,801	£45,831	£46,885	£47,964	£49,067	£50,196	£51,350
Inbound Business	£0	£0	£2,782 £1.342	£2,779	£4,316	£5.959	£13,912 £7.713	£19,784 £9.585	£11.580	£13,706	£35,024 £15.970	£18.378	£18.801	£19,233	£19.675	£20.128	£20,591	£21.064	£21.549	£43,614 £22.045	£22,552	£47,737 £23.070
Inbound Leisure	£0	£0	£1,561	£3,230	£5,012	£6,913	£8,939	£11,098	£13,395	£15,839	£18,437	£21,197	£21,685	£22,184	£22,694	£23,216	£23,750	£24,296	£24,855	£25,426	£26,011	£26,609
Journey Time vs The Boat																						
Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
VoT per Minute	60	60	610 201	631 300	633.005	CAE 600	650 130	672.480	699 797	6105 087	6122.441	6140.007	6144.149	6147.462	6150.855	6154.334	6157.074	6161 505	6165 210	6160.010	6172.007	6176 004
Outbound Business ±0.78	£0	£0	£10,291 £3,501	£21,309	£33,095	£45,690	£59,139 £20,156	£73,489 £25,059	£88,787	£105,087	£122,441 £41,813	£140,907 £48,142	£144,148 £49,250	£147,463 £50,382	£150,855 £51,541	£154,324 £52,727	£157,874 £53,939	£161,505	£165,219 £56,449	£169,019 £57,748	£172,907 £59.076	£176,884 £60,434
Inbound Business £0.78	£0	£0	£4,623	£9,574	£14,869	£20,527	£26,570	£33,017	£39,890	£47,213	£55,010	£63,306	£64,762	£66,251	£67,775	£69,334	£70,929	£72,560	£74,229	£75,936	£77,683	£79,470
Inbound Leisure £0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Southampton Change in Journey Time Business	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Leisure	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
VoT per Minute			65 05 ·		622.0	620.4	620.477	6 4 9 9	CE0.1	670.077	601 C	602.677	COC 0777	600 DT-	6100 577	6402.577	C105 5 15	6407.677	6110.000	6112 677	C145.27	6443 633
Outbound Business £0.78 Outbound Leisure £0.12	±0 £0	£0	±6,861 £1.798	±14,206 £3.726	±22,063	±30,460 £8.005	£39,426 £10.371	£48,992 £12,900	£15.601	£70,058 £18.483	£81,627 £21,557	£93,938 £24,833	£95,098	£98,309 £25.988	£100,570 £26.586	£102,883 £27.197	£105,249 £27.823	£107,670 £28.463	£110,146 £29.118	£112,680 £29.787	£115,271 £30.472	£117,923 £31,173
Inbound Business £0.78	£0	£0	£3,082	£6,382	£9,912	£13,685	£17,713	£22,011	£26,593	£31,475	£36,673	£42,204	£43,175	£44,168	£45,184	£46,223	£47,286	£48,373	£49,486	£50,624	£51,789	£52,980
Inbound Leisure £0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£24,971	£25,546	£26,133	£26,734	£27,349
Outbound Business	f0	£0	£17.151	£35.515	£55.158	£76 150	£98 565	£122 481	£147.979	£175.145	£204.069	£234.845	£240.246	£245 772	£251 474	£257.207	£263.123	£269.175	£275.366	£281 699	£288 178	£294.806
Outbound Leisure	£0	£0	£5,299	£10,979	£17,062	£23,570	£30,528	£37,960	£45,892	£54,352	£63,370	£72,975	£74,654	£76,371	£78,127	£79,924	£81,762	£83,643	£85,567	£87,535	£89,548	£91,608
Inbound Business	£0	£0	£7,706	£15,956	£24,781	£34,212	£44,283	£55,028	£66,483	£78,688	£91,683	£105,510	£107,937	£110,419	£112,959	£115,557	£118,215	£120,934	£123,715	£126,560	£129,471	£132,449
Total Producer & User Benefits	£0 £99.537	£0 £101.827	±3,209	±6,639	±10,302	±14,210	±18,375	£22,812	£27,535	±32,559	£37,899	±43,573 £361.865	£44,575	±45,600	£46,649	£47,722	±48,820	£49,942 £401.548	£51,091	±52,266	£53,468	£54,698
Total Costs & Benefits	-£7,235,463	-£7,233,173	-£602,168	-£518,467	-£430,687	-£338,635	-£242,104	-£140,881	-£34,741	£76,551	£193,242	£315,591	£321,835	£328,222	£334,756	£341,440	£348,278	£355,274	£362,430	£369,751	£377,240	£7,719,902
	1	0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits	-£7,235,463	-£6,988,573	-£562,130	-£467,627	-£375,319	-£285,121	-£196,952	-£110,731	-£26,383	£56,168	£136,993	£216,163	£212,985	£209,866	£206,806	£203,802	£200,854	£197,960	£195,118	£192,328	£189,588	£3,748,560
-£10,281,108																						

