Dublin Airport Authority Response To Commission Paper CP2/2005:

Draft Determination and Explanatory Memorandum for Maximum Levels of Airport Charges in respect of Dublin Airport

1st July 2005

DUBLIN AIRPORT AUTHORITY plc
ÚDARÁS AERFORT BHAILE ÁTHA CLIATH cpt

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Executive Summary

This document is the Dublin Airport Authority's (DAA) response to the Commission for Aviation Regulation's (the Commission) request for submissions in relation to CP2/2005 - "Draft Determination and Explanatory Memorandum on the Proposed Maximum Level of Airport Charges in respect of Dublin Airport"

DAA is committed to assisting the Commission in its task of ensuring that Dublin Airport is developed to meet the requirements of current and prospective users in an economically efficient way. The Commission also has a statutory responsibility to ensure that DAA is able to operate and develop Dublin Airport in a sustainable and financially viable manner. In order to fulfil these objectives it is necessary that the Commission allows:

- An adequate return of and return on existing assets employed in the operation of the airport, sufficient to attract the necessary funds to maintain and develop infrastructure
- The recovery of efficiently incurred operating costs
- Sufficient levels of recoverable capital expenditure to ensure that the airport is capable of financing its capital programme
- Realistic and achievable assumptions in relation to commercial revenues

Airport infrastructure cannot be delivered unless the airport authority is adequately paid to develop it. Government policy is clear that the airports under DAA's management must be operated on a commercial basis, paying dividends and with no recourse to Government funding, grants or guarantees. In addition, numerous independent reports, including those produced for the Commission, have highlighted the fact that Dublin's airport charges are amongst the very lowest in Europe. In DAA's view, they are inadequate if it is to deliver the capacity required to meet demand and to provide an acceptable level of service quality.

The Commission has raised the issue of financial viability, which it believes may be the defining question for this consultation. In this context, DAA agrees with this assessment and believes the defining questions are:

- Will the final determination enable the infrastructure development at Dublin Airport to occur at the scale and timing appropriate to demand and,
- Will the final determination allow DAA to maintain its investment grade rating when objectively assessed in the financial markets and allow DAA to raise finance as required. If not, investment capability will be threatened and cost of capital increased.

The Price Cap Scenarios

CAR has proposed a number of price cap scenarios for consideration as part of the Draft Determination. The "maintenance capex" scenarios (S1 and S2) are wholly unrealistic as they seek to incorporate "unconstrained forecasts" into a physically constrained airport. These scenarios do not accommodate the limitations such an approach would impose on the airport's ability to facilitate demand, which would result in reduced traffic volumes and commercial revenues as well as increased operating costs i.e. the levels of airport charges illustrated in these scenarios would need to be revised upwards to reflect this reality.

- Although the full capital expenditure is allowed in S3, the average price cap arrived at is also inappropriate, as

- the operating expenditure projections underpinning it
  - Exclude any allowance for capacity enhancements prior to 2010 e.g. Terminal 1 extension or Pier D which need to be taken into account.
  - Incorporate certain levels of efficiency which DAA regards as inappropriate.
  - Are based on an inconsistent/selective use of prior and current plans for individual cost headings.
  - Incorporate efficiency targets starting from beginning of 2005, making achievement of the targets impossible given that the Determination is not due for publication until October 2005. Where the Commission sets efficiency targets that are predicated on headcount reductions, such reductions can only be achieved through negotiation and voluntary severance arrangements, both of which need to be factored in from the perspective of timeframe and cost.
- The commercial revenue projections incorporated in S3 are based on wholly inappropriate benchmarking and unrealistic assumptions, offered without detailed supporting analysis viz
  - ASA's property and concession revenue assumptions are unrealistic given that property revenue does not vary directly in line with passenger activity at the airport. Furthermore, there is no provision in the company's CIP for additional commercial property space to be provided for developing additional rental opportunities, with the exception of the limited areas being delivered in Terminal 2 and Pier D, both of which are already reflected in DAA's forecast.
  - ASA assumes that car parking revenues per passenger will essentially be maintained over the forthcoming regulatory period. This will be very difficult to achieve given that it will be contingent on the successful introduction of further car parking tariff increases at a time when the company has been savagely criticised for recent increases both by airlines and the public.
  - ASA retail and food and beverage projections are based on a number of unreliable assumptions such as; single growth rate relative to passenger growth rate for all business streams, unrealistic specific revenue growth rates, application of CPI on all revenues and cost of sales, derivation of additional retail revenues from an upgrading of the retail offer at Dublin Airport and unrealistic suggested changes to landside/airside space allocations.

S3 and the associated Commission scenarios (S5 & S6) do not provide a symmetrical approach to risk. Upside revenue potential or cost reductions are systematically factored in to the plans without recognition of potential downside risks. A particular example of this approach is evident on page 27 of CP2/2005 where very small differences between the cost assumptions of the DAA and those of the Commission and its consultants, covering three different cost headings, are highlighted. Given the fact that these differences have an impact of just 1-2 cents, it could be assumed there is a high degree of congruence between DAA and the Commission and its consultants' views of the forecasts, which include assessments of risk across a wide range of commercial issues over a five-year period. Instead, the Commission proposes that forecasts be adjusted for these differences in assumptions without consideration of potential downside risks. There are a number of significant business risks facing the company, such as the increasing likelihood of a deferral of the implementation of more liberal Ireland-US aviation regulations to a date later than assumed in the DAA forecasts, with a consequent reduction in Transatlantic traffic. The Commission projections should provide for the probability of such system shocks.

The Commission's interpretation of the DAA draft financial projections incorporating planned capital expenditure shown in scenario 4, while representing a superior option to the other scenarios put forward, would need to be incremented to reflect the changed business environment since the projections were submitted, general business risks and to meet financial viability metrics.

S7 relates primarily to events that will post date the publication of the Determination and which are expressly excluded from consideration in this Determination under the State Airports Act 2004.

The Question of Financial Viability

DAA must maintain funding confidence and preserve an appropriate credit rating if it is to finance new investment cost efficiently. This is especially critical to this Determination, given the period of significant investment ahead, and the substantial financing and re-financing required. DAA believes that it needs to maintain an "A" rating, as any rating below this level could have adverse implications for the cost, availability and terms of financing available to DAA, potentially limiting or delaying ability to invest in infrastructure. As acknowledged by the Commission, a deterioration of the company's rating will ultimately result in increased airport charges due to the adverse impact such a downgrading would have on the cost of borrowing.

In relation to whether they expect lower ratings in the future, S&P have stated that, as the current financial profile is weak for an "A" Category rating, the main threats to the company's future financial profile are, firstly lower than needed airport charges, and secondly the potential retention of liabilities associated with re-structuring under the State Airports Act 2004.

In this context, the company welcomes the Commission's plans to stress test the financial robustness of regulatory proposals. However, the scenarios developed to conduct such testing (S5 and S6), based as they are on S3, negate their appropriateness for the reasons stated above. DAA believes the scale of the adjustments computed by the Commission demonstrates that it is not appropriate to address financial viability by adjusting the time profile of regulatory depreciation in these circumstances. The Commission's S3 model, which does not meet requisite financial viability standards, given the inclusion of significant positive assumptions on operating costs and commercial revenues, demonstrates that the cost of capital applied (7.4%) is inadequate. The application of the cost of capital used in S4 (8.5%) would give rise to a considerably smaller scale of adjustment using the mechanism of accelerated depreciation, which would be more consistent with the regulatory precedents noted by the Commission.

DAA believes the Commission has correctly identified the FFO:Debt as the primary indicator for credit rating purposes. However DAA believes the use of five year averages for FFO:Debt and other financial ratios is inappropriate, particularly where this has the effect of masking declining ratios and a weakening financial position which continue to prevail beyond the current review period. Annual ratios and future trends are what the markets examine when reviewing financial performance. If a company's ratios are declining in the short term, due for example, to being at a high point in their investment cycle, they must still be able to demonstrate that the ratios are going to improve within a reasonable timeframe. The use of other ratios referred to by the Commission is also discussed in section 1.3, including, in DAA's view, the inappropriate and inconsistent threshold values used by the Commission.

Under Section 24 of the Air Navigation and Transport (Amendment) Act, 1998 and Section 9 of the State Airports Act, 2004, DAA has a statutory obligation to operate to a commercial mandate. The Minister for Finance has also formally advised the company that he expects it to pay dividends to the shareholder. Set in this context, the inability to pay dividends or the assumption of a dividend holiday could be taken as a signal of financial distress on the part of a commercial entity and in the opinion of DAA, would not be consistent with sustainability and financial viability.

In deciding on the final cap, the Commission must ensure that it adopts a balanced approach to risk, and incorporates possible downsides as well as upsides in its analysis of possible outcomes. This approach is required if the Commission is to protect the interests of existing and prospective users and allow for the continued financial viability of Dublin Airport.

DAA believes that S4 is the only scenario with an internally consistent methodology. However, while it represents a superior option to the other scenarios put forward, it does not meet financial viability metrics and would have to be incremented to reflect the changed business environment since the projections were submitted and general business risks, if it were to be used as a basis for the price cap in the Determination.

A substantial refinancing of DAA debt is required ahead of its €250m bond maturity date of 2011, [redacted] This is particularly relevant in the context of the significant additional funding required to facilitate the proposed capital expenditure programme over the coming years, potentially involving funds of up to a similar level being raised in 2006/ 2007. Standard & Poor's has stated in a recent report that "*the competitive position [of DAA] is expected to remain strong, but the outcome of the expected regulatory reset will be key for the future rating level".* Should S&P consider the final determination will impact negatively on DAA's key financial ratios and downgrade its rating as a result, the flexibility and options for raising additional funding would be impaired. As noted by the Commission, there would also be a significant impact on the cost of debt were a lower rating level assigned. S&P are the predominant rating agency in the airports sector, but other rating agencies are likely to take a similar view.

Other Issues Raised in the Draft Determination

- Capital Investment Programme
  - We note that since the publication of CP2/2005, the Commission has commenced its review of this important area and we are happy to engage with the Commission regarding any queries it may have in respect of the quantum, timing, sequencing or costing of the programme.
  - There is unanimous agreement that additional capacity is required at Dublin airport. This must be paid for if it is to be delivered.
  - Surveys show that passengers are willing to pay more to obtain improved services/facilities at Dublin Airport. Airlines are opposed to increases in charges even though these are often passed on fully to their passengers. In making its decision on the level of allowed capital expenditure for the forthcoming regulatory period, the Commission must take a balanced view in accordance with its statutory obligation to allow for the economic operation and development of Dublin Airport, which meet the needs of current and prospective users. It must also be cognizant of the long-term

planning and development requirements of airports, which are different from the short-term focus of airlines.

