



# BILLET D'ÉTAT

WEDNESDAY, 10th DECEMBER, 2008

XVIII  
2008

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# ***B I L L E T D ' É T A T***

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## **TO THE MEMBERS OF THE STATES OF THE ISLAND OF GUERNSEY**

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I have the honour to inform you that a Meeting of the States of Deliberation will be held at **THE ROYAL COURT HOUSE, on WEDNESDAY, the 10<sup>th</sup> DECEMBER, 2008,** immediately after the meetings of the States of Election and the the States of Deliberation already convened for that day, to consider the items contained in this Billet d'État which have been submitted for debate.

G. R. ROWLAND  
Bailiff and Presiding Officer

The Royal Court House  
Guernsey  
21 November 2008

**PROJET DE LOI**

entitled

**THE POLICE COMPLAINTS (GUERNSEY) LAW, 2008**

The States are asked to decide:-

I.- Whether they are of the opinion to approve the Projet de Loi entitled “The Police Complaints (Guernsey) Law, 2008” and to authorise the Bailiff to present a most humble petition to Her Majesty in Council praying for Her Royal Sanction thereto.

**THE INSURANCE BUSINESS (BAILIWICK OF GUERNSEY)  
(AMENDMENT) (NO.2) ORDINANCE, 2008**

The States are asked to decide:-

II.- Whether they are of the opinion to approve the draft Ordinance entitled “The Insurance Business (Bailiwick of Guernsey) (Amendment) (No.2) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

**THE PROTECTION OF INVESTORS (ADMINISTRATION AND  
INTERVENTION) (BAILIWICK OF GUERNSEY) ORDINANCE, 2008**

The States are asked to decide:-

III.- Whether they are of the opinion to approve the draft Ordinance entitled “The Protection of Investors (Administration and Intervention) (Bailiwick of Guernsey) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

**THE PUBLIC TRANSPORT (AMENDMENT) ORDINANCE, 2008**

The States are asked to decide:-

IV.- Whether they are of the opinion to approve the draft Ordinance entitled “The Public Transport (Amendment) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

## **PRIAULX LIBRARY COUNCIL**

### **NEW MEMBER**

The States are asked:-

V.- To elect a Member of the Priaulx Library Council to fill the vacancy which will arise on 1<sup>st</sup> January, 2009 by reason of the expiration of the term of office of Mrs Gillian Mollie Lenfestey, who is eligible for re-election.

**[NB Each year the States elect a Member of the Priaulx Library Council, who does not need to be a sitting Member of the States, to serve for a two-year term.]**

## **ELIZABETH COLLEGE BOARD OF DIRECTORS**

### **NEW MEMBER**

The States are asked:-

VI.- To elect a member of the Elizabeth College Board of Directors to fill the vacancy which will arise on 6<sup>th</sup> January, 2009, by reason of the expiration of the term of office of Advocate P M A Palmer, who is not eligible for re-election.

**[NB Each year the States elect a Member of the Elizabeth College Board of Directors, who does not need to be a sitting Member of the States, to serve a six year term. The College Statutes include the provision at statute (13) that any person having served the office of Director shall not be qualified for re-appointment till after the expiration of twelve months from the time of his going out of office.]**

## **HOUSING DEPARTMENT**

### **CORPORATE HOUSING PROGRAMME – PROGRESS AGAINST THE 2008 ACTION PLANS**

The Chief Minister  
Policy Council  
Sir Charles Frossard House  
La Charroterie  
St Peter Port

9<sup>th</sup> October 2008

Dear Sir

#### **EXECUTIVE SUMMARY**

1. This States Report provides details of the progress that has been made on the Corporate Housing Programme (CHP) during 2008<sup>1</sup>.
2. The States is asked to note the progress updates on the 2008 workstreams and to approve the priorities for the CHP for 2009.

#### **INTRODUCTION**

3. The CHP was approved by the States in 2003<sup>2</sup> as a means of providing a practical framework for implementing the States Housing Strategy (Appendix I), through coordinated action by States Departments, non-governmental organisations (NGOs), voluntary groups and the private sector.
4. The CHP comprises six Action Areas that reflect the diversity of action that is required to meet the States Housing Strategy across a variety of fronts. The objectives of each of these six Action Areas are designed to cut across individual States Departments' mandates and to focus action on meeting those objectives.
5. Each of the six Action Areas has at least one 'lead department' whose role it is to define the specific Action Plans within each action area and to ensure that progress is being made as required. The Housing Department has responsibility for the overall coordination of the Programme, its role being to manage the

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<sup>1</sup> All information presented in this report is correct as at the end of September 2008.

<sup>2</sup> *'The Development of a Housing Strategy and Corporate Housing Programme'* – Billet d'État II February 2003. A joint report by the States Advisory and Finance Committee and the States Housing Authority.

priorities within it, and to assist those other groups involved in each Action Area to achieve their stated objectives.

6. This report highlights the continued progress that is being made towards achieving a number of key corporate priorities which are grouped together under the umbrella of the CHP and which are incumbent on the support of all of the Departments involved.
7. Discussions commenced in 2008, and will continue during 2009, with the Government Business Plan Team regarding future reporting on the CHP and how this can be included as part of the general reporting programme on the Government Business Plan (GBP) and, specifically, the Social Policy Plan. This is in recognition that many (but not all) CHP workstreams are also actions of the GBP, mostly under Priority 4, to '*Redistribute wealth wisely in the community*'. Existing links to the GBP are referenced throughout this report.
8. As a consequence of the above, the Housing Department envisages that this will be the last CHP update report presented to the States in its current format.
9. Notwithstanding these discussions, the Housing Department wishes to emphasise that it is important that the CHP continues to be recognised as a priority corporate project, in recognition that meeting housing needs is an ongoing concern, with many important workstreams still to be progressed to fulfil the overall States Housing Strategy.

## **DETAILED UPDATES ON PROGRESS AND ACTION PLANS**

10. The following sections provide an update on the progress that has been made on the CHP initiatives during 2008, against those six Action Areas (A to F) that were agreed by the States in December 2007<sup>3</sup>.

### **ACTION AREA A – FISCAL POLICY**

#### **Lead Department - Treasury and Resources Department**

**Objective:** To present the States with a comprehensive review of fiscal policy options available to support the objectives of the States Housing Strategy.

11. Mirroring the above objective, under Priority 4 of the Government Business Plan (Redistribute wealth wisely in the community), there is a Level 3 action to: '*Consider and identify the impact of the new Corporate Tax Strategy, new Tax on Real Property and other new fiscal policy measures on the Guernsey housing market and the housing choices available to low and middle income earners.*'

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<sup>3</sup> '*Corporate Housing Programme – Progress against the 2007 Action Plans*' – Billet d'État XXV December 2007

### Progress on Action Area A:

- **Tax on Rateable Value, Tax on Real Property and the Tax on Real Property Scheme**
12. On 1<sup>st</sup> January 2008, Tax on Rateable Value (TRV) was replaced with **Tax on Real Property (TRP)**.
  13. The principal aims of TRP were to introduce a system of property measurement that was transparent, equitable and easy to administer<sup>4</sup>. The 2008 TRP taxation tariffs were set by the States as part of the 2008 Budget Report.
  14. It was proposed to raise £10 million in 2008, which represents an additional £3.8 million per annum on the amount budgeted for TRV in 2007. Effectively, this was achieved without increasing the total taxation take from domestic properties.
  15. A ‘zero’ tariff is applied to all social rented housing provided by the Housing Department and any housing association approved by the Housing Department.
  16. In addition, under Priority 4 of the GBP, the Treasury and Resources Department was tasked to investigate ways to protect the less well-off who were not in living in social housing from the effects of TRP increases. This was delegated to the Social Security Department which developed a scheme – the Tax on Real Property Relief Scheme - to assist those households most seriously impacted by the costs of TRP. The scheme was to be funded by the Treasury and Resources Department and came into effect on 1<sup>st</sup> January 2008.
  17. The Tax on Real Property Relief Scheme is designed to target assistance to: (i) those people who would qualify for supplementary benefit but who choose not to make a claim; and (ii) those people whose incomes exceed their requirements<sup>5</sup> by relatively modest amounts. Assistance is limited to those households whose TRP bills exceed £100 per annum and who have a household income of less than £35,000 per annum. A capital limit of £3,000 for a single person and £5,000 for a couple is also applied<sup>6</sup>.
  18. As at 5<sup>th</sup> September 2008, the Social Security Department had received two applications for assistance. The low level of take up has been attributed to the fact that TRP rates were not increased in 2008.
  19. The CHP aspect of the TRP workstream - to protect the less well off from the effects of the transition to TRP - is thus now complete.

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<sup>4</sup> Billet d’État VIII June 2008 page 843.

<sup>5</sup> ‘requirements’, in this context, is a Supplementary Benefit term for assessing the level of income that the States has determined is necessary for someone to live within the community.

<sup>6</sup> This reflects the capital limits also applied to the Medical Expenses Assistance Scheme (MEAS).

- **Mortgage Interest Tax Relief (MITR)**

20. As part of the “Zero-Ten” tax strategy, the States agreed that with effect from 1<sup>st</sup> January 2008, the maximum value of mortgages qualifying for mortgage interest tax relief (MITR), for principal private residences, would not exceed £400,000. Prior to 1<sup>st</sup> January 2008 there had been no restriction on the type or level of interest relief that could be claimed by individuals and companies.
21. It was estimated in the 2008 Budget Report that the cost of mortgage interest relief, i.e. lost revenue, was £10 million and that the introduction of a “cap” of £400,000 would realise savings of approximately £2 million per annum.
22. While the implementation of these Mortgage Interest Tax Relief measures is now complete, the Housing Department will keep under review the effects of this policy on the operation of the housing market.

- **Review of Document Duty (New initiative)**

23. The Treasury and Resources Department reported in 2007<sup>7</sup> that it would be setting up a working party to undertake a fundamental review of the present Document Duty Law and Ordinances. This is a new workstream for the CHP.
24. Document Duty is charged on conveyances and the registration of bonds. Issues to be examined by the working party include the current Document Duty thresholds and rates, the relative merits of taxing property ownership by Document Duty as against TRP (and the relative levels of each), and the treatment of transferring beneficial ownership by share transfer. This is a priority for 2009.
25. The Housing Department currently administers a grant scheme that reimburses first-time buyers for their Document Duty on a sliding scale up to a threshold of £150,000. This will also be reviewed, in due course, pending the outcome of the review of Document Duty by the Treasury and Resources Department.

**ACTION AREA A – FISCAL POLICY**  
**PRIORITIES FOR 2009**

- **For the Treasury and Resources Department to continue to consider, identify and take into account, the impact of the new Economic and Taxation Strategy, and other new fiscal policy measures, on the Guernsey housing market and the housing choices available to low and middle income earners.**
- **For the Treasury and Resources Department to review Document Duty.**

<sup>7</sup> Treasury and Resources Budget Report 2008 (page 30) linked to Billet d'État XXIII November 2007

**ACTION AREA B – LAND USE POLICY AND HOUSING DEVELOPMENT**  
**Lead Departments – Environment Department and Housing Department**

**Objective:** To integrate land use planning policies which provide for sufficient housing to be created to meet strategic targets, with a range of measures to ensure that those housing opportunities are translated into development which meets the profile of local needs.

**Progress on Action Area B:**

- **Implementation of the new Planning Law**
26. In September 2007, the States approved 10 of the necessary Ordinances required under the Land Planning and Development (Guernsey) Law, 2005. The outstanding Ordinances are the Appeals Ordinance and the Fees and Charges Ordinance. At the time of writing States approval of Land Planning and Development (Fees and Commencement) Ordinance, 2008 is awaited in order for the legislation to be fully implemented.
- **The findings of the study into Planning Covenants**
27. In December 2007, the States approved the recommendations of a report entitled ‘The Use of Planning Covenants in Guernsey’<sup>8</sup>, which discussed the findings of a study by Environmental Resources Management into the application of planning covenants in the local planning system.
28. The States agreed to the recommendation that planning covenants should only be applied in limited circumstances, such as to secure social and intermediate housing provision on sites already designated as Housing Target Areas (HTAs). The Housing and Environment Departments were tasked with developing the mechanism by which planning covenants could be applied to the HTAs for application as and when required.
29. The Environment Department has been investigating how this mechanism could be achieved. It has now received legal advice that the new Land Planning and Development Law Ordinances will require amendment to enable the use of planning covenants on privately owned HTA sites. This will require additional drafting work and further consideration by the States.
30. The position regarding States-owned HTAs is different in that the States, as owners, can set up planning covenants, if required, as a condition of development.

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<sup>8</sup> ‘*The Use of Planning Covenants in Guernsey*’ – Housing Department and Environment Department Billet d’État XXV December 2007

- **Reviewing the Strategic Target for the creation of new homes**

31. The States Report ‘Findings of the 2006 Housing Needs Survey’<sup>9</sup> recommended the States to direct the Strategic Land Planning Group (SLPG) to review the current strategic policy for the creation of new homes and, for the first time, to set specific annual targets for each tenure, taking into account the profile of needs identified in the Survey. The Strategic Target currently directs the Environment Department to make provision for 300 new homes each year.
32. In addition to the above, the Environment Department is working with the Policy Council to review the strategic land planning policies for the Island through an initiative called “Guernsey Tomorrow”. Public consultation is at the centre of this initiative and was initiated by workshops, held at Les Cotils in September 2008, that involved many individuals, groups and organisations. The aim is to set a long-term framework for strategic land planning. The outcomes of “Guernsey Tomorrow” are likely to have a significant bearing on the CHP in the medium- to long-term.

- **Reviewing the need to release the Housing Target Areas**

33. Under the CHP, the Housing, Treasury and Resources and Environment Departments are required to report to the States on the need to release land for development in the HTAs, taking into account the findings of the 2006 Housing Needs Survey and the findings and recommendations of a report on the use of Planning Covenants in Guernsey.
34. In the States Report ‘Social Housing Development Plan for the period 2008 to 2012’<sup>10</sup>, the Housing Department outlined that, in partnership with the Guernsey Housing Association (GHA), it would be able to meet the identified need for social and intermediate market housing until 2012 from existing land banks and therefore saw no immediate need to develop the HTAs for that purpose.
35. However, the 2006 Housing Needs Survey highlighted a continued and heightened demand for new homes for outright purchase. The SLPG therefore needs to consider how this demand may be met through the supply of land for residential development. Depending on the outcomes of this process, there may be a need to determine whether any of the HTAs should be released and, if so, in what order of priority.
36. Accordingly, in agreeing the priorities for the CHP for 2008, the States directed the SLPG to review the need to release one or more of the HTAs which, through the application of a planning covenant, could also provide additional social and/or intermediate housing provision. This is an ongoing workstream for 2009.

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<sup>9</sup> ‘Findings of the 2006 Housing Needs Survey’ – Housing Department Billet d’État XXV December 2007

<sup>10</sup> Billet d’État XXV December 2007

37. Furthermore, a separate but related workstream for the SLPG is to investigate the feasibility of reserving part of the Grand Bouet Estate as a Strategic Industrial Reserve, to form an eastern extension to the Key Industrial Area (KIA) at the Pitronnerie Road Industrial Estate. This would not affect Phase 1 of the redevelopment of the Grand Bouet Estate for social housing, but would have implications for the proposed future redevelopment of Phases 2 and 3.
38. The SLPG is currently working to identify suitable alternative sites for the replacement of 150 units of social housing designated under Phases 2 and 3. The Housing Department is supportive of creating smaller estates to replace these homes, bearing in mind the social advantages of reducing the high concentration of social housing found in the Bouet area.
39. The outcomes of the SLPG's investigations in this regard are due to be reported to the Policy Council by January 2009.

**ACTION AREA B – LAND USE POLICY AND HOUSING DEVELOPMENT  
PRIORITIES FOR 2009**

- **For the Environment Department to continue to work to implement the new Planning Law, including drafting legislation to enable planning covenants to be applied to HTAs in private ownership.**
- **For the Environment and Housing Departments to work together to develop the mechanism by which planning covenants could be applied to the HTAs, for application as and when required.**
- **For the SLPG to review the Strategic Target for the creation of new homes in the light of the findings of the 2006 Housing Needs Survey and to set specific annual targets for each tenure.**

**In the light of the outcomes of the above:**

- **For the SLPG to determine whether any of the HTAs should be released and, if so, in what order of priority.**
- **For the SLPG to establish, by January 2009, the feasibility of accommodating the later phases of the redevelopment of the Grand Bouet Estate on alternative sites to enable the Grand Bouet to be considered for use as a Strategic Industrial Reserve.**

**ACTION AREA C – INTERMEDIATE HOUSING MARKET**

**Lead Department – Housing Department**

**Objective:** To develop policies aimed at providing for the varied needs of the Intermediate Housing Market and to work with other agencies to ensure that there is sufficient provision of affordable housing to meet the reasonable needs of that market.

### Progress on Action Area C:

- **Update on the 2008-2012 Social Housing Development Plan**
40. In December 2007, the States considered and approved a report outlining proposals for a five-year development plan for the provision of social housing, and the continued modernisation of the existing social housing stock<sup>11</sup>.
  41. This report, which was informed by the findings of the 2006 Housing Needs Survey, included a timetable and funding mechanism to enable the Department to:
    - complete the rationalisation of its housing stock and address the replacement of the last of its estates that are uneconomic to retain and refurbish;
    - continue and complete the modernisation and upgrading of the remainder of the housing stock that is being retained;
    - address the under-occupation of larger family houses by older couples and single people, by building suitable properties that match their requirements and are in the area where they have developed links and associations over the years of their tenancy;
    - increase the size of the social housing stock to meet the needs identified by the 2006 Housing Needs Survey; and
    - continue to provide a supply of Partial Ownership properties that provide alternative tenure choices for first-time buyers and tenants displaced under Tenancy Review procedures.
  42. Working in partnership with the GHA, considerable progress has been made during 2008 on the redevelopment of a number of the Housing Department's estates that were uneconomic to retain and refurbish.
  43. The former Victoria Avenue Estate – now renamed **Sir John Leale Avenue** - has been demolished in readiness for a development of 57 units of 1- and 2-bed accommodation to commence on this site. This accommodation will primarily be made available for the Housing Department's older tenants.
  44. A number of energy efficiency measures have been incorporated into the design for Sir John Leale Avenue, in order to reduce fuel bills for residents (see below). The properties are also being designed using the principles of the lifetime home standards, which aim to provide flexible accommodation that is adaptable to changing needs as people age.

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<sup>11</sup> 'Social Housing under the Corporate Housing Programme: Development Plan for the Period 2008 -2012' – Housing Department Billet d'État XXV December 2007

45. Despite this, grant levels for this scheme do not exceed 10% of the total development costs.
  46. As briefly touched upon in Action Area B above, the Environment Department has gone out to consultation on a draft Development Brief for Phase 1 of the redevelopment of the **Grand Bouet Estate**. Phase 1 will replace 54 homes currently on site with a similar density development of 1 and 2 bedroom accommodation, providing a mix of social rented units and Partial Ownership homes.
  47. Properties at the **Mont Arrive Estate** have now been decanted in readiness for redevelopment by the GHA. The 10 family homes currently on site will be replaced with 15 bungalows offering 2-bed accommodation to meet the needs of the Housing Department's older tenants who are currently under-occupying family properties.
  48. Six Partial Ownership homes have already been completed and sold at the **Hougue a la Perre** development by the GHA (on the site of the former Bouet Bus Garage). The remainder of the properties – 46 social rented units and a further 25 Partial Ownership homes – will become available in July 2009.
  49. In addition to the above, the Housing and Environment Departments, together with the GHA, have been further investigating the opportunities available under the **RH2 exceptions policy** to build new social housing in the rural areas (subject to certain criteria being met). A number of potentially suitable sites, some in States' ownership and others owned privately, are being assessed further.
- **Incorporating sustainable elements into new build programmes**
50. The Housing Department has encouraged the GHA to incorporate eco-friendly solutions into all future developments in recognition of the benefits that this can bring to the environment and to the occupiers, who benefit from the more efficient use of heating, hot water and lighting.
  51. In 2007, the GHA commissioned the Building Research Establishment to advise them in drawing up specifications for the redevelopment of Sir John Leale Avenue.
  52. Early indications are that by incorporating sustainable technology into the design and build specification for this scheme, an energy saving of over 50% over the 2002 Building Regulations (currently adopted in Guernsey) can be achieved. The GHA is using very high insulation levels through the use of Structurally Insulated Panels, solar panels to provide hot water and heating, and a heat recovery system to warm the fresh air brought into the homes.

53. The GHA now includes low energy lights, water butts in gardens and low flush WCs as standard in its developments, and is assessing other practical means of reducing water consumption in its homes.
54. The GHA is also researching the use of other renewable energy sources, such as air source heat pumps and ground source heat pumps with the aim of further reducing the residents' fuel costs and benefiting the environment.
55. These initiatives support the objectives of the Energy Policy Report that was considered by the States in June 2008.

- **Reviewing and updating schemes designed to assist first-time buyers**

56. This is a Level 4 action under Priority 4 of the Government Business Plan.
57. During 2008, the Housing Department has reviewed initiatives designed to assist first-time buyers and other low income households to purchase a home. This has included examining the effectiveness of the current States Home Loans Scheme, together with researching new affordable housing schemes such as assisted purchase and equity loans (which is tied into the "key worker" project – see below).
58. At the time of writing, the Housing Department was anticipating inviting expressions of interest from commercial organisations who would be interested in working with the Department to develop and administer a new loans scheme to enable households in the intermediate housing market to purchase a property. It is envisaged that proposals will be ready for consideration by the States of Deliberation during 2009.
59. As touched upon in Action Area A, the first-time buyer's grant for assistance with Document Duty administered by the Housing Department will also be reviewed at a later date, following a review of Document Duty by the Treasury and Resources Department.

- **'Incompatible' properties**

60. During 2008, the Housing Department has continued to dispose of those properties identified as 'incompatible'; and this programme will continue into 2009.
61. Eleven properties have been sold to date, including Clairval House and Baubigny Cottages. Gross sales have exceeded £2.8 million. These monies have been 'ring-fenced' to help fund replacement social housing being built by the GHA.
62. Twenty properties at Jardin de Haut (formerly the Petit Bouet Estate) will be marketed for sale as individual homes towards the end of 2008. A considerable amount of work has been necessary to get these properties ready for sale and to maximise their value, including creating additional parking on the estate, road

resurfacing and separating the water supplies. There has also been extensive legal work required to determine boundaries, to draw up way leave agreements and in the creation of a management company.

- **Partial Ownership Scheme**

63. Ensuring that a sufficient supply of Partial Ownership units is available to meet identified needs is a Level 4 action under Priority 4 of the Government Business Plan.
64. Partial Ownership is designed to make home ownership affordable to local first-time buyers who would otherwise be unable to purchase their own home. Purchasers are able to buy between 40% and 80% of the value of a property on a 125 year lease. The GHA retains the remainder of the value, for which it charges a discounted rent.
65. The Social Housing Development Plan for the period 2008-2012 seeks to provide a range of social housing options, including Partial Ownership, on the majority of future social housing developments.
66. During 2008, eight roadside properties at Victoria Avenue were sold to the GHA for subsequent refurbishment and sale under Partial Ownership Scheme. Furthermore, as briefly touched upon above, six homes at Hougue a la Perre have already been made available under this Scheme and a further 25 properties for Partial Ownership will be completed during 2009.
67. At the time of writing, the GHA is completing the refurbishment of ten properties at the Jardin De Haut for sale under the Partial Ownership Scheme. These properties, which had been identified as incompatible within the Housing Department's stock, were due to be conveyed to their new owners towards the end of October 2008.
68. This supports the objective of rationalising the States' housing stock. It also fulfils a Level 4 workstream under Priority 4 of the Government Business Plan; namely, together with the GHA, to develop a scheme that would enable some of the Housing Department's incompatible properties to be refurbished and sold under the Partial Ownership Scheme.

- **The Private Rented Sector**

69. This is a Level 4 action under Priority 4 of the Government Business Plan.
70. The Housing Department has maintained regular dialogue with the Guernsey Private Residential Landlords Association (GPRLA) during 2008. The GPRLA is working on increasing its membership, as well as investigating a number of initiatives relating to the private rented sector.

71. Working closely with the Citizens Advice Bureau, the GPRLA has developed a common tenancy agreement, using plain English principles. The common tenancy agreement is being made available to the GPRLA's membership in electronic format.
72. The GPRLA also continues to explore the possibility of establishing an accreditation scheme for its members.
  - **Lodging houses and staff accommodation**
73. This is a Level 4 action under Priority 4 of the Government Business Plan.
74. Initial research into the standards of accommodation in lodging houses and in staff quarters has been completed. A research paper, which highlighted the need for a cross-departmental and multi-agency approach to address poor quality standards in some premises, was considered by the Housing Department board in October 2007.
75. A new staff-level Working Group was established at the end of 2007 and has met on several occasions. The Working Group is represented by the Housing and Commerce and Employment Departments, together with the Office of Environmental Health (Health and Social Services Department), the Fire and Rescue Service (Home Department), the Citizens Advice Bureau and the GPRLA. Options that are being researched include the introduction of minimum standards or a licensing system for such properties. It is intended that a report will be prepared for consideration by the States in 2009.
  - **Review of the Rent Control (Guernsey) Law 1976 (as amended)**
76. The Housing Department, in conjunction with the Treasury and Resources Department (Cadastre), is reviewing the relevance of Rent Control in the private rented sector. Only a handful of properties are currently subject to Rent Control and the numbers reduce each year.
77. The key issue for the Housing Department is whether the Rent Control legislation does (or could be made to) support the States Housing Strategy, which addresses the issues of availability, affordability and quality of accommodation in all tenures, including the private rented sector. The Department will complete its review and following a period of consultation on the proposals, will report to the States on the future of Rent Control in 2009.
  - **The recruitment and retention of "key workers"**
78. Drawing on the research of the Key Worker Housing Group (KWHG), the Housing and Health and Social Services Departments reported to the States in March 2007, with a 'green paper' consultation document on the recruitment and retention of "key workers".

79. The report proposed 19 recommendations which, together, aimed to form a framework for an integrated corporate strategy to address “key worker” recruitment and retention. The report also highlighted changes to current policy that could deliver significant long-term revenue and capital savings.
80. The States resolved as follows:
- That, based on the recommendations set out in the Key Worker Housing Group’s report, an integrated corporate strategy be formulated on the recruitment and retention of “key workers” that encompasses the provision and funding of suitable “key worker” housing initiatives, and the adoption of tailored housing licence and remuneration policies.
  - To direct the Housing and Health and Social Services Departments to report back to the States by March 2008 (earlier if feasible) with firm proposals based on the further investigations required, taking into account the views expressed by the States, together with the consultations undertaken with “key workers” and other interested parties.
  - To direct that all States’ Departments and Committees that are recommended take action for specific matters in this Report do so in accordance with the Action Plan set out in Annex A to that Report, to enable the Housing and Health and Social Services Departments to report back to the States by March 2008.
81. Whilst, as detailed below, significant work has been completed to move this project forward, it was not possible to meet the deadline in the ‘green paper’ for reporting back to the States in March 2008. However, this was always an ambitious target and progress has proved time consuming due to the scope of the work outlined above and other workstreams.
- A questionnaire on “key worker” recruitment and retention was issued to all staff employed in the public sector by the Housing and Health and Social Services Departments in July 2007, as directed under Recommendation 19 of the ‘green paper’.
- Early analysis of the results has shown that there are varying views across the States on the support that should be given to “key workers” and on how a “key worker” should be defined. This has prompted the Key Worker Housing Group to give further consideration to the definition that should be applied to a “key worker”, which has implications in projecting the number of units of accommodation that will be required.
- Recommendation 6 of the ‘green paper’ directed the Housing Department to review all options for the modification of housing licence policies in relation to “key workers”, in liaison with the employing departments.

A Working Group co-ordinated by the Housing Department was subsequently established to review housing licence policy for public sector employees. The Group, which has met on a number of occasions, comprises of staff level representatives from the Health and Social Services, Home and Education Departments, together with the Policy Council's Human Resources Unit.

Employing departments have profiled the skills required within their different service areas, in order to promote a better understanding of housing licence requirements. In addition, a specific policy has been introduced to enable the Education Department to retain a limited number of 'exceptional' staff beyond the normal licence period for their jobs.

- With regard to the collection of statistics (Recommendation 18), the Housing Department is working closely with the Treasury and Resources Department and the Policy Council's Human Resources Unit to investigate methods for collecting information on the recruitment and retention of statistics on an ongoing basis. To date, the focus has been on extracting information from the Treasury and Resources Departments' SAP Payroll system and working with the employing departments to collect information to enable recruitment and retention to be monitored on an ongoing basis. However, unless the States commits to the introduction of a corporate HR system, it is unlikely that significant progress will be made in this regard.
- Treasury and Resources States Property Services were tasked with preparing documentation for an "expression of interest" exercise with the aim of attracting a specialist housing association to provide and manage new and existing rental accommodation for "key workers" (Recommendation 8). However, due to resourcing issues in SPS, this work is being undertaken by the Housing Department. An advertisement was placed in a UK publication in March 2008 in order to investigate what interest there would be from a specialist housing association to establish itself in the Island to provide rental accommodation for "key workers". The next step in this process is to finalise and issue the partnering packs of information to those organisations that expressed an interest.
- The Housing, Health and Social Services and Environment Departments are working together to prepare the Priaulx Garage site for future development as "key worker" housing. A Development Brief for this site will be published for public consultation.

82. In light of the above activity, it is now envisaged that the further States Report required will come forward in the first half of 2009.

**ACTION AREA C – INTERMEDIATE HOUSING MARKET**  
**PRIORITIES FOR 2009**

- For the Housing Department to continue to work closely with the Guernsey Housing Association to provide new and replacement social housing that is targeted to address the imbalance in the States' housing stock and to provide a range of social housing options that includes Partial Ownership.
- For the Housing Department to complete its review on initiatives to support first-time buyers.
- For the Housing Department to continue to sell those properties identified as incompatible, including 20 homes at Jardin de Haut.
- For the Guernsey Housing Association to continue to incorporate sustainable elements into all new build programmes.
- For the Housing Department to continue to support the GPRLA to progress the self-regulation of the private rented sector, including widespread distribution of a common tenancy agreement and the possibility of establishing an accreditation scheme for its members.
- For the Housing Department to co-ordinate and finalise proposals for a cross-departmental and multi-agency approach to facilitate improvements in the standards of some lodging houses and staff accommodation.
- For the Housing Department to finalise and report to the States its findings on a review of the Rent Control (Guernsey) Law 1976.
- For the Housing and Health and Social Services Departments to report back to the States on a "key worker" housing strategy.

**ACTION AREA D – STATES-OWNED STOCK**

**Lead Department – Housing Department**

**Objective:** To maintain and improve the quality of States-owned housing stock, and to provide high quality tenancy services to the occupiers of those dwellings in order to foster communities that are pleasant and safe to live in.

**Progress on Action Area D:**

- **Review of the Allocations Policy**
83. This is a Level 4 action under Priority 4 of the Government Business Plan.
84. In June 2007, the Housing Department reviewed its Allocations Policy for social housing by re-examining the financial eligibility criteria and significantly increasing the income threshold limits.

85. Effectively, the new income limits took account of the cost of accommodation in the private rented sector, thereby ensuring that those in need of assistance to meet their accommodation requirements were able to access social rented housing. The effects of increasing the income limits were: (i) to increase the numbers of households already living in social housing that remained eligible for such accommodation, and (ii) to increase the numbers of those eligible for the waiting list from the private sector.
86. The Government Business Plan commits the Housing Department to “*carry out a comprehensive review of the Allocations Policy, particularly in relation to the eligibility criteria for social rented housing*”.
87. In this regard, the Housing Department remains committed to reviewing the minimum age limit (currently over 65 years of age) for a single person households and couples without dependent children. This will occur once the impacts of the above changes and the effects of the Social Housing Development Programme for the period 2008-2012 can be fully assessed, together with the findings into an integrated housing, care and support strategy for older people (see the update on Action Area E).
88. Other eligibility criteria will also be reviewed at that stage.
  - **Review of Rent and Rebate Scheme**
89. This is a Level 4 action under Priority 4 of the Government Business Plan.
90. The Housing Department reviews the Rent and Rebate Scheme on an annual basis and sets the rents at a level which will fund the long term maintenance of the housing stock, whilst ensuring that the Rebate Scheme retains affordability for those on low incomes. At the time of writing, the Housing Department is working to determine rent and rebate levels for 2009, in order that the details of the new rents, which will come into effect from the first Saturday in January 2009, can be communicated to tenants.
91. In addition, the Housing Department is working closely with the Social Security Department to examine the future of the Rent and Rebate Scheme. This review will examine the interaction of rent rebates and supplementary benefit, and the impact of the benefit limitation on public and private sector rents.
92. The Housing Department will report to the States during 2009, with a proposed revision of the Rent and Rebate Scheme. As highlighted in the Social Security Department’s report ‘Benefit and Contribution Rates for 2009’<sup>12</sup>, it is likely that changes to the supplementary benefit limitation will, in consequence, be required.