Option 5 Maximum Case, High Cost No Terminal

-2%

Contruction Cost Scenario Cost Option Construction Time Split	5 High		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	,
Terminal Built	No		50%	50%																
TRAFFIC & FREQUENCY	Max																			
Year Baseline Traffic Forecast			0 Year 1	1 Year 2	2 Year 3	3 Year 4	4 Year 5	5 Year 6	6 Year 7	7 Year 8	8 Year 9	9 Year 10	10 Year 11	11 Year 12	12 Year 13	13 Year 14	14 Year 15	15 Year 16	16 Year 17)
Guernsey Average Daily One Way Frequency			4	4	4	4	4	4	Α	4	Α	4	4	4	4	4	4	4	Α	
Outbound Business			8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	8,041	
Inbound Business			3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3,612	3
Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	
Average Daily One Way Frequency	r		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Outbound Leisure			8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	
Inbound Business Inbound Leisure			2,408	2,408 8,825	2,408 8,825	2,408	2,408 8,825	2,408 8,825	2,408	2,408 8,825	2,408 8,825	2,408 8,825	2,408 8,825	2,408 8,825	2,408 8,825	2,408	2,408	2,408 8,825	2,408 8,825	
Total			7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Outbound Business			13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	1
Outbound Leisure Inbound Business			25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021	2								
Inbound Leisure			17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	1
Guernsey																				
Average Daily One Way Frequency Outbound Business			5 8,041	5 8,041	3 8,234	8,433	3 8,637	3 8,845	3 9,058	3 9,277	3 9,500	3 9,730	3 9,964	3 10,205	3 10,205	3 10,205	3 10,205	3 10,205	3 10,205	
Outbound Leisure			17,112	17,112	17,541	17,981	18,431	18,893	19,367	19,852	20,350	20,860	21,382	21,918	21,918	21,918	21,918	21,918	21,918	2
Inbound Leisure			8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	1
Southampton Average Daily One Way Frequency			3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Outbound Business			5,360	5,360	5,490	5,622	5,758	5,897	6,039	6,184	6,334	6,486	6,643	6,803	6,803	6,803	6,803	6,803	6,803	
Inbound Business			2,408	2,408	2,466	2,526	2,587	2,649	2,713	2,779	2,846	2,914	2,984	3,056	3,056	3,056	3,056	3,056	3,056	
Inbound Leisure Total			8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	1
Average Daily One Way Frequency Outbound Business	r		8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Outbound Leisure			25,579	25,579	26,228	26,893	27,576	28,276	28,993	29,729	30,483	31,257	32,050	32,864	32,864	32,864	32,864	32,864	32,864	3
Inbound Leisure			6,021	6,021	6,166 18,043	6,315 18,445	6,467 18,856	6,623 19,276	6,783 19,705	6,946 20,144	7,114 20,593	7,285	7,461 21,521	7,641 22,000	7,641 22,000	7,641 22,000	7,641 22,000	7,641 22,000	7,641 22,000	2
CONSTRUCTION COSTS Runway Extension			-£8,375.000	-£8,375.000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Terminal Total			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
PRODUCER IMPACTS			-£8,375,000	-£8,375,000	£U	£U	±υ	£U	£U	£U	£U	£U	£U	±υ	£U	£U	£U	£U	£U	
Airport New Passenger Revenue	Estimated Revenue per Pax	£10	£0	£0	£15,253	£30,874	£46,874	£63,260	£80,043	£97,232	£114,836	£132,867	£151,334	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£1
OPEX Airline			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Subsidy	Total Increase in Subsidy				-331,899	-303,111	-273,628	-243,431	-212,503	-180,828	-148,386	-115,159	-81,128	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-1
USER IMPACTS Existing Passengers - Wait Time In	npacts																			
Guernsey Change in Frequency / Wait Time	Business		7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-
change in requercy / wait finite	Leisure		11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	
Outbound Business		£0.78	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-f
Outbound Leisure		£0.12 £0.78	£23,168 £19,971	£23,701 £20,430	-£37,125 -£26,819	-£37,978	-£38,852	-£39,746	-£40,660	-£41,595 -£30.048	-£42,552	-£43,530	-£44,531 -£32,169	-£45,556	-£46,603	-£47,675	-£48,772	-£49,894 -£36,043	-£51,041 -£36,872	-£
Inbound Leisure		£0.12	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,731	-£26,323	-£
Southampton Change in Frequency / Wait Time	Business		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	
	Leisure	VoT per Minute	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	
Outbound Business		£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£
Outbound Leisure Inbound Business		£0.12 £0.78	£0 £0	£0 £0	-£29,963 -£23,235	-£30,652 -£23,770	-£31,357 -£24,317	-£32,078 -£24,876	-£32,816 -£25,448	-£33,571 -£26,033	-£34,343 -£26,632	-£35,133 -£27,245	-£35,941 -£27,871	-£36,767 -£28,512	-£37,613 -£29,168	-£38,478 -£29,839	-£39,363 -£30,525	-£40,268 -£31,227	-£41,194 -£31,945	-f
Inbound Leisure		£0.12	£0	£0	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£29,843	-£
Outbound Business			£44,451	£45,473	-£111,410	-£113,973	-£116,594	-£119,276	-£122,019	-£124,826	-£127,697	-£130,634	-£133,638	-£136,712	-£139,856	-£143,073	-£146,364	-£149,730	-£153,174	-£
Outbound Leisure Inbound Business			£23,168 £19,971	£23,701 £20,430	-£67,087 -£50,054	-£68,630 -£51,205	-£70,209 -£52,383	-£71,823 -£53,588	-£73,475 -£54,820	-£75,165 -£56,081	-£76,894 -£57,371	-£78,663 -£58,690	-£80,472 -£60,040	-£82,323 -£61,421	-£84,216 -£62,834	-£86,153 -£64,279	-£88,135 -£65,758	-£90,162 -£67,270	-£92,236 -£68,817	-£
Inbound Leisure	(f)		£11,948	£12,223	-£48,989	-£49,429	-£49,880	-£50,341	-£50,812	-£51,294	-£51,788	-£52,292	-£52,809	-£53,337	-£53,877	-£54,430	-£54,996	-£55,574	-£56,166	-£
Frequency / Wait Time vs The Boa	t																			
Guernsey Change in Frequency / Wait Time	Business		44	44	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
	Leisure	VoT per Minute	106	106	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	
Outbound Business		£0.78	£0	£0	£2,167	£4,487	£6,968	£9,620	£12,452	£15,473	£18,694	£22,126	£25,780	£29,668	£30,350	£31,048	£31,762	£32,493	£33,240	£
Inbound Business		£0.12 £0.78	£0 £0	£0	£2,083 £973	£2,016	£6,704 £3,131	£9,259 £4,322	£11,990 £5,594	£6,952	£18,019 £8,399	£9,941	£24,873 £11,582	£28,638 £13,329	£13,636	£29,971 £13,949	£14,270	£31,365 £14,598	£32,087 £14,934	£
Inbound Leisure Southampton		£0.12	£0	£0	£955	£1,975	£3,064	£4,226	£5,465	£6,785	£8,190	£9,684	£11,273	£12,960	£13,258	£13,563	£13,875	£14,194	£14,521	£
Change in Frequency / Wait Time	Business		27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
		VoT per Minute																		
Outbound Business Outbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£821 £680	£1,699 £1,409	£2,639 £2,190	£3,644 £3,027	£4,717 £3,921	£5,861 £4,878	£7,081 £5,899	£8,381 £6,988	£9,765 £8,151	£11,238 £9,389	£11,496 £9,605	£11,761 £9,826	£12,031 £10,052	£12,308 £10,283	£12,591 £10,520	£
Inbound Business		£0.78 £0.12	£0	£0 £0	£369 £607	£764 £1.255	£1,186 £1.948	£1,637 £2,686	£2,119 £3.474	£2,633 £4.313	£3,181 £5.205	£3,765 £6.155	£4,387 £7.165	£5,049 £8,237	£5,165 f8.427	£5,284 £8,621	£5,405 £8,819	£5,530 £9.022	£5,657 £9.229	f
Total																				
Outbound Leisure			£0	£0	£2,987 £2,762	£5,723	£8,894	£13,264 £12,286	£17,168 £15,912	£19,784	£25,775 £23,918	£28,326	£33,024	£38,027	£38,902	£39,797	£43,794 £40,712	£41,648	£45,831 £42,606	£
Inbound Business Inbound Leisure			£0 £0	£0 £0	£1,342 £1.561	£2,779 £3.230	£4,316 £5.012	£5,959 £6.913	£7,713 £8.939	£9,585 £11.098	£11,580 £13,395	£13,706 £15.839	£15,970 £18,437	£18,378 £21,197	£18,801 £21,685	£19,233 £22,184	£19,675 £22,694	£20,128 £23,216	£20,591 £23,750	£
Journey Time vs The Boat							.,.		1				., .							
Change in Journey Time	Business Leisure		130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	
Outbound Business		VoT per Minute £0.78	£0	£0	£10.291	£21.309	£33.095	£45.690	£59.139	£73.489	£88.787	£105.087	£122.441	£140.907	£144.148	£147.463	£150.855	£154.324	£157.874	f
Outbound Leisure		£0.12	£0	£0	£3,501	£7,253	£11,269	£15,565	£20,156	£25,059	£30,291	£35,869	£41,813	£48,142	£49,250	£50,382	£51,541	£52,727	£53,939	£
Inbound Business Inbound Leisure		£0.78 £0.12	£0	£0 £0	£4,623 £1,605	£9,574 £3,320	£14,869 £5,151	£20,527 £7,105	£26,570 £9,188	£33,017 £11,406	£39,890 £13,768	£47,213 £16,279	£55,010 £18,950	£63,306 £21,786	£64,762 £22,288	£66,251 £22,800	£67,775 £23,325	£69,334 £23,861	£70,929 £24,410	£
Southampton Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	-
	Leisure	N.=	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	
Outbound Business		voT per Minute £0.78	£0	£0	£6,861	£14,206	£22,063	£30,460	£39,426	£48,992	£59,192	£70,058	£81,627	£93,938	£96,098	£98,309	£100,570	£102,883	£105,249	£
Outbound Leisure		£0.12 £0.78	£0	£0 £0	£1,798 £3.082	£3,726	£5,793	£8,005	£10,371 £17,713	£12,900 £22.011	£15,601 £26,593	£18,483 £31.475	£21,557 £36.673	£24,833 £42,204	£25,404 £43.175	£25,988 £44.168	£26,586 £45,184	£27,197 £46.223	£27,823 £47,286	£
Inbound Leisure		£0.12	£0	£0	£1,605	£3,320	£5,151	£7,105	£9,188	£11,406	£13,768	£16,279	£18,950	£21,786	£22,288	£22,800	£23,325	£23,861	£24,410	£
Outbound Business			£0	£0	£17,151	£35,515	£55,158	£76,150	£98,565	£122,481	£147,979	£175,145	£204,069	£234,845	£240,246	£245,772	£251,424	£257,207	£263,123	£2
Outbound Leisure			£0	£0 £0	£5,299 £7,706	£10,979 £15,956	£17,062 £24,781	£23,570 £34,212	£30,528 £44,283	£37,960 £55.028	£45,892 £66,483	£54,352 £78,688	£63,370 £91.683	£72,975	£74,654	£76,371	£78,127 £112,959	£79,924 £115.557	£81,762 £118,215	£
Inbound Leisure			£0	£0	£3,209	£6,639	£10,302	£14,210	£18,375	£22,812	£27,535	£32,559	£37,899	£43,573	£44,575	£45,600	£46,649	£47,722	£48,820	£
Total Producer & User Benefits Total Costs & Benefits			£99,537 -£8,275,463	£101,827 -£8,273,173	-£220,269 -£552,168	-£165,355 -£468,467	-£107,060 -£380,687	-£45,204 -£288,635	£20,399 -£192,104	£89,947 -£90,881	£163,645 £15,259	£241,710 £126,551	£324,371 £243,242	£411,865 £365,591	£418,109 £371,835	£424,496 £378,222	£431,030 £384,756	£437,715 £391,440	£444,553 £398,278	£4 £4
Discount Factor				0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	
Discounted Costs & Ropofitz			-68 275 462	-67 992 404	-6515 455	-6422 520	-F331 747	6242 022	-6156 277	.671.422	£11 E99	692.855	6172 429	6250.410	£246.074	6241 927	6237 695	6232 647	£229.690	
Biscounteu Costs & Benefits			-18,275,463	-17,993,404	-1315,455	-1422,530	1351,747	-1245,023	-1150,277	-171,432	111,588	192,855	1172,439	1250,410	1246,074	1241,837	1237,695	1233,647	1229,690	
NPV	-£11,134,355																			