- Whilst DAA concurs with some of the broad conclusions of the WHA analysis, which highlighted inadequate capacity in a number of key areas, we consider the situation to be more critical than WHA suggests. DAA has, in addition, serious reservations about the methodology applied in the analysis, which are discussed at Appendix II of this document.

- Sub caps – DAA recommends that the sub cap on off peak use of the runway be discarded. In the current capacity constrained environment and at a time when Dublin Airport is about to become a fully co-ordinated airport, the current layer of off-peak charges adds an unnecessary complexity to airport pricing without demonstrating any additional economic benefits particularly in the context of slot controls. If an off-peak charging structure is retained, the charges should be applied on the basis of industry standard MTOW rather than ACN.

- Pensions – Pension costs incurred by the company form a legitimate part of operating expenditure and as such should be allowed as part of the Commission's Determination. Regulators in other sectors have recognised the principle that users should bear the efficient costs of remunerating employees, including pension costs. Pension cost estimates provided to the Commission represent the future costs of funding the pension scheme. In the event of any historic pension deficit being recognised on the company's balance sheet a further impact on gearing would arise, with consequent implications for financial viability and cost of capital, but this has not been included in the DAA financial forecasts to date.

- Cost of Capital – The WACC (real, pre-tax) of 7.4% estimated by K&H is too low for a company facing the many risks currently faced by DAA combined with the need to finance a sustained period of significant capital expenditure. Indeed, K&H acknowledge that, given these circumstances, the regulator should set a rate that errs on the high side rather than the low side. The risk free rate proposed by K&H is based on economic theory rather than market evidence and there is an error in the estimation of the beta element.

- Regulated Asset Base (RAB) –

  - DAA concurs with the Commission that the RAB should be rolled forward on the basis of actual net investment (capital expenditure less the value of asset disposals). This approach is in keeping with regulatory precedent elsewhere and will facilitate the pursuit of economic efficiency as it will ensure that, going forward, the RAB accurately reflects the underlying capital costs of providing aeronautical facilities, allowing prices to be equated with actual costs.
  - DAA strongly supports the Commission's reversal of the adjustments made in its previous determinations for so-called "imprudent expenditure". The clarification of the position in relation to the reintroduction of stranded assets as part of the roll forward of the RAB for Dublin Airport would improve investment incentives and reduce regulatory risk.
  - The methodological approach proposed by the Commission to adjust retrospectively for a discrepancy in one of the price cap variables e.g. capital expenditure over the period 2001-2005 while ignoring discrepancies over that same period in other price cap variables such as commercial revenues and operating expenditure is inappropriate, and asymmetric in approach. In this respect, the Commission should take account of

actual underperformance in respect of commercial revenues and excluded voluntary service scheme costs.

- Benchmarking – DAA recognises the largely positive conclusions of the TRL/ATRS benchmarking analyses of its efficiency performance, for example,
  - Dublin Airport's labour costs per passenger are 44% lower on a comparable basis than the average of European airports[1]
  - Total core costs per passenger are ranked second lowest out of a group of 25 European airports
  - Passengers processed per gate is twice that of others reviewed
  - Runway utilisation is highest in the sample except for the 2 largest UK airports

  DAA is disappointed with the Commission's predominantly negative conclusions regarding benchmarking, which are at variance with the body of the benchmarking reports.

  DAA notes that a large proportion of negative comparisons are by reference to Copenhagen Airport which the consultants rate the most efficient airport in the world in 2004, and points out that,
  - Exclusive focus on Copenhagen Airport at a very high level is inappropriate without a detailed comparison of the underlying business models and operating environment. It is also worth noting that aeronautical revenue per passenger at Copenhagen is approximately double that at Dublin, so despite being efficient, Copenhagen is also a considerably more expensive airport.
  - In making its comparison, ATRS does not appear to have adjusted for the fact that Copenhagen Airport carries out a different range of activities to Dublin Airport and has significantly higher charges. Such differences have a significant impact on the relativities of airport performance.
  - The consultants point out that it cannot be expected that "any one airport could match the performance of the best performers across the full spectrum of measures"

  In addition we note that the benchmarking is predominately based on 2001-2003 data. It is important to bear in mind that DAA continues to achieve productivity gains. In particular, the DAA response to the Commission's queries re operating costs, submitted on 19th May, demonstrated efficiencies in payroll and non-payroll operating costs amounting to 20% and 25% respectively for the period 2001 to 2005, with a significant element of these efficiencies gained during 2004 and 2005. These efficiencies are already factored into the cost base assumed for the DAA projections.

- Service Quality – DAA welcomes the Commission's focus on service quality indices. However, it would be challenging to address all the pertinent issues relating to setting the appropriate service quality indices in the context of this short statutory consultation period. We therefore propose that, as part of its Final Determination, the Commission adopts the performance targets already agreed between the airport authority and airline users as part of existing voluntary Service Level Agreements. These agreements address most of the key elements of airport service delivery. Following the Determination decision, Dublin Airport Authority would be happy to engage in a more extensive process of consultation in respect of this issue.

[1] In spite of being located in a high wage economy

Introduction

DAA is making this submission in response to the Commission's request to interested parties and the public to make written representations in respect of the Draft Determination and Explanatory Memorandum on the Proposed Maximum Level of Airport Charges at Dublin Airport (CP2/2005), in the context of consultation as set out in Section 32 of the Aviation Regulation Act 2001. One of the main purposes of CP2/2005 is "*to allow interested parties to ascertain in general terms at an early stage, the impact or effect of the proposed levels of maximum airport charges. A further purpose is to inform interested parties of the Commission's approach to achieving its statutory objectives whilst taking into account each of the statutory factors*".

A large volume of material was published as part of the Draft Determination on 31st May and a relatively short period of time (the minimum set by statute) has been allowed for the receipt of submission. In this context, DAA would like to note that it has focused its response on what it believes are the key areas of importance in the Draft Determination. In particular the company has not fully completed a detailed assessment of the financial models provided by the Commission to support CP2/2005 and the various airport charges scenarios associated with it. As a result, lack of commentary in respect of a particular point should not be interpreted as agreement with same.

In replying to the Draft Determination, DAA requests that the Commission pay due regard to the company's previous formal submission dated 1st November 2004, and its response to submissions by other entities dated 15th November 2004.

This paper is structured as follows:

- Section 1 presents DAA's response to the specific issues on which the Commission has requested comments in CP2/2005. It follows the order in which the issues were raised in that paper.
- Section 2 is composed of a series of appendices presenting the company's response to the analyses undertaken by the Commission's various consultants.
- There are a number of attachments at the end of the paper, which are provided to supplement some of the points made in the body of the text.

Some material has been marked confidential for reasons of commercial or security sensitivity. We note that the Commission has stated that

> *"as a general rule, unless the Commission is able to put all of the information that it is relying on into the public domain, it will be reluctant to rely on that information for the purpose of making its Determination"*[2]

It would be entirely inappropriate to adopt this approach to information that is sensitive for the reasons stated above but which is salient to the Determination of airport charges. Furthermore in responding to submissions made confidentially to us on which the Commission is relying, it would be inequitable if our responses if confidential were to be ignored.

DAA is available to discuss this submission in detail with the Commission.

[2] CP2/2005, page 59

1 DAA Response to Issues Raised in CP2/2005

1.1 Indicative Price Caps

The Commission has proposed a number of price cap scenarios for consideration as part of the Draft Determination. These scenarios contain different assumptions re capital expenditure, operating costs, commercial revenues, cost of capital and FFO to debt, resulting in a range of average charges per passenger over a five year period between €5.12 and €7.05. While we note the Commission's desire to illustrate the effects of changes in certain variables on the price cap, the range of scenarios presented and the limitations associated with them mean that it is difficult to attain a clear appreciation of the *"impact or effect of proposed levels of maximum airport charges*[3]*"* as is the stated intention of the Draft Determination.

Key Elements of the Price Cap Scenarios

Operating Costs

We cannot understand from the information supplied in CP2/2005 how the Commission has linked the operating expenditure projections contained in Scenarios 1, 3, 5 and 6 to the recommendations set out in the BAH report[4]. On page 24 of CP2/2005 it is stated that in deriving the preferred operating expenditure baseline *"in all cases the starting point is 2004 expenditure outturns (as supplied to the Commission by DAA during April 2005)"*. However BAH state in page 88 of its analysis that the DAA model showing *"actual costs to 2003, budget for 2004 and forecast after that"* was the basis for its analysis. The Commission seem to be applying efficiencies calculated on the basis of BAH's review of one set of figures to an entirely different set of projections. This does not appear to be methodologically sound as efficiencies proposed by BAH following detailed examination of one set of projections would not be valid when applied to a set of projections that encompass a more up to date analysis and adjustments to reflect developments in the business and the economic environment in the intervening period. A review by BAH of its proposals in light of DAA's revised financial projections will need to be completed before a final set of operating costs is incorporated into the Determination. This would appear to be accepted by BAH as it is noted that

> *"Adjustments to the assessment to reflect subsequent information will need to be made for the purpose of the final determination".*[5]

The Commission also appears to have adopted an inconsistent/selective use of prior and current plans for individual cost headings. In some cases, this involves the use of old forecast values for projections in certain years and using current forecast values for projecting other years for the same cost heading. In other cases it involves using growth rates derived from one forecast and applying these to values based on the other forecast notwithstanding that the baseline costs in each case are different. For example, *"security payroll projections use the growth rates implicit in DAA's 2005 projections"*, whereas *"retail payroll projections for 2006-09 use the growth rates implicit in DAA's 2004 projections (as endorsed by BAH), while the 2010*

[3] CP2/2005, pg 4
[4] See Appendix V for DAA's detailed response to the BAH Report
[5] BAH, 2005, Slide 13

projection uses the growth rate implicit in DAA's 2005 projections". No reasoning is provided to support this approach, which is unsound.

Selective use of prior and current plans can lead to an incorrect outcome, as demonstrated by examining terminal payroll and related operating expenditure. From 2006 to 2009, the Commission is using the BAH forecast growth, which is based on DAA's prior plans and does not take account of additional customer service FTEs incorporated in the current DAA plan to address congestion issues expected prior to delivery of Terminal 2. From 2010, the current DAA plan growth rates are applied in the Commission's model, resulting in an effective reduction in terminal FTEs in 2010 for FTEs that were never incorporated in the Commission's model.