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<sup>12</sup> ‘Benefit and Contribution Rates for 2009’ – Social Security Department Billet d’État XII September 2008

- **Refurbishment of the existing housing stock**

93. A total of 132 properties have benefited from a programme of extensive refurbishment of the Housing Department's older stock, which was completed in 2006.
94. In 2007, the focus switched to a rolling programme of modernisation for the remainder of the housing stock, which is being delivered in partnership with RG Falla/Amalgamated Facilities Management Limited, together with States Property Services (Treasury and Resources Department.)
95. This phase of the modernisation programme (approximately three years) focuses on continuing the rewiring/ electrical upgrading, installation of central heating, replacement/upgrading the loft insulation and the installation of cavity insulation.
96. A total of 1,200 properties will benefit from rewiring during this three-year programme and 1,200 properties will also have their loft insulation replaced or improved, of which 814 properties have already been completed. Approximately 400 properties will benefit from cavity insulation as a result of the modernisation programme. The cavity insulation works are expected to be completed by the end of 2008.
97. The economies of scale from bulk purchasing the materials necessary to undertake this programme will result in considerable savings on the overall cost. It will also bring considerable energy saving benefits and reduce the costs of States' tenants' fuel bills.
98. This is a Level 4 action under Priority 4 of the Government Business Plan.
  - Electrical Rewiring/Upgrading
99. As of 1<sup>st</sup> September 2008, over 600 properties have undergone full rewiring and 200 properties have had an electrical upgrade through the electrical rewiring and upgrading programme that was introduced in November 2003.
100. Guernsey Electricity Ltd is continuing to assess the upgrades required to the electricity mains supply in the Department's estates in order to cope with the increase in loading from the additional installations, including night storage heating. Two further estates – Rue Jehannet and Rue des Grons - had their mains upgraded in 2008, including additional substations and/or pillars where necessary.
  - Drainage
101. Significant drainage works have been completed on the following estates: Collings Road, Rougeval, Braye Road, Carriere Lane, La Rue Flere and

Sausmarez Mill. In addition, mains connections have been completed at Courtil Michelle and Les Islets estates, which were previously connected to cesspits.

102. Priorities for drainage surveys and assessment include Pre du L'aumone, Rue de la Croix, Rue au Pretre, Chemin Robin and Courtil Portier. They will continue throughout 2008 and until 2010 to identify future priorities.

○ Re-Roofing

103. In addition to the re-roofing of those properties that have been fully refurbished, houses at Chemin Robin, Rue de la Croix, Rue au Pretre, Courtil Michelle, Millbrook, Pont Vaillant, Chemin des Monts, La Vrangue, Gibauderie Flats and Les Granges have also been completed.

104. By the end of 2008/early 2009 re-roofing will also be completed on the following estates: Les Islets, Rue des Grons, Sandy Hook and Pre du L'aumone.

105. Priorities for 2009 are Bas Courtils and Sous Les Hougues estates. Surveys are continuing in order to establish the future priorities.

○ Estate Enhancements

106. The estate enhancement programme is aimed at improving access for emergency service vehicles, whilst easing congestion: work at Les Genats, Rue Jehannet, Sous Les Hougues, Rougeval and Braye Road Estates has been completed. Further schemes are currently being planned for the Collings Road and Courtil Michelle estates.

107. These enhancements will, however, continue to be subject to available funding and the prioritisation of the other estate improvement workstreams.

**ACTION AREA D – STATES-OWNED STOCK**  
**PRIORITIES FOR 2009**

- **For the Housing Department to review its Allocations Policy.**
- **For the Housing Department to review the Rent and Rebate Scheme to determine rent levels for 2009.**
- **For the Housing Department, working closely with the Social Security Department, to examine the future of the Rent and Rebate Scheme.**
- **For the Housing Department to continue with its long-term improvement/modernisation programmes for States' houses.**

## **ACTION AREA E – SUPPORTED HOUSING PROVISION**

### **Lead Department – Housing Department**

**Objective:** To develop appropriate options for persons requiring supported accommodation, which may include older persons, young people, people with a learning disability, persons with a mental illness, ex-offenders etc.

108. The above objective mirrors a Level 4 action under Priority 4 of the Government Business Plan, which directs the Housing Department to work with other States Departments and organisations to develop options for supported accommodation.

### **Progress on Action Area E:**

- **Developing an integrated housing, care and support strategy for older people**

109. This is a Level 4 action under Priority 4 of the Government Business Plan.

110. The Housing Department, in partnership with the Health and Social Services Department, is leading on the development of an older people's accommodation and care strategy. Other key stakeholders are the Social Security and Treasury and Resources Departments.

111. The remit of the strategy will encompass care and support services as well as housing. The strategy will identify current and future needs for older people's housing and will recommend specific housing forms to meet the changing needs of an ageing population. In particular, the strategy will examine future needs for residential care, extra care, sheltered housing and retirement housing, and recommend funding and partnership models to achieve delivery of these housing forms.

112. Considerable research and public consultation has been undertaken during 2008 and this will culminate in a comprehensive report to the States in 2009, examining the future housing and other implications of an ageing population and how these can be addressed.

- **Developing a supported housing strategy (New initiative)**

113. Work is underway to identify the housing needs of other vulnerable user groups (the physically disabled, people with learning disabilities, people with mental health problems etc.) The Housing and Health and Social Services Departments are working together to explore ways of meeting the needs of islanders who require supported accommodation.

114. The viability of providing accommodation for ex-offenders and persons on probation, which was a new initiative introduced into the CHP for 2008, is now being considered as part of this new workstream.

**ACTION AREA E – SUPPORTED HOUSING PROVISION**  
**PRIORITIES FOR 2009**

- **For the Housing and Health and Social Services Departments to present to the States an integrated housing, care and support strategy for older persons.**
- **For the Housing and Health and Social Services Department to co-ordinate the development of a strategy for supported housing.**

**ACTION AREA F – INFORMATION**

**Lead Department – Policy Council (Policy and Research Unit)**

**Objective:** To establish an authoritative system for collating information about housing in order to monitor and review the effectiveness of the Corporate Housing Programme against strategic objectives.

**Progress on Action Area F:**

- **Housing Needs Survey**
115. The States of Deliberation considered the findings of the 2006 Housing Needs Survey in December 2007<sup>13</sup>. The Survey identified housing trends and assessed the current and future requirements for housing in all tenures. The report's findings will continue to provide a valuable source of information which will help with monitoring trends in the local housing stock. The next Housing Needs Survey will take place in 2011.
116. The 2007 States Report on the Housing Needs Survey also focused on improving data collection methods to ensure that an effective system is in place to monitor the number of new homes constructed each year, in order to examine whether housing requirements, as highlighted by the findings of regular Housing Needs Surveys, are effectively being provided for. This data will aid the Strategic Land Planning Group in reviewing the annual strategic policy for the creation of new homes, as outlined in Action Area B and as discussed further below.
- **The ongoing collection of housing-related information**
117. The Policy Council's Policy and Research Unit (P&RU) has responsibility for ensuring that data is available to monitor effectively the outcomes of the programme focusing on changes within the Island's housing stock and market.
118. In line with the priorities mentioned in last year's update, the P&RU has conducted further research to identify solutions to difficulties in obtaining housing related data. These have included working with Digimap to test out

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<sup>13</sup> '2006 Survey of Guernsey's Housing Needs' – Housing Department Billet d'État XXV December 2007

ways of identifying numbers and types of residential property, together with liaising with local estate agents to understand better changes in market conditions.

119. A full-time member of staff has been recruited for one year to take forward this initiative, working with States Departments and private sector bodies to assemble and report on the relevant data. Funding for this post has been provided by the Housing Department through the Corporate Housing Programme Fund.
120. A priority for the Policy Council's Policy and Research Unit will be to 'plug' the information gaps which currently exist and to provide a more robust analysis of the housing stock and market, to enable frequent reporting and the establishment of a more effective monitoring system. In particular, the focus of research and development in the coming year will be to implement systems for regularly reporting changes in Guernsey's housing stock together with data on the affordability and availability of properties.

- **ICT Strategy**

121. During 2007 and 2008, the P&RU has continued to work with the Treasury and Resources Departments Information Communications Technology Unit (ICTU) to ensure that data capture, maintenance and reporting procedures are included in the corporate ICT Strategy. Further development is required to ensure, where possible, that data are collected and stored electronically in a consistent and accessible way by departments.
122. The next stage of this process will be ensuring that new systems can accommodate new data requirements which are accessible on a regular basis.

**ACTION AREA F – INFORMATION**  
**PRIORITIES FOR 2009**

- **For the Policy Council's Policy and Research Unit to continue review the data collection methods in place to ensure that data is available upon which to effectively monitor the local housing market, and the effect of housing and planning policy.**
- **For the Policy and Research Unit to continue to work closely with ICT to ensure that housing related data can be effectively captured across departments, as identified in the corporate ICT Strategy.**

## CONCLUSION

123. The above commentary provides evidence of the ongoing progress that has been made in furthering the priorities of the CHP during 2008. On behalf of the Housing Department board, I would like to take this opportunity to place on

record our appreciation of the concerted efforts of all Housing Department staff, and members of staff in other departments, external agencies and voluntary groups, for their help in moving these important CHP initiatives forward.

124. Many of the priorities for 2009 as outlined herein, and as shown in Appendix II, are important corporate initiatives that must remain high on the political agenda, if the States Housing Strategy is to continue to be implemented. Accordingly, the Department is mindful that as housing has not been identified as a stand-alone objective within the GBP, it must be effectively integrated within the new Social Policy Plan if the CHP is to be sustained with the ongoing success that has marked its inception. The momentum achieved over recent years must not be lost.
125. The Housing Department thus welcomes the commitment of the Government Business Plan Team to assist with the successful implementation of the CHP. (NB A Level 2 action under Priority 12 of the Government Business Plan.)

#### **RECOMMENDATION**

126. The Housing Department recommends the States approve the priorities under the six Action Areas of the Corporate Housing Programme for 2009, as set out in this report.

Yours faithfully

D Jones  
Minister

## **APPENDIX I**

### **STATES HOUSING STRATEGY**

- To ensure that all persons legally resident in Guernsey have access to housing accommodation to meet their reasonable needs.
- To meet housing needs in a sustainable manner in the long-term interests of the community as a whole, making prudent use of all resources and recognising that investment in housing must be prioritised and compatible with strategic policies and the wider programme of public expenditure approved by the States.
- To ensure that there are measures in place to limit any growth in population through immigration in order to manage housing demand in accordance with the principles of sustainability.
- To provide the community with a range of housing options, acknowledging that while home ownership has historically been the preferred means of meeting housing needs, good quality, fairly priced housing may be provided across the housing market by other means and through a variety or mix of agencies – public, private and voluntary.
- To enable housing to be provided for those financially unable to enter the private housing market, either to purchase or rent, through a range of housing measures attuned to meeting their specific housing needs including social rented housing, partial ownership schemes etc.
- To enable the provision of supported accommodation for persons with special needs including accommodation for older persons, young people, people with a learning disability, persons with a mental illness, ex-offenders etc.
- To maintain and improve the quality of housing in Guernsey across all sectors bearing in mind the impact of housing conditions on the health and well-being of the community.

## **APPENDIX II**

### **CORPORATE HOUSING PROGRAMME – PRIORITIES FOR 2009**

#### **ACTION AREA A – FISCAL POLICY**

- For the Treasury and Resources Department to continue to consider, identify and take into account, the impact of the new Economic and Taxation Strategy, and other new fiscal policy measures, on the Guernsey housing market and the housing choices available to low and middle income earners.
- For the Treasury and Resources Department to review Document Duty.

#### **ACTION AREA B – LAND USE POLICY AND HOUSING DEVELOPMENT**

- For the Environment Department to continue to work to implement the new Planning Law, including drafting legislation to enable planning covenants to be applied to HTAs in private ownership.
- For the Environment and Housing Departments to work together to develop the mechanism by which planning covenants could be applied to the HTAs, for application as and when required.
- For the SLPG to review the Strategic Target for the creation of new homes in the light of the findings of the 2006 Housing Needs Survey and to set specific annual targets for each tenure.

In the light of the outcomes of the above:

- For the SLPG to determine whether any of the HTAs should be released and, if so, in what order of priority.
- For the SLPG to establish, by January 2009, the feasibility of accommodating the later phases of the redevelopment of the Grand Bouet Estate on alternative sites to enable the Grand Bouet to be considered for use as a Strategic Industrial Reserve.

#### **ACTION AREA C – INTERMEDIATE HOUSING MARKET**

- For the Housing Department to continue to work closely with the Guernsey Housing Association to provide new and replacement social housing that is targeted to address the imbalance in the States' housing stock and to provide a range of social housing options that includes Partial Ownership.
- For the Housing Department to complete its review on initiatives to support first-time buyers.
- For the Housing Department to continue to sell those properties identified as incompatible, including 20 homes at Jardin de Haut.

- For the Guernsey Housing Association to continue to incorporate sustainable elements into all new build programmes.
- For the Housing Department to continue to support the GPRLA to progress the self-regulation of the private rented sector, including widespread distribution of a common tenancy agreement and the possibility of establishing an accreditation scheme for its members.
- For the Housing Department to co-ordinate and finalise proposals for a cross-departmental and multi-agency approach to facilitate improvements in the standards of some lodging houses and staff accommodation.
- For the Housing Department to finalise and report to the States its findings on a review of the Rent Control (Guernsey) Law 1976.
- For the Housing and Health and Social Services Departments to report back to the States on a “key worker” housing strategy.

#### **ACTION AREA D – STATES-OWNED STOCK**

- For the Housing Department to review its Allocations Policy.
- For the Housing Department to review the Rent and Rebate Scheme to determine rent levels for 2009.
- For the Housing Department, working closely with the Social Security Department, to examine the future of the Rent and Rebate Scheme.
- For the Housing Department to continue with its long-term improvement/modernisation programmes for States’ houses.

#### **ACTION AREA E – SUPPORTED HOUSING PROVISION**

- For the Housing and Health and Social Services Departments to present to the States an integrated housing, care and support strategy for older persons.
- For the Housing and Health and Social Services Department to co-ordinate the development of a strategy for supported housing.

#### **ACTION AREA F – INFORMATION**

- For the Policy Council’s Policy and Research Unit to continue review the data collection methods in place to ensure that data is available upon which to effectively monitor the local housing market, and the effect of housing and planning policy.
- For the Policy and Research Unit to continue to work closely with ICT to ensure that housing related data can be effectively captured across departments, as identified in the corporate ICT Strategy.

**(NB The Policy Council has no comment on the proposal.)**

**(NB The Treasury and Resources Department has no comment on the proposal)**

The States are asked to decide:-

VII.- Whether, after consideration of the report dated 9<sup>th</sup> October, 2008, of the Housing Department, they are of the opinion:-

To approve the priorities under the six Action Areas of the Corporate Housing Programme for 2009, as set out in that Report.

**PUBLIC SERVICES DEPARTMENT****GUERNSEY AIRPORT – PAVEMENTS REHABILITATION**

The Chief Minister  
Policy Council  
Sir Charles Frossard House  
La Charroterie  
St Peter Port

31<sup>st</sup> October 2008

Dear Sir

**1. Executive Summary**

- 1.1 This report provides a detailed review of options to refurbish and rebuild the various surfaced areas at Guernsey Airport, including the runway, taxiways and aprons, hereafter collectively referred to as Pavements. The purpose of the report is to provide States Members with details of the baseline design brief ahead of the main capital prioritisation debate, which will bring the existing runway, the associated safety zones and aircraft parking areas up to standard.
- 1.2 It also explains why the Department is not persuaded that a longer runway is required at this time. It is aware of the different views on this issue and in this respect the proposals set out in this report preserve the option for an extension to the runway to be constructed at a future date without significant additional work to the current length of runway. An opportunity to conduct further research on this matter is included in this Department's recommendations, at the request of the Commerce and Employment Department.
- 1.3 The States of Deliberation is asked to note this brief. In so doing the Department wishes the States of Deliberation to be fully aware of these proposals ahead of the planned debate on the prioritisation of capital projects in 2009. The reasoning is two-fold. First, having an airport which can provide connectivity with major UK airports is an essential for this Island, and not simply highly desirable. Secondly, to defer a decision on the essential and comprehensive remedial scheme will lead to hundreds of thousands (possibly millions) of pounds being spent on patching what exists, whilst doing nothing to address the fundamental issues such as the safety zones and runway strength.
- 1.4 In Guernsey the strength of the runway and aircraft parking areas (aprons) has been reducing gradually over the years and has reached a critical point where major works have become essential.

- 1.5 The runway was last completely reconstructed in 1974. Given that this type of work can be expected to last 15-30 years, it can be seen that the Island has managed to obtain maximum value by making it last nearly 35 years.
- 1.6 The runway and aprons are now at the point where extensive, and in some cases urgent, works are needed to bring them to the necessary standard. Unfortunately however, this is not just a case of laying another thick coat of asphalt.
- 1.7 In considering what to do, it must be recognised that the safety standards for airports are stringent, and set by international standards which are, with very few exceptions, non-negotiable.
- 1.8 Furthermore, international regulations require that when any major repairs are planned, an Airport must seek to rectify any aspects which fall below modern aviation standards, commonly called 'non-compliances'.
- 1.9 In Guernsey's case there are a number of non-compliances, the main being the adequacy of the grass safety areas at each of end of the runway (RESAs), in which the aircraft can run to a stop. At present Guernsey has close to the bare minimum permissible (approx 90m) and significantly below the standard requirement (240m). It has been made very clear that this must be addressed as a priority and the safety areas extended, particularly to the west (into fields in St Peters). Failure to do so promptly risks the imposition of reduced take-off and landing distances. If this happens it will impact severely on the ability to handle traffic to and from London and other major UK airports.
- 1.10 Similar safety work is also required alongside the whole runway to ensure that if an aircraft veers off, it can stop safely. In addition there is a noticeable dip in the western most section of the runway which has to be levelled out.
- 1.11 In addition the load bearing strength of the runway and aprons has reached a stage where one of the main airlines serving the Island is unable to use its new jet aircraft without significant operational restrictions.
- 1.12 The approach and ground lighting system is also at the end of its life and must be replaced.
- 1.13 With major works planned, it is appropriate to examine whether the runway should be lengthened. The Department has considered this carefully and concluded that fixing what exists and making it safe, in line with current standards, is the essential task and the only thing it can justify at this time.
- 1.14 As the Airport operator, the Department has seen no evidence to justify an extension, nor is it persuaded that the situation will change in the foreseeable future. Nonetheless, it is aware that others with a different perspective see merits in an extension as a way of 'future-proofing' the Island for whatever

might lie ahead. It would be feasible to carry out the baseline works as proposed and to initiate further actions including, if necessary, a planning inquiry into a runway extension, the outcome of which would guide the States in developing the Rural Area Plan and ensure that if and when an extension was found necessary, be that in ten, twenty or thirty years time, it could be constructed.

- 1.15 The Department's proposals therefore concentrate on carrying out the urgent and essential works to the runway and aprons as they are at present. Indicative costs are nonetheless provided for a longer runway. In addition, at the request of the Commerce and Employment Department, the Policy Council has agreed to undertake a strategic assessment of the implications on the Island's future wellbeing if the runway is not extended to 1700 metres in the near future.
- 1.16 One thing is for certain, the refurbishment of the runway, aprons, safety areas and ground lighting has to be carried out in the near future. These works are not 'nice-to-haves', they are essential. The life of the existing has been eked out as far as, if not further, than could ever have been hoped, but the time has come to carry out work, or risk a serious downgrading of airport capability.
- 1.17 The option of patching to extend the life of the runway by a year or two has been explored, but not pursued, because this work alone will cost multiple millions and will be abortive as it will have to be replaced when the runway is refurbished. It is also uncertain whether such temporary work will be acceptable to the CAA, not least as it will fail to address any of the non-compliances.
- 1.18 The total predicted cost for approval is £84.5m (detailed as Option A elsewhere in this report). The Department recognises that it is, of necessity, presenting the details of a major project to the States in advance of the capital prioritisation debate planned for March 2009. This is to ensure that the States is fully aware and informed of the necessity of this work prior to that debate.
- 1.19 The report outlines the costs of the options, but not the mechanism by which all this will be funded. While possible, it is considered undesirable, and probably unwise, to load all the costs of these works onto the travelling public. It will therefore be for the Treasury and Resources, Commerce and Employment and Public Services Departments, working in conjunction with the Policy Council, to determine the extent to which the costs of this project can be recovered and over what timeframe and to advise the States accordingly.
- 1.20 To maintain the Airport to current standards, Guernsey must spend a significant sum. This is a decision that cannot be put off for a year or two without serious risk to the economic and social well being of this community.

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## 2. Overview

- 2.1 The programme of works set out in this report represents a major civil engineering project which will take around 24 months of construction work, some of it at night. The impacts of this project are not to be underestimated. This work has to be accommodated around the normal airfield operations and will therefore need to be very carefully planned and executed, with extensive consultation and mitigation to minimise the disruption to our customers, neighbours and members of the public.
- 2.2 The airport runway has been subject to friction re-treatment on two separate occasions since it was last resurfaced in 1974. Over time, the pavement has been worn down through routine use, and this is reflected in a reducing runway classification number (PCN). In addition, the runway lighting is now difficult to maintain, due to a lack of spares caused by obsolescence. An initial engineering assessment, commissioned in 2004, included detailed reviews of the relative load bearing strengths of the other operational areas including the various taxiways and aircraft parking stands, known as aprons. The impacts of deterioration over time equally apply to these pavement surfaces.
- 2.3 Whilst some restrictions are in place now as a result of the current pavement conditions, they are, on the whole, minimal and do not significantly affect the airport operation. However, any delay in proceeding with this major pavement rehabilitation runs the risk of bringing with it further restrictions on aircraft movements, or the need for abortive interim work that would unnecessarily disrupt the airport operations, at a relatively high cost for no long term gain. A significant investment and programme of works at Guernsey Airport has to be progressed without further delay; in that respect this work is non-optional.
- 2.4 It is a requirement of the Civil Aviation Authority (CAA) that whenever an airport is undertaking any significant resurfacing or improvement works, any existing non-compliances must be reviewed and wherever possible addressed in line with national and international civil aviation regulations and guidelines. The runway and airside pavements at Guernsey Airport are non-compliant in a number of areas. In addition to these CAA requirements against which the Airport is audited and licensed, there is a matter of principle where, in the interests of improving safety and the application of worldwide aviation guidelines, the Airport should achieve compliance with current standards anyway, in so far as this is reasonably practicable. The underlying philosophy in advancing these proposals has been to seek to deliver a safe airport which is fit for purpose at the most economic price.
- 2.5 The baseline cost of the core construction works was estimated in November 2007, at £51.1m. The estimates provided at that time, and presentations to States Members in January 2008, made it clear that these cost estimates were subject to fluctuation, and did not include sums for contingency, building inflation, fees,

land purchase, etc. Taking later cost estimates into account (June 2008), which were modified following receipt of site survey information, the baseline cost is now estimated at £57.8m. Taking into account estimates for the other project costs, the total predicted budget for approval will be £84.5m (detailed as Option A elsewhere in this report).

- 2.6 The above cost would further increase to approximately £133.7m (or £118.7m if constructed to current runway specification [Code 3]) should the States of Deliberation resolve to provide a runway extension to 1700m (Detailed as Option B elsewhere in this report) as the single project.
- 2.7 Part of the brief of the Department, in accordance with a Resolution of the States of Deliberation in November 2003 has been to consider the opportunity to extend the airport runway from its current length (1463m) to 1700m. The Department has looked at this issue very carefully, but through consultation with the airlines and airport users, and in recognition of developments in aircraft type and technology since the matter was last debated by the States in 2003, it has concluded that to spend an additional sum of £34m or £49m (depending on specification chosen) to add an extra 237metres of runway could not be justified. The Department is however strongly and urgently recommending increased Runway End Safety Areas (RESAs), which will lead to some operational benefits in terms of increased runway take-off distances. The provision of longer RESAs can be most effectively provided through displacement of the current runway length around 125m further west; which will require the acquisition of land to the west of the airport, and on its adjacent boundaries.
- 2.8 In consulting with a number of bodies in the drafting of this report, the Department is aware that whilst most acknowledge that a case does not currently exist for a runway extension to 1700m, others are of the view that with the prospect of changes in the aviation world it would be prudent to extend at this time to facilitate future expansion of aircraft routes and fleets. This is the clearly the view of the Commerce and Employment Department as set out in the attached letter dated 30 October 2008 (Appendix 9).
- 2.9 The process for providing a runway extension to 1700m now will require a number of separate workstreams which will take time, probably years, to complete. This would include the requirement for a planning inquiry, as well as further detailed redesign work. Regrettably, the current condition of the runway would further deteriorate over this extended timeframe, and this would impact on the immediate operations.
- 2.10 As an alternative to providing a full 1700m extension now, consideration has been given to refurbishing the runway at its existing length in a way that would allow an extension to be added at a future date. In this respect it is assessed that there are two practicable options, one is to spend an extra £24m on the reconstruction to bring it to a higher specification (Code 4 – see Section 6), the other is to refurbish the runway as planned (Code 3) in the knowledge that it can

also be extended. The higher specification (Code 4) would provide marginally greater take off capacity for larger aircraft. This proposal for reconstruction to the higher specification has been carefully contemplated; however the Department will not be advancing this option for further consideration, as the core underlying issue at this stage is what the Department believes to be an absence of a commercial demand for a 1700m runway.

- 2.11 The Department recognises the views of the Commerce and Employment Department as detailed in Appendix 9 to this report. For this reason the Department is willing to participate in a review led by the Policy Council, in consultation with the Treasury and Resources, Public Services and Commerce and Employment Departments, which will undertake a strategic assessment of the implications on the Island's future wellbeing if the runway is not extended to 1700 metres in the near future and to ensure the results of that assessment are available to the States for consideration in due course.
- 2.12 If the States approves the current works as recommended but a future States decides to extend the runway, there would, in addition to the ground-works, be some 'duplicated' costs in the region of £4m (at today's prices), the core elements of which would be the repositioning of ground lighting and communications equipment.

### **3. Background**

- 3.1 At its meeting held on 26th November 2003 (Billet D'Etat XXV, 2003), the States of Deliberation considered specifically whether a runway extension should be constructed at Guernsey Airport. In addition the States noted that further reports would be submitted to the States in respect of routine resurfacing and rehabilitation works for the existing runway and a programme to undertake resurfacing of the concrete aprons at the Airport.
- 3.2 Having considered the report dated 23<sup>rd</sup> October 2003 of the Board of Administration, the States of Deliberation resolved:
- a) That a runway extension shall not be constructed at Guernsey Airport at the present time.
  - b) To direct that, when the States Board of Administration or its successor Department next reports to the States regarding routine, rehabilitation or upgrading works to the Guernsey Airport runway, the Report shall include:
    - i. The additional costs that would be incurred to carry out runway works capable of being part of a strategy to improve the runway along the lines of the recommendations contained with the BAE SYSTEMS Infrastructure Solutions' Guernsey Airport – Runway Extension Report 1 – Runway and Taxiways January 2003;

- ii. Recommendations that would enable the States to resolve, if it so wished, to carry out a basic maintenance project or an upgraded project leading to an improved and lengthened runway; and
  - iii. Recommendations regarding States funding of any strategic betterment of the runway.
- c) To direct the States Board of Administration to continue to review the most appropriate provision in regard to the Instrument Landing System at Guernsey Airport.
- d) (1) To direct the States Board of Administration to continue to assess the requirements in respect of Runway End Safety Areas at Guernsey Airport and to report back to the States in due course; and
- (2) to authorise the States Board of Administration to appoint consultants and undertake investigations and preparatory works as necessary adjacent to the eastern and western ends of the runway for potential future Runway End Safety Areas (RESA) construction, as set out in that Report, subject to the approval of the States Advisory and Finance Committee in each case.

### **Preparatory Works**

- 3.3 Shortly after the Public Services Department assumed responsibility for the operation of Guernsey Airport from the Board of Administration, tenders were sought for the first stage preparatory works. Following a tender exercise, Scott Wilson was appointed as an Engineering Consultant in August 2004 to carry out a full pavement inspection report which involved a variety of techniques to determine the condition of the existing paved areas.
- 3.4 These reports were received and considered during the summer of 2004, and as a result of the information derived from those surveys, a draft scope document was drawn up to secure the appointment of appropriately qualified and experienced technical consultants to oversee the detailed design and implementation of the project. The scoping document was approved by the Public Services Department in January 2006; along with a recommendation that in keeping with States best practice a 'Pavements Project Board' be formed to oversee the management and planning of the project. The Project Board was constituted and met for the first time in March 2006. The Project Board comprises two Public Services Department Board members as well as senior civil servants from the Public Services and Treasury and Resources Departments and St James' Chambers. The membership of the project board provides political, project management, civil engineering, legal and aviation related skills to oversee the project.

- 3.5 The Pavements Project Board invited expressions of interest from consulting engineers by placing an advertisement in Flight International in May 2006. Various respondents were invited to tender following a shortlisting process and a site evaluation visit. Tenders were issued for consulting engineers in October 2006, with a tender return date of January 2007.

### **Appointment of Project Consultants**

- 3.6 RPS Burks Green (RPS-BG) was appointed in June 2007 to undertake the design for the rehabilitation of the runway pavement, apron stands and taxiways, and for the subsequent project management through to the tender and construction stage.
- 3.7 The acceptance of its tender was subject to the parties entering into a formal contract, but to do this, the scope of the project had to be more clearly defined and understood. This was particularly necessary as RPS-BG had submitted a tender based on a fee percentage for Royal Institute of British Architects (RIBA) for stages from 'Outline Proposals' to 'Tender Action'. The purpose of the initial work culminated in the issue of a report from the company which enabled the Strategic Brief to be prepared.
- 3.8 RPS-BG undertook an airside infrastructure master planning exercise to review and recommend options for the rehabilitation and/or improvements to the airfield pavements. This involved a desk study together with a number of meetings with key airport staff, other States of Guernsey Departments and the Guernsey Airport User Committee. Whilst not all of the proposed development work included in that master plan fell within the scope of the RPS-BG design commission for the pavements rehabilitation project, it was considered important that the design for the works that are sanctioned took into account the longer term objectives of the Airport. RPS-BG also reviewed the detailed recommendations contained within the BAE Systems reports from 2003, together with the results of the detailed survey work undertaken since that date.
- 3.9 This States report identifies matters that have been reviewed and considered as part of the airport infrastructure master planning process and which have been subsequently ratified by both the Pavements Project Board and the Public Services Department. The contents of this report have formed the basis of the detailed design work that has been progressed by RPS-BG under its design commission.

### **Project Scope**

- 3.10 In summary, the scope of the works has been defined as follows:
- a) Replace the hard surfaced pavements with new durable runway, taxiway and apron pavements to upgrade the load bearing capacity, surface friction and profiles of these pavements.

- b) Provide additional paved areas to facilitate the proposed pavement reconstruction.
- c) Replace the Airfield Ground Lighting (AGL).
- d) Replace and upgrade all signage and markings.
- e) Provide Runway End Safety Areas (RESAs) to meet as closely as is practicable the current Civil Aviation Authority (CAA)/International Civil Aviation Authority (ICAO) requirements and to provide mitigation if the full requirements cannot be achieved.
- f) Re-grade the runway strip to comply with the CAA/ICAO requirements.
- g) Provide new fencing and crash gates as necessary.
- h) Provide emergency access tracks as necessary.
- i) Provide civil infrastructure in readiness for security check points.
- j) The runway proposals are to include a review of further options for the correction of any deficiencies in vertical alignment (undulation).
- k) The runway proposals are also to include consideration of the potential for runway extension to 1700m.
- l) Replacement/rehabilitation of the existing drainage system as necessary.
- m) Incorporate drainage to cater for future airside pavement developments as appropriate.
- n) Upgrade the drainage system to incorporate pollution control as necessary.
- o) Consideration to the advantages/disadvantages of moving from self manoeuvring aircraft parking stands to nose-in/push-back options.
- p) Consideration for the installation of fixed electrical power at head of stands. Alternatively for the provision of ducting for this so that cabling could be installed at a later date.