			1	
ear 18	Year 19	Year 20	Year 21	Year 22
17	18	19	20	21
ear 18	Year 19	Year 20	Year 21	Year 22
4 3,041	4 8,041	4 8,041	4 8,041	4 8,041
7,112 3,612	17,112 3,612	17,112 3,612	17,112 3,612	17,112 3,612
3,825	8,825	8,825	8,825	8,825
3 5,360	3 5,360	3 5,360	3 5,360	3 5,360
3,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408
3,825	8,825	8,825	8,825	8,825
7 3,401	7 13,401	7 13,401	7 13,401	7 13,401
5,579 5,021	25,579 6,021	25,579 6,021	25,579 6,021	25,579 6,021
7,650	17,650	17,650	17,650	17,650
3	3	3	3	3
0,205 1,918	10,205 21,918	10,205 21,918	10,205 21,918	10,205 21,918
1,585 1,000	4,585 11,000	4,585 11,000	4,585 11,000	4,585 11,000
2	2	2	2	2
5,803 0,946	6,803 10,946	6,803 10,946	6,803 10,946	6,803 10,946
3,056 1,000	3,056 11,000	3,056 11,000	3,056 11,000	3,056 11,000
5	5	5	5	5
7,008 2,864	17,008 32,864	17,008 32,864	17,008 32,864	17,008 32,864
7,641 2,000	7,641 22,000	7,641 22,000	7,641 22,000	7,641 22,000
£0	£0	£0	£0	£8,375,000
£0 £0	£0 £0	£0 £0	£0 £0	£0 £8,375,000
20.047	6470.047	6470 047	6470.047	0470.047
£0	£170,247 £0	£170,247 £0	£170,247 £0	£170,247 £0
6 274	46.274	46.274	46.074	46.274
6,274	-46,274	-46,274	-46,274	-46,274
0	0	0	9	0
-17	-17	-17	-17	-17
83,957	-£85,888	-£87,863	-£89,884	-£91,952
37,720	-£38,587	-£39,475	-£40,383	-£41,312
-12	-12	-12	-12	-12
-28	-28	-28	-28	-28
72,740	-£74,413 -£43.111	-£76,124 -£44,103	-£77,875 -£45.117	-£79,666 -£46,155
32,680 29,843	-£33,432 -£29,843	-£34,201 -£29,843	-£34,987 -£29,843	-£35,792 -£29,843
.56,697	-£160,301	-£163,988	-£167,759	-£171,618
94,357 70,400	-£96,527 -£72,019	-£98,747 -£73,676	-£101,018 -£75,370	-£103,342 -£77,104
56,771	-£57,391	-£58,024	-£58,672	-£59,335
27 77	27 77	27 77	27 77	27 77
34,005	£34,787	£35,587	£36,406	£37,243
32,825 15,278	£33,580 £15,629	£34,352 £15,988	£35,142 £16,356	£35,950 £16,732
14,855	£15,196	£15,546	£15,903	£16,269
16 49	16 49	16 49	16 49	16 49
12,881	£13,177	£13,480	£13,790	£14,107
5,787	£5,920	£6,056	£6,196	£11,786 £6,338
9,441	19,659	19,881	£10,108	£10,340
13,586	£44,589	£45,614	£46,663	£47,737
24,296	£24,855	£25,426	£26,011	£26,609
130	130	130	130	130
130	130	130	130	130
61,505 55.180	£165,219 £56,449	£169,019 £57,748	£172,907 £59.076	£176,884 £60,434
72,560 24.971	£74,229 £25.546	£75,936 £26,133	£77,683 £26,734	£79,470 £27,349
130	130	130	130	130
130	130	130	130	130
07,670 28,463	£110,146 £29,118	£112,680 £29,787	£115,271 £30,472	£117,923 £31,173
18,373 24,971	£49,486 £25,546	£50,624 £26,133	£51,789 £26,734	£52,980 £27,349
69,175	£275,366	£281,699	£288,178	£294,806
33,643 20,934	£85,567 £123,715	£87,535 £126,560	£89,548 £129,471	£91,608 £132,449
19,942 51,548	£51,091 £458,7 <u>04</u>	£52,266 £466,025	£53,468 £473,515	£54,698 £481,176
05,274	£412,430	£419,751	£427,240	£8,809,902
0.557	0.538	0.520	0.503	0.486
25,820	£222,036	£218,336	£214,716	£4,277,832