In addition, DAA re-evaluation of group operating costs in the 2005 projections has been ignored in the Commission's projections. Further, the Commission's application of the BAH operating expenditure forecast as calculated is based on existing facilities only and does not reflect the impact of additional capacity on operating costs up to 2010. By using DAA's growth rates per the 2005 projections on operating costs from 2010, the Commission is, however, incorporating increases in operating expenditure relating to Terminal 2 but from an inaccurate baseline. This leads to an inconsistency between the capital expenditure incorporated in Scenarios 3, 5 and 6 and the operating expenditure projections. BAH itself notes that

> *"OPEX should be reassessed in the light of any CAPEX which is confirmed for the period of the next determination"*

DAA does not accept that the efficiencies projected by BAH are reasonable or achievable in all cases for the reasons set out in Appendix V. Furthermore, we note that the underlying assumption in CP2/2005 is that they can be implemented from 2005. Given that the Final Determination incorporating the definitive efficiency assumptions will not be published until October, it is unreasonable to propose that headcount reductions, amendments to pay scales and proposed reductions in non-payroll costs could be delivered during 2005. On this basis, any proposed efficiencies that may be incorporated in the Final Determination should be incorporated as taking effect only after an appropriate implementation period and certainly not before 2006. This would be consistent with the treatment of efficiency targets incorporated by the Commission in the current determination, where efficiencies were only incorporated from the effective date of the determination and not prior to that.

Any efficiencies delivered through headcount reductions assumed by BAH have been factored into the Commission's scenarios without allowing for the associated severance costs associated with delivering them. This is a completely inconsistent approach, particularly given that BAH acknowledges that DAA employees have considerable protection under the State Airports Act 2004. Adequate provision must be made to cover the costs associated with the operation of a voluntary severance scheme within the regulatory Determination if headcount reductions are assumed. This is supported by other regulators e.g. the CAA concluded as part of its recent review of NATS that

> *"As a matter of principle it would be inappropriate for users to enjoy the long-term savings that NERL produced without also compensating the company for one-off costs that it incurred during the transition"*[6]

[6] Civil Aviation Authority, *NATS Price Control Review 2006-2010*, November 2004, Paragraph 7.41, pg 61

Commercial Revenues

The statutory obligation on the Commission to ensure that DAA is able to operate in a financially viable manner is particularly challenging given the existence of the single till environment where commercial revenues not directly regulated are forecast and factored into the calculation of airport charges. Any significant error in these calculations or forecasts, such as occurred during the regulatory period 2001-2005 can jeopardise the viability of the company. DAA considers that the review of commercial revenues and related forecasts carried out by ASA is lacking in substance and does not provide a sound basis for forecasting commercial revenues in the 2006 - 2010 period. Further commentary on the ASA analysis is provided in Confidential Appendix VI[7].

ASA's property and concession revenue assumptions are unrealistic given that property revenue does not vary directly in line with passenger activity at the airport and there is no provision in the company's CIP for additional commercial property space to be provided for developing additional rental opportunities, with the exception of the limited areas being delivered in Terminal 2 and Pier D, both of which are already reflected in DAA's forecast.

ASA assumes that car parking revenues per passenger will essentially be maintained over the forthcoming regulatory period. This will be very difficult to achieve given that it will be contingent on the successful introduction of further car parking tariff when the company was savagely criticised for recent increases both by airlines and the public.

ASA retail and food and beverage projections are based on a number of unreliable assumptions such as; single annual growth rate for all business streams, unrealistic growth rates applied, application of CPI on all revenues and cost of sales, derivation of additional retail revenues from an up-scaling of the retail offer at Dublin Airport and unrealistic suggested changes to landside/airside space allocations.

Commentary on Price Cap Scenarios

Scenarios 1 and 2

These scenarios are unrealistic as they include "maintenance capex" only i.e. they seek to incorporate "unconstrained forecasts" into a physically constrained airport and do not factor in the limitations such an approach would impose on the airport's ability to facilitate demand. If additional capacity were not made available, this would result in reduced traffic volumes, reduced commercial revenues and, although no capacity related capital expenditure would be incurred, increased congestion could result in increased operating costs. Accordingly, the levels of airport charges illustrated in these scenarios would need to be revised upwards.

DAA is required to ensure the provision of facilities as it deems necessary for the operation, maintenance and development of the airport[8] and has also been given a specific mandate by Government to proceed with the development of Pier D and a second terminal. Accordingly, the

[7] A separate confidential note for the Commission in relation to one aspect of commercial revenues is also attached

[8] S.16 (2) Air Navigation and Transport (Amendment) Act, 1998 as amended by State Airports Act, 2004

setting of a price cap that excludes capital investment required to facilitate such developments is inconsistent with specific Government instructions.

Scenario 3

Although this scenario includes capital expenditure required to facilitate growth at the airport, there are inconsistencies within the other parameters included in this price cap calculation. Examples of such inconsistencies include:

- The operating expenditure projections underpinning this scenario are not aligned with the passenger growth and the capital spend as they:
  - Exclude any allowance for capacity enhancements prior to 2010 e.g. Terminal 1 extension or Pier D which need to be taken into account
  - Incorporate certain levels of efficiency which DAA regards as inappropriate
  - Are based on an inconsistent/selective use of prior and current plans for individual cost headings
  - Incorporate efficiency targets starting from beginning of 2005, making achievement of the targets impossible given that the Determination is not due for publication until October 2005. Where the Commission sets efficiency targets that are predicated on headcount reductions, such reductions can only be achieved through negotiation and voluntary severance arrangements both of which need to be factored in from the perspective of timeframe and cost.

- The commercial revenue projections incorporated in the scenario are based on wholly inappropriate benchmarking and unrealistic assumptions, offered without detailed supporting analysis (this issue is dealt with further in Appendix VI).

There are many risks facing the airport business today and more specifically facing DAA. These risks included global issues such as rapidly escalating fuel prices, the risk of a global flu pandemic or other global health risks, security risks (including those relating to the regulation of security). In addition to these global risks, there are risks specific to DAA including commercial and regulatory risk, the continued loss of competitiveness of the Irish tourist industry and a potential downturn in the Irish economy. Some risk factors such as a delayed agreement between the EU and US on "Open Skies", could have a very specific adverse impact on the DAA's financial position while others are more difficult to quantify and predict.

S3 and the associated Commission scenarios (S5 & S6) do not provide a balanced approach to risk as upside potential is factored into the plans without recognition of downside risks. A particular example of this approach is evident on page 27 of CP2/2005 where very small differences between the cost assumptions of the DAA and those of the Commission and its consultants, covering three different cost headings, are highlighted. Given the fact that these differences have an impact of just 1-2 cents, it could be assumed there is a high degree of congruence between DAA and the Commission and its consultants' views of the forecasts, which include assessments of risk across a wide range of commercial issues over a five-year period. Instead, the Commission proposes that forecasts be adjusted for these very small differences in assumptions without consideration of different potential downside profiles associated with each.

In DAA's opinion, the Commission has adopted an asymmetrical approach to risk, systematically calculating possible upside revenue potential or cost reduction while ignoring

significant downside risk factors even where these are of considerable scale. This greatly increases regulatory risk for DAA and poses a threat to its ability to deliver much needed airport capacity.

Scenario 4

This is the only scenario with an internally consistent methodology as it is based on DAA's most recent financial projections and includes a set of aligned parameters in terms of the capital investment required to provide additional facilities, as well as the potential commercial revenues achievable and the operating costs required to manage the facilities.

A number of issues have arisen since the company submitted its 2005 draft financial projections, which form the basis for S4. These developments illustrate the dynamic and risky nature of DAA's business environment. In particular changes in security regulation have already added [redacted] to the cost base or [redacted] per passenger. Further changes to security regulations introduced by the EU this month could add as much again – a detailed assessment is not yet complete. In addition, it is now clear that the benign assumptions with respect to the liberalisation of transatlantic traffic which underpinned commercial revenue in the business plan may no longer be tenable as recognised by the CAR's own consultants Mott McDonald. In these circumstances, DAA believes that the Commission should apply the methodology underpinning S4, "stress-tested" for financial robustness and incremented to reflect the changed business environment and to meet financial viability metrics.

Scenario 5 and 6

DAA must maintain funding confidence and preserve an "A" credit rating if it is to finance new investment efficiently. In this context, the company welcomes the Commission's plans to stress test the financial robustness of regulatory proposals. However the scenarios developed to conduct such testing (S5 and S6), based as they are on S3, negate their appropriateness for the reasons stated above. DAA believes that the scale of the adjustments computed by the Commission demonstrates that it is not appropriate to address financial viability by adjusting the time profile of regulatory depreciation in these circumstances. The fact that the S3 model does not meet requisite financial viability standards, given the inclusion of significant optimistic assumptions on operating costs and commercial revenues, is a clear demonstration that the cost of capital applied is insufficient. Financial viability issues are further discussed in Section 1.3.

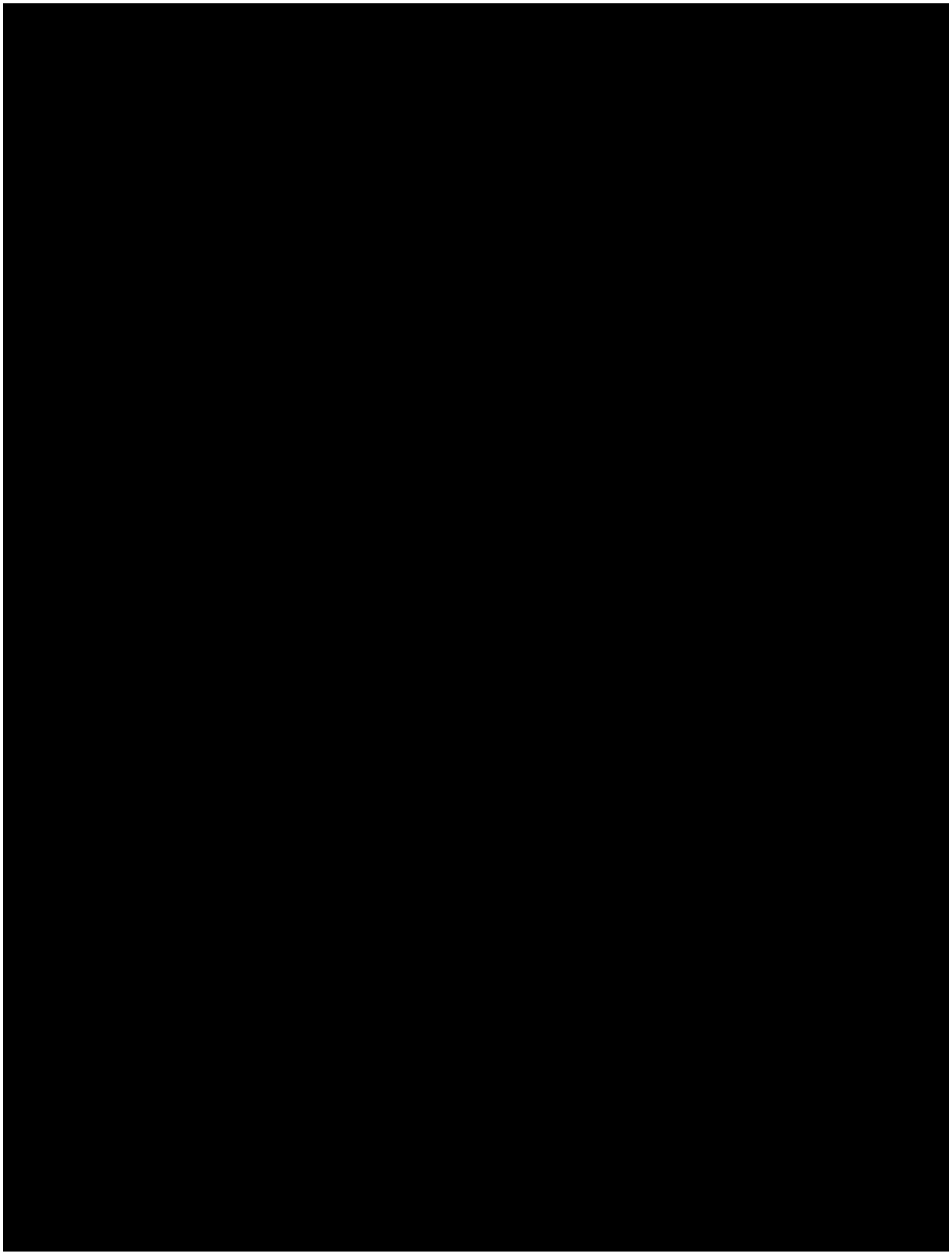
The Minister for Finance has also formally advised the company that he expects it to pay dividends to the shareholder. DAA fully accepts this commercial mandate. An inability to pay dividends or the assumption of a dividend holiday could be taken as a signal of financial distress for any commercial entity and in the opinion of DAA is not consistent with sustainability and financial viability.