3.11 In addition to these basic elements incorporated into the scope it was recognised that other opportunities might arise and impact on the overall project brief including future developments by third parties (including hangarage), the possibility of re-alignment of one of the existing taxiways (Delta), options for the provision of a dedicated helipad, incorporation of a stand where aircraft

wash-down could be undertaken without risk of surface water contamination, facilities for an engine run-up bay, as well as the upgrading of the Instrument Landing System from Category 1 to Category 2, which would improve serviceability of the airport in low visibility (see Section 10 of this report).

3.12 Guernsey Airport has an ‘Airport User Committee’ (constituted in June 2005), which has proved to be a useful source of feedback and comment on a wide variety of policy and strategic issues. Soon after the appointment of RPS-BG, a meeting was held with the Airport User Committee to examine the initial scope of the project. As a result of that feedback the Project Board considered there was merit in adopting the initial scope to include a number of desirable requirements that were raised:

- a) That a further taxiway (Echo) could desirably be widened to accommodate larger aircraft.
- b) That consideration be given to the potential for development to the north of the runway, within the airport curtilage.
- c) That there should be more hard surfaced apron pavement provided to accommodate more aircraft and that the west grass park should be hard surfaced.

3.13 Meetings with the Environmental Services Division (ESD) of the Public Services Department in the scoping stage of the project revealed that the foul main sewer running from housing and other developments to the south of the airport terminal and along the Route de Farras to the southwest was in need of upgrading. It would be possible for some of the public sewer extensions recently undertaken through St Peters to be connected by the laying of a main extension through the airport perimeter. In the event that this sewer extension was provided through the airport boundary, then any pollution control mechanism installed to deal with Airport waste water could discharge into this foul sewer extension. If this were not possible, then such a discharge could be directed to the north east of the airport boundary or stored on site and removed by tanker as necessary.

3.14 Scoping meetings with Guernsey Water also identified the requirement to prevent polluted surface water from the airside pavements entering the St Saviour Reservoir, which is sited to the northwest of the Airport.

#### **4. Aerodrome Regulation and Licensing**

4.1 The licence for the operation of the Airport is granted by the Bailiwick of Guernsey’s Royal Court, based on a recommendation by the UK Civil Aviation Authority’s Safety Regulation Group (CAA). The CAA undertakes an annual audit of the Airport and provides advice in line with their licensing document, CAP 168 “Licensing of Aerodromes”. The role undertaken by the Royal Court

of Guernsey will in due course pass to the Director of Civil Aviation for the Bailiwick of Guernsey. This statutory official role has previously been approved by the States of Deliberation.

- 4.2 The CAA publication, CAP 168 – Licensing of Aerodromes, describes “...the aerodrome physical characteristics that are to be taken into account when an aerodrome is to be licensed or when developments are under consideration.” It however explains that “... in making its assessment of an application for or continuation of a licence the CAA will adopt as flexible an approach as is consistent with the achievement and maintenance of a satisfactory level of safety”. All aerodromes differ, and to allow the CAA flexibility to deal with the different situations encountered, some specifications are phrased using the word “should”. This does not mean that compliance is optional but rather that, where insurmountable difficulties exist, the CAA may accept an alternative means of compliance, provided that an acceptable safety assurance from the applicant or licensee shows that the safety requirements will not be reduced below that intended by the requirement.
- 4.3 Any limiting conditions or mitigating measures that compensate for any increased risk, as described in the safety assurance, will take account of the anticipated flying activity and any other non-compliances, including those documented as variations from licensing requirements that may already exist. Thereafter, the conditions or mitigating measures, and any other non-compliances, including variations, will be reviewed by the licensee and the CAA periodically, in particular when any significant changes in activity or aerodrome development is proposed. “... Where development work, including changes to the physical characteristics, aerodrome lighting and other visual aids is proposed, the CAA shall be consulted...”
- 4.4 The runway and airside pavements at Guernsey are non-compliant with the current CAA requirements laid down in CAP 168 in a number of respects.
- 4.5 Previous survey information has identified that many of the airside pavements are life expired and require major rehabilitation works to restore them and upgrade them for continued use by the existing and potentially newer and larger aircraft fleets that are likely to use Guernsey Airport. For this reason, the CAA would undoubtedly classify this work as “development(s)”, requiring that non-conformances should be rectified “except where insurmountable difficulties exist”. This work is therefore obliged to review such non-conformances and to rectify as many non-conformances as is practically possible.
- 4.6 In addition to this CAA requirement, as a matter of principle it is appropriate that in the interests of improving safety and the application of worldwide aviation standards, the Airport should achieve compliance with current standards anyway, in so far as is reasonably practicable.

- 4.7 There have been two overrun incidents at Guernsey Airport in recent history, one on 7 December 1997 and the most recent on 8 March 2006. In this latter incident, the aircraft was only just able to stop within the airport boundary and within the current RESA. Critically, CAA regulations (determined under CAP 168), cite overruns as one of the primary reasons why an aerodrome authority should review whether its minimum distance RESA's are sufficient. If the CAA was to consider that given our overrun history, longer RESA's were required, these may have to be provided through reducing the operating length of the existing runway. This in turn would lead to a curtailment on the size of aircraft that could continue to operate into the island.
- 4.8 The most recent annual aerodrome inspections by the CAA have advised that the runway friction be monitored more regularly until the runway refurbishment programme is undertaken. Its report has included recommendations that the refurbishment of the runway be undertaken at the earliest opportunity.

## **5. Design Aircraft**

- 5.1 In planning for the refurbishment works, it is common practice to produce the design against a baseline aircraft. The application of such a process needs to take into account various factors in the operation of that aircraft, including most obviously its physical dimensions (length, width, tail height, weight, etc).
- 5.2 Aviation consultancy practice Halcrow was commissioned in 2000 to prepare a report on "Guernsey Airport - Runway Extension and Pavement Evaluation", which was supplemented in April 2001 by a report on "Guernsey Airport Runway - Extension Study - Aviation Industry Consultation". The supplementary report was to assess the likelihood of fleet changes and how the Airport might respond in the light of the runway extension options that had been identified in their previous report. The options for runway extension are no longer relevant (refer to section on RESA – see Section 6.2). The industry survey is also now somewhat outdated due to improvements in the design of aircraft, as well as to moves toward more fuel efficient and larger capacity aircraft. However, the study on potential aircraft types and the length of runway required for each of these is still very relevant to the current proposals.
- 5.3 A report on "Guernsey Airport – Runway Extension (Runway and Taxiways)" was prepared by BAe Systems in January 2003. This report considered that the final runway length at Guernsey should be suitable for the new generation of regional jets (specifically then the Embraer 170,175, 190,195 and the Bombardier CRJ700 and 900). The report concludes that a 1700m minimum runway length would accommodate these aircraft with full passenger payload, but reduced range. It also concluded that this runway length would accommodate the smaller range of Boeing 737 aircraft with reduced payload. The use of the regional jets cited in this report (with the exception of the Embraer 195) has dramatically declined over the last 5 years for short haul flights, which are dominant in Guernsey. The need for better fuel consumption

and for improved airline economics has seen a switch in the use of these relatively small regional jets, in favour of higher capacity and more economic turbo-prop aircraft such as the ATR and Dash8 aircraft.

### **Current Requirements**

5.4 Guernsey Airport is currently served by three main scheduled service providers, using the following aircraft:

- Flybe (Dash 8 Q400). The company is pressing to introduce its Embraer 195 aircraft in place of the BAe-146 once runway works are complete. The latter aircraft was withdrawn from service on 26<sup>th</sup> October 2008.
- Aurigny (ATR 72 and Trislander)
- Blue Islands (Jetstream 32, Trislander and Dornier 328)

Freight aircraft that operate into Guernsey typically include the Electra 188 and ATP.

All these aircraft types are able to carry full payloads and adequate fuel for the UK and European destinations that are currently served, using the existing runway characteristic, with the exception of the Embraer 195 (see following paragraphs).

### **Potential Future Requirements**

5.5 Flybe withdrew its BAe 146 from service at the end of October 2008. The aircraft had been used for the Guernsey - Gatwick route and represented the only scheduled commercial jet operation on the Island. Before withdrawing the aircraft from Guernsey the airline had sought to replace the BAe 146 with another jet aircraft, the Embraer 195.

5.6 Flybe advised that the Embraer E195 could be accommodated on the existing runway with immediate effect, however given advice from RPS–BG and more recent generic advice from the CAA that is now applied when undertaking runway resurfacing, the airline was advised that until works on the runway were completed the aircraft would be subject to payload restrictions. These restrictions rendered the aircraft's use in the short term uneconomic. However once works are complete the aircraft would be able to operate without restriction should Flybe or any other operator choose to do so.

5.7 As previously reported by BAe Systems, the runway would need to be extended to 1700m to accommodate the smaller Boeing 737 variants and similar aircraft on a viable basis. Jersey Airport has a number of operators, that currently operate Boeing 737 or similar aircraft and has a runway length of 1706m.

5.8 The additional cost of extending the runway to 1700m at Guernsey Airport would be up to £49m (over and above the baseline design cost summary as

detailed on Table 8). This sum includes land purchase and road re-routeing costs, which could be in the order of £6m. This is because the only means of achieving that extension would be to in-fill and develop the valley at the east end of the airfield. Unfortunately that development would require additional and very significant civil engineering requirements in filling the valley. Aside from this, in the event the runway was extended, there is an argument that it should then be placed into a higher runway ‘code’ (from Code 3 to Code 4) which increases the demands on longitudinal profile compliance. This would then necessitate far more work than is being proposed to comply with the profile requirement of the existing runway length (1463m).

- 5.9 In addition, work carried out by the Commerce and Employment Department since 2006 to identify potential new routes would suggest that there is very little appetite from carriers to operate new routes into or out of Guernsey. This is largely as a result of the size of the resident and visitor market. No airlines consulted thus far have cited the runway length as a limiting factor; instead, the focus has been on the limited catchment size of both residents and visitors as this is seen as the greatest limitation on new route viability.

#### **Aircraft Stand Layout - Design Aircraft**

- 5.10 The majority of the low cost carriers and other European airlines are standardising their short/medium haul fleets based on the Boeing 737 variants and/or the Airbus A319/320. It is therefore recommended that the layout of the airport taxiways is designed to accommodate these aircraft – albeit that they could only land on and depart from Guernsey at the current runway length with a restricted payload. It is recommended that some apron stands are designed to accommodate these aircraft, but that since there is no current demand for these aircraft types, these stands are also laid out to accommodate other aircraft such as the Embraer 195 or smaller aircraft that currently utilise Guernsey Airport.

#### **Pavements - Design Aircraft**

- 5.11 The tender brief identified the design aircraft for load bearing purposes as the Boeing 737-700. However the choice of the Boeing 737-700 for pavement design purposes was reviewed.
- 5.12 This aircraft would not be able to visit Guernsey without payload restrictions, depending upon the runway option adopted. It is therefore not necessarily appropriate to design the pavements to accommodate a fully laden Boeing 737-700. Table 1 shows the Aircraft Classification Number (ACN) for each of the aircraft relevant to Guernsey Airport. The ACN values depend on the aircraft weight, but also the pavement type (concrete, “Rigid” or bituminous, “Flexible”) and ground conditions. Whilst the ground conditions at Guernsey vary, there are significant areas where the ground is classified as “ultra low”. For simplicity, the figures given in the table for comparative purposes are for this “ultra low” condition. Pavements require a Pavement Classification Number (PCN) equivalent to the ACN of the adopted design aircraft.

- 5.13 It should be noted that the pavements will be designed to have a structural life of approximately 30 years. Even if the extended runway is not adopted at this time, it may be that during the next 30 years, it becomes more viable. Furthermore during this timescale it is likely that improvements in engine and aircraft performance will be achieved, as they have been over recent years perhaps allowing heavier, B737-700 type aircraft to be accommodated on the current runway length.
- 5.14 Flexible pavements (asphalt) can be strengthened by overlay whereas rigid, concrete pavements are more difficult to overlay and are often therefore reconstructed to accommodate heavier aircraft rather than overlaid. Furthermore, it is difficult to accommodate overlays close to the terminal building, where levels are constrained by the building.
- 5.15 At Guernsey, convention has dictated that the apron pavements are constructed in concrete as this is a more durable material for this environment, where aircraft are performing tight turns and equipment associated with servicing the aircraft require a hard, flat surface. In hot summer conditions, rutting can occur to asphalt surfaces when aircraft are stationary for periods of several hours. The Project Board has considered this matter previously and recommends the continued use of concrete in the apron areas.
- 5.16 The taxiways and runway will be most appropriately overlaid in flexible construction to achieve the strengthening that is required. In these locations, aircraft are not stationary for the long periods of time that can lead to the deformation of flexible pavements during hot weather. For this reason, consideration should be given to retaining concrete at the runway ends. However, due to works programming constraints, it is most likely that these will have to be overlaid in asphalt. The use of asphalt overlays to the taxiways and runway has also been endorsed by the Project Board.

<b>Aircraft Type</b>	<b>Flexible Pavement ACN</b>	<b>Rigid Pavement ACN</b>
<b>Commercial / Freight Aircraft</b>		
Boeing 737-700 (Fully Laden)	49	50
Boeing 737-700 (Empty Weight)	23	24
Boeing 737-600 (Fully Laden)	45	45
Boeing 737-600 (Empty Weight)	22	23
Boeing 737-500 (Fully Laden)	43	43
Boeing 737-500 (Empty Weight)	21	21
Boeing 737-400 (Fully Laden)	49	49
Boeing 737-400 (Empty Weight)	23	23

Boeing 737-300 (Fully Laden)	45	46
Boeing 737-300 (Empty Weight)	21	22
Boeing 737-200 (Fully Laden)	41	41
Boeing 737-200 (Empty Weight)	19	19
Airbus A320-200 (Fully Laden)	50	48
Airbus A320-200 (Empty Weight)	25	24
Airbus A319-100 (Fully Laden)	50	50
Airbus A319-100 (Empty Weight)	22	23
Airbus A318-100 (Fully Laden)	41	38
Airbus A318-100 (Empty Weight)	23	22
Embraer 195 (Fully Laden)	35	36
Embraer 195 (Empty Weight)	18	18
Dash 8 – Q400 (Fully Laden)	20	19
Aerospatiale ATR72 (Fully Laden)	15	15
BAe 146 (Fully Laden)	31	31
BAe ATP (Fully Laden)	16	16
Lockheed 188 Electra (Fully Laden)	36	36
Fokker F27 (Fully Laden)	14	13
BN Trislander (Fully Laden)	<3	<3
BAe Jetstream 32 (Fully Laden)	6	5
<b>Business Aircraft</b>		
Gulfstream V	31	33
Learjet 60 (Fully Laden)	8	8
Dornier 328 Jet (Fully Laden)	11	11
Dassault Falcon 900 (Fully Laden)	15	15
Bombardier Challenger 800 (Fully Laden)	17	18
Bombardier Global Express (Fully Laden)	32	33
Citation 750 / Citation X (Fully Laden)	12	13

**Table 1-** Aircraft Classification Numbers for Aircraft Applicable to Guernsey Airport

- 5.17 If the runway extension is adopted either as part of the currently proposed work or at some time in the future then the PCN could be enhanced by further overlay to 50, by overlaying additional depths of asphalt.
- 5.18 Assuming that the runway extension to 1700m is not adopted at the present stage, then for the flexible pavements at Guernsey it is recommended that the current overlays are designed to accommodate a semi-laden Boeing 737 aircraft or a fully laden Embraer 195. In other words, the design strength of the pavements has to be a function of the current operational limitations of the runway length. A design Pavement Classification Number (PCN) of 36 is recommended as appropriate. This would cater for a half loaded Boeing 737-700 (or 400), and would accommodate the Embraer 195 in a fully laden state as well as the current full range of aircraft that use Guernsey Airport.
- 5.19 Because concrete pavements cannot easily be strengthened, and because the levels outside the terminal building cannot be readily lifted, it is recommended that the aprons and any other newly constructed concrete areas are reconstructed at this stage to a PCN of 50.
- 5.20 Even if the larger aircraft variants do not come into Guernsey during the next 30 years, the increased pavement strength will accommodate more movements of the generally lighter aircraft; resulting in a longer pavement life before the next major rehabilitation is required.
- 5.21 The Public Services Department has considered the impacts of recent significant fluctuations in the price of oil on the future provision of air services at Guernsey Airport. At this stage there are no formal studies on the impact of high prices of crude oil and specifically on whether it will have a lasting and damaging impact on the sustainability of air services. The Public Services Department has to assume therefore that some direct flights will continue within the Channel Islands and to the UK mainland in the short to medium term. For this reason, and even if traffic levels decline, it has to continue to provide an operational airport pavement for the foreseeable future, and this will require such a level of investment. As the previous paragraph describes, in the event that Guernsey Airport can no longer attract larger aircraft on the current level of scheduled services, the provision of the various surfaces at their proposed PCN strength will mean that they will be liable to the same level of wear and tear, and their operational life will extend accordingly.

## **6. Runway**

### **Orientation**

- 6.1 At an early stage of the design process, thought was given to whether the orientation of the runway should be modified. This has been considered, but discounted. There were very limited options to realign the runway and all options would incur considerable extra cost for negligible, if any, benefit.

### **Runway End Safety Areas (RESA's)**

- 6.2 As previously stated, Halcrow were commissioned in 2000 to prepare a report on “Guernsey Airport - Runway Extension and Pavement Evaluation”. The report was written prior to the publication of the 5th Edition of CAP 168, which was amended in February 2001 to incorporate extended RESA's.
- 6.3 In this regard, the Halcrow report stated that “The UK CAA is in the process of adopting a revised ICAO standard relating to the length of RESA's. The effect of this revision will be to increase the recommended minimum length from 90m to 240m beyond the runway strip end. It is not yet clear how these revised criteria may be applied in the UK to existing runways, or particularly those constrained by topography or land acquisition issues. Compliance with the recommended RESA length of 240m would largely negate the benefits of the runway extensions considered in this study. In this study, the effect of implementing the revised criteria in full has not been considered further. A minimum 90m RESA criterion has been used as the basis for assessment.”
- 6.4 The subsequent revision of CAP 168 stated “Licensees should not assume that the minimum distance of RESA will necessarily be sufficient, particularly where there have been changes to the environment on or around the aerodrome, or to the type or level of traffic; it is recommended that RESAs extend to at least 240m for Code 3 and 4 runways wherever practicable and reasonable licensees should review and determine on an annual basis the RESA distance required for individual circumstances, taking into account in their risk assessments factors such as:
- the nature and location of any hazard beyond the runway end;
  - the type of aircraft and level of traffic at the aerodrome, and actual or proposed changes to either;
  - aerodrome overrun history;
  - overrun causal factors;
  - friction and drainage characteristics of the runway;
  - navigational aids available;
  - scope for procedural risk mitigation measures; and
  - the net overall effect on safety of any proposed changes, including reduction of the official ‘Declared Distances’.”

A number of these factors could be considered to be favourable for the runway at Guernsey:

- 6.5 The types of aircraft that currently use Guernsey are considerably smaller than those that use larger International Airports, and are predominantly turboprop rather than jet, and therefore have slower approach and take-off speeds than typical regional jets. A safety case could potentially be made that a full 240m RESA at Guernsey could be excessive on this basis alone.
- 6.6 Equally however, both the 1999 and 2006 overrun incidents resulted from late touch-downs. In both incidents the aircraft fortunately came to rest in a relatively short distance due to the soft ground conditions. Had these incidents occurred in summer months, when the ground conditions were more firm, the stopping distances might have been longer.
- 6.7 CAP 168 states “If a RESA beyond the 90m minimum is deemed necessary but there are physical constraints to achieving the desired distance, Declared Distances should be reduced unless other mitigation measures can be demonstrated to achieve an equivalent safety result for the same set of operational circumstances. Mitigation measures that may be acceptable, singly or in combination, as alternatives to the reduction of Declared Distances, include:
- a) improving runway surfaces and/or the means of reducing and indicating rectification action, particularly for contaminated runway states...;
  - b) ensuring that accurate and up-to-date information on weather, the runway state and characteristics is notified and passed to flight crews...;
  - c) improving the aerodrome management’s knowledge, recording, prediction and dissemination of wind data...;
  - d) minimising the obstruction environment in the area beyond the RESA;
  - e) upgrading visual and instrument landing aids to improve the accuracy of aeroplane delivery at the correct landing position on runways...;
  - f) formulating, in consultation with aeroplane operators, adverse weather and any other relevant aerodrome operating procedures or restrictions...;
  - g) installing suitably positioned and designed arrester beds, to supplement the RESA...; and
  - h) publishing the RESA provision in the AIP (Air Pilot).”
- 6.8 The current runway surface at Guernsey is porous friction course (pfc), which has been treated by the Klaruw process on two occasions, the most recent in August 2007. This process involves the roughening of the runway surface by mechanically impacting the surface with many small chisel-like tool heads. CAP 168 lists surfaces that have been found to provide good friction

performance for new asphalt runways as; coarse textured slurry seal, grooving or porous friction course. This suggests that the pfc at Guernsey could not in demonstrable terms be improved as the surface is already of one of the preferred options and has been adequately maintained.

- 6.9 Improving weather data and passing this on to flight crews only allows the crew to decide whether or not to divert. Guernsey needs to maintain services as far as is possible in wet and windy conditions and these measures do not overcome any shortcomings in the runway capability.
- 6.10 Due to topography, mainly roads located to the west and the east of the airport, the areas beyond the RESA cannot readily be improved to a full 240m without significant civil engineering. However, some significant improvement can be made on RESA length to better the existing situation.
- 6.11 Whilst in theory arrester beds could be considered, there are some distinct disadvantages to these. Arrester beds allow an errant aircraft to sink into the contained material in order to bring the aircraft to a standstill in a shorter distance. In order for this to be achieved the arresting material needs to be lightweight and loose. The material therefore is easily blown, particularly by jet-wash and prop-wash. The blown material can then cause damage to sensitive ILS and landing lights that are positioned behind the beds. Recovering overrun aircraft from arrester beds is also notoriously difficult and may require special equipment.
- 6.12 Options for incorporating Compliant and shorter RESA are discussed further in this report under the heading of Runway Length.
- 6.13 The logistics even for the baseline project (Option A) are extremely challenging. There is approximately 32,000 cubic meters of asphalt to add to the surface of the runway, at depths of 1.8m in places. This alone will generate many thousands of vehicle movements for the transport of raw materials to site. The layers of asphalt will need to be built up night by night and suitably ramped for aircraft operations each day. In addition the western end of the airport site will need to be built up to achieve the displacement of the runway to accommodate extensions to the existing RESA's. This will involve around 180,000 cubic meters of fill generating many more lorry movements.

## **Runway and Runway Strip Profile**

### Runway Longitudinal Profile

- 6.14 RPS-BG has undertaken a detailed review of the longitudinal profile of runway 09-27. In summary, the longitudinal profile is non-compliant with the requirements of CAP 168. For comparison, the results from the RPS-BG study have been compared to the information presented in the BAe Systems report, dated December 2003, to check that the same conclusions have been reached.

- 6.15 The conclusion of this review is that there is a requirement to carry out some marginal re-levelling at the most easterly end of the runway and some major re-levelling at the western end of the runway (where a dip in the runway needs to be filled). The amount of re-levelling required at the western end is illustrated on the drawing at Appendix 1 (15482/A1/R01). Approximately 1.8m of build-up is required to rectify the runway profile. This re-profiling work will be undertaken during the strengthening/resurfacing pavement rehabilitation.
- 6.16 The requirements for CAA CAP 168 and ICAO Annex 14 compliance for the particular runway at Guernsey (Code 3, with Category I ILS) are different. The CAA requirements are more stringent and have a cost enhancement of £12m over the requirements to meet the ICAO requirements which involves approximately 1.8m of build-up. The programming requirements for the construction are significantly more complex and therefore attract greater risk for the CAA requirements. CAP 168 requirements have been derived from ICAO requirements for use in the local UK environment. It is not clear why the standards differ in this particular aspect. The Project Board has agreed that approvals be sought from the CAA for a longitudinal profile based on ICAO Annex 14 rather than CAP 168.
- 6.17 If the runway extension option is adopted (see under Runway Length), to provide a 1700m runway, then it is generally the case that the runway is designated at Code 4 (from Code 3) to maximise the operational benefits of the runway. In so doing the higher code would attract more exacting standards which are detailed under CAP 168 and ICAO Annex 14. For instance, the permitted change in height from one end of the runway to the other (longitudinal gradient) is then restricted from 1.5% for the Code 3 option to 1.25% for the Code 4 option. This results in a significant increase in the amount of re-grading that is required to the current runway at the western end. Instead of a 1.8m build-up of levels, a greater build-up is required. Additional re-grading is however also required elsewhere to achieve Code 4 compliance. It is nonetheless feasible to have a 1700m runway at Code 3.

*Runway Cross-Section Profile*

- 6.18 It should also be noted that the runway has a cross-fall crown that is offset from the centreline by about 3.5m. Again, this will need to be addressed during the pavement rehabilitation work, when the cross-section is re-profiled such that the crown lies on the runway centreline.
- 6.19 The runway is currently 45m wide and has shoulders 10m wide to the south and 13m wide to the north. The shoulders appear to have been installed in 1974, but the reason for doing this is not clear. For the current aircraft that use Guernsey and those that are likely to use Guernsey in the future (even with a 1700m runway), these shoulders are not required. The Department considers that these should be removed under this rehabilitation project. This will reduce the amount of overlay that is required and will reduce the impermeable area that requires drainage works.

- 6.20 Other pavement structural issues relating to the runway width and shoulders are discussed in the section on Runway Pavement Strength.

#### Runway Gradient

- 6.21 The runway at Guernsey, like those at many other airports is not flat, but has an overall downward slope towards the west. The runway elevation at the eastern end threshold is 334ft, whereas the elevation at the western threshold is 303ft. There is therefore a downward gradient of approximately 0.65%, which falls within the 1.00% maximum gradient of clause 3.3.1 of CAP 168.
- 6.22 However, this uphill slope towards the east results in the need for increased effective take-off length requirements in this direction and also an increase in effective landing distances, down the slope in the westerly direction. As a “rule of thumb”, the runway length required by a particular aircraft type or operator is likely to be increased by 10% to accommodate a gradient of 1%.
- 6.23 On this basis, for the current runway, the effective Take-Off Run Available (TORA) in the easterly direction is reduced by approximately 95m. Similarly, the effective LDA in the westerly direction is reduced by approximately 95m. This figure compares with the 120m “order of magnitude figure” given in the Halcrow report of 2001.

#### Runway Strip Profile

- 6.24 The runway strip is the area enclosing the runway 150m either side of the runway centreline and extending 60m beyond each end of the runway. Within this area there are longitudinal and transverse (cross-section) gradient restrictions. The restrictions within the Clear and Graded area, which extends 105m either side of the runway and 60m beyond the ends are more constrained. It is within these areas where most of the work is required to bring Guernsey into compliance with current requirements.
- 6.25 At present, the strips at the western end of Guernsey Airport are too steep to meet the criteria laid down in CAP 168. Generally the ground to the north of the runway is high and to the south is low. This non-compliance is to be rectified as part of the pavement rehabilitation project.

### **Runway Length**

#### Design Aircraft

- 6.26 Table 2 illustrates the runway lengths that are required by aircraft that are applicable to Guernsey Airport, including some aircraft types operated by traditional Low-Cost Carriers. Figures have been provided for fully laden and half laden aircraft. Where many of these aircraft types would not be appropriate to operate on a full payload, low cost basis, into and out of Guernsey, they have

been incorporated to illustrate that there may be options for operating a number of these aircraft at reduced payload (fuel and passenger). This would be appropriate for short haul destinations such as the UK and near Europe. These options become more applicable if or when the option to extend the runway to 1700m is adopted.

- 6.27 There are two key factors applicable to the length of the runway to accommodate different aircraft. The first is the Landing Distance Available (LDA). The other is the Take-Off Run Available (TORA). Both these distances relate to the length of asphalt/concrete pavement available for these functions. In addition, pilots and operators will take account of the distance to the first upstanding object/obstructions and stopping distances available.
- 6.28 The distances given are for dry weather conditions and standard atmospheric pressure and temperature. Longer distances are required in wet weather, lower atmospheric pressures and higher temperatures. It should also be noted that there are several variants of many of the aircraft listed depending on the choice of engines. Those listed are for the latest engine variants. The distances applicable to other variants may therefore be longer.

<b>Aircraft Type</b>	<b>Weight (kg)</b>	<b>Take Off Run Required (m)</b>	<b>Landing Distance Required (m)</b>
<b>Commercial / Freight Aircraft</b>			
Boeing 737-700 (Fully Laden)	69,400	1,750	1,450
Boeing 737-700 (Half Laden)	53,400	1,230	1,340
Boeing 737-600 (Fully Laden)	65,090	1,650	1,370
Boeing 737-600 (Half Laden)	50,735	1,230	1,280
Boeing 737-500 (Fully Laden)	60,554	2,500	1,400
Boeing 737-500 (Half Laden)	46,035	1,210	1,310
Boeing 737-400 (Fully Laden)	65,100	2,355	1,640
Boeing 737-400 (Half Laden)	49,375	1,210	1,380
Boeing 737-300 (Fully Laden)	61,236	2,644	1,512
Boeing 737-300 (Half Laden)	47,068	1,250	1,370
Boeing 737-200 (Fully Laden)	52,390	2,164	1,420
Boeing 737-200 (Half Laden)	43,870	920	1,080
Airbus A320-200 (Fully Laden)	77,000	2,350	1,790
Airbus A320-200 (Half Laden)	59,450	1,350	1,580
Airbus A319-100 (Fully Laden)	68,000	2,215	1,460

Airbus A319-100 (Half Laden)	54,080	No Info Available	No Info Available
Airbus A318-100 (Fully Laden)	66,000	1,765	1,365
Airbus A318-100 (Half Laden)	52,490	No Info Available	No Info Available
Embraer 195 (Fully Laden, 108 PAX – 2200nm)	52,290	2,179	1,282
Embraer 195 (108 PAX – 500nm)	48,100	1,460	<1,460
Dash 8 – Q400 (Fully Laden)	28,700	826	908
Aerospatiale ATR72 (Fully Laden)	21,100	1,225	1,050
BAe ATP (Fully Laden)	23,200	1,351	1,128
Lockheed 188 Electra (Fully Laden)	50,300	1,676	1,463
Fokker F27 (Fully Laden)	20,500	1,088	1,003
BAe Jetstream 32 (Fully Laden)	6,900	1,326	1,229
<b>‘Corporate’ Aircraft</b>			
Gulfstream V	40,500	1,826	966
Learjet 60 (Fully Laden)	10,600	1,661	1,042
Dornier 328 Jet (Fully Laden)	15,500	1,088	610
Dassault Falcon 900 (Fully Laden)	20,200	1,508	701
Bombardier Challenger 800 (Fully Laden)	23,700	1,919	887
Bombardier Global Express (Fully Laden)	43,700	1,691	779
Citation 750 / Citation X (Fully Laden)	16,000	1,701	1,067

**Table 2** – Typical Aircraft Take-Off Run and Landing Distances required for Aircraft Applicable to Guernsey Airport

Existing Runway

- 6.29 The single runway 09/27 at Guernsey Airport is classified as ‘Code 3C’ with a length of 1463m and a width of 45m. The current published (declared) distances for the runway are recorded in Table 3.
- 6.30 Approximately 60% of the aircraft movements occur on runway 27.

Runway Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Stopway Dimensions (m)	Clearway Dimensions (m)
09	1453	1628	1463	1453	10	165
27	1463	1737	1463	1453	nil	274

**Table 3** – Declared Distances for Runway 09-27Proposals for Accommodating Compliant RESA’s

- 6.31 In order to accommodate RESA’s beyond the runway strip at both ends of the runway, the existing runway would be displaced to the west. Land is currently under acquisition to accommodate this displacement. The remaining part of the current runway to the east of the proposed threshold would be designated as a starter extension for Runway 27, providing an additional 150m of take-off run available. An additional length of new runway would need to be constructed at the western end of the runway to compensate for this displacement.
- 6.32 In order to provide a “balanced” runway (so that the runway characteristics are similar in both directions), a runway starter extension would also be required at the western end of the runway, within the new runway construction. A balanced runway is considered important such that aircraft can take-off or land in both directions, dependent upon wind conditions, with a similar payload.
- 6.33 The area available for development is restricted by Route de la Tourelle at the western end of the runway and by La Villiaze Road at the eastern end of the runway. To achieve full length RESA’s in accordance with the recommendations of CAP 168 (240m), the length of runway available for landing will need to be reduced accordingly. This assumption is based on a recommendation that La Mare Road at the western end of the runway is permanently closed and the land incorporated into the airport site. In addition, there will be requirements to acquire land on the north west and south west boundaries of the airfield, in order to provide sufficient mandatory runway clearances in accordance with the relevant ICAO/CAA requirements.
- 6.34 As a guideline the approximate declared distances for this option are illustrated in Table 4.