Option 5 Maximum Case, High Cost Option with Terminal

SCENARIO ASSUMPTIONS	5		4									-												
Cost Option	High		-							-														+
Construction Time Split			Year 1 50%	Year 2 50%	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
Terminal Built	Yes									['	· · · · · · · · · · · · · · · · · · ·													
TRAFFIC & FREQUENCY	Max																							
Year Paceline Traffic Forecast			0 Year 1	1 Year 2	2 Year 3	3 Vear 4	4 Vear 5	5 Vear 6	6 Year 7	7 Year 8	8 Year 9	9 Vear 10	10 Vear 11	11 Year 12	12 Vear 13	13 Vear 14	14 Vear 15	15 Vear 16	16 Vear 17	17 Vear 18	18 Vear 19	19 Vear 20	20 Vear 21	21 Vear 22
Guernsey				-				i i i i i i i i i i i i i i i i i i i	-		former c		· •••••								i i i i i i i i i i i i i i i i i i i		-	
Average Daily One Way Frequency Outbound Business	/		4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041	4 8,041
Outbound Leisure			17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112	17,112
Inbound Business Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Southampton	v		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Outbound Business			5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360	5,360
Outbound Leisure Inbound Business			8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408	8,466 2,408
Inbound Leisure			8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825	8,825
Total Average Daily One Way Frequency	y		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Outbound Business			13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401	13,401
Inbound Business			6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021	6,021
Inbound Leisure Change Scenario Traffic Forecast	+		17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Guernsey					2	2	2	-	2	2		2	2	-	2	2	2	2	2	2	2	2	2	
Average Daily One Way Frequency Outbound Business	/		8,041	5 8,041	3 8,234	3 8,433	3 8,637	3 8,845	3 9,058	3 9,277	3 9,500	3 9,730	3 9,964	3 10,205	3 10,205	3 10,205	3 10,205	3 10,205						
Outbound Leisure			17,112	17,112	17,541	17,981	18,431	18,893	19,367	19,852	20,350	20,860	21,382	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918	21,918
Inbound Business Inbound Leisure			8,825	8,825	9,022	9,223	9,428	3,974 9,638	9,853	4,106	4,200	4,571	4,477	4,585	4,585	4,565	4,565	4,565	4,565	4,585	4,585	4,565	4,585	4,585
Southampton			3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Outbound Business			5,360	5,360	5,490	5,622	5,758	5,897	6,039	6,184	6,334	6,486	6,643	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803	6,803
Outbound Leisure			8,466 2.408	8,466 2.408	8,687 2.466	8,913 2.526	9,145 2.587	9,382 2.649	9,626 2.713	9,877 2.779	10,134 2.846	10,398 2.914	10,668 2.984	10,946 3.056	10,946 3.056	10,946 3.056	10,946 3.056	10,946 3.056						
Inbound Leisure			8,825	8,825	9,022	9,223	9,428	9,638	9,853	10,072	10,296	10,526	10,760	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Total Average Daily One Way Frequency	v		8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Outbound Business			13,401	13,401	13,724	14,055	14,394	14,741	15,097	15,461	15,834	16,216	16,607	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008	17,008
Inbound Business			6,021	6,021	6,166	6,315	6,467	6,623	6,783	6,946	7,114	7,285	7,461	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641	7,641
Inbound Leisure			17,650	17,650	18,043	18,445	18,856	19,276	19,705	20,144	20,593	21,052	21,521	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
Runway Extension			-£8,375,000	-£8,375,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£8,375,000
Terminal Total	-		-£1,150,000 -£9,525,000	-£1,150,000 -£9,525,000	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£0 £0	£1,150,000 £9,525,000
PRODUCER IMPACTS																								
Airport New Passenger Revenue	Estimated Revenue per Pax	£10	£0	£0	£15,253	£30,874	£46,874	£63,260	£80,043	£97,232	£114,836	£132,867	£151,334	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247	£170,247
OPEX			£0	£0	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000	-£50,000
Alfine										1					1									
Subsidy USER IMPACTS	Total Increase in Subsidy				-331,899	-303,111	-273,628	-243,431	-212,503	-180,828	-148,386	-115,159	-81,128	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274	-46,274
Existing Passengers - Wait Time In	mpacts		-										1											,
Guernsey Change in Frequency / Wait Time	Business		7	7	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
	Leisure	VoT per Minute	11	11	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Outbound Business		£0.78	£44,451	£45,473	-£59,693	-£61,066	-£62,470	-£63,907	-£65,377	-£66,881	-£68,419	-£69,993	-£71,602	-£73,249	-£74,934	-£76,657	-£78,421	-£80,224	-£82,069	-£83,957	-£85,888	-£87,863	-£89,884	-£91,952
Outbound Leisure		£0.12 £0.78	£23,168 £19.971	£23,701 £20,430	-£37,125 -£26,819	-£37,978	-£38,852	-£39,746	-£40,660	-£41,595 -£30,048	-£42,552	-£43,530	-£44,531 -£32,169	-£45,556	-£46,603	-£47,675	-£48,772	-£49,894	-£51,041	-£52,215 -£37.720	-£53,416	-£54,645	-£55,901 -£40,383	-£57,187 -£41 312
Inbound Leisure		£0.12	£11,948	£12,223	-£19,146	-£19,586	-£20,037	-£20,497	-£20,969	-£21,451	-£21,945	-£22,449	-£22,966	-£23,494	-£24,034	-£24,587	-£25,152	-£25,731	-£26,323	-£26,928	-£27,548	-£28,181	-£28,829	-£29,492
Southampton Change in Frequency / Wait Time	Rusiness		0	0	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
	Leisure	Martin and Alleria	0	0	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Outbound Business		£0.78	£0	£0	-£51,718	-£52,907	-£54,124	-£55,369	-£56,642	-£57,945	-£59,278	-£60,641	-£62,036	-£63,463	-£64,922	-£66,416	-£67,943	-£69,506	-£71,104	-£72,740	-£74,413	-£76,124	-£77,875	-£79,666
Outbound Leisure		£0.12	£0	£0	-£29,963	-£30,652	-£31,357	-£32,078	-£32,816	-£33,571	-£34,343	-£35,133	-£35,941	-£36,767	-£37,613	-£38,478	-£39,363	-£40,268	-£41,194	-£42,142	-£43,111	-£44,103	-£45,117	-£46,155
Inbound Business Inbound Leisure		£0.12	£0	£0 £0	-£23,255 -£29,843	-£23,770 -£29,843	-£24,317 -£29,843	-£24,876 -£29,843	-£25,446 -£29,843	-£26,055 -£29,843	-£26,652 -£29,843	-£27,245 -£29,843	-£27,871 -£29,843	-£28,512 -£29,843	-£29,100 -£29,843	-£29,859 -£29,843	-£30,525 -£29,843	-£31,227 -£29,843	-£31,945 -£29,843	-£32,660 -£29,843	-£33,452 -£29,843	-£34,201 -£29,843	-£34,987 -£29,843	-£35,/92 -£29,843
Total			£44.451	£45.473	-6111.410	-£113.973	-£116.594	-f119.276	-£122.019	-£124.826	-£127.697	-£130.634	-6133,638	-£136.712	-6139.856	-£143.073	-£146.364	-£149.730	-£153,174	-£156.697	-6160.301	-6163.988	-6167 759	-£171.618
Outbound Leisure			£23,168	£23,701	-£67,087	-£68,630	-£70,209	-£71,823	-£73,475	-£75,165	-£76,894	-£78,663	-£80,472	-£82,323	-£84,216	-£86,153	-£88,135	-£90,162	-£92,236	-£94,357	-£96,527	-£98,747	-£101,018	-£103,342