Scenario 7

S7 in large part relates to events that will post date the publication of the Determination and although the Commission are to give due regard to "the restructuring including the modified functions of Dublin Airport Authority," this is expressly excluded from consideration in this Determination under the State Airports Act, 2004[9].

[9] Part 3 Section 22 Subsection 3

The de-merger of the company cannot take place until a number of statutory pre-conditions have been met. These include a requirement that the Ministers for Finance and for Transport must each be satisfied as to the state of operational and financial readiness, including business planning, of Dublin, Shannon and Cork airports. In this context, it is clear that any consultation in relation to these issues should only take place when the full terms of the restructuring become clearer. It is possible however, that the forthcoming determination could, if set below full cost recovery for Dublin Airport, precluded implementation of Government policy.



Conclusions re Indicative Price Caps

- There are a number of important inconsistencies in assumptions underpinning the price cap scenarios presented in CP2/2005 which must be resolved for the final Determination.

- In deciding on the final cap, the Commission must ensure that it adopts a symmetrical approach to risk, considering both the upsides and potential downsides, if it is to protect the interests of users and allow for the continued financial viability of Dublin Airport.

- DAA believes that S4 is the only scenario with an internally consistent methodology. However, while it represents a superior option to the other scenarios put forward, it needs to be incremented to reflect the changed business environment since the projections were submitted, general business risks and to meet financial viability metrics.

1.2 Off-Peak Price Cap Structure

In the current capacity constrained environment and, when Dublin Airport is about to become a fully coordinated airport, the existence of the current structure of off-peak charges adds an unnecessary layer of complexity without demonstrating any additional economic benefits. DAA also believes that the implementation of a sub-cap for off-peak use of the runway at the last Determination is incompatible with the requirement to place the minimum restrictions on the company.

The current off-peak charging structure would make introduction of noise or emissions related charges at Dublin extremely difficult, if this were deemed appropriate, due to the complexity associated with overlaying a noise or emissions categorisation process on an ACN based categorisation. Thus, our ability to implement a charging structure reflecting a dynamic business is reduced by the existing charging structure.

The complexity of the underlying methodology means that the resulting charges are sensitive to changes in input parameter, as evidenced by the fact that aircraft categorisation has been substantially changed by the Commission three times since it was initially implemented. However, we do not believe that the signals associated with this methodology are materially different to those associated with a more standard and well accepted MTOW-based approach. In fact, due to its complexity, it is our view that there is a greater administrative burden for no additional benefit.

The methodology underlying the sub-caps is cumbersome, and its administration requires a level of detail not normally used in aeronautical billing. It is difficult to administer. In previous submissions, a number of airlines, IATA and the airport authority have all called for elimination of the ACN based methodology. Dublin Airport Authority recommends that this sub cap approach be discarded in the next Determination.

The company is of the view that, if the Commission ultimately decides to retain an off-peak charging structure, it should levy a simple off-peak charge per tonne for all aircraft. This is the approach favoured by airlines and is the established practice at airports worldwide where off-peak charges are in place.

In such a situation the off peak periods for the next year should be agreed annually in conjunction with ACL and DAA after the summer season.

1.3 Financial Issues

Cost of Capital

DAA commissioned a detailed report from NERA in support of its view of the appropriate cost of capital. This report has previously been submitted to the Commission and should be viewed as part of DAA's statutory submission in the context of the current consultation process. NERA's best estimate of the real pre-tax WACC for the DAA, using the standard weighted average cost of capital (WACC) methodology, is 8.5%.

A detailed response to the Kearney & Hutson paper prepared for DAA by NERA is appended in Section 2, Appendix I.

Financial Viability

Ratios & Credit Rating

DAA concurs with the Commission's view that financial viability is a necessary condition for the airport's efficient and economic development and that the ratios listed are commonly used in the financial community. In this context, the company welcomes the fact that the Commission has adopted some scenarios to test the financial robustness of regulatory proposals (though the scenarios developed to address this issue [S5 and S6] are based on S3, rather than S4 which negates their appropriateness for the reasons stated above).

DAA must maintain funding confidence and preserve an appropriate credit rating if it is to finance new investment efficiently. In the DAA's view this should be an "A" rating, as a rating below this level would have the impact of restricting DAA's borrowing capacity, potentially limiting or delaying ability to invest in infrastructure[10]. DAA notes that the Commission is aware that a deterioration in the company's rating would ultimately result in increased airport charges due to the adverse impact such a change would have on the cost of borrowing.

> *"A deterioration in its ratings would be expected to have an adverse impact on its cost of borrowing, ultimately to the detriment of airport charges that must support this cost"*[11]

The credit rating agency Standard and Poor's has confirmed that DAA's business profile supports an "A" category rating but that uncertainty lies in the expected and current financial profile of the company. S&P has stated that *"the outcome of the expected regulatory reset will be key for the future rating level*"[12] as a sustained pattern at the current low ratio levels could threaten the company's current rating. A determination that is pitched at a rate that enables DAA to maintain its existing credit rating would therefore assist the achievement of the Commission's statutory objectives i.e. it would facilitate the development of Dublin Airport by

[10] Further arguments in support of this conclusion are provided in the "The Cost of Capital for DAA", NERA, 2005, Section 9.2, where evidence is provided re the higher costs of BBB rated debt and the restricted availability of longer term BBB rated debt.
[11] CP2/2005, page 37
[12] S&P Summary credit analysis document issued 15 June 2005

enabling efficient investment in a sustainable and financially viable manner and enable Government policy re airport development and the restructuring of the company.

It should be noted that, in the context of assigning a credit rating, the financial ratios are one of many factors, considered, with the result that it is impossible to assign a definitive set of ratios for each rating level. This is demonstrated in the table below which shows that Manchester Airport Group has similarly strong ratios compared to BAA but its credit rating is lower due to other factors affecting its business.

	CP2/2005	DAA minimum[13]	Manchester Airport Group	BAA
Current credit rating		A	A	A+
FFO:Debt	18% - 20%	20% [14]	23%	20%
EBITDA:Interest	2x[15]	>3.5x	3.6x	4.2x
FFO:Interest	2.5x	3.5x [14]	3.5x	4.1x
EBIT:Interest	1.5x		2.2x	2.9x
Net Debt:EBITDA		<4.5x	2.2x	3.2x

We note that while the threshold value set by the Commission for the FFO:Debt ratio is appropriate for maintaining the company's current rating, the interest coverage ratio thresholds would need to be increased in order to ensure consistency across the ratios being examined. For example, the Commission has assessed EBITDA cover based on a threshold value of two times interest. In fact, EBITDA coverage in the region of 3.5 to 4 times interest would be more normal for an "A" rated company and would be more consistent with an FFO to Debt ratio of 20%. A similar uplift would be required to the other interest coverage ratios to ensure their consistency with an "A" rated entity and a 20% FFO to Debt ratio (see table above). It is notable that S&P have recently assigned an A rating to the Manchester Airport Group plc where the FFO to Debt and EBITDA interest coverage ratios are currently 23% and 3.6x respectively and are expected to increase.

Given the level of investment required and consequent impact on debt levels, DAA believes that projected debt ratios are more likely to influence its credit rating going forward than interest coverage ratios, particularly in the context of a low interest rate regime. Another key financial ratio in this regard is the Net Debt to EBITDA multiple. For an "A" rated entity, this ratio would be expected to be in the region of 3x and DAA proposes to move towards this level over the medium term. In the interim, the company proposes a target of less than 4.5x with a view to sustaining a reasonable financial profile.

The Commission states that S&P would be looking for evidence that the company should be able to sustain an FFO:Debt ratio in excess of 20% and has calculated the average ratio over five years under the various scenarios in this regard. However, achieving an average ratio of 20% or more over a five-year period should not be confused with sustaining that ratio, particularly if the trend is negative in the longer term. However DAA believes the use of five year averages for FFO:Debt and other financial ratios is inappropriate, particularly where this

[13] DAA have set target ratios in excess of these minimum levels as these levels are acceptable only in the short term and during a high point in the capital expenditure cycle

[14] Based on view of Standard & Poor's

[15] EBITDA coverage would mathematically generate a higher ratio due to the value of EBITDA exceeding the value of FFO

has the effect of masking declining ratios and a weakening financial position which continue to prevail beyond the current review period. Annual Ratios and future trends are what the markets examine when reviewing financial performance. If a company's ratios are declining in the short term, due for example, to being at a high point in their investment cycle, they must still be able to demonstrate that the ratios are going to improve within a reasonable timeframe. It is not prudent to assume that a sustainable ratio has been achieved, if in most years the ratio is less than the target or if having reached the target, decline is shown over the remainder of the period. On the other hand, a pattern of improvement to a steady state level and maintenance at that level will be a stronger rating factor.