Runway Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1482	1782	1482	1388
27	1538	1787	1538	1388

**Table 4** – Declared Distances for Runway 09-27

- 6.35 Whilst the take-off available for this option is 85m longer than the current runway configuration, the landing distance available is reduced by 65m. Discussions with the airline pilot representatives have advised that the landing distance is important. For this reason consideration is given to maintaining the current landing distance available and providing RESA that are marginally under those recommended in CAP 168.
- 6.36 The Take-Off distance available (TODA's) for this option are less than 1800m for both 09 and 27. This runway option can therefore remain as a Code 3 runway, which is important given that the next code of runway applies more exacting requirements in other areas of design.

*Proposals for Accommodating Non-Compliant RESAs*

- 6.37 The figures in Table 4 illustrate a marginal reduction in runway capability for landing aircraft from the current status as illustrated in Table 3.
- 6.38 For comparative purposes, drawing Appendix 2 (15482/A1/R02) illustrates an alternative layout with the existing runway length between thresholds maintained, but displaced by 124m to the west to accommodate equal RESAs at each end of the runway. In this instance, the RESAs are non-compliant, but greatly improved at 202m compared with the current 90m and 110m. This option will provide improved runway characteristics as illustrated in Table 5.

Runway Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1519	1782	1519	1463
27	1587	1799	1587	1463

**Table 5** – Declared Distances for Runway 09-27

- 6.39 The Take-Off distance available (TODA's) for this option are less than 1800m for both 09 and 27. This runway option can therefore remain as Code 3 runway.
- 6.40 The Public Services Department prefers this option and has identified this as the design to be developed for recommendation to the States. It is accepted that this option is not strictly compliant with the recommendations of CAP 168, but that a safety case should be developed to support this option and presented for approval to the UK CAA.

## Runway Extension

- 6.41 In line with the findings of the report “Guernsey Airport – Runway Extension (Runway and Taxiways)” prepared by BAe Systems in January 2003, consideration has been given to the provision of a 1700m runway. This involves the currently proposed acquisition of land to the west, but also the acquisition and development of land to the east of the current Airport boundary.
- 6.42 This development is in line with the proposal recommended in the 2003 BAe Systems report and would provide the characteristics given in Table 6. This option is also illustrated on drawing Appendix 3 (15482/A1/R03) and also provides full 240m RESAs.

Runway Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1632	1864	1632	1632
27	1632	1840	1632	1632

**Table 6** – Declared Distances for Runway 09-27

- 6.43 The Take-Off distance available (TODA’s) for this option would ordinarily exceed the 1800m limit for a Code 3 runway. The runway in this option would have to be re-classified as a Code 4 runway to meet with CAA, CAP 168 requirements. This increased coding has a number of implications, but most significantly requires improved longitudinal gradients, which was highlighted in this report under the section on Runway Longitudinal Profile (see paragraph 6.14). It is nonetheless possible to limit the TODA to 1799m and thereby allow a 1700m runway to be classified as Code 3. The approximate reduction in cost would be £15m (extra cost of extension falls from c. £49m to c. £34m).
- 6.44 As stated in the earlier section of this report on Design Aircraft - Potential Future Requirements (Paragraph 5.5), this is the only option that would provide viable Boeing 737 aircraft capability, similar to that currently available at Jersey Airport and used by operators Jet 2, Thomson Fly, Easyjet and British Airways. For comparison purposes, the characteristics of Jersey Airport are given in Table 7.

Runway Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1706	1889	1706	1645
27	1645	2469	1645	1554

**Table 7** – Declared Distances for Runway 09-27 at Jersey Airport

- 6.45 It should however be noted that there is no gradient effect at Jersey Airport. For comparative purposes, reductions of approximately 110m should be made on the easterly TORA and westerly LDA at Guernsey to compensate for the effect of the gradient.

- 6.46 The Public Services Department has determined it would be unable to make such a recommendation to the States at this time, due partly to the excessive additional cost (circa +£49m) associated with the provision of an extension and partly on the developments in aircraft type and technology since the matter was last debated by the States in 2003. Furthermore, the Department is not persuaded that there would be a requirement for a 1700m runway in the foreseeable future.
- 6.47 In consulting with a number of bodies in the drafting of this report, the Department is aware that although it has not found any case to justify providing a runway extension to 1700m now or in the immediately foreseeable future, some are of the view that an extension should be provided irrespective of current demands in order to facilitate future expansion of aircraft routes and fleets. In this connection, attached as Appendix 9 is a letter dated 30 October 2008, from the Commerce and Employment Department.
- 6.48 The process for providing a runway extension to 1700m now, would require a number of separate workstreams which would take time to complete. This would potentially include the requirement for a planning inquiry, as well as further detailed redesign work. Unavoidably, the current condition of the runway would further deteriorate over this extended time frame, and this would impact on the immediate operations.
- 6.49 As an alternative to providing a full 1700m extension now, an option for upgrading the proposed works on the existing runway length, such that at a later stage the extension could be provided at relatively minimal additional cost, has been considered by the Public Services Department. The Policy Council has agreed to undertake a strategic assessment of the implications on the Island's future wellbeing if the runway is not extended to 1700 metres in the near future. The outcome of this assessment and any further actions arising from that review will determine both the necessity and timing of any such extension.
- 6.50 As mentioned elsewhere in this report, there is an argument that a runway length of 1700m should also include an upgrade in 'Code' from its current Code 3 to Code 4. In so doing, there would be a requirement to complete additional works on the existing 1463m runway length, essentially in providing more exacting vertical profiling of the surface. The advantages of a higher code are realised on a longer take off distance (as opposed to a longer tarmac runway) which is one of a number of performance criteria used by pilots.
- 6.51 The alternative approach considered by the Public Services Department was to redesign the works for an extension to 1700m now, but to construct in two phases. The first phase would reconstruct the existing 1463m runway in its proposed position, but accommodate the more stringent alignment requirements that an eventual Code 4 – 1700m runway would require. A second phase would then involve an extension to the east, which would require additional land acquisition and a more onerous planning process.

- 6.52 As an indication, the additional cost of providing the existing runway length compliant to Code 4 (1700m) standards would be in the order of £24m, which sum would need to be added to the overall indicative project budget of £84.5m. The Department is not proposing to recommend this option to the States when the matter is reconsidered next year. The case for a 1700m runway remains unproven and the investment now would, as with a full runway extension, be somewhat speculative. Indeed the runway could be later extended at Code 3 standards to 1700m, particularly as the difference in performance criteria between Code 3 and Code 4 is relatively minimal, when considering the additional cost associated with the more extensive work.
- 6.53 More generally, the logistics of constructing a runway extension to 1700m are enormous. There would be a requirement to create additional ramping at the eastern end of the runway, with a massive amount of fill material. This ramping could not be achieved during the main works and would have to be undertaken after the main works within the current airport boundary were complete. This would extend the construction period from 2 years to 3 years. This option would also involve the closure of La Villiaze Road and through necessity re-routing of that road, including possible widening of adjacent lanes to take the displaced traffic.

#### **Runway Pavement Strength**

- 6.54 The current runway pavement is concrete at both ends and lean concrete overlaid with asphalt over the main length.
- 6.55 The main length of the runway is constructed of 200mm bituminous material overlaying between 250mm and 300mm of dry lean concrete. The runway ends are constructed of between 300mm and 323mm of Pavement Quality Concrete (PQC), which overlays 110mm of dry lean concrete.
- 6.56 In the earlier section of this report on Pavement Strength (paragraph 5.18), the project brief has identified that a PCN of 50 is recommended. However if the 1700m runway extension is not adopted at this time, then it is recommended that the flexible pavements should at this stage be designed for a PCN of 36.
- 6.57 In the CAA Aeronautical Information Publication (AIP), the current runway has a declared Pavement Classification Number (PCN) of 22/F/B/Y/T. This means that the pavement is:
- generally suitable for use by aircraft with an ACN of 22, or below;
  - generally of flexible construction (note that the ends are of concrete);
  - constructed on a medium category of subgrade
  - suitable for aircraft with low tyre pressures (less than 1.0MPa);

- classified using a technical evaluation.
- 6.58 The report also confirms that although the runway ends that are constructed in concrete are close to the requisite strength, they were constructed in 1974, and are now in need of replacement.
- 6.59 To achieve either a PCN of 36 or 50, the whole runway requires strengthening by overlay with additional asphalt or bituminous material. It is estimated that the overlay thickness would need to be approximately 120mm to achieve a PCN of 36 or approximately 245mm to achieve a PCN of 50.
- 6.60 The Scott Wilson Report had previously described the history of the airfield pavements. It also provided details of core logs that were taken through the runway and provides the results of Ground Penetrating Radar surveys that were undertaken. From all this information, it appears that the runway construction described above relates only to the central 36.6m of the runway. It is believed that the outer construction is considerably thinner, consisting of only about 80mm of bituminous material laid directly onto a granular base (similar to the runway shoulder construction). This is illustrated on drawing Appendix 4 (15482/A1/R04).
- 6.61 The existing runway is described as 45m wide, but also has a 10m shoulder on the north side and a 13m shoulder on the south side. Edge marking is provided at approximately 23m either side of the centreline.
- 6.62 The runway is classified as 3C. In accordance with CAP 168, the “C” for this length of runway designates the minimum width as 30m. The runway edge markings could therefore be moved to 18.3m either side of the centreline in order to provide a pavement of adequate strength throughout the then designated width of 36.6m.
- 6.63 If the 120mm overlay is to be continued over the outer 6.7m edges, then the overlaid pavement here will provide a reduced PCN of only about 3 or 4.
- 6.64 To achieve the requisite strength over the full 45m width, then the 6.7m edge on both sides of the runway would need to be reconstructed.
- 6.65 If the runway width is reduced to 36.6m, then the impermeable area requiring drainage will be reduced as well as the area of overlay being reduced.
- 6.66 The Public Services Department has decided that the current runway width should be retained at the current designated 45m width. For this, strengthening will be required to the outer 6.7m widths.
- 6.67 Airport staff have endeavoured to determine when and why the runway width was increased from 36.6m to 45m, with shoulders. The widening apparently

occurred during the early 1970's and it appears that it was undertaken at the request of an airline operator due to experience with strong cross winds. Current Airline Pilot representatives have urged that the 45m width be retained, but would accept the removal of the shoulders beyond the edge markings and lights. Furthermore, all but one of the airports used by the flybe pilot representatives consulted are 45m wide or wider.

### **Runway Surface**

- 6.68 The existing runway surface is porous friction course. This was laid in 1974 and has been treated by the Klaruw method to improve the friction in both 2000 and 2007.
- 6.69 In the 2007 Aerodrome CAA inspection report it was suggested that until the rehabilitation of the runway is undertaken, friction testing be carried out at three monthly intervals at 1.5m and 4m either side of the centreline.
- 6.70 CAP 168 lists surfaces that have been found to provide good friction performance for new asphalt runways as: course textured slurry seal, grooving (of marshal asphalt) or porous friction course.
- 6.71 Surface options will be explored further to determine whether grooved marshal asphalt or porous friction course would serve equally well and whether any of the newer proprietary polymer modified products (such as those used at Sumburgh, Exeter and by RPS-BG at Duxford) might be suitable. The airline representatives that have been consulted have stated that they would prefer a surface that dries quickly after rainfall.

## **7. Taxiways**

### **Existing Taxiway Arrangement**

- 7.1 Currently the airfield is served by four main taxiways. There are two additional taxiways providing access to hangar and maintenance facilities. The current taxiway layouts are illustrated on drawing Appendix 2 (15482/A1/R02). Taxiway **Alpha** runs parallel to the runway linking to threshold 27 via the north of the passenger and cargo stands; Taxiway **Bravo** and Taxiway **Charlie** that provide intermediate links to the runway; and Taxiway **Delta** that provides the link between Taxiway Alpha and the western threshold, 09. In addition, Taxiway **Echo** provides access to the General Aviation (GA) (light aircraft) hangars and the West Grass Park area and Taxiway **Foxtrot** that provides access to the maintenance hangar.

### **Taxiway Widths**

- 7.2 The current width of the two main taxiways, Alpha and Delta, is approximately 18m. The 3 link taxiways, Alpha, Bravo and Charlie, are also 18m wide.

Taxiway Echo measures approximately 7m, and Foxtrot measures approximately 10m.

- 7.3 For Code C operations, (which are applicable for aircraft with a main gear wheelbase (over 9m)), the main four taxiways are required to be maintained at 18m wide.
- 7.4 It is recommended that Taxiway Echo be widened to 10.5m to accommodate Code B aircraft (Jetstream 32), which may need to access the GA apron and West Grass Park area, during the reconstruction of the main passenger apron. This proposal was endorsed by the Pavements Project Board meeting in October 2007. The current taxiway has had restrictions applied on movements by certain aircraft types, and given increases in usage of the area over time, including construction of new hangar facilities; there is now a requirement to provide a wider taxiway.
- 7.5 Taxiway Foxtrot is used for access to the maintenance hangar by a variety of aircraft. Airport Management staff have advised that this is of adequate width for the operations undertaken.

#### **Taxiway Re-Alignment**

- 7.6 CAP 168 (Table 3.4) states that the required separation between the runway (Code 3C) and taxiway centrelines (Code C) should be a minimum of 168m. Generally the centreline of taxiway Alpha and the eastern half of Delta have a separation distance of 180m. However, there is a section of Taxiway Alpha, approximately 150m long, to the east of Taxiway Bravo, that is non-compliant in this respect. It is recommended that this is rectified as part of the pavement rehabilitation works. In addition, in order to accommodate the new Rear of Stand Road, Taxiway Alpha on either side of the current infringement should be re-aligned closer to the runway. This proposal has been ratified by the Public Services Department.
- 7.7 The western end of Taxiway Delta is located within the runway strip. Furthermore, in order that the Runway End Safety Areas can be provided, the runway thresholds need to be displaced in a westerly direction. Taxiway Delta will therefore no longer join the runway at the threshold or at the start of any Starter Extension that is provided. Drawing number Appendix 5 (15482/A1/R05) illustrates the turning circle for the Boeing 737-700 and Embraer 195 and the localised widening to the runway that would be required to accommodate this manoeuvre for aircraft back-tracking from the current Taxiway Delta junction with the runway.
- 7.8 An alternative alignment for Taxiway Delta is illustrated on drawing number Appendix 6 (15482/A1/R06). This revised alignment would require significant additional land acquisition as well as vertical alignment works. This would add at least £8m to the project cost and would significantly increase the complexity

of the project. The taxiway is also extended to the western end of the re-located runway. This option was discussed by the Project Board and was rejected on the grounds of cost. It also considered that in the event that a runway extension is provided at a later date, then the benefit of this revised alignment would lessen, as the requirement for aircraft to utilise the starter extension at the west end of the runway would reduce.

- 7.9 As a second alternative, it was agreed that a turning head should be provided at the western end of the runway to allow aircraft to back track and turn on the runway. This is illustrated in Appendix 5 (15481/A1/R05).
- 7.10 As a third alternative and following concerns raised by the Guernsey Airport User Committee which is not in favour of introducing back tracking operations at Guernsey, a short extension to the non-compliant taxiway was considered to extend Taxiway Delta to the new runway end. This still has a cost implication of at least £1.5m. The matter will be advanced as an option in the detailed planning and approval phase as an interim solution.
- 7.11 The short taxiway between the Aero Club and Taxiway Delta is currently steep, and visibility from the hold at the foot of this taxiway is poor. This will be made worse by the strengthening works to Taxiway Delta, which will result in an increase in the level of taxiway Delta, and therefore in a steeper gradient on the GA taxiway. It is recommended that this taxiway is re-routed further west as part of these works so that the gradient is reduced and visibility improved. This new route will also provide taxiway access for a future proposed development. Various options have been considered. Discussions are ongoing with the relevant parties, but some provision for servicing these facilities has been included in the project scope.

### **Taxiway Vertical Alignment**

- 7.12 Taxiway Delta falls into a valley from its junction with Taxiway Alpha at the apron, down past the Aero Club to the west and then back up to the runway at hold bar Delta 2, close to the western end of the runway. For a Code C taxiway, the gradient is limited to 1.5%; however the gradient of Delta is 2.7%. In order to overcome this, the taxiway at its mid-point would require lifting by approximately 3.8m. In addition, the 57m taxiway strip would need to be re-graded. The current gradient however complies with the requirements of a Code B Taxiway.
- 7.13 The above exercise to achieve Code C would be a huge undertaking and would involve the closure of Delta in order to facilitate the works and would block any access to the Aero Club, both short-term and long-term (as the link taxiway gradients would be too steep). Land acquisition would also be required.
- 7.14 It has been concluded following consideration of the matter, that the option to re-align Taxiway Delta both vertically and horizontally is not viable as the costs would be prohibitive. It was agreed that discussion with the CAA should

identify where the stop bars should be re-located, but if necessary they would be west of Taxiway Charlie, where the runway and taxiway separation is adequate. If necessary Code C aircraft could track down Taxiway Charlie in order to back track the runway rather than continuing down the non-compliant Taxiway Delta. The western section of Taxiway Delta would then be restricted to Code B aircraft.

### **Taxiway Pavement Strength**

- 7.15 The current taxiway PCN values were assessed by Scott Wilson in 2004. None of the taxiways meet the requisite minimum PCN of 36 and overlays have therefore been considered for all the taxiways.
- 7.16 Because the Aprons to the east are being reconstructed close to existing levels, Taxiway Alpha will also have to be reconstructed over this area in order to maintain levels. Further west, it would be possible to overlay the taxiway to achieve the requisite strengthening. Similarly, Taxiway Delta would require overlay. On the basis of the Scott Wilson report, it is considered that a 120mm overlay over all the taxiways would be adequate. This however will require verification.

## **8. Aprons**

### **Stand Layout**

- 8.1 The existing stand layout illustrated on drawing number Appendix 7 (15482/A1/R07) has been reviewed and it is confirmed that given the various operational constraints, this layout represents the optimum layout for the aircraft that currently utilise Guernsey Airport.
- 8.2 The Scott Wilson Report commented that whilst aircraft movements had not increased substantially in the years leading up to their report, the size of aircraft that operated from Guernsey had increased. It is difficult to predict the aircraft requirements for Guernsey over the expected structural life of the pavements that will be rehabilitated (approximately 30 years). However, it is likely that there will continue to be a gradual increase in the size of aircraft that visit the island. This is particularly applicable if the runway is extended either now or within the next 30 years.
- 8.3 All the aircraft that currently visit Guernsey operate off self manoeuvring stands. There are currently no tugs on the Airport to enable nose-in/push-back operations to take place. The airlines that currently operate at Guernsey are reluctant to move to nose-in/push-back as it will increase their operating costs and could lead to delays in push back from stand, particularly at peak times. For the Airport to arrange third party operation of tugs and additional associated staff there is additional cost.

- 8.4 In the short-term there is no overriding commercial advantage in a move to nose-in/push-back, although some benefits would be gained particularly in the event of aircraft breaking down and needing repair. It is also argued that it is probably more beneficial to outlay increased capital cost for additional concrete apron than to pay for the ongoing costs of providing tugs and associated additional staff. However the Airport is geographically constrained and areas available for additional apron space are highly restricted. It is therefore likely that the driver for nose-in/push-back will come from a capacity issue; either in the size or type of aircraft to be operated or in the number of aircraft to be accommodated on stand at any one time.
- 8.5 Given future intended use of the Embraer 195 at Guernsey Airport, the current stand layout has been reviewed. With a revised layout the Embraer 195 could be handled on the current Stand 22 as a self manoeuvring stand. This Stand could also been re-configured in such a way that it would alternatively accommodate a self manoeuvring Boeing 737-700. Both aircraft on this stand would have to face in a northerly direction due to their tail heights.
- 8.6 Stands 17/18 could also been re-configured to accommodate a self manoeuvring Embraer 195. Because a Boeing 737-700 has previously been considered on Stand 22, and smaller variants have been considered on stands 17/18, no checks have been undertaken on the effects of jet blast for this proposal at this stage. Further verification work is required to confirm that jet blast would be acceptable from these aircraft if manoeuvred on this stand.
- 8.7 A revised self-manoevring layout could therefore accommodate the same aircraft as are currently handled, but with two Embraer 195s (or 1 B737-700 and 1 Embraer 195) in place of two of the current Dash8-Q400s / BAe 146, and the aircraft can remain as self manoeuvring.
- 8.8 If a third Regional jet is to be accommodated then the apron layout would need to be reconfigured and the operation amended to adopt nose-in/push-back. Once nose-in/push-back is operational for the Regional Jets, then it is assumed that this would be adopted for all aircraft, apart from the Trislanders and perhaps the Jetstream 32s.
- 8.9 If an increase in stand occupancy is the driver for nose-in/push-back operations, then drawing Appendix 8 (15482/A1/R10) shows how aircraft could be accommodated. This drawing is a direct derivation of the existing stand layout and is produced for comparative purposes only. It shows how one additional Dash 8 type aircraft can be accommodated in the same passenger apron area, demarked by the Rear of Stand Road. It is not anticipated that this layout would however be used, as it is likely that the smaller Trislander aircraft would have been re-located on to the western apron adjacent to the Control Tower prior to the operational changes to nose-in/push-back. However this does confirm that there is a commercial benefit in moving to nose-in/push-back once there is sufficient demand.

- 8.10 Whilst the aprons are being re-constructed, these aircraft will need to be displaced onto the West Grass Park. However, the larger the area that can be closed-off for re-construction, the quicker the works will progress. As the concrete replacement work is completed, the concrete will need to be “cured” before trafficking by aircraft for a period of up to 28 days. The fewer the number of phases therefore, the quicker the overall apron reconstruction programme will be completed. During the works there is therefore significant merit in moving to the nose-in/push-back operations, which achieves a higher density of aircraft parking. The benefits of this are discussed in more detail in this report under the heading Construction Phasing. It is the view of the Public Services Department that Nose-In Push-Back parking would provide immediate benefits in terms of parking capacity for Guernsey Airport, and that it should be adopted to a) minimise the time and cost of redeveloping the main apron (through releasing larger phases of apron for reconstruction) and b) to maximise the limited hard standing areas available for parking of aircraft. The terminal design and layout of lighting on the existing apron was based on an assumption that aircraft would be parked in a Nose-In Push-Back configuration.

#### **Apron Pavement Strength**

- 8.11 As previously stated in this report, it is recommended that the apron pavements are constructed in concrete. Because the concrete cannot easily be strengthened in the future by overlay, it is recommended that the aprons are designed for a PCN value of 50, rather than 36 that is being used for asphalt runway and taxiways. Using PCN 50 would result in a pavement thickness of approximately 325mm of pavement Quality Concrete (PQC) on 150mm of Dry Lean Concrete (DLC) – for comparison, the thickness required for a PCN of 36 would be approximately 275mm of PQC on 150mm of DLC. The economic benefit of reducing the PCN to 36 is therefore not considered valid. The order of magnitude costs for the scheme have been developed using PCN 50, and, as requested by the Project Board, the saving for PCN 36 is identified.
- 8.12 Within the horse-shoe area of the apron, the current gradients are non-compliant as they fall to the North West at approximately 2.0% (the limit being 1.0%). In the North West corner of the Apron, close to the control tower building, the levels need to be raised by approximately 700mm. In part of this area, it may be possible to over-slab the existing pavement. This has the advantage of reducing excavation and the associated cost and provides work that could be done in winter months when the subgrade would ideally not be exposed. In this process, the existing pavement surface would first be re-graded using an asphalt interlayer. A uniform thickness of pavement quality concrete would then be laid as the surface. Approximately one quarter of the existing apron area could be over-slabbed with concrete.

#### **Head of Stand Road**

- 8.13 The apron layout proposed includes a head of stand road 7.3m wide to accommodate fire appliances and fuel bowsers. There is a link between the head

of stand road to the east side of the control tower, and the associated building to provide fuel tanker and fire appliance access to the baggage handling area and to the fuel farm.

- 8.14 Between the head of stand road and the aircraft stands, a service corridor will be provided. It is intended that ducts will be provided beneath the concrete pavement in this “corridor” for future services, such as ground power and potable water.

### **Rear of Stand Road**

- 8.15 When the Airport moves to nose-in/push-back operations, the rear of stand road will be brought into service. This will enable all service vehicles to access the parked aircraft without using the head of stand road. This will represent a significant improvement in safety, as vehicles will not be crossing the path of passengers who are circulating between aircraft and the terminal building.
- 8.16 The rear of stand road will be 10m wide to provide access for fire appliances and fuel bowsers, as well as baggage handling vehicles and other service vehicles. This is wider than the head of stand road as it will be more heavily trafficked and will be able to accommodate fire appliances and bowsers passing in opposite directions.

## **9. Drainage**

### **Existing Drainage System**

#### *Existing Surface Water Drainage Philosophy*

- 9.1 The majority of the surface water runoff from the ‘airside’ pavements is collected via drainage channels and gullies located at the edge of operational areas. This runoff is then conveyed to the site outfalls via a large number of carrier pipes. The two main site outfalls being:
- Lovers Leap Outfall into the Beau Vallee
  - Petit Bot Outfall into the sea outfall
- 9.2 Approximately 80% of the pavement area outfalls to the north west of the airport boundary at Lovers Leap into the Beau Vallee. The remaining 20% of the pavement area outfalls into the Petit Bot to the south east of the airport boundary.
- 9.3 The Beau Vallee outfall flows directly into the St Saviours Reservoir and the Petit Bot outfall flows to a sea discharge on the south coast of the island. During periods of low rainfall the flow from the Beau Vallee into the reservoir is supplemented by a pumping station situated on the Petit Bot outfall downstream

of the airport. This pumps water (at a maximum rate of 80 litres per second) back into the Beau Vallee, within the airport boundary. In summary, both of the site outfalls provide water to the 'St Saviours Reservoir', which is a source of freshwater for the island and an important woodland/wildlife habitat.

9.4 In the event of an incident (e.g. fuel spillage, deployment of fire-fighting foam, etc.), the following pollution control measures are provided within the existing surface water drainage network:

- Oil Interceptors – interceptors are provided in order to separate hydrocarbons (fuels, oils, etc.) from the surface water runoff, and therefore prevent contamination of the surrounding watercourses. A number of oil interceptors are present within the airport, primarily to apron pavement areas. However, it is thought that not all the pavement runoff passes through interceptors. Furthermore, the condition of the interceptors is not known.
- Lovers Leap Outfall Structure – a reinforced concrete structure with a manually operated 'penstock', which is used to control water flows in the event of an incident and therefore restricts the polluted water being discharged to the Beau Vallee. The contained water would then have to be pumped into tankers and removed to waste. There is concern however that the penstock valve could in heavier rainfall conditions be overtopped, and the contaminated water would then enter the reservoir.
- Petit Bot Emergency Stop – two emergency stop buttons for the pumps are provided (one 'airside' and one 'landside') so that in the event of an incident within this catchment area polluted water is discharged to sea and not pumped back into the Beau Vallee.

#### Review of Drainage Survey

9.5 As detailed information was not available for the entire existing surface water drainage network, a detailed Drainage Survey has been carried out in order to base assumptions on the condition of the existing system and materials used in the existing system.

#### Treatment of the Existing Surface Water Drainage Network

9.6 It is therefore proposed that all existing surface water manholes that will form part of the new drainage system are replaced with new manholes – with aircraft loading cover slabs/inspection covers (F900) – and 'delethalised' if within the clear and graded area of Runway 09/27. This would provide the new drainage system with chambers suitable for aircraft loading and fully compliant with CAP 168, Sewers for Adoption 6th Edition and current Health and Safety Regulations (access into confined spaces etc.)

- 9.7 All existing surface water pipes that will form part of the new drainage system are to be 'lined' with, as a minimum, an epoxy spray lining which is typically 1mm thick. Alternatively the pipes will be replaced. This will facilitate positive drainage by sealing any cracks/defective joints in the existing system, more importantly in the event of an incident on the aerodrome it will prevent the egress of pollutants, such as Perfluorooctane Sulphonate (PFOS) found in fire-fighting foam from infiltrating into the surrounding strata and ground water table. From discussions with Guernsey Water, this requirement is critical due to a plateau in the ground water table towards Runway 09.
- 9.8 All existing surface water manholes and pipes that will not form part of the new drainage system would be removed in their entirety.

### **Proposed Drainage System**

#### Design Criteria

- 9.9 From discussions held with Guernsey Water, it is understood that there is no specific modelling requirement for the design of new drainage networks, therefore it is recommended that the design criteria for the proposed drainage network are as follows:
- No above ground flooding during a 1 in 30 year worst case storm. (i.e. there shall be no flooding within the airport site during the worst storm event expected once in a 30 year period).
  - No off-site flooding during a 1 in 100 year worst case storm. (i.e. there shall be flooding within the airport site during the worst storm event expected once in a 100 year period, however this flooding shall be contained within the airport boundary).

These parameters are those that are typically applied to airport schemes within the UK.

- 9.10 It is intended that the proposed drainage system would utilise as far as possible the existing drainage network contained within the aerodrome. The main subjects considered within this report are Drainage to Runway/Taxiway/Apron Areas, Surface Water Attenuation, Polluted Water Monitoring/Control, Polluted Water Attenuation and Connection to Foul Drainage Network.

#### Runway Drainage

- 9.11 A number of different construction options have been considered for the drainage of the existing and proposed runway pavement area, with the most favourable of these being the use of profiled drainage channels and gullies either side of the runway edge. The surface water from the runway would runoff into the profiled drainage channel (which will be formed in either pavement quality

concrete or bituminous surfacing). The runoff would then pass into the gullies, spaced at about 15m centres within each channel, before being taken to the site outfall via buried, carrier pipes running parallel to the runway edge.

9.12 The benefits of using this method are:

- Utilises part of the existing runway shoulders, as a base on which to construct the channel,
- Optimises the possibility of re-use of the existing runway drainage network,
- Works effectively with a phased construction approach – i.e. maintaining daytime operation of the airport,
- Reduces the amount of imported materials.

#### Taxiway Drainage

9.13 Existing taxiway pavements that will not be substantially altered by the works would have the existing drainage reviewed and optimised so as to reduce any flooding that is identified by the design model for the specified criteria.

9.14 New or altered taxiway pavements would be provided with new drainage either in the form of (subject to detailed design):

- Profiled drainage channels – as described for the runway;
- Slot drains – the main benefit in using this method to areas of new pavement is that it reduces the amount of underground pipes that are otherwise required.

#### Apron Drainage

9.15 It is proposed that all new drainage to apron pavements will be provided by slot drains.

9.16 The benefits of using this method within apron areas are that:

- It provides an unobtrusive solution and therefore does not affect the operation of the apron pavement areas;
- It reduces the amount of underground pipes that are otherwise required, therefore also providing a more simple system to maintain;
- It mitigates trip hazards presented to passengers walking from the aircraft to the front of terminal.

Surface Water Attenuation

- 9.17 The existing site discharge at Lovers Leap into the Beau Vallee has a ‘free’ discharge rate (i.e. it is not restricted). From discussions there has not been experience of flooding at Lovers Leap or Petit Bot. There is no record of flooding downstream of these locations. Furthermore, preliminary model simulations, based on the information available, have confirmed that flooding should not occur at these locations due to the runoff from the existing pavement catchment areas.
- 9.18 In the absence of any formal ‘greenfield run-off’ rates (or similar) in the Island, the requirement for surface water attenuation has been assumed to be dictated by the possibility of flooding caused by the aerodrome downstream of Lovers Leap in the Beau Vallee. To avoid this, it is assumed that the future outfall flows should be restricted to the flows determined for the current runoff. Attenuation will therefore need to be provided to accommodate any future pavement enlargement.

Polluted Water Monitoring/Control

- 9.19 It is the recommendation of this report that a SCADA (Supervisory Control And Data Acquisition) system is procured as part of the proposed works in order to monitor and operate pollution prevention measures to the Beau Vallee..
- 9.20 Guernsey Water and Guernsey Airport have agreed that it would be sensible to consider diverting flows in the Beau Vallee which enter the airport site from other sources on its Southern boundary. An option would be to provide a flow diversion chamber at the intersection between the Beau Vallee and the Southern boundary. The philosophy for the operation of this would be:
1. Normal Operating Conditions – flows diverted into the Padains Stream. It would be required to check the levels and capacity of the Padains Stream in order to assess if this is a viable option, this would divert non-airport drainage around the airport.
  2. Incident Conditions – in the event of a fire incident or other spillage to the south of the airport boundary, the potentially contaminated flows in the Beau Vallee would be diverted into the airport site and be attenuated as part of the proposed pollution control system.
- 9.21 As part of the above works the diversion of flows from the Petit Bot Pumping Station shall be considered. It would be prudent to consider providing further impermeable surfacing to the Fire Training Ground, in order to prevent potentially polluted water runoff infiltrating into the surrounding strata.