Inbound Business Inbound Leisure	-		£19,971 £11,948	£20,430 £12,223	-£50,054 -£48,989	-£51,205 -£49,429	-£52,383 -£49,880	-£53,588 -£50,341	-£54,820 -£50,812	-£56,081 -£51,294	-£57,371 -£51,788	-£58,690 -£52,292	-£60,040 -£52,809	-£61,421 -£53,337	-£62,834 -£53,877	-£64,279 -£54,430	-£65,758 -£54,996	-£67,270 -£55,574	-£68,817 -£56,166	-£70,400 -£56,771	-£72,019 -£57,391	-£73,676 -£58,024	-£75,370 -£58,672	-£77,104 -£59,335
New Passengers (inc. Rule of a Hai	alf)				E-oper.	2.30,10	1-1,00	Loops .						Loop.		200 Ly 12				200,0	and part			100,0
Guernsey	.t																							
Change in Frequency / Wait Time	Business		44	44	27	27	27	27	27	27	27	27	27 77	27	27	27	27	27	27	27	27	27	27	27
	Leisure	VoT per Minute	100	100	· ·	<i>,,</i>			·· ·	, . 			,,			//		<i>,,</i>	· · ·	, , , , , , , , , , , , , , , , , , ,			, , , , , , , , , , , , , , , , , , ,	
Outbound Business Outbound Leisure	+	£0.78 £0.12	£0 £0	£0 £0	£2,167 £2,083	£4,487 £4,314	£6,968 £6,704	£9,620 £9,259	£12,452 £11,990	£15,473 £14,907	£18,694 £18,019	£22,126 £21,337	£25,780 £24,873	£29,668 £28,638	£30,350 £29,297	£31,048 £29,971	£31,762 £30,660	£32,493 £31,365	£33,240 £32,087	£34,005 £32,825	£34,787 £33,580	£35,587 £34,352	£36,406 £35,142	£37,243 £35,950
Inbound Business		£0.78	£0	£0	£973	£2,016	£3,131	£4,322	£5,594	£6,952	£8,399	£9,941	£11,582	£13,329	£13,636	£13,949	£14,270	£14,598	£14,934	£15,278	£15,629	£15,988	£16,356	£16,732
Inbound Leisure Southampton		£0.12	£0	£0	£955	£1,975	£3,064	£4,226	£5,465	£6,785	£8,190	£9,684	£11,273	£12,960	£13,258	£13,563	£13,875	£14,194	£14,521	£14,855	£15,196	£15,546	£15,903	£16,269
Change in Frequency / Wait Time	Business		27	27	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Leisure	VoT per Minute			45	45	45	45	42	*5	45	~	~	***	45	45		42	45	45	45	45	45	~~~
Outbound Business Outbound Leisure		£0.78 £0.12	£0 £0	£0 £0	£821 £680	£1,699 £1.409	£2,639 £2.190	£3,644 £3.027	£4,717 £3.921	£5,861 £4,878	£7,081 £5,899	£8,381 £6.988	£9,765 £8.151	£11,238 £9,389	£11,496 £9.605	£11,761 £9.826	£12,031 £10.052	£12,308 £10.283	£12,591 £10.520	£12,881 £10,762	£13,177 £11.009	£13,480 £11.262	£13,790 £11.521	£14,107 £11.786
Inbound Business		£0.78	£0	£0	£369	£764	£1,186	£1,637	£2,119	£2,633	£3,181	£3,765	£4,387	£5,049	£5,165	£5,284	£5,405	£5,530	£5,657	£5,787	£5,920	£6,056	£6,196	£6,338
Total	+	EU.12	EU	EU	£607	±1,255	£1,940	±2,000	±3,474	±4,513	±5,205	±0,155	±7,105	±0,237	±0,427	±0,021	±0,013	£9,022	£9,223	±9,441	£9,059	£9,001	£10,100	±10,540
Outbound Business			£0 £0	£0 €0	£2,987	£6,186 £5,723	£9,608 £8.894	£13,264 £12,286	£17,168 £15,912	£21,334 £19,784	£25,775 £23,918	£30,507 £28,326	£35,545 £33,024	£40,906 £38.027	£41,847 £38,902	£42,809 £39,797	£43,794 £40,712	£44,801 £41,648	£45,831 £42,606	£46,885 £43,586	£47,964 £44,589	£49,067 £45,614	£50,196 £46,663	£51,350 £47,737
Inbound Business			£0	£0	£1,342	£2,779	£4,316	£5,959	£7,713	£9,585	£11,580	£13,706	£15,970	£18,378	£18,801	£19,233	£19,675	£20,128	£20,591	£21,064	£21,549	£22,045	£22,552	£23,070
Inbound Leisure Journey Time vs The Boat			£0	£0	£1,561	£3,230	£5,012	£6,913	£8,939	£11,098	£13,395	£15,839	£18,437	£21,197	£21,685	£22,184	£22,694	£23,216	£23,750	£24,296	£24,855	£25,426	£26,011	£26,609
Guernsey			130	120	130	120	130	120	120	120	120	130	130	120	120	120	120	120	120	120	130	120	120	120
Change in Journey Time	Business		130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Outbound Business		VoT per Minute	f0	f0	£10.291	£21 309	£33.095	£45 690	£50 139	£73.489	£88 787	£105.087	£122 441	£140 907	£144 148	£147.463	£150 855	£154 324	£157 874	6161 505	£165 219	£169.019	£172 907	£176 884
Outbound Leisure		£0.12	£0	£0	£3,501	£7,253	£11,269	£15,565	£20,156	£25,059	£30,291	£35,869	£41,813	£48,142	£49,250	£50,382	£51,541	£52,727	£53,939	£55,180	£56,449	£57,748	£59,076	£60,434
Inbound Business		£0.78 £0.12	£0 £0	£0 £0	£4,623 £1.605	£9,574 £3.320	£14,869 f5.151	£20,527 £7.105	£26,570 £9.188	£33,017 £11.406	£39,890 £13.768	£47,213 £16.279	£55,010 £18.950	£63,306 £21.786	£64,762 £22.288	£66,251 £22.800	£67,775 £23.325	£69,334 £23.861	£70,929 £24.410	£72,560 £24.971	£74,229 £25.546	£75,936 £26.133	£77,683 £26.734	£79,470 £27.349
Southampton					11,000			L),100	10,100				L10,5			122,000		125,000			120,0	120,100	120,70	
Change in Journey Time	Business Leisure		130 130	130 130	130 130	130 130	130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130	130 130
		VoT per Minute		<u> </u>	26.961	014 206	C22.062	530.460	220,426	549.002	250 102	C70.0E9	C91 C27	202.028	505.008	508.309	6100 570	C103 893	CTOF 249	C107 570	C110 146	C113 580	C115 271	C117.022
Outbound Business Outbound Leisure		£0.12	£0	£0	£5,851 £1,798	£3,726	£5,793	£8,005	£10,371	£48,992 £12,900	£15,601	£18,483	£81,627 £21,557	£93,938 £24,833	£25,404	£98,309 £25,988	£100,570 £26,586	£102,883 £27,197	£105,249 £27,823	£28,463	£29,118	£29,787	£30,472	£31,173
Inbound Business		£0.78	£0	£0	£3,082	£6,382	£9,912	£13,685	£17,713	£22,011	£26,593	£31,475	£36,673	£42,204	£43,175	£44,168	£45,184	£46,223	£47,286	£48,373	£49,486	£50,624	£51,789	£52,980
Total	-	10.12	10	10	11,005	13,320	13,131	27,105	19,188	111,400	113,708	110,275	118,950	121,780	122,200	122,800	123,323	123,801	124,410	124,571	123,340	120,133	120,734	127,349
Outbound Business Outbound Leisure			£0 £0	£0 £0	£17,151 £5,299	£35,515 £10,979	£55,158 £17,062	£76,150 £23,570	£98,565 £30,528	£122,481 £37,960	£147,979 £45,892	£175,145 £54,352	£204,069 £63,370	£234,845 £72,975	£240,246 £74,654	£245,772 £76,371	£251,424 £78,127	£257,207 £79,924	£263,123 £81,762	£269,175 £83,643	£275,366 £85,567	£281,699 £87,535	£288,178 £89,548	£294,806 £91,608
Inbound Business	-		£0	£0	£7,706	£15,956	£24,781	£34,212	£44,283	£55,028	£66,483	£78,688	£91,683	£105,510	£107,937	£110,419	£112,959	£115,557	£118,215	£120,934	£123,715	£126,560	£129,471	£132,449
Inbound Leisure Total Producer & User Benefits			£0 £99,537	£0 £101,827	£3,209 -£270,269	£6,639 -£215,355	£10,302 -£157,060	£14,210 -£95,204	£18,375 -£29,601	£22,812 £39,947	£27,535 £113,645	£32,559 £191,710	£37,899 £274,371	£43,573 £361,865	£44,575 £368,109	£45,600 £374,496	£46,649 £381,030	£47,722 £387,715	£48,820 £394,553	£49,942 £401,548	£51,091 £408,704	£52,266 £416,025	£53,468 £423,515	£54,698 £431,176
Total Costs & Benefits			-£9,425,463	-£9,423,173	-£602,168	-£518,467	-£430,687	-£338,635	-£242,104	-£140,881	-£34,741	£76,551	£193,242	£315,591	£321,835	£328,222	£334,756	£341,440	£348,278	£355,274	£362,430	£369,751	£377,240	£9,909,902
Discount Factor				0.966	0.934	0.902	0.871	0.842	0.814	0.786	0.759	0.734	0.709	0.685	0.662	0.639	0.618	0.597	0.577	0.557	0.538	0.520	0.503	0.486
Discounted Costs & Benefits			-£9,425,463	-£9,104,515	-£562,130	-£467.627	-£375,319	-£285,121	-£196.952	-£110,731	-£26.383	£56.168	£136.993	£216,163	£212.985	£209,866	£206,806	£203,802	£200.854	£197.960	£195.118	£192.328	£189.588	£4.811,960
	-£13,523,649 -2%																							
/	/																							/