As demonstrated by Figure 1, the scenarios set out by the Commission do not demonstrate an acceptable pattern as under S3 the trend is downwards from the current ratio (with the exception of 2006) while under S6 the ratio only exceeds the target 20% during two years of the forthcoming regulatory quinquennium and based on the Commission's model it does not reach it again during the subsequent quinquennium. A similar pattern of short-term improvement followed by weakening in the medium term results under S5.

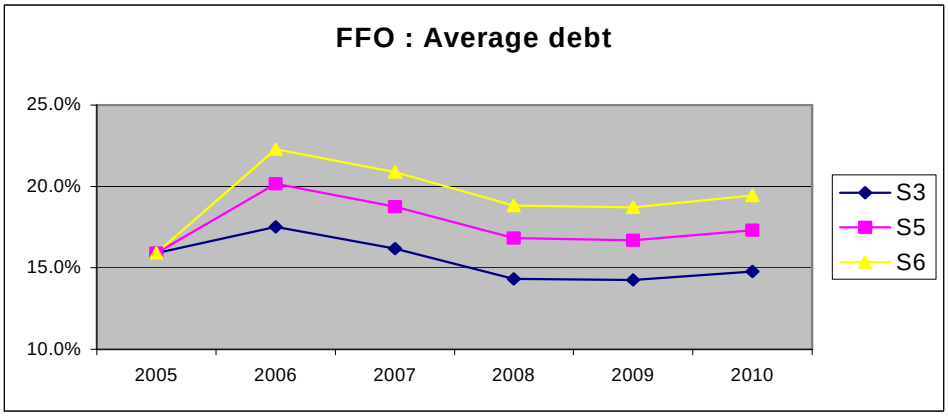


Figure 1
Source: CAR financial model

Furthermore, it is clear from Figure 2 below that unlike the trend in the Dublin Airport Authority projections the Commission figures yield a declining trend in the FFO to debt ratio.

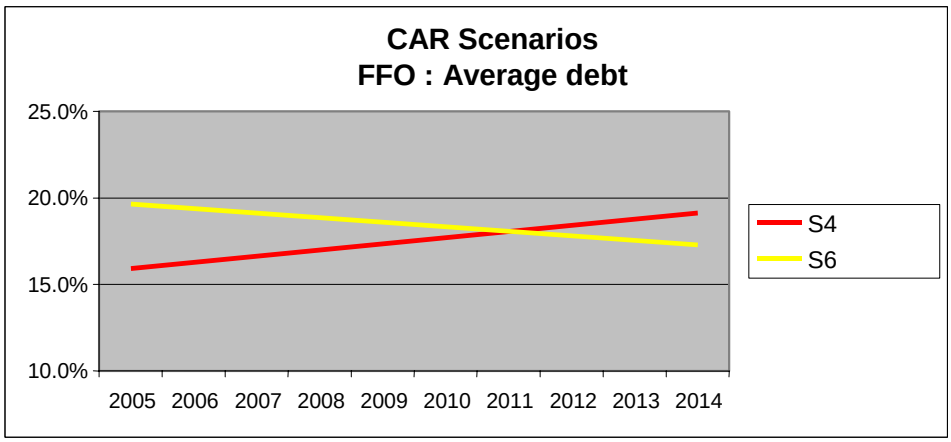


Figure 2

DAA has a commercial mandate and the Minister for Finance has formally advised the company that he expects it to pay dividends to the shareholder. Against this mandate, an inability to pay dividends or the assumption of a dividend holiday can be taken as a signal of financial distress for any commercial entity and in the opinion of DAA is not consistent with sustainability and financial viability.

In DAA's opinion, the Commission has adopted an asymmetrical approach to risk, systematically calculating possible upside revenue potential or cost reduction while ignoring significant downside risk factors even where these are of considerable scale. This greatly increases regulatory risk for DAA and poses a threat to its ability to deliver much needed airport capacity. In addition to recognizing specific downside risks such as those highlighted by DAA, it is essential that in its Final Determination, the Commission provides for the possibility of a significant adverse shock impacting on the company.

Use of Accelerated Depreciation to achieve target ratio

The Commission has proposed the use of accelerated depreciation as an approach to achieving a target financial ratio for the company over the next regulatory period. However, DAA believes that the scale of the adjustments computed by the Commission demonstrates that it is not appropriate to address financial viability by adjusting the time profile of regulatory depreciation in these circumstances. A methodology that results in financial returns that are well below financial viability standards for a given cost of capital indicates that the cost of capital applied is incorrect.

The application of the cost of capital used in S4 would give rise to a considerably smaller scale of adjustment to be addressed through accelerated depreciation, which would be consistent with the regulatory precedents noted by the Commission. The use of accelerated depreciation as modelled by the Commission further compounds the problems associated with the use of averages for FFO:Debt and other ratios mentioned above. This methodology, which brings forward revenues at the expense of later periods, serves to further weaken a declining average rate.

Pensions

The Commission has sought the views of interested parties on the appropriate treatment of the DAA's pension deficit.

DAA's permanent employees are members of the multi-employer Irish Airlines (General Employees) Superannuation Scheme (IAS). This scheme is operated in conjunction with a number of other employers with DAA current and past employees comprising approximately one quarter of the membership of this scheme. Details of the scheme are provided in the company's 2004 Annual Report.

[redacted]

[redacted]

DAA's advice is that the anticipated required increase in funding rate is substantially reflective of the future funding needs, with a small proportion attributable to past service deficit. The Commission has stated that the indicative price caps in the draft Determination take into account the higher pension contributions foreseen by DAA's actuary. However, the Commission has confirmed to DAA that provision has not been made in the scenarios in respect of any historic pension deficit.

[redacted]

The Commission has indicated that it is considering the possible capitalisation in the RAB of any pension deficit for the purpose of calculating the price cap. While potentially any deficit relating to past service could be treated in this manner, any increased costs relating to future service should be dealt with as an allowance through forecast payroll. However, the choice of method (capitalisation in RAB or allowance in operating expenditure) for dealing with the past service deficit is mainly differentiated by timing considerations. DAA considers that allowance in operating expenditure is more appropriate and treats both past and future pension cost issues consistently. The alternative method of capitalisation of any DAA deficit contributions would be inferior, as it would worsen DAA's financial ratios during the forthcoming control period. This might then require a further increase in the Commission's financial viability adjustment simply to correct for the impact of capitalisation.

DAA has stated its intention to establish a new pension scheme, subject to Ministerial approval. In these circumstances, any applicable actuarial deficit would have to be reflected on DAA's balance sheet. Consequently, DAA considers that it is inappropriate for the

[redacted]

Commission to ignore any balance sheet position in assessing the price cap and, in particular, the financial viability of DAA.

DAA is of the view that costs associated with the company's future pension requirements, in addition to any past service deficit, form a legitimate part of the company's operating expenditure and as such should be allowed as part of the Commission's Determination.

Regulatory Precedent

Regulators in other sectors have recognised the principle that users should bear the efficient costs of remunerating employees, including pension costs.

UK Electricity Distribution Price Control Review 2005-2010

During the Electricity Distribution Price Control Review 2005-2010, OFGEM stated that it adhered to the principle that it would make allowances for the efficient level of costs it expected regulated companies to incur over a regulatory period, including the costs which the companies were likely to incur in funding their pension schemes.

OFGEM incorporated forecast pension costs in its final Electricity Distribution regulatory proposals[18] for the period 2005-2010. OFGEM also introduced an adjustment mechanism whereby if actual pension costs exceeded the forecast allowance for the period 2005-2010, the regulated company would be permitted to recover this additional contribution in the next price control period, thus reducing regulatory risk for the regulated companies.

NATS Price Control Review 2006-2010

In its draft regulatory decision of November 2004[19] for NATS, the CAA acknowledged the associated rising cost of pension contributions and concluded that because stock market returns have declined, NERL, in common with many other firms in the UK, needed to increase the amount that it contributed to its pension fund in order to ensure that it was able to fund the benefits that were payable to scheme members on retirement. It stated that:

> *"As a matter of principle, customers of regulated businesses should be expected to pay the efficient costs of providing a competitive package of pay and benefits, including pension benefits, to the staff of the regulated business, and it was therefore necessary to include in the CAA's operating expenditure allowances, the full cash cost that NERL expects to incur in funding current and future employee benefits under the company's final salary scheme."*[20]

From a practical perspective, the CAA has proposed the introduction of some form of pass-through mechanism within the price cap to ensure that users would pay the actual pension costs incurred by NERL in funding employees' pension benefits rather than the forecast costs anticipated by the CAA.

[18] Office of Gas and Electricty Markets, *Electricity Distribution Price Control Review Final Proposals,* November 2004
[19] Civil Aviation Authority, *NATS Price Control Review 2006-2010 CAA Initial Proposals,* November 2004
[20] ibid, Page 61, Paragraph 7.39

Under the CAA proposal, a proportion of pension costs (the amount has not yet been defined) would be allowed through the adjustment of the RAB at the start of the next regulatory period (2011) for any differential between NERL's actual cash pensions and the amount allowed by the CAA for pension costs as part of its operating expenditure forecasts over the period 2006-2010.

BAA London Airports Price Control Review 2003-2008

As part of its regulatory decision for the period 2003-2008[21], the CAA included pension costs as part of allowable operating expenditure. The UK Competition Commission adjusted down the amount included to a 19.3% company contribution rate from an original figure of 23% which was incorporated in the BAA's operating expenditure forecasts for the period 2003-2008.

UK Water and Sewerage Periodic Review 2005-2008

During the water and sewerage periodic review 2005-2010, OFWAT acknowledged that the treatment of pensions was a matter of concern for the regulated water companies and that the funding of pensions was particularly difficult at the stage in the business cycle when there were volatile capital markets. OFWAT stated that:

> *"Companies' pension arrangements were a matter for company management but in setting price limits the regulator needed to enable efficiently managed companies to finance their functions. This included the costs of providing pensions as part of competitive remuneration arrangements."*[22]

In its final regulatory determinations for 2005-2010, OFWAT incorporated all estimated future pension costs plus half of the historic pension cost deficit as part of allowable operating expenditure, and this provides a solid basis for the adoption of such an approach by the Commission in its Determination.

Capitalisation of Pension Costs

The Commission has suggested that the pension deficit could be remunerated through capitalisation in the RAB. DAA take the view that future pension costs form a legitimate part of the company's operating costs and as such they should be allowed as part of forecast operating expenditure. DAA accepts that there is some regulatory precedent for the capitalisation of historic pension deficits. However, the company believes that in the case of DAA, such an option would be inappropriate as the capitalisation of these pension costs could create a mismatch in the timing of the revenues that the company would receive and the pension contributions it would be required to pay. This in turn could exacerbate the company's financial ratios.

DAA believes that any past service deficit should be incorporated in the price cap by taking it into account in the financial viability assessment and incorporating it in the allowed operating expenditure.