Polluted Water Attenuation

- 9.22 As part of the pollution control system, attenuation would be provided so as to attenuate polluted water in the event of:

- An incident in which a fuel spill occurs.
- An incident in which Perfluorooctane Sulphonate (PFOS) is used. Guernsey Water has made it clear that this is its main concern as a possible source of pollution from the airport.
- Aircraft and pavement de-icing – this is likely to be the main source of BOD (Biological Oxygen Demand) loading at the Airport; BOD is used in order to monitor water quality.
- Due to the sensitivity of the receiving waters in the Beau Vallee, the effect of aircraft de-icing on BOD levels has not been discounted. In order to capture de-icing runoff, two general de-icing wastewater collection methods can be considered:
  - At-source collection – this method is based on the concept of restricting de-icing to a number of designated stands. However, it is understood that this would unacceptably hinder operations/scheduling at Guernsey Airport and has not been considered further.
  - Downstream collection – this alternative would utilise the existing surface water system to carry all the de-icing runoff to pollution retention tanks located at the outfall of the catchment, from where it would be transferred to the foul water system. This option is favourable as it would also allow attenuation of polluted water from other events such as fuel spillage and PFOS pollution.

- 9.23 It is therefore proposed that polluted water attenuation is provided adjacent to the site outfall at Lovers Leap. From preliminary calculations, and assuming that the attenuation will have a capacity to store 25mm of polluted runoff (similar to other UK airport projects), which would be generated by the ‘first-flush’ from a series of rainfall events, the approximate volume of storage required will be 4,000m<sup>3</sup>. This figure considers storing water from the entire ‘airside’ pavement areas and therefore providing pollution control for this entire area.
- 9.24 The philosophy of the existing pollution control measures at the Petit Bot outfall would be maintained and incorporated into any future SCADA system.
- 9.25 Further to discussions with both Guernsey Water and Guernsey Airport, the provision of a flow diversion chamber has been considered at the design stage so as to divert potentially polluted flows into storage. It is proposed that flows from different pavement areas should be able to be isolated in the event of an incident (i.e. if an incident occurred on the apron, then this area would be isolated and diverted to attenuation, and the remaining pavement areas would be allowed to discharge at Lovers Leap).

Connection to Foul Sewer

- 9.26 A connection to an existing foul sewer would be required for the proposed polluted water attenuation provided adjacent to the site outfall at Lovers Leap. This requires further investigation, but it is understood that a connection may be possible at the road junction with the Route de Plaisance, and Ruelle de la Tourelle to the west of the airport; at some later date when funds for the main public sewer extension programme permit.
- 9.27 It is therefore recommended that the proposed polluted water attenuation be provided adjacent to the site outfall at Lovers Leap with a pumped discharge to the existing foul sewer to the north west of the airport boundary, at an agreed rate of 5 litres per second.

**Airfield Ground Lighting (AGL) and Navigation Aids**

- 9.28 The existing airfield ground lighting is life expired and is now difficult to maintain. Furthermore, lifting rings cannot be used with the existing types of light fittings. Lifting rings are required to lift the light fitting, when the pavements are overlaid. The ground lighting and circuits are therefore to be replaced as part of this project.
- 9.29 Various works to the Airfield Ground Lighting (AGL) and Navigation Aids are required within the proposed scheme. The amount of work required depends on which option is chosen, i.e. starter extension or runway extension. However, both options contain requirements that are common to both schemes. A summary of the AGL requirements is indicated below:
- New centreline lights at the 09 starter extension.
  - New inset bidirectional runway end/threshold lights at both ends of the runway.
  - Bidirectional red/white edge lights along the lengths of starter extension. Depending on the requirements for re-aligning taxiway Delta, some of these edge lights could be inset lights.
  - Blue edge lights at the turning areas.
  - New approach lighting systems.
  - Relocate PAPI lights for both thresholds.
  - Where necessary revise the centreline light filters to maintain the required colour coding and revise the cable circuits as the runway displacement takes place.
  - If Taxiway Delta is not realigned then it will enter the runway at an

intermediate position. This will require new lead-on lights towards the 09 turning area, and the runway taxi-holding position signs and stopbars will need replacing, probably at new locations.

- New holding point on Delta – adjacent to tower for push-back in LVP's.
- Echo will require centreline and edge lighting or edge lighting as a minimum requirement, and the new shared taxiway for an additional Hangar development and the Aero Club may require lighting.
- Assess the requirement for edge lighting to the surfaced west grass park.
- Provide new primary cable to allow for interleaving circuits for the taxiway centreline lights.
- Western apron floodlighting.

9.30 A summary of the Navigation Aids requirements is indicated below:

- Install a new power supply system to replace the existing cable that is in poor condition and a new distribution cabin located adjacent to the existing 09 Glide Path antenna.
- The 27 localiser will need to be displaced to the west.
- For the starter extension option, the existing 27 Glide Path antenna will be too close to the revised threshold position, and it will have to be relocated. It is recommended that the Glide Path antenna be relocated on the north side of the runway to avoid interference with its signal due to aircraft on Taxiway Alpha. Verification will be required that the new location will not interfere with the radar and vice versa.
- Install a new IRVR behind the 27 Glide path antenna.
- The 09 Glide path antenna will be relocated due to the runway displacement.
- There will therefore be a period when the Instrument Landing System at both ends will not be operational. At the detailed planning stage consideration will be given to reducing this potential downtime.
- Install a new DME aerial at a position where it will provide a zero range for both of the future threshold positions.
- All Navigation Aid equipment should have a new backup power supply (UPS) installed in the equipment shelters.

- Both windsleeves and the meteorological equipment installed on the north side of the runway do not require relocating as their current positions will still be compliant after the thresholds are re-located.

9.31 As the project involves the possibility of investing in some new Navigational Aids, this could also be the time to consider replacing the radar. Because the radar is “custom built”, it is difficult to get spare equipment if a failure occurs. However, this could be the subject of a separate capital expenditure.

## **10. Review of Airfield Instrument Landing System (ILS) Category Upgrade**

10.1 As part of the background research and in accordance with the approved project scope, a report was commissioned from National Air Traffic Services Ltd (NATS) to evaluate a modification of the operational category of the airfield from its current designation (CAT 1) to CAT 2 operations. Such a change in designation could provide some additional serviceability of the runway during low visibility weather, in that CAT2 provides lower operating minima for certain aircraft.

10.2 The matter had been last reviewed in 2001 by the CAA, when it was concluded the costs associated with an upgrade to CAT 2 could not be justified in light of the minimal additional hours of airfield serviceability that would be gained.

10.3 The latest report from NATS used metrological data for a ‘typical’ weather year (2005). That data revealed that CAT 2 conditions applied for a total of 30 hours over the year, on 34 separate days. Generally, CAT 2 conditions applied for less than 1 hour on each occasion, indeed only on 2 days over the year did conditions exceed 1 hour. This is because generally CAT 2 conditions only applied as a transition between CAT 1 and CAT3 minima.

10.4 A series of significant modifications would be required to the infrastructure (including runway gradients and existing navigational aids) at Guernsey Airport in order to achieve CAT 2 compliance. In addition, some additional navigational equipment would be required. The cost of these additional modifications and provisions, when associated with the minimal additional hours of effective airfield operation over a typical year, means that a case cannot be made for upgrading the airfield to CAT2 as part of this development proposal.

## **11. Construction Phasing**

### **Contractor’s Compound**

11.1 It is assumed that the contractor’s compound will be erected to the north of the runway. Any asphalt, concrete trials or materials laid should be laid in locations and to levels that would be suitable for future developments. Routes and procedures will have to be established to allow the contractor to gain access to the runway and airside pavements to the south of the runway. The

height of batching equipment in the compound will need to be restricted by the transitional surface and technical safeguarding of navigational aids, radar etc. Close liaison with nearby properties and land owners will be required during planning for these operations, particularly when overnight resurfacing is taking place.

## **12. Operational Constraints**

### **Runway**

- 12.1 It is anticipated that the runway will remain open during normal daytime operations and the overlay and re-profiling works will therefore need to be undertaken at night. The re-profiling will need to be completed prior to the overlay. Consideration needs to be given to any temporary surfaces that will be utilised by aircraft during the following day. It may be necessary to temporarily groove parts of the surface as the works progress. This will need to be planned in advance of the works and will be considered during the progression of the final design.
- 12.2 The RESA and runway displacement to the west will also have to be progressed at night. All surfaces will have to be temporarily re-graded at night to back-fill any open areas before opening for aircraft movements.
- 12.3 It is understood that emergency access to the runway will have to be maintained 24 hours per day, throughout the works. It is understood that this will require a runway length of approximately 500m for the typical type of aircraft engaged in such operations. Investigation has revealed that typically there are over 16 call-outs per annum (50% being search and the other 50% being evacuation of personnel to or from the Island). It is anticipated that 500m of the runway would be maintained in a serviceable condition during each night shift. Battery lights would be required by the Airport to support the runway's use at night.

### **Aprons**

- 12.4 The apron re-construction works will have to be undertaken in blockade closures. Areas of the apron will have to be closed for several weeks at a time. In order that the same number of aircraft can be accommodated, whilst part of the existing apron is closed, a new area of pavement is proposed to replace the west grass park. This will cater for the Trislander aircraft throughout the duration of the works. The other stands can then be temporarily re-marked and utilised by the larger aircraft. In order that passengers from the Trislanders can be transferred between the aircraft and terminal building, consideration should be given to the provision of an airside mini-bus service throughout the duration of the apron rehabilitation. On completion of the works, the west apron can again be used by GA aircraft that will then have the benefit of a hardened surface. This will also reduce the risk of groundwater contamination from fuel spillages as a positive drainage system will be provided in this area. On odd

occasions, when a scheduled aircraft develops a fault, this area could potentially also be used for safe parking away from the operational stands. This would be subject to weight restrictions based on the PCN achieved for this area.

- 12.5 The larger the blockade closure, the quicker the apron works will progress. For each closure, the new concrete once completed will have to be allowed to “cure” for up to 28 days before being trafficked by aircraft. The larger the blockade, the fewer the number of phases and the quicker the overall apron replacement programme. There is therefore significant merit in moving to nose-in/push-back operations during the works. This greatly reduces the area of apron pavement required for aircraft manoeuvring and parking and leaves a greater area available for reconstruction.
- 12.6 Discussions with the Airport operations staff have identified that the aprons are required to cater for 5 Trislanders, 3 Jetstream 32 and 7 larger aircraft throughout the works. If nose-in/push-back operations are adopted then, with the west grass park fully surfaced, the works to the main apron will require 9 phases. Each phase is likely to require approximately 12 weeks to complete (including curing the concrete – before aircraft can operate on the pavements). The total construction period for these apron works if nose-in/push-back operations are adopted will therefore be approximately 108 weeks.
- 12.7 If self manoeuvring operations are maintained, then two options have been considered. The first assumes that one of the larger aircraft types could be displaced during part of the works (phase 10) for approximately 12 weeks. This would allow the apron works to be completed in 11 phases and a total construction period of 132 weeks. Alternatively, if all the existing aircraft are to be accommodated throughout the works, then the final phases have to be further broken down. The apron works are then extended into 12 phases and a total construction period of 144 weeks.
- 12.8 The cost estimates provided elsewhere in this report are based on nose-in/push-back operations. It is envisaged that the contractor will progress the runway and taxiway works during night closures and will concurrently progress the apron works during day shift work. Under these conditions, it is likely that all works will be completed in approximately two years. If self manoeuvring operations are maintained, then the total construction period will be extended due to the apron works. Whilst the direct costs for construction will not vary, if the contractor is to maintain a presence for a longer duration, his “preliminary” costs for staff management, site offices, plant hire etc. will all be extended. The estimated costs of maintaining these services on site for an extended duration of 36 weeks are provided later in this report.

### **Taxiways**

- 12.9 The taxiways can either be closed to allow their overlay, with aircraft backtracking down the runway, or could be overlaid on a piecemeal basis during night closures. It is likely that a combination of the two will be required.

- 12.10 If the runway is displaced to provide extended RESA, or the runway is extended to 1700m, then the ILS equipment will have to be replaced or relocated. It has been assumed that the existing ILS will be taken down and relocated once the runway extension works are completed. It is therefore expected that there would be no ILS equipment in place for a period of several months. This was discussed with pilot representatives from the airlines and thought to be feasible, although some flights are likely to be diverted. If the work is undertaken in the summer months then disruption should be minimised. Nonetheless, it is inevitable that during this critical phase of the works some disruption is likely to airlines and passengers alike. An option to introduce GPS approaches at Guernsey Airport is being investigated and this may alleviate some elements of the anticipated disruption.

### **13. Contract Procurement**

#### **Background**

- 13.1 It is anticipated that the civil engineering works would be let as a single contract. This would result in reduced overhead costs and would provide improved programme completion dates compared with letting a number of smaller contracts for individual elements of work. Consideration could however be given to a separate contract for the works to the Navigation Aids.
- 13.2 The works are highly time dependent; the late completion of one element of work will lead to the delayed start of another item of work. It is critical that a main contractor is selected who has a successful record of managing highly complex airport infrastructure projects.
- 13.3 It is understood that there is no appropriate main contractor on the Island with relevant airport experience. However, there may be suppliers and construction companies that could work in partnership with, or provide sub-contract support to, the main contractor. The use of local labour should be encouraged. It is however important that sub-contractors are not nominated to the main contractor (such that the Client becomes liable for any shortcomings in performance). It will be the intention of RPS-BG to compile a directory of any potential local suppliers and sub-contract construction companies which can be supplied with the tender information. Tendering Main Contractors can then select any support that they may require and enter into negotiations with these Island-based companies. At this stage in the process the Department remains open minded to the possible use of some form of public private partnership if it is clearly to the benefit to the States.

#### **Pre-qualification**

- 13.4 Only main contractors with the relevant experience will be permitted to tender. As the project is in Guernsey, it would not need to be advertised in accordance with OJEU (Official Journal of the European Union) requirements. If used, the

requirements of the OJEU process are strictly procedural and can be constraining. In particular, the first notices have to be issued many months prior to the intended award date. As an alternative to this process, the Project Board has placed advertisements in UK and European trade journals and magazines inviting contractors to submit pre-qualification documentation. The Board will then select from the submissions (using established evaluation criteria) an appropriate number of contractors to tender the works.

- 13.5 It is likely that only 4 or 5 main contractors will be in a position to tender for this project on the basis of their relevant experience. If the list is longer than this, tenderers tend to reduce their effort as they believe that their chance of success is reduced.

### **Type of Contract**

- 13.6 There are several types of contract and many variant standard forms of contract for each. The main types of contract are design and build, traditional and early contractor involvement.
- 13.7 Design and Build requires the Contractor to take responsibility for both the design and construction of the project. This has the advantage that if there is any form of defect, the responsibility clearly lies with the Contractor and it is not necessary to determine whether the causation was design or construction. However, for this form of contract there has to be significant design opportunity otherwise, if the design is “prescribed” by the client brief for the proposed project at Guernsey Airport, there is little opportunity for design innovation by the Contractor. In this project, the client is clear on the requirements of the project. A design and build contract is not therefore considered suitable for this project.
- 13.8 A traditional contract is one when the client employs a design consultancy to prepare design and construction documentation (drawings, specification, contract requirements etc.). These documents are then priced by a contractor, who will undertake to construct the works. Both the designer and the contractor are separately appointed by the client and each have responsibility to the client for the design and construction respectively. Usually in the standard forms of contract for this type of arrangement, the designer will also have a role to administer the contract as Engineer or Project Manager on behalf of the client. This type of contract is considered suitable for the proposed works at Guernsey Airport.
- 13.9 A variation of these contracts is one when the Contractor forms part of the professional team during the design and contract documentation preparation. He then goes on to construct the works with the design team, acting as Engineer or Project Manager. This type of contract is referred to as early contractor involvement (ECI). This type of contract has several significant advantages:

- The contractor has the opportunity to input to the design, but without taking overall responsibility for the design and without design duplication.
- The designer has the opportunity to discuss with the Contractor the most appropriate materials and methods of construction, providing either programming or cost advantages.
- The client can agree the cost and content of the works with the team before committing to a contract to undertake the whole of the works.
- As part of the professional team, the Contractor has more opportunity to fully understand the project before committing to a price. He can therefore tender the works with more cost certainty and has less opportunity to make claims on the basis of a lack of understanding later in the contract.

13.10 The Project Board will remain flexible in the initial stages toward Contractor proposals for the contract or structure for delivering the project, particularly if this delivers better value for money.

13.11 Once tenders are returned they will be assessed on relevant experience and a number of other agreed criteria. A single contractor will then be given “preferred” status. Alternatively, two contractors may be retained to further develop the design and documentation with one being given “preferred” status at a later date. Once preferred status is given, then the contractor will work with the professional team to cost and program the designed works. This process will usually occur over a number of weeks until the contractor is able to provide price surety for various scheme options. The client can then identify the extent of the works in the full knowledge of the likely construction costs and programme implications. The contractor can then be awarded the contract. In order to ensure proper professional contractor involvement at the early stages, it is sometimes appropriate to contribute to the contractor’s costs once they have been given “preferred” status. This type of contract appears to have significant advantages for the project in Guernsey and this proposal has been ratified by the Pavements Project Board.

#### **14. Programme**

14.1 RPS-BG has prepared a programme leading up to the award of contract for the commencement of construction. The programme illustrates that the earliest contractor appointment would be Summer 2009.

14.2 The programme assumes that there will be a two stage appointment process for the main contractor, with time in between stages I and II for value engineering and early contractor involvement. This is considered to be essential such that

the construction programming of the works can be thoroughly explored and considered with the Contractor. Furthermore, early involvement with the contractor will enable the tender sum to be thoroughly reviewed and evaluated. If there are cost savings that could be achieved through further airport operational changes, then these need to be considered. (If for instance an additional hour of closure each night would provide a significant reduction in cost, this can be explored by Airport Operational Staff and Airlines.)

- 14.3 Prior to the capital prioritisation debate, work will be continued to finalise the design, shortlist contractors and hold pre-tender briefings. Once the States approves the final proposals the tender documentation will be issued as soon as practically possible. If the States were to decide instead to opt for a 1700m runway from the outset then there will be a relatively lengthy delay. A new runway design will be required and additional land will need to be acquired. Furthermore, because the scheme would then relate to a runway extension rather than just safety and rehabilitation works, it is likely further work would be necessary including more complex planning approvals. It is anticipated that this would delay the start by at least 24 months.

## **15. Planning Application**

- 15.1 Some staff level discussions between Airport Management, RPS-BG and the Environment Department have occurred during the early design stages of the project. Early views are that there is unlikely to be a requirement for a planning inquiry if Option A is ratified. However, given that the existing runway length is likely to be required to be moved further west, thereby providing a means for lengthening the RESA at the east end of the runway, some form of environmental impact study could be required to identify any issues that may arise from this development. It is assumed that a formal Planning Application under existing States Procedures will be submitted to the Environment Department in the near future.
- 15.2 Construction programmes will be developed during the detailed design process as phasing of the works is reviewed by RPS-BG and Operational Management staff at the Airport. However, the final construction programme will be developed with the contractor during the stage II process. This will not therefore be available until after Spring 2009.

## **16. Budget Estimates**

### **Rates**

- 16.1 At this stage, approximate quantities of primary construction materials have been calculated based on the preliminary designs that have now been developed for this report. The primary quantities have been taken off for each element of the project so that overall costs can be derived for different options.

- 16.2 RPS-BG has collated cost data from a large number of UK based airport infrastructure projects. However, it is recognised that these costs take no account of cost differentials between the UK and the Channel Islands, and in particular Guernsey. To overcome this, RPS-BG has consulted with Guernsey based Quantity Surveyors, W T Partnership. In addition, Fitzpatrick Contractors, which has a specialist airfield infrastructure division, is currently undertaking concrete rehabilitation and runway asphalt resurfacing work at Jersey Airport, has also been consulted.
- 16.3 The principal quantities for the project such as asphalt, concrete and granular stone all require significant volumes of quarried crushed rock. Investigations have revealed that the only quarry in Guernsey at Les Vardes does not produce adequate output for the proposed project (even if all of its production over the construction period was delivered to the airport project, there would be a shortfall). Fitzpatrick has therefore been able to advise on costs of importing these materials to Guernsey.
- 16.4 From the above investigations, it has been determined that there is a mark-up of approximately 40% on most of the general construction items. However, items such as airfield ground lighting only attract a moderate 10% to 20% mark-up from UK installation costs.

### Project Costs

- 16.5 For the purposes of developing the overall project cost estimate, a “baseline” design (Option A) has been adopted, based on the decisions of the Project Board outlined in this report. In addition and for comparison Option B has been provided in table 8. Option B provides costs for an extension of the runway to 1700m at Code 4.

<b>Project Cost Summary</b>	<b>Option A</b>	<b>Option B</b>
	<b>Baseline Project</b>	<b>Extension to 1700m Runway</b>
Anticipated Construction Period	Sept09 - Sept 11	Sept 10 - Sept 13
<b>RUNWAY (width = 45m, PCN = 36)</b>	<b>Cost (£)</b>	<b>Cost (£)</b>
<b>Treating Existing Runway</b> Infill Runway Longitudinal Low Spot Overlay Existing Runway pavement (120mm thick) Breakout shoulders and rehabilitation of weak runway Grooving of new pavement surface Strip Improvements		



<b>MISCELLANEOUS ITEMS</b>		
Foundations for Security Huts Security Fencing and Barriers Taxiway Link for Aero Club/New Hangar <b>Sub-total</b>	<b>400,000</b>	<b>400,000</b>
<b>SUB TOTAL OF INFRASTRUCTURE WORKS (+/- 10% ACCURACY)</b>	<b>57,800,000</b>	<b>82,900,000</b>
10% allowance for accuracy	5,780,000	8,290,000
<b>SUB TOTAL</b>	<b>63,580,000</b>	<b>91,190,000</b>
Allowance for building inflation (Nov 07 – relevant construction period)	9,537,000	19,600,000
<b>SUB TOTAL</b>	<b>73,117,000</b>	<b>110,790,000</b>
10% Construction Contingency	7,311,700	11,079,000
Professional Fees	1,500,000	2,950,000
Allowances for Downtime due to LVP's and Emergency Flights	1,500,000	2,250,000
Land Purchase Requirements (+Road Re-Routing with 1700m option)	500,000	6,000,000
Provision for Nose In-Push Back aircraft parking during construction	600,000	600,000
<b>Total Predicted Project Budget</b>	<b>84,528,700</b>	<b>133,669,000<sup>a</sup></b>

<sup>a</sup> Cost given is at Code 4. Code 3 would cost circa £118,700,000.

**Table 8** –Project Cost Summary

- 16.6 The option to enhance the runway and taxiways to PCN 50 is really only viable if aircraft over ACN 36 are going to utilise the pavements on a frequent basis. This is considered unlikely, and certainly only a realistic prospect if a 1700m extended runway is adopted. If in future years circumstances changed such that a higher PCN was required this could be achieved by additional overlays of asphalt.
- 16.7 The option to decrease the apron PCN from 50 to 36 is not recommended. The saving is minimal and results only in a 50mm reduction in concrete thickness.

- 16.8 The surfacing of the west grass park in the baseline design is assumed to be in asphalt. However, concrete is significantly denser than asphalt and is therefore thinner for a specified PCN. However, the material costs for asphalt and concrete are similar. For this reason a concrete apron of PCN 50 can be provided for a similar cost to an asphalt pavement providing PCN 15. This would be beneficial as a non-additional cost option as any aircraft can then be positioned by tug onto the west apron without causing pavement distress.
- 16.9 There are two surface water drainage options, which both allow surface water that is collected elsewhere, and currently flows through the airport site and merges with airport run-off water, to be diverted and kept separate from the airport drainage. The diversions are recommended such that clean water from outside the airport boundary is diverted to the St Saviour Reservoir whilst any contaminated water from the airport can be stored and ultimately diverted to the foul sewer for treatment. The diversions also have the advantage that the amount of dirty water storage required at the airport is marginally reduced.
- 16.10 There are three foul water improvements that could be considered. None of these benefit the airport, but all require work to be undertaken within the airport boundary.
- 16.11 The baseline design option assumes that the ILS system will be shut down for a period of months during the works. If this is to be maintained operational throughout, then additional ILS equipment will be required. The cost of this additional equipment is not included in any estimates, but would be substantial.
- 16.12 Indicative costs to various miscellaneous items are provided.
- 16.13 Table 8 also provides an order of magnitude cost for the option to provide the extended 1700m runway from the outset. If a Code 4 1700m runway is provided then there would be a requirement for more significant runway re-profiling. This would be necessary for the whole of the existing runway length as well as for the extension area. In addition, because the runway will cater for larger aircraft, the costs include for increasing the PCN of the runway and taxiways to PCN 50.

### **Accuracy**

- 16.14 It should be noted that at this stage, the cost estimates provided for infrastructure works are “order of magnitude” only and are subject to an estimated variation of plus or minus 10%. Whilst some detailed design has been undertaken there remains some risk that the quantities could vary. Only as the detailed design is progressed further can more accurate quantities be derived. However, even with more accurate quantities, the contract value will be subject to variation and can only be reported accurately with input from Contractors. It is for this reason that it is recommended that a two stage appointment process be adopted with the preferred contractor. In this way, there is the opportunity for RPS-BG to work with the preferred contractor, prior to appointment, to explore ways to deliver

better value for money. In this way, the States will benefit from any reductions in cost that can be derived from more advantageous arrangement of the works, or variations in construction materials or the structure for working methods or contractual arrangements, all of which could have cost advantages to the project.

- 16.15 It should be noted that the cost estimates provided are given based on construction and material costs as at November 2007. Allowances have been made in Table 8 from that date until the various dates indicated on that table when works should take place. Annual construction cost inflation over the past five years has been between 4% and 5%. However, it should be noted that variations in oil prices can significantly affect construction costs. Oil is required not only to operate the construction plant, but is also required for the production of asphalt.

### **Assumptions**

- 16.16 The following assumptions were made in the original preparation of these order of magnitude cost estimates:
- Cost estimate has no contingency (should allow +/- 10%).
  - Guernsey island factors have been included (10-40%).
  - Local quarry unable to supply all aggregate requirements.
  - Night time working for runway and some taxiways.
  - Costs are based on November 2007 prices – allowances for 2008/09 tendering have been provided separately.
  - ILS downtime during construction.
  - Phasing of the works included (up to 9 phases for apron).
  - Land purchase not included (dealt with separately).
  - Fees not included (design, planning, survey, statutory licences, etc.).
  - No allowance for downtime for LVP's or interruptions for ASR.
  - Operational costs (nose-in/push-back, etc) are excluded.
  - The original cost estimates were based on a set estimated price for the purchase and laying of asphalt material. With some volatility in the current price of crude oil, there is a risk that this core component of these cost estimates would be subject to higher price fluctuation than that more generally indicated for building inflation earlier. This is particularly the case for asphalt given its high oil content.

- 16.17 With allowances provided to cover the above known assumptions, the overall project budgets (based on two project options) can be assessed from Table 8 as follows:

	Cost (£)
Option A – Baseline Design	84.5m
Option B – Extension to 1700m (at Code 4)	133.7m
(at Code 3)	118.7m

### **Phasing Implications**

- 16.18 The cost estimates given in this section of the report assume that the works will be completed within a two year period. If self manoeuvring operations are maintained then the apron works would require 12 phases taking approximately 144 weeks, 36 weeks longer than the 9 phases required for the nose-in/push-back alternative phasing options. The apron works would therefore require the contractor to remain on site with his plant, offices and labour, which would increase the cost of the project. The preliminaries, which cover these time-related costs, have been estimated at 25% for the project. The total cost of the apron works is £10.4m, including preliminaries of £2.1m for a two year period. If this period is further extended by 36 weeks, then it is estimated that the project costs would increase pro-rata by approximately £0.72m.
- 16.19 There is strong justification therefore for moving to nose-in/push-back operations during the works. This will save approximately £0.72m in costs and approximately 8 months on the construction programme. In addition, as is reported in Section 8, the phasing for nose-in/push-back operations could permit two aircraft up to Embraer 195 dimensions to be accommodated at any time, whereas with the self manoeuvring alternative only one of these aircraft can be accommodated during the later phases. On these grounds it is strongly recommended that nose-in/push-back operations be adopted through the works. In this way usage of the limited apron space can be maximised for the parking of aircraft.

## **17. Future Airport Revenue Generation and Funding Options**

- 17.1 In March 2008, the Fiscal and Economic Policy Steering Group (FEPSG) asked officers from those Departments which had any interest in the financial future of the Airport, including Treasury and Resources, Public Services and Commerce and Employment, to provide advice and recommendations on the long term options for revenue generation at the Airport.
- 17.2 A working party including senior staff representatives of those departments was convened and considered a number of different financial models which might be able to be applied in order to generate increased revenue at the Airport. This work is ongoing.

- 17.3 The Treasury and Resources Department has accepted that it is its role to be the lead advisor on the funding options which could deliver the project. The Public Services Department anticipates that proposals for a funding mechanism for the project will be presented to the States in due course.
- 17.4 In addition, Action Point 26 of the Strategic Economic Plan (endorsed by the States of Deliberation in July 2007) requires that the financial structure of the Airport should be reviewed to confirm if it is purely a self-funding operation or if it should be considered as a strategic gateway to the island which merits General Revenue support as a strategic asset. The Economic Plan also recommended that the costs of the works to the Airport Runway, including remedial works, should be reviewed so that the States could take an informed decision on the extent of the works to be undertaken and how they should be funded.
- 17.5 The Public Services Department is aware of the timing issues associated with bringing forward these proposals now and before the States of Deliberation has had the opportunity to conduct its capital prioritisation debate. The Department had hoped to submit this report earlier this year and has worked very hard over recent months to maintain the momentum on the significant design and planning work associated with this major project. The Department has completed a capital prioritisation submission for this project, which it understands will be included in the overall capital prioritisation exercise. The Department recognises the highly technical nature of this project and has determined to advise the States now, ahead of the capital prioritisation debate, on the background and essentiality of these works. The Department will progress several workstreams in the lead up to the planned capital prioritisation debate. These include the completion of detailed design work and the selection process for contractors. These are time consuming tasks and the Department does not wish to halt essential progress on these matters ahead of the capital prioritisation debate. The Department is however satisfied that the Airport Pavements Project is included in that debate. For this reason, the recommendation authorising the Treasury and Resources Department to approve the necessary funding for this project will be deferred until the States capital prioritisation debate. In the unlikely event that the States determine that this project is not one of the Island's top capital priorities then the Department undertakes to cease all expenditure at that stage, and address the consequences accordingly.

## **18. Consultation with Airport User Committee**

- 18.1 The Guernsey Airport User Committee comprises senior representatives of companies and organisations who operate from the airport. Its membership includes senior managers of all the locally based airlines, as well as representatives from the private aviation community, engineering, cargo and fuel suppliers. The Committee has had opportunity to review the planning output of the project from the outset, and has been asked to provide formal feedback on the baseline design.

18.2 This feedback endorses many of the proposals placed before the States of Deliberation in this report. At its meeting held on 4<sup>th</sup> June 2008, the User Committee formally agreed the following comments in respect of the proposed project:

- a) That the Airport Pavements Project should attract a significant element of strategic asset funding, given that the infrastructure represented a strategic asset to the island. It was unrealistic to expect a project of this magnitude could be funded through the 'user pays' policy currently adopted.
- b) That the User Committee Members did not consider that the provision of a 1700m runway, at the indicative additional costs was an economically viable option.
- c) That asphalt pavements should be constructed at PCN36, and concrete pavements provided at PCN50. Options for providing a PCN50 for asphalt pavements should also be considered. The User Committee considered that the whole of the West Grass area should also be resurfaced, to the above specification.
- d) That the User Committee was against backtracking at the west end of the runway. Further options for extending the delta taxiway should be considered by the Project Board. Delays caused by backtracking of aircraft at the western end of the runway were cited as the primary reasons behind this element of the proposal. An option to avoid the requirement for backtracking will be included in the detailed planning.
- e) That the existing position of the technical block should be reviewed with a view to its relocation elsewhere and the existing area should be levelled to provide additional concrete paving.
- f) That the short term priority of the project should be to increase paved areas for parking aircraft. Whilst the User Committee accepted that nose-in push-back parking would reduce the time and costs of apron rebuilding, the Committee was still concerned over the longer term costs associated with NIPB and over funding issues of maintaining that method of parking once the main apron was rebuilt.
- g) That concern was expressed by the User Committee over disruption caused during the outage of ILS equipment during construction works, and over the potential for problems if operators are relying on non-precision approaches.