Development Economics Approach

Option 5 Core Case

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Runway Option	5						
Incremental Cost	Low	£9,194,000		EIRR	7.5%		
Add Terminal Cost	No	£0					
Annual Operating Cost Increase		£0					
Base Year Traffic	Service Corrected	62,650					
Uplift Assumed relative to Max	50%		Total				
Population Increase after 10 years	7%	141	2,161				
Tourism increase after 10 years	12%	2,118	19,768				
(Million GBP - Q4 2015 prices)							

						value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	62,650	-	-4.60		0.22			-4.38
0	62,650	-	-4.60		0.22			-4.38
1	63,405	- 0.34596		0.00		£0.11	£0.02	-0.22
2	64,169	- 0.33175		0.00		£0.23	£0.04	-0.07
3	64,942	- 0.31736		0.00		£0.35	£0.06	0.09
4	65,725	- 0.30280		0.00		£0.48	£0.08	0.25
5	66,516	- 0.28807		0.00		£0.61	£0.10	0.42
6	67,318	- 0.27316		0.00		£0.74	£0.12	0.59
7	68,129	- 0.25807		0.00		£0.88	£0.14	0.77
8	68,950	- 0.24279		0.00		£1.03	£0.17	0.95
9	69,781	- 0.22734		0.00		£1.18	£0.19	1.15
10	70,622	- 0.21169		0.00		£1.34	£0.22	1.35
11	70,622	- 0.21169		0.00		£1.37	£0.22	1.38
12	70,622	- 0.21169		0.00		£1.39	£0.23	1.41
13	70,622	- 0.21169		0.00		£1.42	£0.23	1.44
14	70,622	- 0.21169		0.00		£1.45	£0.24	1.47
15	70,622	- 0.21169		0.00		£1.48	£0.24	1.51
16	70,622	- 0.21169		0.00		£1.51	£0.25	1.54
17	70,622	- 0.21169		0.00		£1.54	£0.25	1.58
18	70,622	- 0.21169		0.00		£1.57	£0.26	1.61
19	70,622	- 0.21169		0.00		£1.60	£0.26	1.65
20	70,622	- 0.21169	4.60	0.00		£1.63	£0.27	6.28
							EIRR	7.5%

Runway Option	5							
Incremental Cost	Low	£9,194,000		EIRR	5.6%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	50%		Total					
Population Increase after 10 years	7%	141	2,161					
Tourism increase after 10 years	12%	2,118	19,768					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	-1 62,650	-	-5.75		0.22			-5.53
	0 62,650	-	-5.75		0.22			-5.53
	1 63,405	- 0.34596		-0.05		£0.11	£0.02	-0.27
	2 64,169	- 0.33175		-0.05		£0.23	£0.04	-0.12
	3 64,942	- 0.31736		-0.05		£0.35	£0.06	0.04
	4 65,725	- 0.30280		-0.05		£0.48	£0.08	0.20
	5 66,516	- 0.28807		-0.05		£0.61	£0.10	0.37
	6 67,318	- 0.27316		-0.05		£0.74	£0.12	0.54
	7 68,129	- 0.25807		-0.05		£0.88	£0.14	0.72
	8 68,950	- 0.24279		-0.05		£1.03	£0.17	0.90
	9 69,781	- 0.22734		-0.05		£1.18	£0.19	1.10
1	.0 70,622	- 0.21169		-0.05		£1.34	£0.22	1.30
1	1 70,622	- 0.21169		-0.05		£1.37	£0.22	1.33
1	.2 70,622	- 0.21169		-0.05		£1.39	£0.23	1.36
1	.3 70,622	- 0.21169		-0.05		£1.42	£0.23	1.39
1	.4 70,622	- 0.21169		-0.05		£1.45	£0.24	1.42
1	.5 70,622	- 0.21169		-0.05		£1.48	£0.24	1.46
1	.6 70,622	- 0.21169		-0.05		£1.51	£0.25	1.49
1	7 70,622	- 0.21169		-0.05		£1.54	£0.25	1.53
1	.8 70,622	- 0.21169		-0.05		£1.57	£0.26	1.56
1	.9 70,622	- 0.21169		-0.05		£1.60	£0.26	1.60
2	20 70,622	- 0.21169	5.75	-0.05		£1.63	£0.27	7.38
							EIRR	5.6%

Runway Option	5							
Incremental Cost	Medium	£12,370,000		EIRR	5.5%			
Add Terminal Cost	No	£0						
Annual Operating Cost Increase		£0						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	50%		Total					
Population Increase after 10 years	7%	141	2,161					
Tourism increase after 10 years	12%	2,118	19,768					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	. 62,650	-	-6.19		0.22			-5.96
0	62,650	-	-6.19		0.22			-5.96
1	. 63,405	- 0.34596		0.00		£0.11	£0.02	-0.22
2	64,169	- 0.33175		0.00		£0.23	£0.04	-0.07
3	64,942	- 0.31736		0.00		£0.35	£0.06	0.09
2	65,725	- 0.30280		0.00		£0.48	£0.08	0.25
5	66,516	- 0.28807		0.00		£0.61	£0.10	0.42
6	67,318	- 0.27316		0.00		£0.74	£0.12	0.59
	68,129	- 0.25807		0.00		£0.88	£0.14	0.77
3	68,950	- 0.24279		0.00		£1.03	£0.17	0.95
	69,781	- 0.22734		0.00		£1.18	£0.19	1.15
10	70,622	- 0.21169		0.00		£1.34	£0.22	1.35
11	. 70,622	- 0.21169		0.00		£1.37	£0.22	1.38
12	70,622	- 0.21169		0.00		£1.39	£0.23	1.41
13	70,622	- 0.21169		0.00		£1.42	£0.23	1.44
14	70,622	- 0.21169		0.00		£1.45	£0.24	1.47
15	5 70,622	- 0.21169		0.00		£1.48	£0.24	1.51
16	5 70,622	- 0.21169		0.00		£1.51	£0.25	1.54
17	70,622	- 0.21169		0.00		£1.54	£0.25	1.58
18	70,622	- 0.21169		0.00		£1.57	£0.26	1.61
19	70,622	- 0.21169		0.00		£1.60	£0.26	1.65
20	70,622	- 0.21169	6.19	0.00		£1.63	£0.27	7.87
							EIRR	5.5%

Runway Option	5							
Incremental Cost	Medium	£12,370,000		EIRR	4.1%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	50%		Total					
Population Increase after 10 years	7%	141	2,161					
Tourism increase after 10 years	12%	2,118	19,768					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	1 62,650	-	-7.34		0.22			-7.11
	62,650	-	-7.34		0.22			-7.11
	1 63,405	- 0.34596		-0.05		£0.11	£0.02	-0.27
	2 64,169	- 0.33175		-0.05		£0.23	£0.04	-0.12
	64,942	- 0.31736		-0.05		£0.35	£0.06	0.04
	4 65,725	- 0.30280		-0.05		£0.48	£0.08	0.20
	5 66,516	- 0.28807		-0.05		£0.61	£0.10	0.37
	6 67,318	- 0.27316		-0.05		£0.74	£0.12	0.54
· · · · · · · · · · · · · · · · · · ·	7 68,129	- 0.25807		-0.05		£0.88	£0.14	0.72
	8 68,950	- 0.24279		-0.05		£1.03	£0.17	0.90
	9 69,781	- 0.22734		-0.05		£1.18	£0.19	1.10
1	0 70,622	- 0.21169		-0.05		£1.34	£0.22	1.30
1	1 70,622	- 0.21169		-0.05		£1.37	£0.22	1.33
1	2 70,622	- 0.21169		-0.05		£1.39	£0.23	1.36
1	3 70,622	- 0.21169		-0.05		£1.42	£0.23	1.39
1.	4 70,622	- 0.21169		-0.05		£1.45	£0.24	1.42
1	5 70,622	- 0.21169		-0.05		£1.48	£0.24	1.46
1	6 70,622	- 0.21169		-0.05		£1.51	£0.25	1.49
1	7 70,622	- 0.21169		-0.05		£1.54	£0.25	1.53
1	8 70,622	- 0.21169		-0.05		£1.57	£0.26	1.56
1	9 70,622	- 0.21169		-0.05		£1.60	£0.26	1.60
2	0 70,622	- 0.21169	7.34	-0.05		£1.63	£0.27	8.97
							EIRR	4.1%