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[21]Civil Aviation Authority, *Economic Regulation of BAA London Airports 2003-2008, CAA Decision*, February 2003
[22]Office of Water Services, *Setting Waste and Sewerage Price Limits for 2005-2010: Framework and Approach*, March 2003, Page 53

Conclusions re Financial Issues

- Cost of Capital:
  - The best estimate of the real pre-tax WACC for the DAA, using the standard weighted average cost of capital (WACC) methodology, is 8.5%.

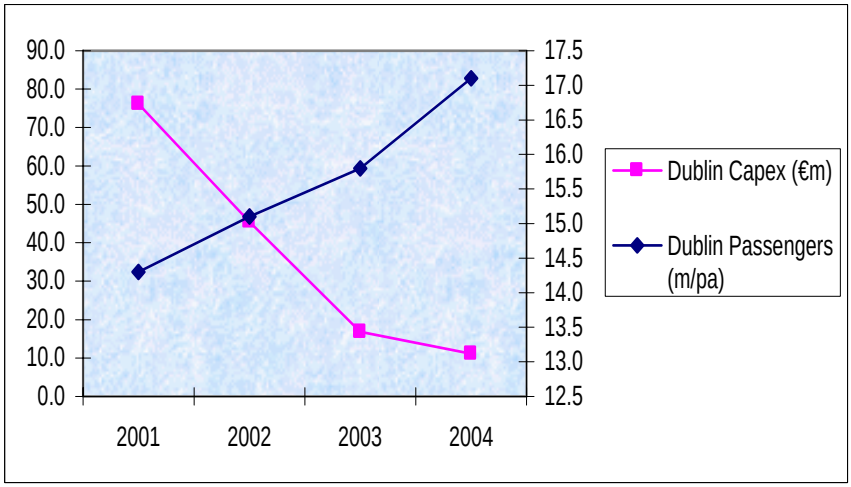
- Financial Viability
  - A determination that is pitched at a rate that enables DAA to maintain its existing "A" credit rating would assist the achievement of the Commission's statutory objectives i.e. it would facilitate the development of Dublin Airport by enabling efficient investment in a sustainable and financially viable manner.
  - The use of five year averages for FFO:Debt and other financial ratios is inappropriate, where these mask declining ratios and a weakening financial position.
  - The scale of the adjustments computed by the Commission demonstrates that it is not appropriate to address financial viability by adjusting the time profile of regulatory depreciation in these circumstances. A methodology that results in financial returns that are well below financial viability standards for a given cost of capital indicates that the cost of capital applied is incorrect.
  - DAA has a commercial mandate - An inability to pay dividends or the assumption of a dividend holiday can be taken as a signal of financial distress for any commercial entity and is not consistent with sustainability and financial viability.
  - While the threshold value set for the FFO:Debt ratio is appropriate for maintaining the company's current rating, the interest coverage ratio thresholds need to be increased in order to ensure consistency across the ratios being examined.

- Pensions
  - Future contribution levels to the multi-employer IAS scheme will need to rise to maintain the level of benefits.
  - Costs associated with the company's future pension requirements, in addition to any past service deficit, form a legitimate part of the company's operating expenditure and as such should be allowed as part of the Commission's Determination. This is supported by regulatory precedent elsewhere.

1.3 Capital Expenditure

One of the Commission's statutory objectives is to facilitate the efficient and economic development and operation of Dublin Airport, which meet the requirements of current and prospective users of Dublin Airport. The level of investment in airport facilities is a key factor for consideration in attaining this statutory objective, as the Commission must ensure that the level of allowed aeronautical revenue is sufficient to develop airport facilities in line with those requirements. We note that the Commission is now commencing its review of this important area and we are happy to engage with the Commission regarding any queries it may have in respect of the timing, sequencing or costing of the programme.

Airport infrastructure cannot be delivered unless the airport authority is adequately paid to develop it. The 2001 Determination was insufficient to fund capital expenditure to meet growth. As a result capital expenditure reduced dramatically to a level of €10m in 2004, while at the same time passenger numbers grew to the highest ever level – see graph below. Service standards have also seriously deteriorated, reflecting the lack of investment.



This situation is unsustainable. It is widely recognised by many commentators that Dublin Airport is currently at capacity, particularly at peak times. The Commission's own consultant WHA[23] has also acknowledged that the airport is at or approaching capacity in certain key areas, although we contend that the situation is more serious than recognised by WHA.

The consequences of capacity constraints are significant and include congestion, delays, lower service levels, increased costs and reduced choice. There may also be negative implications for the Irish economy, particularly in relation to trade, tourism, inward investment and employment. In this context, it is interesting to note the outputs from the 2005 IMI Multinational Companies (MNCs) survey. One of the factors that Ireland was perceived to underperform on most, when performance rankings were compared to importance rankings was "Air and sea facilities". Concerns about these issues are reflected in comments received from chief executives and senior managers such as "*Ireland's infrastructure particularly in air transport cargo and business travel is primitive by European standards*".[24]

23 The Commission has requested comments on the WHA's Assessment of the 2003/4 Handling Capacity of Dublin Airport and DAA's response is provided in Appendix II.

24 The Survey of MNCs in Ireland, IMI, 2005

The CIP and Consultation with Users

The Capital Investment Programme (CIP) is DAA's best assessment of the capital expenditure required to meet forecast increases in demand at an acceptable service standard and in a manner that does not compromise safety standards[25]. The CIP is a best estimate at a specific point in time. However, it must be acknowledged by the Commission that the dynamic nature of the business means that adjustments will need to be made in line with new developments, changes in regulations, user needs etc.

We note that the Commission's consultants BAH have urged that:

> *"… the CAR approach to capital investment ought to encourage DAA to make investments consistent with the desired quality of service."*[26]

In this context we welcome the fact that the Commission has indicated that:

> *"… to the extent that service quality is measured by physical capacity, the recoverable capex allowed by the Commission will be of sufficient size to allow the airport authority to add the required physical capacity"*.[27]

DAA has consulted with users on the CIP and a series of meetings and discussions were held in recent months to provide information on the capacity deficits and the projects that we considered were necessary to address same. Details of key meetings held as part of this interaction are provided in the table below[28]:

Date	Consultation
8th December 2004	1st consultation meeting of current process • Airport charges for 2005 • Capital expenditure Budget distributed • RSS 2005
22nd December 2004	1st deadline for users feedback
12th January 2005	2nd consultation meeting • Amendment to Capital Programme 2005 o Pier A Development • Impact of Capital expenditure on charges • Update on Planning Application for Parallel Runway • Capital Expenditure Programme 2005 - 2014
26th January 2005	2nd deadline for feedback – subsequently extended to 2nd February

[25] At the time that the CIP was submitted DAA indicated that the capital expenditure associated with car parking was under review. As part of this review we have identified a project driven by planning requirements that should have been included in the CIP. The project sheet associated with this investment is attached.
[26] BAH, 2005, pg 72
[27] CP2/2005, pg 50
[28] Bi-lateral meetings were also held with individual airport users and there were exchanges of correspondence on the issue.

2nd February 2005	3rd consultation meeting • User feedback • Capital expenditure to charges conversion
4th April 2005	Consultation Meeting – further request for comments in context of impending submission
30th May 2005	CIP update presentation

As part of this process DAA shared information with users on the impact of the proposed capital expenditure on airport charges on the basis of a set of assumptions used by the Commission in the last determination. The Commission has received the spreadsheets and other information provided to users in this regard.

DAA notes the Commission's view that

> *"some consensus or approval between DAA and the users of Dublin Airport as to the necessity of capital projects would benefit all parties and the Commission in making a determination"*[29]

In this context, it could be in airline users interests to engage in regulatory game playing by refusing to engage constructively in consultation on the CIP where the Commission would interpret lack of consensus as a reason to disallow capital expenditure.

Ultimately, it is the passenger that pays airport charges, which are separately identified on tickets and are often passed through directly to them by airlines. The TNS-mrbi survey published with the Commissions Draft Determination illustrates clearly that a majority of passengers are willing to pay up to an additional €3 per passenger in airport charges to fund improvements in key services/facilities. However, airlines have stated that they are opposed to the level of increase in charges implied by the proposed investment levels. Therefore, despite DAA's best efforts, consensus has proved impossible to achieve to date. We are not unique in this, as there has been a similar experience in the UK

> "*BAA has warned that its £4bn expansion of Stansted would be delayed by "several years" after the planned completion date of 2013, unless it more than doubles landing charges at Stansted to £7-8 pr passenger and also levies up to an extra £1 on every traveller using Heathrow and Gatwick...The two low-cost carriers complain that BAA's plan to build what they call "a Taj Mahal" in the Essex countryside is pointlessly extravagant for their needs… BAA should certainly exercise tight cost control but it surely right to give Stansted the decent infrastructure that projects in this country so often lack.".*[30]

In this context, the Commission must decide whether the DAA's informed view of capital expenditure requirements of the airport for the next ten years is appropriate in the context of the strong demand projections for the future, CAR's statutory obligations to facilitate the development of the airport to meet that demand and the expressed views of other users i.e.

[29] CP2/2005, pg 42
[30] Financial Times 20/05/05

passengers. In making its decision, the Commission should note the short-term focus of airlines as opposed to the long-term planning and development requirements of airports and assess whether it is appropriate that this short-term focus should determine the level of investment in airport facilities in the long term.

Aviation Action Plan

As the Commission is aware, on 18th May 2005, the Government approved the Aviation Action Plan. The proposals directly relating to the DAA concern the provision of a new Pier for aircraft parking stands at Dublin Airport (to be available from 2007) and the building of a DAA owned new Terminal (Terminal 2) at Dublin Airport to open in 2009. The Government regards the totality of these proposals as a comprehensive plan for the long-term success and growth of Irish aviation and have placed special emphasis on the need to quickly and efficiently provide extra capacity at Dublin Airport. Terminal 2, in particular, has been noted by the Government as representing a critical piece of State infrastructure underpinning the importance of Dublin Airport to Ireland. The final location of the terminal is yet to be determined, with two options under consideration, one to the north of the existing terminal and one to the south. A consultation process has already commenced with users to address these matters and will be followed by discussions in relation to the detailed specification of the facility.

It is important to note that, though the CIP includes an estimated cost for the option that allows for a terminal situated north of the existing facility in the location of the maintenance hangars, the likely quantum of capital expenditure involved is similar for both locations. The key issue for the Determination, therefore, is to allow a sufficient quantum of capital expenditure to facilitate delivery of the specified facility at the end of the consultation process. The best estimate of this quantum is contained in the CIP document.

The Commission plays a key role in ensuring the delivery of this Aviation Action Plan and in ensuring the remuneration of costs through charges appropriate to the provision of this extra capacity at Dublin Airport. Charging and regulatory certainty is essential to facilitate a speedy progression of the Government's decision.