## 19. Recommendations

The Public Services Department requests that the following propositions be debated under Rule 12(4) of Rules of Procedure such that they are considered by the States without amendment. This is on the understanding that the States will, after the planned debate on capital prioritisation in March 2009, be asked to approve the propositions necessary to progress the project, which may of course be accepted, rejected or amended, at that time.

Accordingly the Department recommends the States:

1. To note the proposals for the 'baseline' redevelopment of Guernsey Airport as outlined in this Report which will facilitate the resurfacing and reconstruction of the runway, aprons and taxiways.
2. To note that after the planned capital prioritisation debate the States will be asked:
  - i. To approve the proposals for the 'baseline' redevelopment of Guernsey Airport as outlined in this Report.
  - ii. To authorise the Treasury and Resources Department to appoint the Public Services Department's recommended contractor and to approve other professional services in connection with these works.
  - iii. To authorise the Treasury and Resources Department to approve a capital vote for these works.

Yours faithfully

B M Flouquet  
Minister

**GLOSSARY OF TERMS**

Accelerate – Stop Distance Available (ASDA)	The distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest point in the direction of take-off, at which the aeroplane cannot roll over the surface of the aerodrome and be brought to rest in an emergency without the risk of accident.
Aircraft Classification Number (ACN)	The ACN is a single unique number expressing the relative effect of an aircraft on a pavement for a specified subgrade strength.
Aeronautical Ground Light	Any light specifically provided as an aid to air navigation, other than a light displayed on an aircraft, including lights specifically provided at an aerodrome as an aid to the movement and control of aircraft and of those vehicles which operate on the movement area.
Aircraft Stand	A designated area on an aerodrome intended to be used for parking an aircraft.
Apron	A defined area on a land aerodrome provided for the stationing of aircraft for the embarkation and disembarkation of passengers, the loading and unloading of cargo, and for parking.
Cleared and Graded Area (CGA)	The part at the end of the Runway Strip cleared of all obstacles except for minor specified items and graded, intended to reduce the risk of damage to an aircraft running off the runway.
Clearway	An area at the end of the take-off run available and under the control of the aerodrome licensee, selected or prepared as a suitable area over which an aircraft may make a portion of its initial climb to a specified height.
Critical Area	An area of defined dimensions extending about the ground antennae of a precision instrument approach equipment within which the presence of vehicles or aircraft will cause unacceptable disturbance of the guidance signals.

Landing Distance Available (LDA)	The distance from the point on the surface of the aerodrome above which the aeroplane can commence its landing, having regard to the obstructions in its approach path, to the nearest point in the direction of landing at which the surface of the aerodrome is incapable of bearing weight of the aeroplane under normal operating conditions or at which there is an obstacle capable of affecting the safety of the aeroplane.
Low Visibility Procedures (LVP's)	Defines aircraft operations at aerodromes during reduced visibility or low cloud conditions. Reduced visibility can present additional hazards to the aircraft and to other aerodrome users, as the ability of air traffic service staff, pilots, vehicle drivers and other personnel to identify hazards and to take remedial action in a timely manner becomes limited.
Precision Approach Path Indicator (PAPI)	Precision Approach Path Indicator (PAPI) is a light system positioned beside the runway that consists of two, three, or four boxes of lights that provide a visual indication of an aircraft's position on the glidepath for the associated runway.
Runway	A defined rectangular area, on a land aerodrome prepared for the landing and take-off run of an aircraft along its path
Runway End Safety Area (RESA)	An area symmetrical about the extended runway centreline and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.
Runway Strip	An area of specified dimensions enclosing a runway intended to reduce the risk of damage to an aircraft running off the runway and to protect aircraft flying over it when taking-off or landing.
Shoulder	An area adjacent to the edge of a paved surface so prepared as to provide a transition between the pavement and the adjacent surface for aircraft running off the pavement.

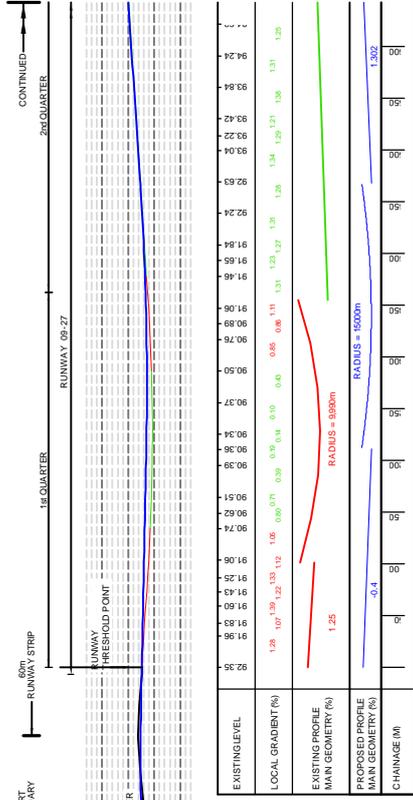
Stopway	A defined rectangular area beyond the end of the TORA, suitably prepared and designated as an area in which an aeroplane can be safely brought to a stop in the event of an abandoned take-off.
Take-off Distance Available (TODA)	Either the distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest obstacle in the direction of take-off projecting above the surface of the aerodrome and capable of affecting the safety of the aeroplane, or one and one half times the take-off run available, whichever is the less.
Take-off Run Available (TORA)	The distance from the point on the surface of the aerodrome at which the aeroplane can commence its take-off run to the nearest point in the direction of take-off at which the surface of the aerodrome is incapable of bearing the weight of the aeroplane under normal operating conditions.
Taxiway	A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another.
Taxiway Strip	An area of specified dimension enclosing a taxiway and intended to protect aircraft operating on the taxiway and to reduce the risk of damage to an aircraft running off the taxiway.
Threshold	The beginning of that portion of the runway available for landing.

NOTES :

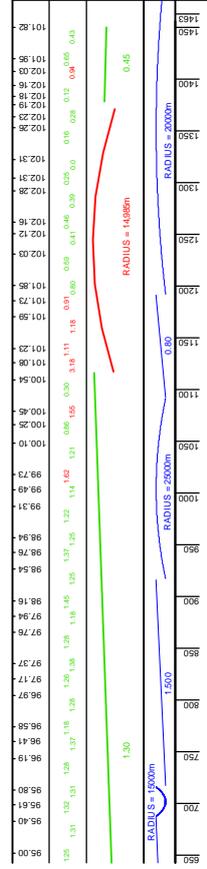
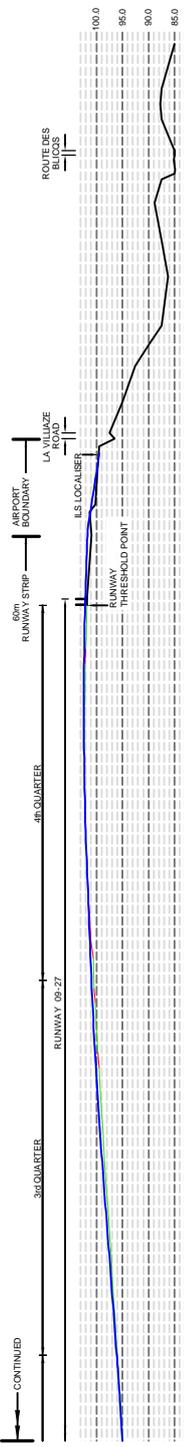
1. If this drawing has been modified electronically, it is the recipient's responsibility to print this document to the correct scale.
2. All dimensions are in millimetres unless stated otherwise. It is the recipient's responsibility to check the units of all dimensions.
3. This drawing has been prepared in compliance with all relevant current drawings and specifications.

NOTE

1. LOCAL GRADIENTS, TRANSVERSE LEVELS EXTRACTED FROM GUERNSEY AIRPORT DRAWING - "AERODROME PLAN 2007"
2. MAIN GEOMETRY BASED ON AN APPROXIMATE LINE OF BEST FIT. GRADIENTS AND RADII ARE PROVIDED FOR GUIDANCE ONLY. TO DETERMINE EXISTING GEOMETRY, THE SURFACE DATA MUST BE CONFIRMED FOLLOWING FURTHER LEVELLING AND MODELLING EXERCISES

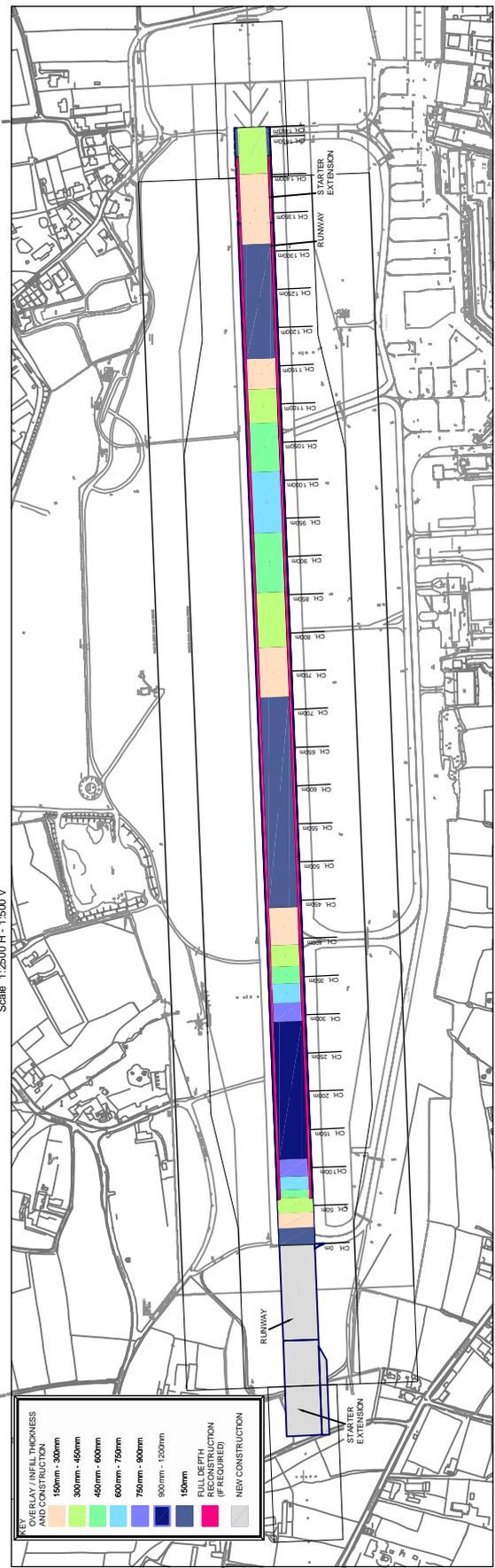


# APPENDIX 1 – EXTENT OF RE-LEVELLING OF RUNWAY SURFACE



## LONG SECTION A - A THROUGH EXISTING AND PROPOSED RUNWAY 09 - 27

Scale 1:25000 H - 1:500 V



**KEY**

- 150mm - 300mm
- 300mm - 450mm
- 450mm - 600mm
- 600mm - 750mm
- 750mm - 900mm
- 900mm - 1200mm
- 1200mm - 1500mm
- 150mm FULL DEPTH RECONSTRUCTION (IF REQUIRED)
- NEW CONSTRUCTION

**Project Information**

Project: Airfield Pavements Rehabilitation

Client: Guernsey Airport

Project Manager: SD

Design Stage: 10/10/07

Issue: 1/2500

Drawn By: DMB

Checked By: SD

Scale: 1:2500

Revision: 1

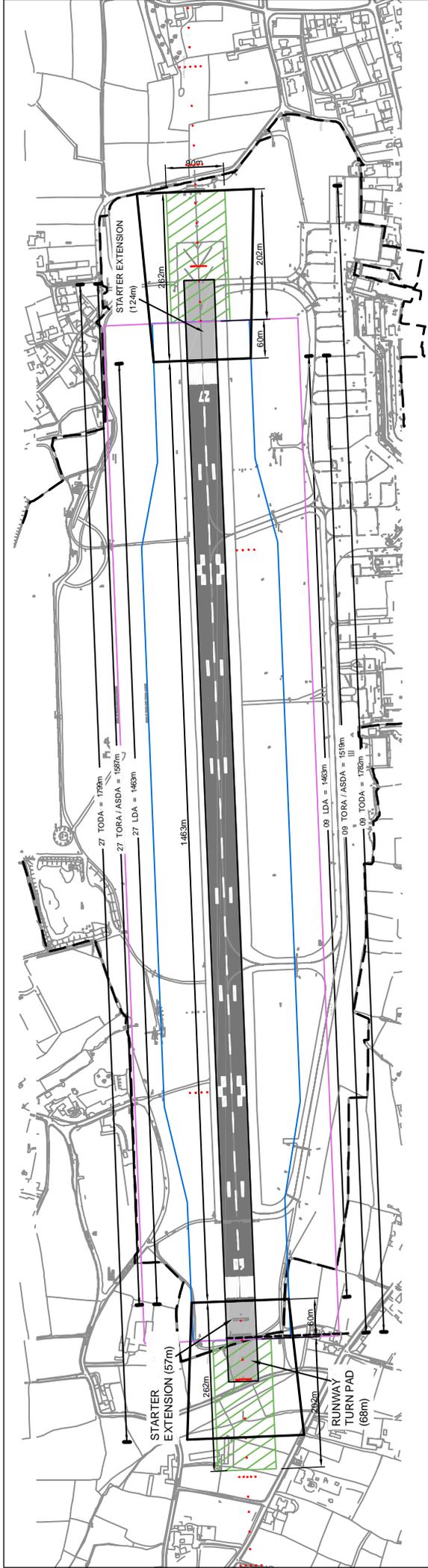
Drawing Number: 15482 / A1 / R01

Sheet: A

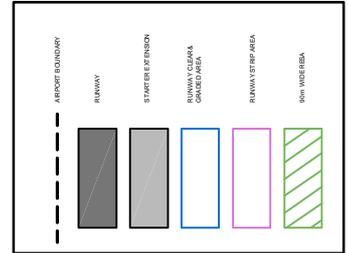
notes :

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# APPENDIX 2 – PROPOSED RUNWAY LAYOUT TO ACHIEVE 202M RUNWAY END SAFETY AREAS



**BASELINE DESIGN** EXISTING RUNWAY LENGTH, BALANCED RUNWAY & NON-COMPLIANT RESAs



DECLARED DISTANCES				
RUNWAY DESIGNATOR	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1519	1782	1519	1463
27	1587	1789	1587	1483

- TORA = TAKE-OFF RUN AVAILABLE
- TODA = TAKE-OFF DISTANCE AVAILABLE
- ASDA = ACCELERATE-STOP DISTANCE AVAILABLE
- LDA = LANDING DISTANCE AVAILABLE
- \* TODA TO BE FOLLOWING FURTHER OBSTACLE SURVEY AROUND AIRPORT

T +44 (0) 1536 600 700  
 F +44 (0) 1536 610 000  
 E info@rpsburnsgreen.co.uk  
 RPS24, 1, 100

A DIVISION OF THE PUBLIC SERVICES DEPARTMENT

Project: Airfield Pavements  
 Renovation

Title: Runway 09-27 Existing Orientation  
 Existing Runway Length  
 Balanced Runway & 202m RESA

Drawing Status: Preliminary  
 Project Leader: DMB  
 Date Created: 06/12/07  
 Drawn By: SD  
 Scale: 1:3000

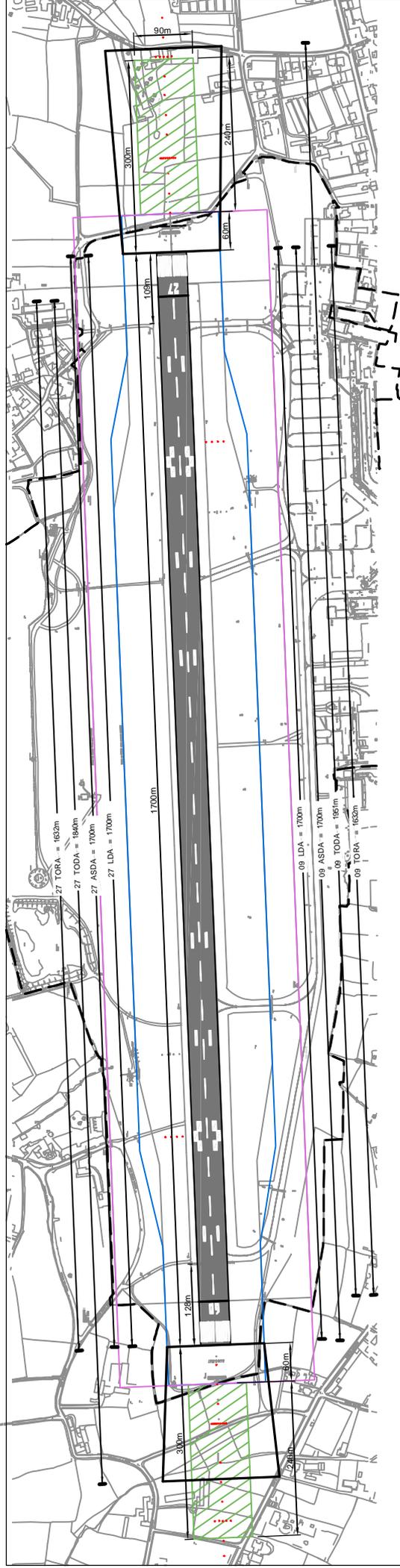
Drawing Number: 15482 / A1 / R02

notes :

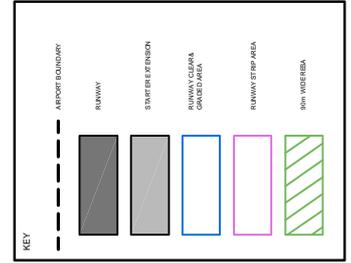
1. If this drawing has been received electronically, it is the recipient's responsibility to print this document to the correct scale.
2. All dimensions are in millimetres unless stated otherwise. (1:10 scale)
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# APPENDIX 3 – ALTERNATIVE RUNWAY LAYOUT TO ACHIEVE 240M

## RUNWAY END SAFETY AREAS AND EXTENSION TO 1700M



1700m RUNWAY



RUNWAY DESIGNATOR	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1852	1840	1852	1852
27	1852	1840	1852	1852

DECLARED DISTANCES	TORA (m)	TODA (m)	ASDA (m)	LDA (m)
09	1852	1840	1852	1852
27	1852	1840	1852	1852

TORA = TAKE OFF RUN AVAILABLE  
 TODA = TAKE OFF DISTANCE AVAILABLE  
 ASDA = ACCELERATE - STOP DISTANCE AVAILABLE  
 LDA = LANDING DISTANCE AVAILABLE  
 \* TODA TBG FOLLOWING FURTHER OBSTACLE SURVEY AROUND AIRPORT

Project: Airfield Pavements Rehabilitation
   
 Title: Runway 09-27 Existing Orientation 1700m Runway
   
 Drawing Status: Preliminary
   
 Project Leader: GDD
   
 Date Created: 08/12/07
   
 Drawing Scale: 1:3000
   
 Drawn By: SD
   
 Issue Review: DMB
   
 Drawing Number: 15482 / A1 / R03

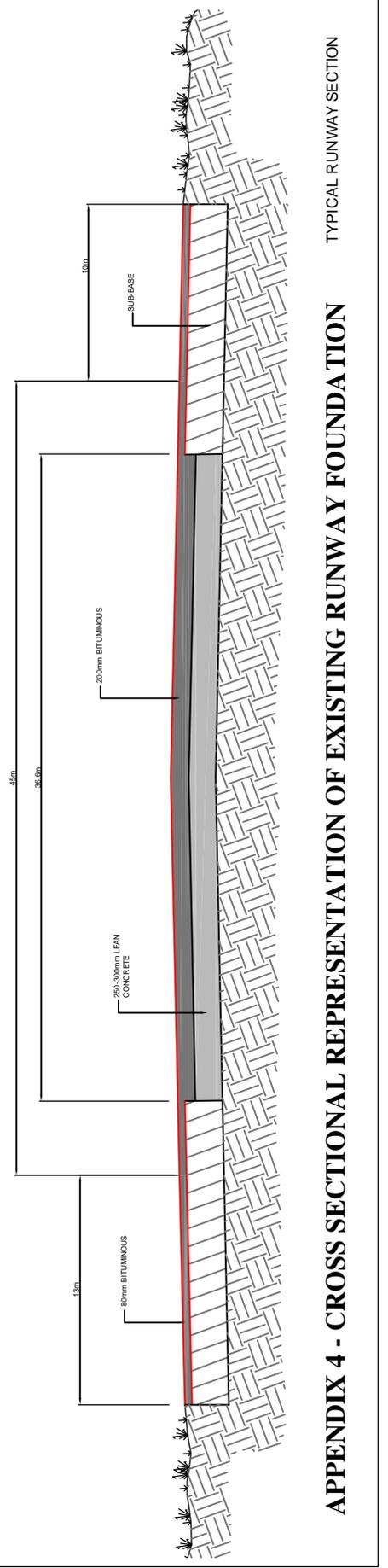


**EXISTING RUNWAY PAVEMENT PCN CLASSIFICATION**  
 Scale 1:2000



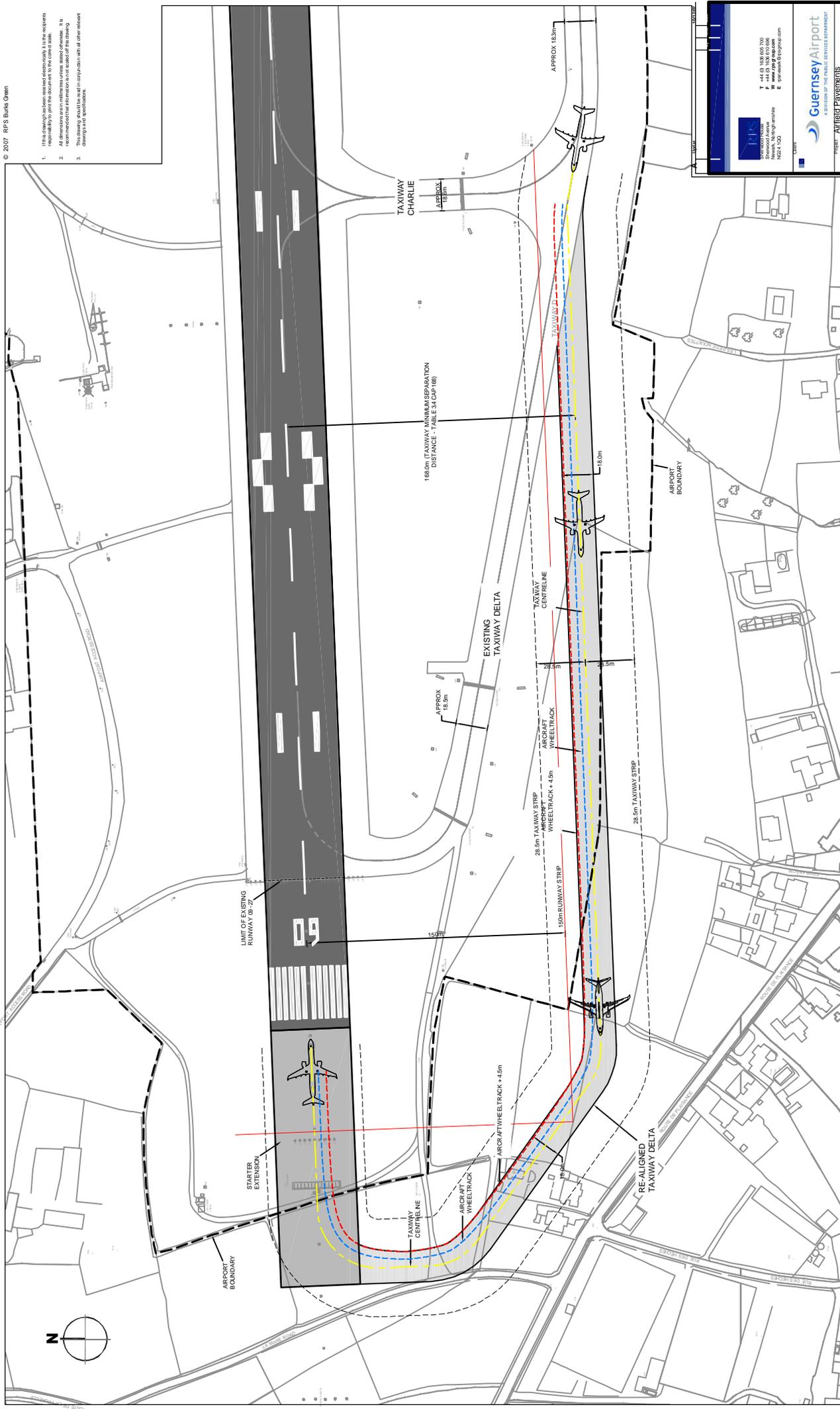
<p><b>Guernsey Airport</b>          A MEMBER OF THE AIR SERVICES AUTHORITY</p>	<p><b>Project:</b> Airfield Pavements Renovation</p> <p><b>Title:</b> Runway 09-27 Existing Pavement Construction and Classification</p> <p><b>Drawn/Checked:</b> GDD / WIN  <b>Preliminary:</b> 21/09/07  <b>Issue Review:</b> DMB</p> <p><b>Scale:</b> 1:2000</p> <p><b>Drawn By:</b> GDD  <b>Checked By:</b> WIN  <b>Issue Review:</b> DMB</p> <p><b>Revision:</b> A</p>
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T +44 (0) 1534 632700  
 F +44 (0) 1534 636000  
 W www.guernseyairport.com  
 E info@guernseyairport.com





1. This drawing has been prepared electronically by the system responsible to print the document for the client's use.
2. All dimensions are in millimetres unless stated otherwise. It is recommended that information is not scaled off the drawing.
3. This drawing should be read in conjunction with all other relevant drawings and specifications.



OPTION FOR RE-ALIGNMENT OF TAXIWAY DELTA

Scale 1:1000

**NOTE**  
 EXTENDED AND RE-ALIGNED TAXIWAY DELTA  
 WIDTH = 18m  
 AIRCRAFT USED FOR TRACKING PURPOSES -  
 (A) UNRESTRICTED TRACKING &  
 (B) PLOT VIEW

<p><b>Guernsey Airport</b>          A DIVISION OF THE PUBLIC SERVICES DEPARTMENT</p>	
<p>Project: Airport Pavements Rehabilitation          Title: Option for Re-alignment of Taxiway Delta</p>	
<p>Drawn By: 10/10/07          Checked By: SD          Project Leader: GDD</p>	<p>Scale: 1:1000          Date: DMB          Drawing No: 15482 / A1 / R06</p>

# APPENDIX 6 – ALTERNATIVE LAYOUT FOR COMPLIANT DELTA TAXIWAY





**COMMERCE AND EMPLOYMENT DEPARTMENT**

Deputy B M Flouquet  
Minister  
Public Services Department  
Sir Charles Frossard House  
La Charroterie  
St Peter Port

30<sup>th</sup> October 2008

Dear Deputy Flouquet

**Guernsey Airport Pavements Project Report**

1. The Commerce and Employment Department is grateful that the Public Services Department has given it the opportunity to submit detailed comments to be published with the States Report on the Guernsey Airport Pavements Project.
2. You will be aware that since receipt of an earlier draft of the Report in August 2008, the Commerce and Employment Department has consistently taken the stance that it did not believe that an adequate strategic assessment has been undertaken to enable the States to take an informed decision on whether or not the runway should be extended.
3. On the basis of the evidence currently available, the Commerce and Employment Department has serious concerns about the strategic risk to the Island's wellbeing if the runway is not extended. It would not support any proposals that, prior to consideration of the results of an adequate strategic assessment, excluded the possibility of a runway extension either immediately or in the foreseeable future.
4. To be clear, the Commerce and Employment Department's main concern is not that it may not be possible to expand air services to Guernsey and increase passenger numbers in the immediate future. Although such improvements would be welcome, its main concern is the strategic risk that limitations on the type of aircraft that can use the runway will lead to a deterioration in air services to Guernsey which would have a significant impact on the economic and social wellbeing of the community.

5. In this respect the comment in the Report that “*no airlines have cited runway length as a limiting factor*” is misleading. The comment refers to an initiative to get additional services and operators to Guernsey and which were focused on the operators of aircraft that could be accommodated on a 1400 metre runway.
6. The Commerce and Employment Department also has concerns about the funding of the project. One aspect of these concerns is the possible implications on future air services if the whole cost of the project was passed on to airport users through increases on airport charges that are already amongst the highest in Europe. Another aspect is how to ensure that consideration of alternative methods of funding was included the capital prioritisation process and that adequate provision is made to cover the cost of a possible runway extension.
7. However, even if the necessity for a runway extension was immediately accepted and the appropriate funding agreed in the capital prioritisation process, the extension project could not go ahead until land use planning policies were changed. This would involve the preparation of a draft amendment to the Rural Area Plan by the Environment Department followed by a Planning Inquiry and the submission of the Inquiry report to the States. The time scale for such a process is likely to be in excess of one year.
8. The Commerce and Employment Department is aware that any significant delay in commencing work to the pavements may result in even more stringent operational restrictions being imposed on existing services as a result of their worsening condition. The Department would not wish to recommend an approach that involved delays of the magnitude referred to above.
9. To some extent the concerns of the Commerce and Employment Department have been addressed by the agreement of the Policy Council to oversee a strategic assessment of the need for a runway extension.
10. It is unlikely that the results of the strategic assessment will be available in time for consideration at the capital prioritisation debate. The Commerce and Employment Department would expect however that the capital prioritisation process would take account of the possibility that the Policy Council assessment confirms the need for a runway extension and that a further report may be put to the States to secure appropriate funding arrangements. That further report could also include proposals directing the Environment Department to commence the processes to amend current land use planning policies under the new Land Use Planning Law which by then should be in force.
11. If a runway extension is required, the most cost efficient approach would be to undertake a single coordinated refurbishment and extension project, this would also be least disruptive to airport activities. This cannot now be achieved without unacceptable delays to the commencement of works. The next best achievable option is therefore to undertake an extension as an add-on to the refurbishment project which will not be completed before sometime around mid 2011.

12. In order that States members are fully aware of the issues relating to a possible runway extension when debating the current Report, a discussion of those issues and comments from ASM, the external experts retained by the Commerce and Employment to advise on air route issues, are enclosed with this letter.
13. Subject to the comments above the Commerce and Employment Department supports the recommendation of the Public Services Department.

Yours sincerely

C S McNulty Bauer  
Minister

Enc.

## Annex

**Discussion on the Airport's Role and Air Services to Guernsey**

1. The Report placed before the States by the Public Services Department (the Report) concludes that the estimated cost of refurbishing the runway at its existing length of approximately 1400 metres to "Code 3" standards (the "baseline" proposal) is £84.5m and the estimated costs of refurbishment and extension to approximately 1700 metres is £118.7m to "Code 3" standards or £133.7m to higher "Code 4" standards (these Code standards are discussed below).

**Funding**

2. Under the current self funding financial structure of the airport, and even allowing for the small subsidy provided through the Commerce and Employment Department, Guernsey airport landing charges are already amongst the highest in Europe and are not competitive with other regional UK airports. Passing on the full cost of the project to airport users would increase charges substantially which would be passed on to passengers in higher ticket prices and could also impact on strategic route planning decisions by operators.

**The Role of the Airport**

3. Following publication of its 2006 Document on the Visitor Economy Strategy, the Commerce and Employment Department has undertaken a route development initiative with the support of its external advisers ASM. In undertaking this initiative, the Commerce and Employment Department has benefited from expert external advice, built on its previous understanding of aviation issues and gained a far deeper strategic appreciation of the obstacles to, and opportunities for, maintaining adequate air links to Guernsey.
4. Over and above technical, operational and trading considerations, the airport is a gateway to and from the Island and as such is a vital part of its strategic infrastructure. The strategic importance to the Island is significantly greater than is the case with a mainland community which will be served by a variety of land transport links.
5. Leisure visitors remain an important element in maintaining the viability of air links but they now constitute only some 35% of total air passengers. The benefits of maintaining and, where possible, enhancing the connectivity of the Island with the outside world goes far beyond attracting tourists and extends to all areas of the economy and the social well being of the community.
6. Air links to a range of near destinations and to onward international connections underpin the overall economic attractions and quality of life of the community. In this respect the airport is as much a part of the strategic infrastructure of the Island as are roads, schools, health amenities, waste disposal facilities etc.

7. Decisions taken today on the extent of runway works to be undertaken could determine the types of aircraft that can be accommodated for the foreseeable future. Those decisions must therefore be taken from a strategic perspective rather than an immediate operational or funding perspective.