Runway Option	5							
Incremental Cost	High	£16,750,000		EIRR	3.7%			
Add Terminal Cost	No	£0						
Annual Operating Cost Increase		£0						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	50%		Total					
Population Increase after 10 years	7%	141	2,161					
Tourism increase after 10 years	12%	2,118	19,768					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	1 62,650	-	-8.38		0.22			-8.15
	0 62,650	-	-8.38		0.22			-8.15
	1 63,405	- 0.34596		0.00		£0.11	£0.02	-0.22
	2 64,169	- 0.33175		0.00		£0.23	£0.04	-0.07
	3 64,942	- 0.31736		0.00		£0.35	£0.06	0.09
	4 65,725	- 0.30280		0.00		£0.48	£0.08	0.25
	5 66,516	- 0.28807		0.00		£0.61	£0.10	0.42
	6 67,318	- 0.27316		0.00		£0.74	£0.12	0.59
	7 68,129	- 0.25807		0.00		£0.88	£0.14	0.77
	8 68,950	- 0.24279		0.00		£1.03	£0.17	0.95
	9 69,781	- 0.22734		0.00		£1.18	£0.19	1.15
1	.0 70,622	- 0.21169		0.00		£1.34	£0.22	1.35
1	.1 70,622	- 0.21169		0.00		£1.37	£0.22	1.38
1	.2 70,622	- 0.21169		0.00		£1.39	£0.23	1.41
1	.3 70,622	- 0.21169		0.00		£1.42	£0.23	1.44
1	4 70,622	- 0.21169		0.00		£1.45	£0.24	1.47
1	.5 70,622	- 0.21169		0.00		£1.48	£0.24	1.51
1	.6 70,622	- 0.21169		0.00		£1.51	£0.25	1.54
1	.7 70,622	- 0.21169		0.00		£1.54	£0.25	1.58
1	.8 70,622	- 0.21169		0.00		£1.57	£0.26	1.61
1	.9 70,622	- 0.21169		0.00		£1.60	£0.26	1.65
2	0 70,622	- 0.21169	8.38	0.00		£1.63	£0.27	10.06
							EIRR	3.7%

Runway Option	5							
Incremental Cost	High	£16,750,000		EIRR	2.8%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	50%		Total					
Population Increase after 10 years	7%	141	2,161					
Tourism increase after 10 years	12%	2,118	19,768					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	-1 62,650	-	-9.53		0.22			-9.30
	0 62,650	-	-9.53		0.22			-9.30
	1 63,405	- 0.34596		-0.05		£0.11	£0.02	-0.27
	2 64,169	- 0.33175		-0.05		£0.23	£0.04	-0.12
	3 64,942	- 0.31736		-0.05		£0.35	£0.06	0.04
	4 65,725	- 0.30280		-0.05		£0.48	£0.08	0.20
	5 66,516	- 0.28807		-0.05		£0.61	£0.10	0.37
	6 67,318	- 0.27316		-0.05		£0.74	£0.12	0.54
	7 68,129	- 0.25807		-0.05		£0.88	£0.14	0.72
	8 68,950	- 0.24279		-0.05		£1.03	£0.17	0.90
	9 69,781	- 0.22734		-0.05		£1.18	£0.19	1.10
	10 70,622	- 0.21169		-0.05		£1.34	£0.22	1.30
	1 70,622	- 0.21169		-0.05		£1.37	£0.22	1.33
	12 70,622	- 0.21169		-0.05		£1.39	£0.23	1.36
	13 70,622	- 0.21169		-0.05		£1.42	£0.23	1.39
	14 70,622	- 0.21169		-0.05		£1.45	£0.24	1.42
	15 70,622	- 0.21169		-0.05		£1.48	£0.24	1.46
	16 70,622	- 0.21169		-0.05		£1.51	£0.25	1.49
	17 70,622	- 0.21169		-0.05		£1.54	£0.25	1.53
	18 70,622	- 0.21169		-0.05		£1.57	£0.26	1.56
	19 70,622	- 0.21169		-0.05		£1.60	£0.26	1.60
	20 70,622	- 0.21169	9.53	-0.05		£1.63	£0.27	11.16
							EIRR	2.8%

Option 5 Maximum Case

Runway Option	5							
Incremental Cost	Low	£9,194,000		EIRR	15.2%			
Add Terminal Cost	No	£0						
Annual Operating Cost Increase		£0						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	. 62,650	-	-4.60		0.22			-4.38
	62,650	-	-4.60		0.22			-4.38
1	. 64,161	- 0.33189		0.00		£0.22	£0.04	-0.07
2	65,709	- 0.30310		0.00		£0.45	£0.08	0.23
3	67,294	- 0.27361		0.00		£0.69	£0.12	0.54
	68,917	- 0.24341		0.00		£0.94	£0.16	0.86
5	70,580	- 0.21248		0.00		£1.20	£0.20	1.19
6	5 72,282	- 0.18080		0.00		£1.47	£0.25	1.54
	74,026	- 0.14836		0.00		£1.75	£0.30	1.90
8	75,811	- 0.11514		0.00		£2.04	£0.35	2.27
<u>ç</u>	77,640	- 0.08112		0.00		£2.34	£0.40	2.65
10	79,513	- 0.04627		0.00		£2.65	£0.45	3.05
11	. 79,513	- 0.04627		0.00		£2.70	£0.46	3.12
12	79,513	- 0.04627		0.00		£2.76	£0.47	3.18
13	79,513	- 0.04627		0.00		£2.81	£0.48	3.24
14	79,513	- 0.04627		0.00		£2.87	£0.49	3.31
15	5 79,513	- 0.04627		0.00		£2.93	£0.50	3.38
16	5 79,513	- 0.04627		0.00		£2.99	£0.51	3.44
17	79,513	- 0.04627		0.00		£3.05	£0.52	3.51
18	79,513	- 0.04627		0.00		£3.11	£0.53	3.59
19	79,513	- 0.04627		0.00		£3.17	£0.54	3.66
20	79,513	- 0.04627	4.60	0.00		£3.23	£0.55	8.33
							EIRR	15.2%

Runway Option	5							
Incremental Cost	Low	£9,194,000		EIRR	12.6%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	. 62,650	-	-5.75		0.22			-5.53
C	62,650	-	-5.75		0.22			-5.53
1	. 64,161	- 0.33189		-0.05		£0.22	£0.04	-0.12
2	65,709	- 0.30310		-0.05		£0.45	£0.08	0.18
3	67,294	- 0.27361		-0.05		£0.69	£0.12	0.49
4	68,917	- 0.24341		-0.05		£0.94	£0.16	0.81
5	70,580	- 0.21248		-0.05		£1.20	£0.20	1.14
6	i 72,282	- 0.18080		-0.05		£1.47	£0.25	1.49
7	74,026	- 0.14836		-0.05		£1.75	£0.30	1.85
8	8 75,811	- 0.11514		-0.05		£2.04	£0.35	2.22
9	77,640	- 0.08112		-0.05		£2.34	£0.40	2.60
10	79,513	- 0.04627		-0.05		£2.65	£0.45	3.00
11	. 79,513	- 0.04627		-0.05		£2.70	£0.46	3.07
12	79,513	- 0.04627		-0.05		£2.76	£0.47	3.13
13	79,513	- 0.04627		-0.05		£2.81	£0.48	3.19
14	79,513	- 0.04627		-0.05		£2.87	£0.49	3.26
15	5 79,513	- 0.04627		-0.05		£2.93	£0.50	3.33
16	5 79,513	- 0.04627		-0.05		£2.99	£0.51	3.39
17	79,513	- 0.04627		-0.05		£3.05	£0.52	3.46
18	79,513	- 0.04627		-0.05		£3.11	£0.53	3.54
19	79,513	- 0.04627		-0.05		£3.17	£0.54	3.61
20	79,513	- 0.04627	5.75	-0.05		£3.23	£0.55	9.43
							EIRR	12.6%
Runway Option	5							
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Incremental Cost	Medium	£12,370,000		EIRR	12.2%			
Add Terminal Cost	No	£0						
Annual Operating Cost Increase		£0						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
N ext		Subsidy			GVA due to Construction	Value Adjusted GVA due to Population	Value Adjusted GVA due to Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	1 62,650	-	-6.19		0.22			-5.96
	0 62,650	-	-6.19	0.00	0.22	co 22	CO 04	-5.96
	1 64,161	- 0.33189		0.00		£0.22	£0.04	-0.07
	2 65,709	- 0.30310		0.00		£0.45	£0.08	0.23
	5 07,294 4 69.017	- 0.27301		0.00		£0.09	£0.12	0.54
	4 00,917 5 70,580	- 0.24341		0.00		£0.94 £1.20	£0.10	0.80
	6 72 282	- 0.21248		0.00		£1.20	£0.20	1.19
	7 74 026	- 0.14836		0.00		£1.47	£0.25	1.94
	7 74,020 8 75,811	- 0.11514		0.00		£1.75	£0.30	2.30
	9 77.640	- 0.08112		0.00		£2.04	f0 40	2.2,
1	0 79,513	- 0.04627		0.00		f2.65	f0.45	3.05
1	1 79.513	- 0.04627		0.00		£2.70	£0.46	3.12
1	2 79.513	- 0.04627		0.00		£2.76	£0.47	3.18
1	3 79,513	- 0.04627		0.00		£2.81	£0.48	3.24
1	4 79,513	- 0.04627		0.00		£2.87	£0.49	3.31
1	5 79,513	- 0.04627		0.00		£2.93	£0.50	3.38
1	6 79,513	- 0.04627		0.00		£2.99	£0.51	3.44
1	7 79,513	- 0.04627		0.00		£3.05	£0.52	3.51
1	8 79,513	- 0.04627		0.00		£3.11	£0.53	3.59
1	9 79,513	- 0.04627		0.00		£3.17	£0.54	3.66
2	0 79,513	- 0.04627	6.19	0.00		£3.23	£0.55	9.92
							EIRR	12.2%