Conclusions re Capital Expenditure

- There is unanimity that capacity is required at Dublin airport. DAA must be allowed to recover its costs if this capacity is to be put in place.

- Surveys show that passengers are willing to pay more to obtain improved services/facilities. Airlines are opposed to increases in airport charges even though these are often passed on fully to their passengers. The Commission must ensure that Dublin Airport is developed in a manner that meets the requirements of all current and prospective users of Dublin Airport.

- In making its decision on the level of allowed capital expenditure for the forthcoming regulatory period, the Commission must take a balanced view in accordance with its statutory obligation to allow for the economic operation and development of Dublin Airport, which meet the needs of current and prospective users. It must also be cognisant of the long-term planning and development requirements of airports, which are different from the short-term focus of airlines.

- DAA has consulted extensively with airline users, but it must be recognised that it could be in their interests to refuse to engage constructively in consultation on the CIP where the Commission would interpret lack of consensus as a reason to disallow capital expenditure.

- The Capital Investment Programme (CIP) is DAA's best assessment of the capital expenditure required to meet forecast increases in demand at an acceptable service standard and in a manner that is reflective of timescales set by government and which do not compromise safety standards. It should be allowed in full.

1.4 Regulated Asset Base

Roll Forward Methodology

DAA welcomes the Commission decision to roll forward its initial valuation of the Dublin Airport RAB, which was based on the December 2000 indexed historic cost value of net fixed assets, and that it has adopted DAA's December 2004 indexed historic cost valuation of fixed assets updated for 2005.

DAA believes that employing an appropriate methodology for the roll forward of the RAB is essential, as it will contribute towards achieving the Commission's statutory objective of facilitating the efficient and economic development and operation of Dublin Airport which meet the requirements of current and prospective users while also enabling Dublin Airport to operate and develop in a sustainable and financially viable manner.

DAA concurs with the Commission that the RAB should be rolled forward on the basis of actual net investment (capital expenditure less the value of asset disposals). This approach is in keeping with regulatory precedent elsewhere such as in airport regulation in the UK and in other regulated sectors in both Ireland and the UK[31].

Rolling forward the RAB on this basis will facilitate the pursuit of economic efficiency as it will ensure that going forward the RAB accurately reflects the underlying capital costs of providing aeronautical facilities, allowing prices to be equated with actual costs.

By applying actual capital expenditure in the roll forward of the DAA's RAB, the Commission will also be able to adjust for any differential which may emerge between the Commission's projected spend incorporated in its previous determinations and actual spend over the regulatory period 2001-2005. This will ensure that any benefits from a capital underspend or costs associated with a capital overspend are removed going forward and therefore do not stretch into perpetuity, as would be the case if the RAB was rolled forward on the basis of the original projections for capital expenditure.

DAA recommends that in the methodology applied to the roll forward of the RAB a deduction should be made for the indexed historical equivalent level of actual depreciation, charged against Dublin Airport's regulatory assets for the regulatory period 2001-2005, rather than projected depreciation as set out in previous determinations. This will allow for symmetry in the treatment of capital expenditure and depreciation in the roll forward methodology and for consistency between the RAB and Dublin Airport's fixed asset register.

If the RAB were rolled forward on the basis of either projected capital expenditure or depreciation, this would, in effect, create a notional Dublin Airport RAB. This would be inappropriate as, from a practical perspective, it would not be possible to reconcile this with Dublin Airport's fixed asset register, and from an economic perspective this notional RAB would not accurately reflect the underlying capital costs associated with the provision of the regulated facilities.

[31] Commission for Electricity Regulation, *Distribution Price Review Proposals*, CER01/86 July 2001
Civil Aviation Authority, *Economic Regulation of BAA London Airports 2003-2008, CAA Decision*, February 2003

Adjustments for "Imprudent" Investment

The Commission has stated that it is considering whether adjustments made in the initial valuation of the RAB for "imprudent" investment should be reversed or fixed as a permanent adjustment to the RAB.

DAA strongly supports the Commission's reversal of the adjustments made in previous determinations for "imprudent expenditure". DAA has expressed its opposition in earlier submissions to the stranding of certain assets over the regulatory period 2001-2005[32] and would like these to be reviewed by the Commission as part of its deliberations prior to making a decision.

DAA believes that a symmetrical treatment of the benefits /costs arising from efficiency savings and inefficiency penalties is integral to the framework for incentive regulation. Given that it is accepted that a regulated entity will only get to retain any efficiency savings which it has achieved in implementing its capital investment programme for the duration of a regulatory period (usually five years) it is therefore appropriate that any penalties imposed for capital inefficiencies should also have a limited maximum duration.

It is critical that the Commission adopts this balanced approach to capital investment expenditure, with an even handed treatment of both the efficiency saving and inefficiency penalties, if it is to maintain the incentive properties of the price cap regulatory model.

As a general principle, it is uncertain as to whether a regulatory decision to disallow "imprudent investment" will result in improved economic efficiency, which is the Commission's stated objective. The decision to disallow portions of investment through the stranding of assets has implications for each element of a company's economic efficiency.

- The stranding of assets will result in a maximum level of airport charges, which will not reflect the full economic costs of historic investments. Therefore prices are not equated with the actual economic costs of providing aeronautical facilities, which may result in a loss in allocative efficiency.

- The decision to disallow a portion of investment provides a signal to investors and potential financiers that under regulation the company faces the risk of under recovery of its costs, which may add a compensatory premium to the cost of capital, reducing productive efficiency. Alternatively, under clearly stated criteria as to the basis for disallowing assets, it may encourage firms to improve productive efficiency and to avoid what could be deemed in the future "inefficient" investment. Therefore, the overall impact of this decision on productive efficiency is difficult to assess.

- The decision to disallow historic investments may weaken dynamic efficiency. If a company is prevented from recovering the cost of its investment, this may strongly discourage similar investment in the future as potential investors and financiers will be aware of the risk of being unable to earn an adequate return on investment. This is further exacerbated if the

[32] 26/06/01 Submission to the Commission on Proposed Maximum Level of Airport Charges Draft Determination CP6/2001; 04/07/03 Submission in Response to the Public Consultation Notice of June 4th 2003 on a Review of the Maximum Levels of Airport Charges; 08/12/03 Submission in Response to Notice by the Commission Relating to the Determination on the Maximum levels of Airport Charges Setting Out the Issues to be Reviewed and Seeking Representations from Interested Parties or the Public CP4/2003

decision to disallow investment is a subjective one rather than one based on empirical evidence and with a transparent decision process.

- Lack of any indication as to the likely circumstances or methodology by which stranded assets could be assimilated back into the RAB when appropriate, may further reduce dynamic efficiency due to the increased regulatory uncertainty.

Retrospective Revenue Adjustments to the RAB

The Commission has indicated that it is considering whether adjustments should be made for savings in capital expenditure that were not a result of efficiency, but instead a result of change in the scope or output of the capital programme

It is acknowledged that actual capital expenditure undertaken by a regulated entity may fall short of capital expenditure projections over the course of a regulatory period, for a number of reasons such as the following:

- The regulated firm has achieved cost efficiencies in implementing its capital programme

- Market or other conditions (such as planning issues) have forced the regulated entity to scale back or defer projects within its capital programme

- The regulated firm has under-invested when benchmarked against regulatory projections

There appears to be a consensus that revenue clawbacks are an inappropriate measure, which go against the principles of regulation by undermining the incentive properties of the price cap regulatory model. For example, the CAA in the UK has stated that revenue clawbacks are undesirable and should only be applied in exceptional circumstances.

> *"… the CAA's general policy is that claw-backs are highly undesirable and undermine the incentive properties of price cap regulation."*[33]

In this instance, the Commission has stated that it is considering whether it should reduce the RAB to reflect the value of income calculated in earlier determinations that users have paid but that can be attributed to new Pier investment that has not taken place. From a practical perspective, DAA believes that it would be particularly inappropriate for the Commission to claw any capital under-spend over the regulatory period 2001-2005 on the Pier D project given that the Commission never identified a breakdown of the capital costs which it included in its recoverable capital expenditure programme for individual projects such as Pier D project. Therefore DAA had no transparency as to what would constitute a capital under or over spend. It should also be noted that as of May 2005, DAA had invested circa €7.5 million on the development of Pier D and the Government has now re-mandated the company to build a new Pier facility.

We are also concerned that the Commission is proposing a retrospective adjustment to the RAB, which is only one element of the price cap model. In order to ensure regulatory symmetry and to adopt a balanced approach to both upside and downside risks, there would be a

[33] Civil Aviation Authority, *Economic Regulation of BAA London Airports 2003-2008, CAA Decision*, February 2003

requirement to also retrospectively adjust all the other variables within the price cap determination (operating expenditure, commercial revenues, etc.)

DAA believes that a roll forward of the RAB based on actual capital expenditure will allow for an adjustment for any differential which may have emerged between projected capital expenditure incorporated in previous determinations and actual spend over the regulatory period 2001-2005 and a revenue clawback is not justified.

Incentives for Capital Investment

DAA welcomes the Commission's recognition of the importance of capital expenditure incentives for the next control period when the company faces a sizable investment programme. The Commission has proposed the introduction of a rolling incentive mechanism in respect of the RAB. DAA is interested in exploring this option in more detail with the Commission. However the introduction of a rolling incentive mechanism in relation to capital expenditure would require a level of detailed intervention by the regulator which may greatly increase the cost of managing capital expenditure programmes or affect its timing, which could potentially drive up the costs of regulation. There is also a concern that this mechanism could blur responsibility for the effective delivery of capital programmes.

In this context, DAA believes that in order to properly incentivise capital expenditure going forward, the Commission must ensure that DAA is allowed to earn an appropriate rate of return on its investment and that an appropriate methodology is put in place for the roll forward of the RAB. This will facilitate increased regulatory certainty as both DAA and Dublin Airport users will have greater clarity as to the likely approach, the Commission will adopt in the treatment of historic investment over future regulatory periods and also on the level of remuneration associated with this. Increased regulatory clarity and reduced regulatory risk will also enhance incentives for long-term investment in airport facilities. This, in turn, will contribute towards achieving the Commission's statutory objective of facilitating the efficient and economic development and operation of Dublin Airport, which meets the requirements of current and prospective users while also enabling Dublin Airport to operate and develop in a sustainable and financially viable manner.

Conclusions re RAB

- DAA concurs with the Commission that the RAB should be rolled forward on the basis of actual net investment (capital expenditure less the value of asset disposals). This approach is in keeping with regulatory precedent elsewhere and will facilitate the pursuit of economic efficiency as it will ensure that, going forward, the RAB accurately reflects the underlying capital costs of providing aeronautical facilities, allowing prices to be equated with actual costs.