### **Developments in the Aviation Industry**

8. There have been, and continue to be, major changes in the global aviation industry in terms of consolidations and fall out of operators, the adoption of new business models and standardisation of fleets. The pace of that change has recently accelerated as a result of trends on oil prices. In addition, issues are emerging on busy hub airports that may make access for smaller aircraft more difficult and thus impact on services from Guernsey to such airports for onward connection.
9. The so called Low Cost Carrier (LCC) business model has revolutionised the aviation market to a point whereby consumer choice can be influenced as much by which destinations are offered on a brand leader's heavily marketed website as by the attractions of destinations in their own right. The LCC sector (which with the exception of Flybe is primarily based around 140/180 seat aircraft, typically the smaller Boeing 737 variants and Airbus A320/A319 that cannot land on a 1400 metre runway without restriction) has been the only sector in aviation showing any growth in recent years.
10. In effect the Island is competing with other jurisdictions to attract and retain operators to provide air services and any disincentive to operators, such as restrictions on aircraft type or high airport charges, undermines its ability to attract such operators.
11. There will always be a benefit in having some services from niche operators using smaller aircraft but frequent, larger capacity services into major population centres and hub airports to meet the strategic needs of the Island will require significant, financially robust operators. Commerce and Employment's experience in seeking to achieve route development confirms that, even today, the number of such operators with aircraft in their fleet that can be used on a 1400 metre runway is very limited.
12. Without disputing the commitment of the current operators of services to Guernsey, it cannot be assumed that they will be in existence, be able or be willing to continue to provide adequate levels of services in the medium to long term future or that their business strategies will complement the strategic needs of the Island.
13. All the indications are that, in the future, the number of potential operators with aircraft in their fleet that might be attracted to provide services to Guernsey on a 1400 metre runway, and who could therefore substitute for, or enhance, existing services will be even more limited.

14. Commerce and Employment asked ASM for a high level review of the issues and a compilation of the advice received is contained in the attached document.
15. Jersey has a 1700 metre runway and is able to accept the larger aircraft adopted by many operators. A summary of current services to Guernsey and Jersey showing the type of aircraft used and whether it can land unrestricted on a 1400 metre runway is shown on pages 10 and 11 in the ASM document.
16. There has already been a trend towards new routes to Guernsey being either triangular or via Jersey, in part due to the relative number of passengers generated by each island. It cannot be discounted that if a 1400 metre runway is retained then, given a continuation of the trends in the aviation industry, Guernsey could increasingly become a feeder, or “spoke”, to a hub of services on larger aircraft provided out of Jersey.
17. From a strategic perspective, from its recent experience in discussions with commercial providers whilst seeking to achieve route development and taking into account comments from ASM, its external advisers, Commerce and Employment does not believe that the evidence presented in the Public Services Department report supports the conclusion that a 1700 metre runway is not required.

### **Costings and Timings**

18. Table 8 of the Report presents a breakdown of the costs of refurbishing the existing runway length to Code 3 standards at £84.5m and of extending the runway and bringing the whole length up to Code 4 standards at £133.7m, a total difference in costs of £49.2m.
19. For Guernsey airport the most significant element of the Code standards is that Code 4 would require considerably more infill to smooth out height and gradient changes along the length of the runway than would Code 3.
20. Until the final stages in the preparation of the proposals the Public Services Department considered that to be able to accommodate larger aircraft the runway would need to be extended with the whole length being at Code 4 standards.
21. On the grounds of additional costs and additional disruption to airport activities, this requirement would have effectively ruled out a possible two stage approach of refurbishing the existing 1400m to Code 3 standards as the first stage then, as a second stage, bringing the existing 1400 metres up to Code 4 and extending to 1700 metres.
22. The Public Services Department now advises that it has identified that larger aircraft could be accommodated on a 1700m runway at Code 3 standards as explained in the Report. Compared with the £84.5m cost of refurbishing the

runway to Code 3 standards (the baseline proposal), the costs of refurbishing and extending the runway to 1700m at Code 3 standards is £118.7m, a total difference in costs of £34.2m.

23. The Public Services Department is suggesting that this makes a two stage approach possible whereby the existing 1400m is refurbished immediately to Code 3 standards and if it was decided in the future to extend to 1700m this could be done also at Code 3 standards. There would however be additional mobilisation costs and the costs of re-siting lighting etc. that would take the total cost of a two stage approach above £118.7m.
24. The Commerce and Employment Department is proceeding on the basis of the conclusions of the Public Services Department that 140/180 seat aircraft, typically the smaller Boeing 737 variants and Airbus A320/A319, can be accommodated without significant restrictions on a runway extended to 1700m at Code 3 standards as described in the Report.

# Consolidated comments on Guernsey Runway Proposal

Prepared for The States of Guernsey

J 510	Shanghai/Pudong	27
K 111	Shanghai/Pudong	17
L 135	Sydney	21
M 700	Melbourne	71
N 7876	Gullin	20
O 3038	Cairns	18
P 086	Changsha	64
Q 9810	Auckland	35

**ASM** route development for airports

The World Leader in Route Development for Airports

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# Introduction

To the Commerce and Employment Department,

Thank you for inviting ASM to comment on the implications on future air services to Guernsey of retaining a 1400m runway as opposed to extending it to 1700m to accommodate larger aircraft.

In the time available, ASM have only been able to draw on data already available to it and on its experience in assisting your Department on its route development initiative. This document consolidates the information contained in the presentations given to your Department and to the Policy Council with some additional data as requested. It also includes some overall comments on possible commercial trends in aviation and how these may impact on Guernsey.

We have not carried out any research or analysis specific to the runway issue. We are also not in a position to comment on the Cost/Benefits of the alternative runway options but would be pleased to assist in undertaking such an analysis should it be commissioned in the future.

I can confirm that ASM gives it approval for this document to be published and would be happy to give presentations to interested parties on the island.

ASM



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# Turbulent times.....

- Continued standardisation on A320/A319/New Generation 737s by LCCs (with the exception of Flybe)
- Consolidation of European LCCs ( the US market now has 3 strong surviving brands )
- Consolidation of European network carriers around three core groupings – Lufthansa, Air France-KLM and BA-Iberia
- Continued market share gains for LCCs from Charter Carriers in markets less than 3-4 hours flying time
- Break up of BAA London airports will create further pressure on runway capacity in the London system – no guarantee that further London runway capacity will be available for smaller aircraft. Only Heathrow guaranteed to continue to operate as a genuine hub airport
- Continued restrictions on further runway capacity at established European hubs – Amsterdam, Frankfurt and Paris will eventually reach Heathrow saturation levels
- Expanded use of geographically well positioned hubs in Central Europe (Warsaw, Vienna, Munich, Prague), as smaller airlines are squeezed out of traditional hubs.

## The context

- The issue of runway development is multi-dimensional, and certainly should not be viewed as a simplistic exercise that focuses upon and assumes a level of incremental passenger growth once a runway extension has been concluded.
- There are equally critical issues that relate to quality rather than just volume of air seat availability and passengers. Island communities are dependent more than others on the density and extent of air links.
- Its economic well being will also be dependent on the manner in which the islands key economic generators of Financial Services and Tourism can be most adequately served by future air service provision

## Market Power

- There is a strong possibility that simply maintaining the existing 1,400m will only re-enforce the reliance on a small number of existing operators. The Regional Airline market sector is now one of the most difficult to operate within commercially, and only the subsidiary regional partners of major network carriers are gravitating strongly towards re-equipping with EMB195 type equipment.
- The provider of much of the recent market development in Guernsey, Flybe, could feasibly undergo an IPO/trade sale in the near future, under which the existing business model and geographic incorporation of Guernsey operations are not guaranteed. A 1,400m runway places potential obstacles in the way of broadening the airline customer base in the future, rather than acting as an incentive to develop Guernsey services.
- Short-haul Low Cost Carriers (LCCs) which are driving growth in the aviation market are standardising their fleets around larger 737/A320 type aircraft.

# International Connectivity

- There is a widely acknowledged requirement for regional economies to be effectively linked to the international market place. For larger conurbations, a range of direct international air services are usually supported which deliver this requirement. The most effective way for a smaller market such as Guernsey to achieve this level of connectivity is through efficient access to a major hub airport, which offers seamless one-stop connections to a range of global markets.
- Jersey, for instance, currently achieves this via its BMI services to Heathrow which connect with more than 10 Star Alliance partner airlines serving more than 20 cities throughout the world. The business model adopted by both Aurigny and Flybe does not allow this to happen at Gatwick, whose range of international scheduled services is becoming increasingly dominated by short-haul Low Cost Carriers (LCCs) – even at this point Guernsey does not have a competitive level of “Global Accessibility”.

## International Connectivity (2)

- A 1,400m runway only allows fully laden flights with EMB195 and Dash 8-400 aircraft access to Gatwick and nearby European hubs such as Paris and Amsterdam. Air transport displays irrefutable long term growth trends, and busy hub airports simply get busier over time. As slot capacity is exhausted at these airports, it is unlikely that large amounts of additional runway capacity will be added (with the London system a potential exception) , particularly given the EU's penchant for developing fast rail links as an alternative to short haul air travel. With only a 1400m runway Guernsey risks running out of hubs.
- Market economics dictates that as these hubs fill, smaller aircraft will eventually be priced out. The medium term alternative for Guernsey would be to access an alternative hub airport such as Munich or Prague – for which a 1,400m runway would be insufficient.

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## International Connectivity (3)

- It is unrealistic to believe that even in the medium term Guernsey can simply by-pass the hub and spoke system and create a significantly wider range of direct services than is already supported, given the limited market size.
- It should also be noted that should Heathrow succeed in developing medium term additional runway capacity, the sheer market power of the busiest international airport in the world will almost certainly dictate that new slots will be used by aircraft greater than 150 seats – which again would need a 1,700m runway at Guernsey. There is a possibility that the current regulatory pricing caps at London Airports could simply be withdrawn once the sell-off of Gatwick and Stansted is completed, and these airports would then be completely exposed to market pricing. A 1,400m runway therefore may not be sufficient in future to access the increasingly inadequate Gatwick international network, and would rule out any access to highly attractive new slots at Heathrow

# Tourism

- LCC's are now beginning to act as the dominant distribution channels for leisure travel both in the UK and throughout Europe. We believe that the island is at a competitive disadvantage by being excluded from these distribution channels because the existing runway length is insufficient for LCC operations.
- A minimum runway length of 1,700m is irrefutably required for the island to penetrate these key distribution channels. Guernsey fulfils certain key operating criteria for UK based LCCs in that it is an attractively "short" sector length from LCC base airports, and can supply two-way traffic flow because of the high propensity-to-fly ratio of the resident population. The only LCC market test that Guernsey fails for is insufficient runway length for commercial operations

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# Guernsey current services

Carrier	Dest	Eqp	Weekly Flights	Weekly Seats	Carrier	Dest	Eqp	Weekly Flights	Weekly Seats
Flybe	London Gatwick	BAE 146	28	2520	Aurigny	London Gatwick	ATR 72	28	1792
Flybe	Southampton	Bombardier Q400	26	1820	Aurigny	Manchester	ATR 72	14	896
Flybe	Jersey	Bombardier Q400	22	1540	Aurigny	Bristol	ATR 72	7	448
Flybe	Exeter	Bombardier Q400	7	490	Aurigny	London Stansted	ATR 72	7	448
Flybe	Birmingham	Bombardier Q400	6	420	Aurigny	Jersey	Trilander	71	1136
Flybe	Paris CDG	Bombardier Q400	4	280	Aurigny	Dinard	Trilander	11	176
Flybe	Dublin	Bombardier Q400	3	210	Aurigny	Alderney	Trilander	28	448
Flybe	Manchester	Bombardier Q400	1	70	BlueIslands	Bournemouth	Jetstream 32	4	76
Flybe	Norwich	Bombardier Q400	1	70	BlueIslands	Geneva	Jetstream 32	5	95
Flybe	Birmingham	Bombardier Q400	6	420	BlueIslands	Isle Of Man	Jetstream 32	8	152
Flybe	Exeter	Bombardier Q400	5	350	BlueIslands	Zurich	Jetstream 32	6	114
								Total number of seats	13971

Source: Latest available from Flightbase

# Jersey current services

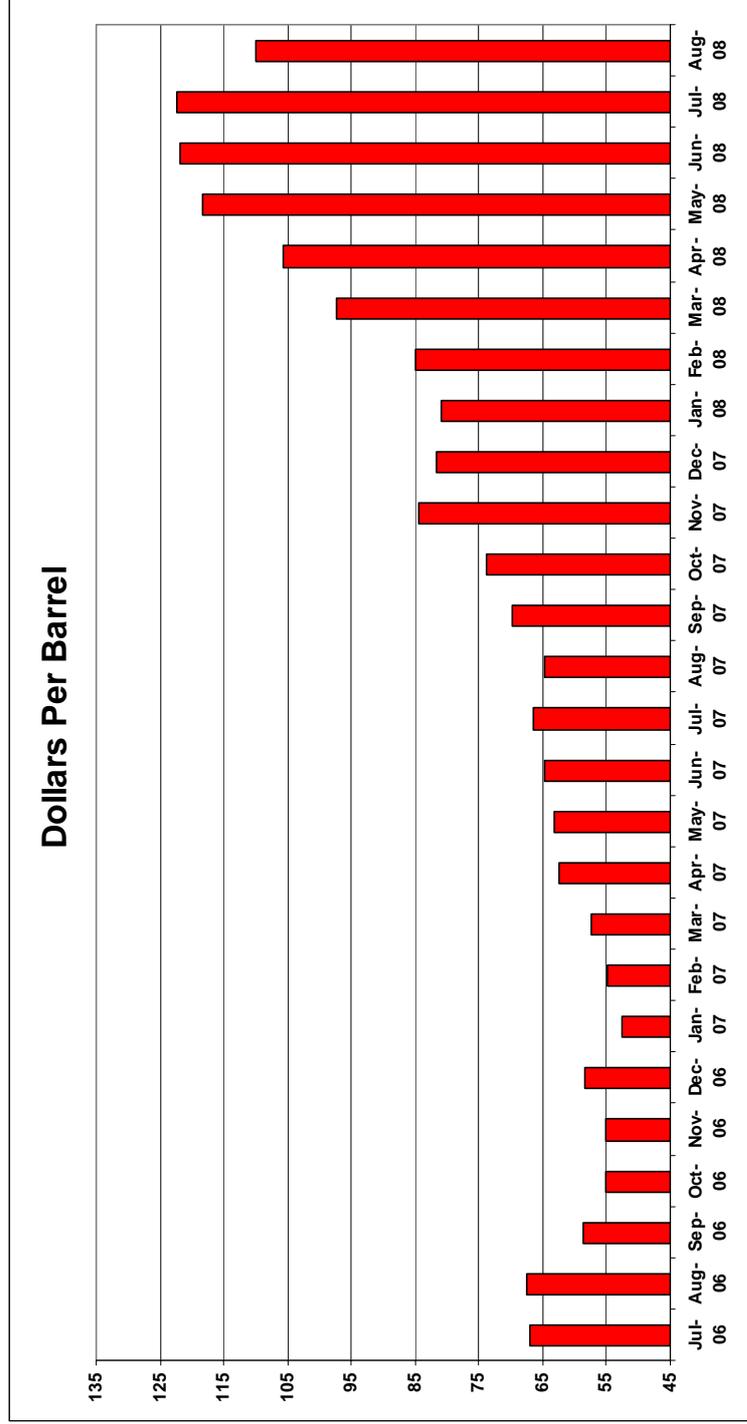
Carrier	Destination	Fleet	Weekly Flights	Weekly Seats	Carrier	Destination	Fleet	Weekly Flights	Weekly Seats
Flybe	London Gatwick	Embraer 195	27	3456	British Airways	London Gatwick	737-500	19	2052
Flybe	Belfast City	Embraer 195	1	128	British Airways	London Gatwick	737-400	1	137
Flybe	Manchester	Embraer 195	1	128	British Airways	London Gatwick	Airbus A319	16	2016
Flybe	Newcastle	Embraer 195	1	128	British Midland	London Heathrow	Airbus A319	4	484
Flybe	Manchester	Embraer 145	10	490	British Midland	London Heathrow	Airbus A320	6	936
Flybe	Southampton	Embraer 145	1	49	British Midland	London Heathrow	Embraer 145	4	200
Flybe	Southampton	Bombardier Q400	25	1750	BMI Baby	East Midlands	737-500	7	791
Flybe	Guernsey	Bombardier Q400	22	1540	BMI Baby	Birmingham	737-500	1	113
Flybe	London Gatwick	Bombardier Q400	12	840	BMI Baby	Manchester	737-300	6	792
Flybe	Birmingham	Bombardier Q400	10	700	BMI Baby	Birmingham	737-300	2	264
Flybe	Edinburgh	Bombardier Q400	8	560	BMI Baby	Cardiff	737-300	1	132
Flybe	Norwich	Bombardier Q400	7	490	Aer Lingus	Dublin	Airbus A320	3	456
Flybe	Bristol	Bombardier Q400	6	420	Aer Lingus	Cork	Airbus A320	2	304
Flybe	Paris CDG	Bombardier Q400	6	420	Easyjet	Liverpool	Airbus A319	7	1092
Flybe	Exeter	Bombardier Q400	6	420	Easyjet	Luton	73G	7	1036
Flybe	Cardiff	Bombardier Q400	3	210	Jet2	Leeds Bradford	737-300	3	396
Flybe	Manchester	Bombardier Q400	3	210	Flyglobespan	Teesside	737-300	1	132
Flybe	Newcastle	Bombardier Q400	3	210	WV	Cardiff	737-500	1	113
Flybe	Doncaster Sheffield	Bombardier Q400	2	140	VLM	London City	Fokker 50	5	250
Flybe	Glasgow	Bombardier Q400	2	140	NM	Gloucester	L4T	3	51
Flybe	London Southend	Bombardier Q400	2	140	Aurigny	Guernsey	Trilander	74	1184
Flybe	Aberdeen	Bombardier Q400	1	70					
Flybe	Belfast City	Bombardier Q400	1	70					
Flybe	Nice	Bombardier Q400	1	70					
Flybe	Exeter	Bombardier Q400	6	420					
Flybe	Birmingham	Bombardier Q400	5	350					
			Total number of seats					26480	
			Seats on aircraft restricted by 1400m runway					11246	
								42%	
Source: Latest available from Flightbase									

42% of the capacity into Jersey is provided on aircraft that could not operate on a 1400m runway without restriction

# Guernsey's Potential Airline Customer Portfolio – Continued Market Segmentation

Airline Category	Examples
<b>Regional Carriers</b>	<b>Aurigny, Blue Islands, Aer Arran</b> Extremely difficult to survive without commercial partnerships with Network Carriers
<b>Low Cost Carriers</b>	<b>EasyJet, Ryanair, Wizz, Jet2, BMI Baby, Flybe</b> Standardisation on 1/2 aircraft type fleets – typically 140-189 seats Now becoming the dominant distribution channel for leisure flights Flybe are unique in choice of 78 and 105 seat aircraft in Europe
<b>Hybrid Low Cost Carrier</b>	<b>Air Berlin</b> – only LCC operating a hub and spoke business model
<b>Network Carrier</b>	<b>BA, BMI, Air France-KLM, Lufthansa</b> – offer global coverage with connecting flights using key hub airports. Short haul services in these hubs often operated by regional partners/subsidiaries

# Fuel dominates the industry's agenda



“The situation is desperate and potentially more destructive than our recent battles with all the Horsemen of the Apocalypse combined.” Giovanni Bisignani, Director General of IATA, June 2008.



The World Leader in Route Development for Airports

## The effects are tangible

- Ryanair grounds 20 aircraft this winter and suspends operations at several airports
- British Airways reduces frequencies across the network equivalent to 10 aircraft
- TUI cuts summer 2009 capacity in the UK by 15%
- 24 airlines ceased operating between January and June 2008
- Further consolidation likely in Q4 2008 in regional and LCC sectors
- The future of even the biggest airlines cannot be guaranteed.

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# Aircraft Technology

Aircraft Type	Operator	Runway requirement
A319	Easyjet, BA, BMI	Unrestricted operations as far as 400nm from 1,700m runway
Boeing 737 -300	BMI baby, Jet2	Unrestricted operations as far as 400nm from 1,700m runway
Boeing 737-800	Ryanair	Requires 2,200m for unrestricted operations
Embraer 195	Flybe, Air France, KLM, Lufthansa	500nm unrestricted range from 1,400m runway 1,500nm unrestricted range from 1,700m runway
Dash 8-400	Flybe, Air Berlin	Unrestricted operations up to 1,500nm from 1,400m runway
ATR 72	Aurigny	Unrestricted operations to 800nm from a 1,400m runway
Do328/Jetstream 31	Blue Islands	Unrestricted operations to 1,000 nm from 1,400m runway

## Routes – The outlook for Guernsey

- The States of Guernsey Department of Commerce and Employment are committed to developing air service access to the island for residents and visitors.
- There are obstacles however to the development of additional capacity to the island.
- Some markets do not have sufficient passenger volume to sustain scheduled air services.
- The existing runway cannot accommodate most LCC aircraft operations.
- Even with an extended runway (1700m), certain types of regional jet aircraft will encounter operational limitations\* in terms of payload or range restrictions which may be a barrier to route profitability
- Nevertheless a 1700m runway in Jersey is sustaining LCC operations from major LCC brands
- Ironically, extremely low LCC fares are no longer sustainable, making Guernsey more competitive on a price basis for the first time in some years.

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# Current Priorities

- Maintain the existing route network in terms of destinations and capacity.
- There is a clear need to provide access to a hub which offers a global network. There is a defined corporate demand for travel to destinations that can only be accessed by an indirect routing from Guernsey. This is not being adequately provided by any services to London, Paris or Dublin at present
- Ideally, there is a need to diversify the range of operators serving Guernsey to future proof existing and secure new links

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**Runway length**

1,400m

1,700m

**Business /VFR Traffic**

Limited to 500nm range of EMB195s  
 Airlines detest compromises created by payload restrictions  
 Flybe's Business Model is not "hub" friendly  
 Long term pressure on hub airport capacity in Europe will increase average aircraft size over medium term. A 70 seat turbo-prop may not be sufficient in 10 years time  
 Few likely emerging "secondary hubs" within 500nm of Guernsey  
 Protects a Flybe/Aurigny duopoly – future strategic business model of Flybe could change after potential IPO

**Inbound Leisure Traffic**

Protects a Flybe/Aurigny duopoly – future strategic business model of Flybe could change after potential IPO  
 No access to marketing bandwidth of secure LCCs from UK market  
 No access to European based LCCs who are gradually replacing traditional charter operations

Allows unrestricted EMB195 operations up to 1,500 nm  
 Even 130-140 seat jets to major European hubs such as Amsterdam, Paris and Brussels  
 Compatible with fleet development at the industry "survivors" – Lufthansa/KLM/Air France  
 Delivers (and sustains) "Global Connectivity"  
 Creates a more competitive airline marketplace

Allows access to LCC brands eg Easyjet, Jet2 who would be attracted to characteristics of Guernsey market eg short sectors from UK and Continental Europe  
 Creates a more competitive airline marketplace



The World Leader in Route Development for Airports

## ASM - Credentials

- Established 1993, the first company to focus purely on the field of Air Service Development
- Operate globally – HQ in Manchester with satellite international offices in Kuala Lumpur, Beijing, Hyderabad, Tokyo, Moscow, Miami and Warsaw
- 60% of client assignments are delivery-focussed air service development projects. 40% of turnover now on transaction advice for potential investors in airports
- Team of 25 staff drawn from unique airline/airport commercial management backgrounds (BA, American Airlines, Manchester Airport, Singapore Airlines, KLM/Air UK)

**(NB The Policy Council, by a majority, supports the submission of States reports on major capital projects, of which this is the first, for debate, in accordance with Rule 12 (4) of the Rules of Procedure of the States of Deliberation, at successive States meetings, leading up to the States debate on capital prioritisation intended to take place at the March 2009 States meeting.)**

**(NB The Treasury and Resources Department has no comment on the proposals.)**

The States are asked to decide:-

VIII.- Whether, after consideration of the Report dated 31<sup>st</sup> October, 2008, of the Public Services Department, they are of the opinion:-

1. To note the proposals for the ‘baseline’ redevelopment of Guernsey Airport as outlined in that Report which will facilitate the resurfacing and reconstruction of the runway, aprons and taxiways.
2. To note that after the planned capital prioritisation debate the States will be asked:
  - (1) To approve the proposals for the ‘baseline’ redevelopment of Guernsey Airport as outlined in that Report.
  - (2) To authorise the Treasury and Resources Department to appoint the Public Services Department’s recommended contractor and to approve other professional services in connection with these works.
  - (3) To authorise the Treasury and Resources Department to approve a capital vote for these works

**(NB The Public Services Department has requested that this matter be debated in accordance with Rule 12 (4) of the Rules of Procedure of the States of Deliberation which provides**

*“Where a Department or Committee originating a matter for debate before the States is of the opinion that the proposals it is submitting to the States are ones of general policy, and where it is desirable that the general principles of that policy should be considered, the Department or Committee may request that its propositions be considered by the States without amendment, on the understanding that if the propositions are accepted, the Department or Committee would return with detailed proposals which could be accepted or rejected, together with any amendments...”*)

***ORDINANCE LAID BEFORE THE STATES*****THE COMPANIES (GUERNSEY) LAW, 2008  
(AMENDMENT) (NO.2) ORDINANCE, 2008**

In pursuance of the provisions of the proviso to Article 66 (3) of the Reform (Guernsey) Law, 1948, as amended, the Companies (Guernsey) Law, 2008 (Amendment) (No.2) Ordinance, 2008, made by the Legislation Select Committee on the 27<sup>th</sup> October, 2008, is laid before the States.

***STATUTORY INSTRUMENTS LAID BEFORE THE STATES*****THE COMPANIES (REGISTRAR) (FEES) REGULATIONS, 2008**

In pursuance of Section 537 of the Companies (Guernsey) Law, 2008, the Companies (Registrar) (Fees) Regulations, 2008, made by the Deputy Registrar of Companies on 17<sup>th</sup> October, 2008, are laid before the States.

**EXPLANATORY NOTE**

These regulations prescribe the fees payable to the Registrar of Companies in respect of the performance of his functions under the Companies (Guernsey) Law, 2008.

**THE TAXATION OF REAL PROPERTY (GUERNSEY AND ALDERNEY)  
(AMENDMENT) REGULATIONS, 2008**

In pursuance of Section 49 (4) the Taxation of Real Property (Guernsey and Alderney) Ordinance, 2007, the Taxation of Real Property (Guernsey and Alderney) (Amendment) Regulations, 2008, made by the Treasury and Resources Department on 28<sup>th</sup> October, 2008, are laid before the States.

**EXPLANATORY NOTE**

These regulations amend the definition of “school”, contained in the Taxation of Real Property (Guernsey and Alderney) Ordinance, 2007, to enable organisations or institutions, whose principal function is the provision of supervision and care of children of less than compulsory school age, to be zero rated for Tax on Real Property purposes.

**THE CHARITIES AND NON PROFIT ORGANISATIONS  
(EXEMPTION) REGULATIONS, 2008**

In pursuance of paragraph 8(3) of the Schedule to the Charities and Non Profit Organisations (Registration) (Guernsey) Law, 2008, the Charities and Non Profit Organisations (Exemption) Regulations, 2008, made by the Treasury and Resources Department on 4<sup>th</sup> November 2008, are laid before the States.

EXPLANATORY NOTE

These regulations specify the classes and descriptions of registered charitable and non profit organisations which are exempted from the requirements of paragraph 8(1)(b) of the Schedule to the Charities and Non Profit Organisations (Registration) (Guernsey) Law, 2008 to file annual financial statements with the Administrator.

# Guernsey Retail Prices Index <sup>1572</sup>

## Quarter 3 - 30 September 2008



Issue Date - 24th October 2008

## Introduction

The Guernsey Retail Prices Index (GRPI) is the measure of inflation used in Guernsey. It measures the change in the prices of goods and services bought for the purpose of consumption or use by households in Guernsey. It is published quarterly by the States of Guernsey Policy and Research Unit. The calculation of the GRPI is based on the price change of items within a 'shopping basket'. Whilst some prices rise over time, others will fall or fluctuate and the Index represents the average change in these prices. More detailed information on the RPI and its calculation can be found at the end of this handout.

## Headlines

- **At the end of September 2008 Guernsey's annual headline rate of inflation was 5.8%, compared to 5.5% at the end of June. The equivalent figures for the UK and Jersey were 5.0% and 6.4% respectively.**
- **The Food group contributed the largest amount (1.1%) to the headline increase, followed by the Housing group, which contributed an additional 1%. Motoring and Leisure Services were also significant contributors.**
- **Guernsey's RPIX (inflation excluding mortgage interest payments) was 6.4% this quarter, compared to 5.4% at the end of June.**
- **The Index increased to 142.8 (1999 base).**

## Overview

The Guernsey RPI increased by 5.8% for the twelve months ending 30th September 2008. This is the highest rate of inflation since September 1991.

The increase over the three months ending 30th September 2008 was 0.9%, compared to 1.7% during the previous quarter and 2.1% the quarter before.

The Food group was the largest contributor to the annual percentage change (1.1% out of 5.8%), due to increases in prices throughout the group over the past year.

The Housing group contributed 1.0% to the annual change and was the largest contributor to the quarterly change (0.4% out of 0.9%).

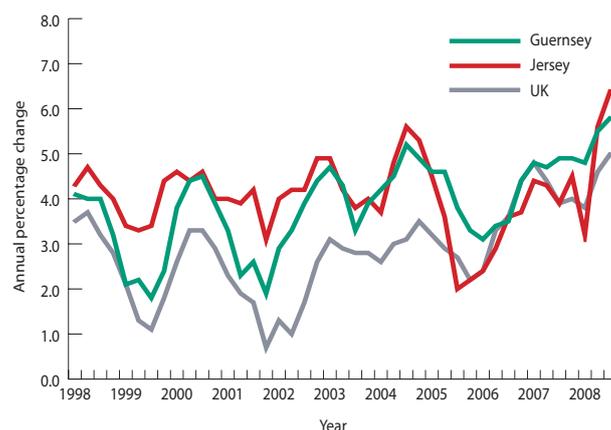
The Bank of England kept the interest rate unchanged during the quarter, however, with local house prices continuing to increase, the average cost of mortgage repayments continued to rise. Rents and home maintenance costs also increased during the quarter.

Clothing & Footwear and Leisure Goods had a downward effect on the annual change (-0.4% in total).

**Table 1: Annual Rates of Inflation**

Year	March	June	September	December
2002	2.9	3.3	3.9	4.4
2003	4.7	4.3	3.3	3.9
2004	4.2	4.5	5.2	4.9
2005	4.6	4.6	3.8	3.3
2006	3.1	3.4	3.5	4.4
2007	4.8	4.7	4.9	4.9
2008	4.8	5.5	5.8	

**Figure 1: Annual Rates of Inflation**



**EDUCATION DEPARTMENT**

ELIZABETH COLLEGE – PRINCIPAL’S ANNUAL REPORT - 2007/2008

The Chief Minister  
Policy Council  
Sir Charles Frossard House  
La Charroterie  
St Peter Port

14<sup>th</sup> October 2008

Dear Sir

I enclose the annual report of the Principal of Elizabeth College for the academic year 2007/2008. I would be grateful if you would arrange for the report to be published as an appendix to the Billet d’État for December 2008.

Yours faithfully

C A Steere  
Minister

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## ELIZABETH COLLEGE



The Principal's Annual Report of the general state of the College, the number of scholars and the course of education pursued in the academic year 2007/2008 addressed to the Board of Directors of Elizabeth College.

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For onward transmission by them to His Excellency, the Lieutenant Governor and Commander-in-Chief, Vice Admiral Sir Fabian Malbon, KBE and to the Bailiff of Guernsey.

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## PRINCIPAL'S REPORT

Summaries of the AS, A2 and GCSE A2 examination results appear later. By all measures our A2 results were very pleasing with an overall pass rate of 100% and an all-time high of over 44% of entries achieving grade A. An exceptional achievement worth flagging is that three boys (out of 6209 entries) achieved scores in the top 10 for Edexcel A level Art and Design.

There were other exceptional individual achievements; 11 candidates (of 42) gained three or more A grade A2 results. In consequence two boys leave us to read Medicine and one is now reading Veterinary Science. More unusually one pupil has gained a scholarship to study at the American Academy of Dramatic Arts based in Los Angeles. The results in the stand-alone AS courses that College offers were also good; overall the majority of the Upper Sixth Form obtained AS level qualifications in a fourth or fifth subject. College delivers a number of A2 courses to some Ladies' College pupils; collectively these girls achieved 100% pass rate with over 92% at grades A-C.