Runway Option	5							
Incremental Cost	Medium	£12,370,000		EIRR	10.4%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Рах	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	. 62,650	-	-7.34		0.22			-7.11
0	62,650	-	-7.34		0.22			-7.11
1	. 64,161	- 0.33189		-0.05		£0.22	£0.04	-0.12
2	65,709	- 0.30310		-0.05		£0.45	£0.08	0.18
3	67,294	- 0.27361		-0.05		£0.69	£0.12	0.49
4	68,917	- 0.24341		-0.05		£0.94	£0.16	0.81
5	70,580	- 0.21248		-0.05		£1.20	£0.20	1.14
6	72,282	- 0.18080		-0.05		£1.47	£0.25	1.49
7	74,026	- 0.14836		-0.05		£1.75	£0.30	1.85
	75,811	- 0.11514		-0.05		£2.04	£0.35	2.22
9	77,640	- 0.08112		-0.05		£2.34	£0.40	2.60
10	79,513	- 0.04627		-0.05		£2.65	£0.45	3.00
11	. 79,513	- 0.04627		-0.05		£2.70	£0.46	3.07
12	79,513	- 0.04627		-0.05		£2.76	£0.47	3.13
13	79,513	- 0.04627		-0.05		£2.81	£0.48	3.19
14	79,513	- 0.04627		-0.05		£2.87	£0.49	3.26
15	79,513	- 0.04627		-0.05		£2.93	£0.50	3.33
16	79,513	- 0.04627		-0.05		£2.99	£0.51	3.39
17	79,513	- 0.04627		-0.05		£3.05	£0.52	3.46
18	79,513	- 0.04627		-0.05		£3.11	£0.53	3.54
19	79,513	- 0.04627		-0.05		£3.17	£0.54	3.61
20	79,513	- 0.04627	7.34	-0.05		£3.23	£0.55	11.02
							EIRR	10.4%

Runway Option	5							
Incremental Cost	High	£16,750,000		EIRR	9.5%			
Add Terminal Cost	No	£0						
Annual Operating Cost Increase		£0						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
Yest		Subsidy			GVA due to Construction	Value Adjusted GVA due to Population	Value Adjusted GVA due to Tourism	Net Benefit in
Year	Pax	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
	-1 62,650	-	-8.38		0.22			-8.15
	0 62,650	-	-8.38	0.00	0.22	co 22	CO. 04	-8.15
	1 64,161	- 0.33189		0.00		£0.22	£0.04	-0.07
	2 65,709	- 0.30310		0.00		£0.45	£0.08	0.23
	5 07,294 4 69.017	- 0.27301		0.00		£0.09	£0.12	0.54
	4 00,917 5 70,580	- 0.24341		0.00		£0.94 £1.20	£0.10	0.80
	6 72 282	- 0.21248		0.00		£1.20	£0.20	1.19
	7 74 026	- 0.10000		0.00		£1.47	£0.25	1.94
	8 75,811	- 0.11514		0.00		f2.04	f0.35	2.27
	9 77.640	- 0.08112		0.00		£2.34	£0.40	2.65
	10 79,513	- 0.04627		0.00		£2.65	£0.45	3.05
	1 79,513	- 0.04627		0.00		£2.70	£0.46	3.12
	12 79,513	- 0.04627		0.00		£2.76	£0.47	3.18
	13 79,513	- 0.04627		0.00		£2.81	£0.48	3.24
	14 79,513	- 0.04627		0.00		£2.87	£0.49	3.31
	15 79,513	- 0.04627		0.00		£2.93	£0.50	3.38
	16 79,513	- 0.04627		0.00		£2.99	£0.51	3.44
:	17 79,513	- 0.04627		0.00		£3.05	£0.52	3.51
	18 79,513	- 0.04627		0.00		£3.11	£0.53	3.59
	19 79,513	- 0.04627		0.00		£3.17	£0.54	3.66
	20 79,513	- 0.04627	8.38	0.00		£3.23	£0.55	12.11
							EIRR	9.5%

Runway Option	5							
Incremental Cost	High	£16,750,000		EIRR	8.3%			
Add Terminal Cost	Yes	£2,300,000						
Annual Operating Cost Increase		£50,000						
Base Year Traffic	Service Corrected	62,650						
Uplift Assumed relative to Max	Max		Total					
Population Increase after 10 years	Max	280	2,300					
Tourism increase after 10 years	Max	4,350	22,000					
(Million GBP - Q4 2015 prices)								
						Value Adjusted	Value Adjusted	
					GVA due to	GVA due to	GVA due to	
		Subsidy			Construction	Population	Tourism	Net Benefit in
Year	Рах	Increment	Capital Cost	Operating Cost	Employment	Increase	Increase	Year
-1	. 62,650	-	-9.53		0.22			-9.30
0	62,650	-	-9.53		0.22			-9.30
1	. 64,161	- 0.33189		-0.05		£0.22	£0.04	-0.12
2	65,709	- 0.30310		-0.05		£0.45	£0.08	0.18
3	67,294	- 0.27361		-0.05		£0.69	£0.12	0.49
4	68,917	- 0.24341		-0.05		£0.94	£0.16	0.81
5	70,580	- 0.21248		-0.05		£1.20	£0.20	1.14
6	72,282	- 0.18080		-0.05		£1.47	£0.25	1.49
7	74,026	- 0.14836		-0.05		£1.75	£0.30	1.85
8	75,811	- 0.11514		-0.05		£2.04	£0.35	2.22
9	77,640	- 0.08112		-0.05		£2.34	£0.40	2.60
10	79,513	- 0.04627		-0.05		£2.65	£0.45	3.00
11	. 79,513	- 0.04627		-0.05		£2.70	£0.46	3.07
12	. 79,513	- 0.04627		-0.05		£2.76	£0.47	3.13
13	79,513	- 0.04627		-0.05		£2.81	£0.48	3.19
14	79,513	- 0.04627		-0.05		£2.87	£0.49	3.26
15	79,513	- 0.04627		-0.05		£2.93	£0.50	3.33
16	79,513	- 0.04627		-0.05		£2.99	£0.51	3.39
17	79,513	- 0.04627		-0.05		£3.05	£0.52	3.46
18	79,513	- 0.04627		-0.05		£3.11	£0.53	3.54
19	79,513	- 0.04627		-0.05		£3.17	£0.54	3.61
20	79,513	- 0.04627	9.53	-0.05		£3.23	£0.55	13.21
							EIRR	8.3%