At GCSE it was heartening to see that the major improvements in standards seen in 2007 were consolidated and in some areas further improved. For the second year running College achieved a 100% pass rate in the compulsory core areas of English, Mathematics and Science. The proportion of A\* grades, (29.2%), was an all time high, as was the proportion of entries achieving grades A\* or A (62.8%). Impressively, over half the pupils gained seven or more passes at A\* or A. The great majority of boys took GCSEs in 10 or 11 subjects and it reflects well upon the entire cohort that the results averaged out at nearly nine and a half grades A\*-C per pupil. Remarkably the Art Department's achievements at A level were paralleled at GCSE: two boys (out of 36294 entries) achieved scores in the top 10 for Edexcel GCSE Art and Design.

There were other outstanding individual performances: one pupil gained 12 A\* passes, an exceptional achievement. One gained 11A\*s plus an A and two others gained 10 A\*s and two As. A total of 21 boys passed 10 subjects at A\* or A. The record highs in terms of A\* grades, the total of grades A\*/A and points per candidate are hugely encouraging, not least because these simple statistics conceal consistent effort throughout Key Stage 4. It is also pleasing to see how well our pupils are being readied for the challenges of Sixth Form study.

An interesting curriculum innovation occurred during the past year with the introduction of a non-examined Lower Sixth Form critical thinking course. This course offers enrichment for our most able pupils, particularly those considering Oxbridge entrance.

The 2007-8 academic year also saw the first impact within College of the Foundation Appeal, launched the previous year. Conscious that the study and social facilities for our Sixth Formers had fallen some way behind standards appropriate in the 21<sup>st</sup> century we committed to a major upgrade of their Common Room areas. In addition to a

complete refurbishment, a new kitchen and suite of offices for Sixth Form staff were created. In a parallel initiative our Sixth Form Study Room was redesigned, with the addition of a mezzanine level providing a much improved facility for independent study. These works, representing the first improvements to this provision for some years, were only made possible through the generosity of College's supporters drawn principally from current parents and Old Elizabethans. In recognition of the support College has received a quiet study area was formally named the Mike Wilson Reading Room, in memory of Jurat Wilson (OE 1234), who served as a College Director on three occasions. Similarly the Sixth Form Study Hall has been named in memory of AJ Perrot, late father of Advocate Roger Perrot, Chairman of the Foundation Appeal.

Over the past year Foundation funds have also allowed us to upgrade the lighting, sound and staging in the main hall. This will significantly improve the facilities available for musical and dramatic productions. The Foundation has also provided a much needed all-weather playing surface at Beechwood. Plans for the coming academic year include an extra classroom at Acorn House and, if plans run to schedule, the long-awaited and much needed new pavilion at Memorial Field.

During the past academic year three staff left College, details of their replacements appear later. In December Mr Hughes, Head of Art, left us to return to the mainland and in July Mrs Webster, teacher of Mathematics, retired. December 2007 also saw the departure of one of our longest serving teachers. Mr Guilbert, an OE, retired having led the Biology Department since 1978, achieving very high standards in his subject area. In 2002 he was promoted Head of Science, subsequently steering the sciences through radical revisions of the GCSE syllabus. He made memorable contributions in many other areas; he was for many years Housemaster of South House, he had a long involvement with the College CCF and was the school's IT coordinator in the late 1990s. It is difficult to summarise an association that spanned more than 41 years, pupil and teacher; he was an excellent classroom practitioner and gave freely of his time to advance our pupils' intellectual and social development.

The School Council continued to take responsibility for College's fundraising, their achievements are listed later. It is heartening to see continuing evidence that the boys understand that living in an affluent society brings with it obligations to those who are less fortunate.

The summer term was marked by the tragic death of Mr Jeff Burton, who had been a College Director since 2006. His work on our behalf epitomised the support that College receives from its Directors. We are grateful that Mr Nick Guillemette, a former Director, has agreed to serve the remainder of the term of Mr Burton's Directorship.

Reports on College music and drama are contained as appendices at the end of this report. However, one production deserves particular mention. In the week immediately prior to Remembrance Day College staged a production of *Journey's End*. This moving production evoked strong memories, particularly as sell-out the audience included members of the casts of College's previous productions in the 1960s and 1980s. The

play ended with a very moving tribute to College's fallen of the First World War, a timely reminder of the sacrifices made for the wider community by Old Elizabethans.

Dr N D Argent  
Principal

## SENIOR SCHOOL NUMBERS AND ENTRY

Upper School	ENTRY		TOTAL	
	2007/2008	2008/9	2007/2008	2008/9
Year 07	82	77	82	77
Year 08	1	-	65	83
Year 09	1	1	78	61
Year 10	-	1	57	76
Year 11	-	1	66	54
L6 <sup>th</sup>	-	2	59	60
U6 <sup>th</sup>	-	-	43	59
<b>Total</b>	<b>84</b>	<b>82</b>	<b>450</b>	<b>470</b>

**Academic Achievements:** University places for 2008 were offered to the following pupils, note that the table includes some pupils who left College in 2007 and have been on a gap year.

NAME		READING	AT
Angliss	Richard	Politics with Economics	The University of Bath
Ashworth	Oliver	Marine Sports Technology	The University of Plymouth
Ashworth	Ryan	Business Enterprise	The University of the West of England
Backhouse	Benjamin	International Business	The University of Plymouth
Bichard	James	Physics	Imperial College, London
Blows	Nicholas	Archaeology	University College, London
Bodkin	James	Computer Science	The University of Birmingham
Boyle	Hamish	French	The University of Reading
Briggs	Adam	Product Design	The University of Plymouth
Brouard	Alistair	Geography	The University of Exeter
de Kooker	Joshua	Medicine	The University of Cardiff
Dorey	Jonathan	Geography	The University of the West of England
Edwards	Jonathan	Architectural Studies	The University of Cardiff
Ferbrache	James	Mathematics and Teaching	The University of Chichester
Heaume	Etienne	Geography	The University of Exeter
Jones	Ben	Civil Engineering	The University of Manchester
Knight	Daniel	Mechanical Engineering	The University of Bath
Laine	Dominic	Geography	University College, London
Langlois	Joshua	Veterinary Science	The University of Liverpool
Le Page	Joseph	Philosophy	The University of Durham
Litchfield	Thomas	Anthropology	The University of Sussex
Lycett	Thomas	Architecture	The University of Liverpool John Moores
Meader	Sam	Drama Studies	American Academy of the Dramatic Arts
Miller	Thomas	English Literature	The University of Durham

Ogier	Ian	Business and Politics	Aston University
Petit	Pierre	Product Design	The University of Leeds
Pugh	Carl	History	The University of Warwick
Richards	Oliver	Business and Management	The University of Exeter
Richardson	Henry	Aerospace Design Engineering	The University of the West of England
Robin	Adam	Human Geography	Royal Holloway, University of London
Rushton	Thomas	Art / Primary Teaching	The University of Winchester
Whelton	Mark	Computer Science	The University of Birmingham
Whitworth	Christopher	Medicine	The University of Brighton and Sussex
Wrench	Callum	Economics and Finance	The University of Exeter
Zierer	Thomas	Industrial Design and Technology	The University of Loughborough

## **LEAVERS' SCHOLARSHIPS**

The performance of the following students in the 2007 A2 level examinations was outstanding and they have, therefore, been nominated by the Academic Board for scholarships, tenable for one year, at University during the academic year 2008/2009. The Board of Directors made the following awards:

### **De Saumarez Exhibition**

D M Pickford reading Economics & Management at Pembroke College, Oxford

### **Mainguy Scholarship**

C D Paluch reading Medical Sciences at St John's College, Cambridge

### **Mignot Scholarship**

A R Brewer reading Natural Sciences at Sidney Sussex College, Cambridge

### **Queen's Exhibition**

C M Jones reading Psychology at Royal Holloway, London  
D A Lacey reading Natural Sciences at University of Bath

## UPPER SCHOOL STAFF APPOINTMENTS

### From January 2008

Mr Adam Stephens joined us as Head of Art. A graduate of the University of Brighton he completed his PGCE at Goldsmiths' College. Mr Stephens was previously Head of Art at Sheldon School, Chippenham, Wiltshire.

Mrs Tamara Halton joined College as a teacher of Biology. A graduate of the University of Glasgow, where she also did her PGCE, she joined us from Bedford Modern School.

### From September 2008

Dr Elaine Ryder joined College as a teacher of Mathematics. Dr Ryder has a PhD in Mathematics from the University of Edinburgh and a PGCE from Moray House, Edinburgh. She joins us from Charterhouse.

## STAFFING: INTERNAL POSTS

<b>Senior Management Team</b>	
VICE PRINCIPAL	S.G.D. Morris
DIRECTOR OF STUDIES	A.R. Cross
HEAD OF SIXTH	R.J.W. James

<b>Year Heads</b>		<b>Faculty Heads</b>	
Year 07	T. Slann	Head of English	R.J.W. James
Year 08	A. M. Jewell	Head of Mathematics	A. Hale
Year 09	M.E. Kinder	Head of Science	Dr D.F. Raines
Year 10	B.W. Allen	Head of Modern Languages	Mrs M.C. Dudley
Year 11	B.H. E Aplin	Head of Humanities	C.R.W. Cottam
Year 12 (L6 <sup>th</sup> )	R.J.W. James	Head of Social Sciences	S. Huxtable
Year 13 (U6 <sup>th</sup> )	R. Le Sauvage	Head of Fine Arts & Craft	Mrs P. Maher
		Head of Physical Education	D. Wray

**Annexe A****GCSE RESULTS SUMMARY**

<b>Year</b>	<b>No. of Candidates</b>	<b>Average Points per Candidate</b>
2008	65	66.23
2007	73	65.70
2006	58	63.14
2005	70	64.50
2004	68	56.90
2003	78	53.00
2002	70	54.70
2001	68	54.37
2000	66	52.62
1999	77	54.42
1998	80	53.94
1997	86	53.15
1996	91	51.54

**A-LEVEL RESULTS SUMMARY**

To maintain comparability the old UCAS points system has been retained (A = 10 points, B = 8 points etc.)

<b>Year</b>	<b>No. of Candidates</b>	<b>Average Points per Candidate</b>
2008	42	26.40
2007	58	28.11
2006	55	24.26
2005	55	22.50
2004	52	24.27
2003	57	21.05
2002	47	19.44
2001	38	16.53
2000	53	19.55
1999	72	17.44
1998	69	16.93
1997	58	20.97
1996	65	20.58

**Annexe A****Year 11 GCSE RESULTS 2008: SUBJECT GRADES**

(Grades achieved by number of pupils)

<b>Subject</b>	<b>N° of Entries</b>	<b>A*</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
Art	18	2	9	5	0	2	0	0
Business Studies	13	1	5	5	1	1	0	0
Biology	24	15	9	0	0	0	0	0
Chemistry	24	18	6	0	0	0	0	0
Classics	11	2	4	2	0	3	0	0
DT Graphics	10	1	3	3	3	0	0	0
DT Materials	18	3	4	7	3	1	0	0
Drama	5	1	2	2	0	0	0	0
English	65	7	20	26	12	0	0	0
E Literature	45	12	22	11	0	0	0	0
French	40	5	8	5	14	8	0	0
Geography	42	20	15	6	1	0	0	0
German	8	1	3	3	1	0	0	0
History	35	7	11	8	7	2	0	0
ICT	9	0	4	2	3	0	0	0
Latin	5	1	3	1	0	0	0	0
Maths	65	30	17	11	7	0	0	0
Statistics	22	18	4	0	0	0	0	0
Music	9	1	2	5	1	0	0	0
PE	11	4	3	2	2	0	0	0
Physics	24	20	4	0	0	0	0	0
RS	64	9	16	22	14	3	0	0
Science (Core)	41	8	26	6	1	0	0	0
Science (Additional)	41	9	21	8	2	1	0	0
Spanish	21	1	4	4	7	3	2	0
<b>Totals</b>	<b>670</b>	<b>196</b>	<b>225</b>	<b>144</b>	<b>79</b>	<b>24</b>	<b>2</b>	<b>0</b>

**Annexe A****Upper 6th (Yr 13) A2 RESULTS 2008: SUBJECT GRADES**

(Grades achieved by numbers of pupils)

<b>Subject</b>	<b>N<sup>o</sup>. of Entries</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>U</b>
<b>Ancient History</b>	5	3	1	1	0	0	0
<b>Art</b>	7	4	1	1	0	1	0
<b>Biology</b>	10	7	2	0	0	1	0
<b>Business Studies</b>	8	1	2	4	1	0	0
<b>Chemistry</b>	3	2	0	1	0	0	0
<b>Classical Civilisation</b>	3	2	1	0	0	0	0
<b>DT Graphics</b>	8	0	3	2	3	0	0
<b>DT Materials</b>	5	0	3	2	0	0	0
<b>Drama</b>	1	1	0	0	0	0	0
<b>Economics</b>	4	4	0	0	0	0	0
<b>English Literature</b>	11	6	2	2	1	0	0
<b>French</b>	6	2	1	2	1	0	0
<b>Geography</b>	10	4	3	1	2	0	0
<b>History</b>	12	6	2	3	1	0	0
<b>ICT</b>	3	0	3	0	0	0	0
<b>Mathematics</b>	16	9	4	1	1	1	0
<b>PE</b>	2	0	1	0	1	0	0
<b>Photography</b>	1	1	0	0	0	0	0
<b>Physics</b>	6	2	1	1	0	2	0
<b>Religious Studies</b>	3	1	0	2	0	0	0
<b>Totals</b>	<b>124</b>	<b>55</b>	<b>30</b>	<b>23</b>	<b>11</b>	<b>5</b>	<b>0</b>

**Upper 6th (Yr 13) AS RESULTS 2008: SUBJECT GRADES**

(Grades achieved by number of pupils)

<b><u>Subject</u></b>	<b>No. of Entries</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>U</b>
<b>Film Studies</b>	2	0	1	1	0	0	0
<b>Photography</b>	2	0	1	1	0	0	0
<b>Psychology</b>	3	0	1	0	1	1	0
<b>Totals</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>

**Annexe B****SPORTING ACHIEVEMENTS DURING 2007/2008**

<b>GAME</b>	<b>PLAYED</b>	<b>WON</b>	<b>DRAWN</b>	<b>LOST</b>
Cricket	17	10	2	5
Hockey	22	6	6	10
Soccer	14	2	1	11
Rugby	2	0	0	2

**Senior Matches against Victoria College**

<b>Cricket</b>	Away drawn; home won by 4 wickets	<b>Golf</b>	Lost 2 - 6
<b>Tennis</b>	No match	<b>Hockey</b>	Drew 1-1
<b>Athletics</b>	Hutchence Cup lost V86-E70	<b>Soccer</b>	Lost home and away
<b>Shooting</b>	Bisley full bore retained Haines Shield	<b>Rugby</b>	No match

**Other Pupil Achievements****Autumn 2007**

- Nicolas Ozanne (Year 12) was awarded an Army Sixth Form Scholarship; a fine achievement as there is considerable national competition for these awards.
- College boys formed the bulk of the Guernsey Team that won the European U15 Cricket Division 2 Championships held in Spain. The College boys were James Smith, Tom Still, Charlie Wilkes-Green, Matthew Renouf, Max Ellis, Adam Clark, Adam Hindle, Will Thompson, James Smith and Joe Alvarez; Thomas Kirk captained the side which beat Jersey in the final and was voted player of the tournament.
- Timothy Ravenscroft, Year 11, scored a century for Hampshire in their win over Durham in the ECB Under-17 Cricket Championship Final.
- A number of boys represented Guernsey in the Athletics Inter-Insulars in September.
  - At U17 Hywel Robinson won the U17 400m and was 2nd in the 200m, William Bodkin won the 1500m & 3000m, William Steele-Moore was

2nd in the 3000m & 4th at 1500m and Guy Craze 3rd in the 800m and 4th at 400m.

- At U15 Ben Fiore won the Discus and was 2nd in the Shot Putt & Javelin, Christian Georcelin won the High and Jacques Ogier won the 200m and was 2nd in the 100m.
- At U13 Michael Mann was 2nd in Javelin and 3rd in Discus & Shot Putt.
- Bradley Morton and Jonathan Spicer (Year 8) won 1<sup>st</sup> and 2<sup>nd</sup> prize in the Children's Book Week Competition run by the Schools' Library Service.
- The Charities' Committee raised over £300 for *Jeans for Genes Day*.
- Many boys (and staff) took part in the *Swimarathon*, our 17 teams raised over £2000.
- There was a highly successful production of *Journey's End*. Staged during Remembrance Week, it sold out and included a moving tribute to College's fallen of the 1<sup>st</sup> World War.
- Our Poppy Day Appeal, which included donations given at the play, raised over £500.
- An equally successful *Winter Concert* was held in November. An appreciative audience was richly entertained by a varied programme of solo and ensemble performances.
- An Upper Sixth Form team of Nick Blows, Joshua de Kooker, Tom Miller and Ian Ogier won the inaugural *de Putron Challenge* (a University Challenge style quiz) defeating all the local schools. College won £1000 which at the team's request was put into the Foundation funds.
- The members of the CCF's newly reformed *Corps of Drums* gave its first public performance at College's Remembrance Service.
- A number of boys completed Duke of Edinburgh Awards; Matthew Allen, Daniel Ingrouille and Simon Morris (all Year 12) receiving their Silver certificates.
- Our team of Tom Miller (Year 13), Jamie de Carteret and Nicolas Ozanne (both Year 11) won the Island School's team fencing competition.
- George Thompson (Year 10), won the GYC Young Sailor of the Year Award.

- The Charities' Committee were particularly active in raising over £2150 for *Children in Need*. An initiative involving selling car parking spaces to local estate agents was covered in the local press.
- The Football 1st XI squad took on a different kind of opposition by cooking and serving a 3-course lunch at *Da Nello's*, (their sponsor for the last 3 years). Not only did 40 guests enjoy their lunch, but the event also raised over £900 for the *Maison Million Home Appeal*.

### **Lent 2008**

- College was hugely successful at the *Public Schools' Fencing Championships* held in Nottingham in March, dominating the boys' events. Their list of successes is considerable, they won:
  - The Boys' Team Trophy for the best boys' school overall (out of 120).
  - The Trophy for Greatest Improvement Over Previous Championships.
  - The All Foil Events Trophy (The Nick Halsted).
  - The All Epée Events Trophy (The Chapman).
  - The All Mount-Haes Events Trophy (The Whitgift).
  - The All Senior Events Trophy (The Churchill).
  - College also placed 2nd in the Overall Sabre and Overall Junior Events Competitions.
- In the annual *Foundress's Concert* the standard of music was impressive with many pupils from College and the Junior School coming together in celebration of our founding.
- College staged a production of the Broadway musical *Anything Goes*. Even a power cut on the second night did not detract from a hugely successful, and sell out, run.
- A very large number of younger exhibitors and performers were involved in the *Junior Creative Arts Exhibition*, which showcased the talents of our younger boys.
- The Elizabeth College 'B' Shooting Team, of Brett Benest, Oliver Collas, David Du Port, Michael Jones and Matthew Thome (all Year 12), won the BSSRA Pollard Cup in Division 1 Section B for the first time since 1996.

- Our hockey teams, had the better of the matches against Victoria College; the results were:

1st XI 1 - 1                      U15    1 - 3                      2nd XI 8 - 3                      U13    4 - 1

Earlier in the term the Year 7 side (U12) also defeated Victoria 5 – 2.

Both the 1<sup>st</sup> and 2<sup>nd</sup> XI reached the finals of their respective league knock out competitions. On their tour the U15 XI beat Kings Chester, current Northern Division champions.

- 27 Year 12 students gained the St John's First Aid Life Saver Certificate
- 10 students from Years 9-11 gained the Emergency First Aid Certificate for DoE Award.
- Adrian Aplin (Year 10), Jacob Cherry (Year 11) and Simon Morris (Year 12) completed the RLSS Distinction Award for Life Saving and many pupils gained an Award of Merit or the Bronze Medallion.
- College raised well over £500 for *Sport Relief* in March.

### **Summer 2008**

- On Senior Sports Day the Victor Ludorum was Hywel Robinson (Year 12), he dominated the sprint events.
- A number of boys competed in the Channel Island Fencing Championships at the end of April. Fraser Ward (Year 13) is the Channel Island Sabre Champion, and Pierre Ozanne (Year 12) added the Channel Island Foil Championship to the Guernsey Championship he had won a fortnight earlier.
- A College team of Christopher Galpin and Jack Heywood (Year 9), Jonathon Spicer and Sam Smith (Year 8) defeated 15 teams of the best mathematicians from all schools in Guernsey and Jersey to win the Regional Final of the Maths Team Challenge.
- William Bodkin Year 11 set a new 800m record (of 2 mins 4.66 secs) at the Hampshire County Championships, the old record had stood since 1995. In the same competition Christian Georcelin (Year 10) won a bronze medal in the High Jump with 1.65m.
- A number of College boys took part in the Elizabeth College Summer Orchestral Course which culminated this year in three concerts at St James. Joshua de Kooker (Year 13 leaver) was awarded a bursary as the top performer.

- At Bisley a young College VIII finished 7<sup>th</sup> overall in the Ashburton, one place ahead of Victoria College so retaining the Haines Shield. There were some very fine individual and team performances;
  - The College IV, Oliver Collas, David Du Port, Charles Crowder and Matthew Thome (all Year 12) won the Schools' IV.
  - Michael Creber (Year 12) won the Victoria Tankard, a 600 yards aggregate shoot.
  - Max Barber and Charles Downing (Year 10) placed second in the Cadet Pair.
  - Jonathan Branch (Year 12) came 3<sup>rd</sup> in the Spencer Mellish, the 500 yard shoot off.
- Adam Clarke and Thomas Still (Year 11) were selected for the U15 West of England hockey squad; Jonathan Clarke (Year 13) was selected for the U17 West of England hockey squad.
- Daniel Wray (Year 13) placed 2<sup>nd</sup> in the National Laser 4.7 Sailing Championships.
- The cricket 1<sup>st</sup> XI played Victoria College twice, drawing away with College hanging on thanks to Jonathan Clark's battling 59\*. At home College won by 4 wickets; Victoria made 215 from their 50 overs (Adam Robin 5 for 39); Tim Ravenscroft anchored our reply with an unbeaten 85. In the annual Twenty20 match against the OEA, College's total of 194 proved too much for our former pupils who lost by 25 runs. In the same week the 1<sup>st</sup> XI beat the MCC touring side for the first time since 1989
- The 2<sup>nd</sup> XI also beat Victoria with James Ferbrache's 4 for 9 helping them to a 7 wicket win.

## **Review of the College Musical Year, 2007-2008**

The Music Department tends to hit the ground running at the start of the Michaelmas Term with the College Commemoration Service taking place at the end of the first week. 33 members of the College Choir were involved in this important event which is of such significance to the College year. The first half term of the academic year also included the College Open Day and the usual musical activities could be heard by the many visitors who attended the event.

The Winter Concert took place in the College Hall at the beginning of December and involved all of the College Ensembles as well as allowing for some of our senior performers to offer various solos. Highlights of the event were the 'Orchestra of Cellos' performing Arbeau's Pavane and the three most senior College Prefects performing a movement from Schubert's Trout Quintet.

Just ten days later, 44 members of the College Choir led the Senior Carol Service at the Town Church. The following evening, at St James, the Junior Carol Service took place. The wind, brass and string players together with the College Choir combined to give a truly festive finish to the term. Again, it was pleasing to note that so many of our students were able to participate on this occasion.

The third Faculty of Creative Arts Junior Exhibition Evening took place at the beginning of February and saw the College Hall full of displays from the various departments within the Faculty. The opportunity was taken for various soloists to perform which they did with considerable success.

A small team of senior musicians was included in the Band for the Drama presentation of '*Anything Goes!*'. Building on the success of last year's production this proved to be an even more dynamic event.

The Foundress's Concert is traditionally the highlight of the College musical year. This year it was decided to theme the evening around music connected with stage and screen. Along with each school's own contributions, performers from Beechwood and Elizabeth College came on stage for the Grand Finale which this year was a performance of movements from Carl Orff's *Carmina Burana*. The Concert was a considerable success and included such items as Rossini's Overture to *William Tell* and a particularly rousing performance of 'I'm a Believer' from the Senior Wind Band.

The annual visit to St Malo by the College Choir followed its usual format with the Choir singing at two services over the weekend. Both Saturday evening's performance at the Chapel of the Dominican Convent and Sunday morning Mass in St Vincent's Cathedral in the Intra-Muros of St Malo went particularly well. The French congregations were very appreciative of our efforts.

This has been an exceptionally busy year for the department and in conclusion I would like to thank the tremendous support given throughout the year to College Music by Mrs Maher, Mr Cottam, Mr Cross and the invaluable members of the Schools' Music Service.

## Review of College Drama 2007-2008

Once again, in October Year 9 boys presented improvised drama sketches for Alcohol and Drug Awareness week, as the culmination of the schools' life skills project. This academic year the numbers of Year 9 Drama students has doubled, and so over 30 students presented two separate sketches, both of which were well received by audiences at our new venue of the Princess Royal Arts Centre. For most actors this was the first time they had appeared on stage, so it was good experience for them.

Also in the Michaelmas Term Mrs Campbell directed *Journey's End*, a play depicting three days in lives of British troops in the trenches in World War I. It comprises a representative selection of men from differing ranks attempting to maintain a semblance of normality in the totally abnormal circumstances of war. The scenes are set in a dug out at St Quentin at the beginning of the last German offensive of the war during which the Fifth Army, of which the company of *Journey's End* is a part, collapsed under the German onslaught. The atmosphere of the play is not one of unrelieved gloom; its chief source of humour being Private Mason, upon whom Baldrick in *Blackadder Goes Forth* was based. The young cast produced mature, convincing and sustained performances, with excellently managed tension throughout. The production was staged in College Hall during Remembrance Week; at the end of the production, following a huge explosion and pyrotechnics, the cast stood in front of the stage as if dead. A spot light lit up the honours board, this was followed by Hywel Robinson's playing of *The Last Post*, and reading by the senior prefects of the names of the Elizabethan Fallen from the Roll of Honour. The cast then walked silently off in silhouette against a red sky. The production was supported by a First World War installation, which included a mock up of a trench, worthy of a place in the War Museum, made by Kevin Lancaster of the maintenance staff; and an informative display in Room 5, including students' work which formed part of a History project. Once the success of the production had been established, tickets were quickly sold out and many people, including States Members had to be turned away.

At the beginning of the Lent Term many students were entered for dramatic duologues in the Eisteddfod: for most of them it was their first time on stage not as part of a group. They all learnt a great deal from the exercise and did well. The central production of the term was Miss Flood's direction of the musical *Anything Goes!* Its labyrinthine plot was described by its reviewer as resembling 'a three-dimensional game of happy families played by schizophrenics at a masked ball'. Female roles were undertaken by girls from Ladies' College. The triumph of the production was assured by the strength and quality of the individual performances. Sympathetically miked, performers took on their musical numbers with gusto and accuracy, and in dialogue effortlessly milked a witty script for every laugh. The seven piece band directed by Mrs Maher, brisk and tuneful at the outset, continued to provide disciplined yet responsive support for the song and dance throughout. The show was a huge success; and many people who had unwisely postponed their ticket purchases found themselves disappointed.

In Trinity Term a Year 9 Drama group entered the One Act Play Festival, and were the subject of huge praise and commendation from the adjudicator. The play was a well

written, funny, yet hard-hitting production about bullying; and because of its content, it was suggested we took it on tour to Island Schools as part of the Life Skills programme. In the penultimate week of term the group visited six different schools, and played to attentive audiences in order to provoke discussion upon the topic. Towards the end of term Mr Inderwick directed a short and witty Year 7 play, *Ancient Greek Assembly*. The encouraging results of this exercise were that Year 7 was given a chance to perform on stage, and that we were able to witness the extraordinary amount of dramatic talent in this year group.

# **IN THE STATES OF THE ISLAND OF GUERNSEY ON THE 10<sup>th</sup> DAY OF DECEMBER, 2008**

**The States resolved as follows concerning Billet d'État No XVIII  
dated 21<sup>st</sup> November 2008**

## **PROJET DE LOI**

entitled

### **THE POLICE COMPLAINTS (GUERNSEY) LAW, 2008**

I.- To approve the Projet de Loi entitled “The Police Complaints (Guernsey) Law, 2008” and to authorise the Bailiff to present a most humble petition to Her Majesty in Council praying for Her Royal Sanction thereto.

### **THE INSURANCE BUSINESS (BAILIWICK OF GUERNSEY) (AMENDMENT) (NO.2) ORDINANCE, 2008**

II.- To approve the draft Ordinance entitled “The Insurance Business (Bailiwick of Guernsey) (Amendment) (No.2) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

### **THE PROTECTION OF INVESTORS (ADMINISTRATION AND INTERVENTION) (BAILIWICK OF GUERNSEY) ORDINANCE, 2008**

III.- To approve the draft Ordinance entitled “The Protection of Investors (Administration and Intervention) (Bailiwick of Guernsey) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

### **THE PUBLIC TRANSPORT (AMENDMENT) ORDINANCE, 2008**

IV.- To approve the draft Ordinance entitled “The Public Transport (Amendment) Ordinance, 2008” and to direct that the same shall have effect as an Ordinance of the States.

## **PRIAULX LIBRARY COUNCIL**

NEW MEMBER

V.- To re-elect Mrs Gillian Mollie Lenfestey as a Member of the Priaulx Library Council with effect from 1 January 2009.

# **ELIZABETH COLLEGE BOARD OF DIRECTORS**

## **NEW MEMBER**

VI.- To elect Advocate Russell Clark as a member of the Elizabeth College Board of Directors with effect from 6 January 2009, to replace Advocate P M A Palmer.

### ***ORDINANCE LAID BEFORE THE STATES***

#### **THE COMPANIES (GUERNSEY) LAW, 2008 (AMENDMENT) (NO.2) ORDINANCE, 2008**

In pursuance of the provisions of the proviso to Article 66 (3) of the Reform (Guernsey) Law, 1948, as amended, the Companies (Guernsey) Law, 2008 (Amendment) (No.2) Ordinance, 2008, made by the Legislation Select Committee on the 27<sup>th</sup> October, 2008, was laid before the States.

### ***STATUTORY INSTRUMENTS LAID BEFORE THE STATES***

#### **THE COMPANIES (REGISTRAR) (FEES) REGULATIONS, 2008**

In pursuance of Section 537 of the Companies (Guernsey) Law, 2008, the Companies (Registrar) (Fees) Regulations, 2008, made by the Deputy Registrar of Companies on 17<sup>th</sup> October, 2008, were laid before the States.

#### **THE TAXATION OF REAL PROPERTY (GUERNSEY AND ALDERNEY) (AMENDMENT) REGULATIONS, 2008**

In pursuance of Section 49 (4) of the Taxation of Real Property (Guernsey and Alderney) Ordinance, 2007, the Taxation of Real Property (Guernsey and Alderney) (Amendment) Regulations, 2008, made by the Treasury and Resources Department on 28<sup>th</sup> October, 2008, were laid before the States.

#### **THE CHARITIES AND NON PROFIT ORGANISATIONS (EXEMPTION) REGULATIONS, 2008**

In pursuance of paragraph 8(3) of the Schedule to the Charities and Non Profit Organisations (Registration) (Guernsey) Law, 2008, the Charities and Non Profit Organisations (Exemption) Regulations, 2008, made by the Treasury and Resources Department on 4<sup>th</sup> November 2008, were laid before the States.

**IN THE STATES OF THE ISLAND OF GUERNSEY ON  
THE 11<sup>th</sup> DAY OF DECEMBER, 2008**

(Meeting adjourned from 10<sup>th</sup> December 2008)

**The States resolved as follows concerning Billet d'État No XVIII  
dated 21<sup>st</sup> November 2008**

**HOUSING DEPARTMENT**

**CORPORATE HOUSING PROGRAMME –  
PROGRESS AGAINST THE 2008 ACTION PLANS**

VII.- After consideration of the report dated 9<sup>th</sup> October, 2008, of the Housing Department:-

To approve the priorities under the six Action Areas of the Corporate Housing Programme for 2009, as set out in that Report.

**PUBLIC SERVICES DEPARTMENT**

**GUERNSEY AIRPORT – PAVEMENTS REHABILITATION**

VIII.- After consideration of the Report dated 31<sup>st</sup> October, 2008, of the Public Services Department:-

TO SURSIS the Article until the March 2009 meeting of the States.

**K H TOUGH  
HER MAJESTY'S GREFFIER**