- DAA strongly supports the Commission's reversal of adjustments made in previous determinations for so called "imprudent expenditure". Clarifying the position in relation to the reintroduction of stranded assets as part of the roll forward of the RAB for Dublin Airport would improve investment incentives.

- The methodological approach being proposed by the Commission whereby it would retrospectively adjust for a discrepancy in one of the price cap variables e.g. capital expenditure over the period 2001-2005 while ignoring discrepancies over that same

period in other price cap variables such as commercial revenues and operating expenditure is inappropriate.

- The Commission's proposal for a rolling incentive mechanism is an interesting one and could be explored further. DAA has some concerns re the potential cost implications.

1.5 Quality of Service

CAR has stated that it intends, as part of the final determination, to attempt to define levels of service quality to be achieved during the regulatory period[34]. DAA welcomes the CAR's focus on service quality issues. In its submission in response to CP7/2004, the company stated that it would be happy to work with the Commission in developing an objective system to monitor service standards in the future.

Service Quality and Capital Expenditure

Given that service quality at airports is heavily dependent on capital investment, DAA is particularly pleased to note CAR's statement that:

> *"to the extent that service quality is measured by physical capacity, the recoverable capex allowed by the Commission will be of sufficient size to allow the airport authority to add the required physical capacity"*.

However, as the level of service that CAR expects to be delivered at the airport has not been defined, in the absence of this decision[35], it will be difficult to assess the appropriate levels of capital expenditure required.

The issue of the overall appropriate service level standard continues to be a subject of significant debate and lack of consensus with users, with clear conflicts between the expectation of the passenger as the ultimate user and that of some major airline users. The capacity analyses carried out on all main processors within the terminal complex as part of the detailed baseline study at Dublin Airport indicates that the terminal is operating substantially below IATA level of service standard C for several of the main processors. This means that passengers and airport users are experiencing significantly reduced service levels at various times and that operational efficiency is being hampered. This is particularly true of the gate lounges, which, due to the increasing gauge of short haul aircraft, in general fall below level of service D.

Addressing these deficiencies will require a significant increase in the levels of allowed capital expenditure incorporated in the new Determination when compared to the previous Determination. The Commission's consultants BAH have commented on this in their report viz:

> *"recently DAA has invested little at Dublin Airport and capacity is becoming strained reducing some aspects of quality of service*"[36].

The DAA's capital investment programme aims to facilitate a level of service between IATA levels B and C, though airline users are largely opposed to paying the costs associated with delivering this standard.

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[34] CP2/2005, pg 51

[35] In its 2001 Determination the CAR specified that it was sanctioning IATA level of service B (where A is highest and any level of service below D is considered unsustainable).

[36] BAH, Dublin Airport Bottom Up Efficiency Study, May 2005, pg 72

Service Quality and Operating Expenditure

CAR has also stated that to the extent that service quality is measured by operational performance, it will seek to set appropriate service quality indices and monitor performance against them. In this context, it has requested submissions on the appropriate indices of operational performance.

Note that it is important that service standards be applied to all service providers at the airports, including airlines and handlers. This is due to the fact that airports are not a self-contained system, rather they are part of an integrated structure of activities and processes where each part impacts and depends upon the others. The overall performance of processing passengers, freight and aircraft depends on the collaboration of "partners" (e.g. airlines, handling agents[37], customs, immigration and aerodrome navigation services). This was recognised by the Commission's consultants BAH viz:

> "*in a complex environment such as an airport, the interplay between the actors is extremely important and it is necessary that all actors involved in a particular process fulfil their obligations to ensure the overall quality of the process is maintained"*[38]

BAH also noted that:

> *"a pragmatic approach is likely to be needed balancing the needs of all to define quality factors for the common good – this will need considerable consensus building*[39]*"* and
>
> *"at airports the need for direct regulation of quality is less than in other regulated industries"*[40]*.*

The CAA in the UK has noted "*service quality at airports is a complex and technical area*[41]*".*

In this context, DAA believes it would be very challenging to complete an appropriate level of review of all the pertinent issues relating to setting the appropriate service quality indices in this short statutory consultation period, particularly when there are so many other issues to be considered at the same time. In this context, we note that the Australian Competition and Consumer Commission (ACCC) engaged in a consultative and review process lasting just under two years prior to setting its Guidelines for Quality of Service Monitoring at Airports. In the UK, the Civil Aviation Authority led consultation on issues relating to service quality and the exact implementation of an appropriate monitoring system for Heathrow and Gatwick airports took approximately two and a half years. While we do not propose that setting service indices for Dublin Airport should necessarily take as lengthy a period to complete as elsewhere, it will

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[37] DAA has little or no control over ground handlers and the level of service they provide as they are licensed by CAR. As the approving authority for ground handling licences under the European Communities (Access to the Groundhandling market at Community Airports) Regulations 1998 ("the Irish Regulations"), we recommend that the Commission incorporate a provision for service standards as part of its process in licensing ground handlers.

[38] BAH, Dublin Airport Bottom Up Efficiency Study, May 2005, pg 72

[39] ibid

[40] ibid, pg 73

[41] Civil Aviation Authority, *Economic Regulation of Heathrow and Gatwick London Airports Service Quality Statement of Standards and Rebates,* May 2003

certainly require a specific process spanning a period longer than one month in order to be truly meaningful in the medium term.

We therefore propose that as part of its Final Determination, the Commission adopts the performance targets agreed between the airport authority and airline users as part of the existing voluntary Service Level Agreements (SLAs). The Commission could then publish details of performance against these standards[42].

These agreements (attached) address most of the key elements of airport service delivery, including many of those raised by the Commission in CP2/2005, and set out specific targets for queuing times, baggage delivery and equipment availability. For example, as part of the SLAs,

- DAA has given a commitment that the overall baggage handling system will be available 99% of the time during the hours of operation and performance against this standard is measured and reported on a monthly basis.
- The airlines have committed to having check in desks open 2 hours in advance of standard departure time (SDT) for 95% of each airlines/handling agents' flights each day and that check in desks for all flights must open no later 1 hr 40 minutes in advance of SDT.

Following the Determination decision, a more extensive process of consultation could commence in respect of service quality issues and the operational indices that would be best suited to measuring performance. DAA would be happy to engage fully with the Commission and any other interested parties in such a process. The following issues will be important to debate in the context of this interaction:

- In having due regard to the level and quality of service offered at Dublin Airport and the reasonable interests of the current and prospective users of these services, we believe there is a requirement to ensure that quality standards are broad enough to accommodate all categories of suppliers and customers. It will also be important to ensure that services be of sufficient level and quality to facilitate current users without precluding the requirements of prospective users, which might be significantly different.

- The level and quality of airport service offered should be related to basic quantitative measures e.g. availability of gates, stands and airbridges, queuing times, equipment availability and standard of facilities, etc. As airlines are large organisations, well able to promote their interests when negotiating with airports, current prevailing business contracts should continue to be the primary means of defining the standards that are required by individual airlines and for which they are willing to pay.

- We believe bilateral agreements should not be permitted to provide service levels that are below the agreed minimum standard even at lower charges than the norm.

- A key issue for consideration will be the degree of influence and control that the airport can exert over service standards where the product/service is being delivered by another agency. If the inputs of the various actors in service quality are not precisely defined the airport could be penalised for actions or failures outside its direct control thus adding to regulatory risk and uncertainty.

[42] It should be noted that the airport authority's performance against its SLA targets is already published, though currently the Airline Operators Committee (AOC) will not agree to the identification of individual companies in the reports that detail actual performance against the agreed SLAs and which are circulated amongst AOC members.

- The achievement of high service quality is not without cost. Any costs (capital expenditure or operating expenditure) associated with delivering agreed service levels will need to be quantified and a means of funding same established prior to their implementation.

Conclusions re Service Quality

- Given that service quality at airports is heavily dependent on capital investment, DAA is particularly pleased that CAR plans to allow the capital expenditure required to deliver acceptable standards.
- DAA believes it would be very challenging to complete an appropriate level of review of all the pertinent issues relating to setting the appropriate service quality indices in this short statutory consultation period, given the range of parties involved and the complexity of the issues to be addressed.
- We therefore propose that the Commission adopts the performance targets agreed between the airport authority and airline users as part of the existing voluntary Service Level Agreements (SLAs) and publish performance against them.
- A more extensive process of consultation in respect of service quality issues and the operational indices that would be best suited to measuring performance could subsequently take place.

2 DAA Response to Consultants Reports

Appendix I – Kearney and Hutson: Dublin Airport Authority's Cost of Capital

Appendix II – WHA: Assessment of the 2003/4 Handling Capacity of Dublin Airport

In commenting on the WHA methodology, two separate aspects need to be considered, namely the capacity assessment results and the methodology used. In general, the overall conclusions expressed in the Executive Summary are broadly similar to some of the conclusions within DAA's capacity analysis. It is a measure of our concern at the underlying methodology that, despite any similarity in results, we feel it is necessary to put on record our reservations about the methodology employed.

Overall Conclusions

The Executive Summary indicates that the terminal capacity is 19-20 million per annum, that there is currently an overall stand deficit, and that a runway is required by 2013/2014, with varying levels of available capacity in Departures and Arrivals Landside, Short-Term Car Parking and Coach Parking. The report recognises the need for investment in infrastructure in the near future.

Disregarding any issues about the methodology used in deriving these conclusions, DAA is pleased that it has now been accepted that we are close to or at the capacity limits of the existing airport infrastructure. In fact, we believe that it is clear that at times service standards have fallen to unacceptably low levels due to congestion effects. Additional infrastructure will also be required in the terminal in the short-term to reach the capacity referred to. We also welcome the fact that it is now accepted that in order to meet forecast growth, investment is now required as a matter of urgency.

Methodology Applied

In recent months the DAA has worked very actively with the Commission and WHA in relation to its capacity analysis project, and has attempted to assist the Commission constructively in the application of a robust capacity analysis methodology. A large number of meetings have been held, DAA has devoted considerable resources to the process, and we have outlined in detail the basis for our reservations about the approach adopted, such as the underlying static modelling techniques and the extreme sensitivity of the results to small parameter changes.

Regrettably, despite the detailed feedback issued by the DAA, the information provided to us as part of the Draft Determination suggests that apart from correction of some of the many computational mistakes identified by the DAA, the underlying methodology remains the same, and the deep concerns articulated by the company have not, in any material way, been addressed.

DAA has serious concerns about this, particularly in the context of Section 4 of the WHA report, which suggests that WHA will be undertaking a "*detailed examination of the forecast demand for passenger and aircraft movements to provide a more robust determination of when capacity related infrastructure development will be required".* This suggests to us that WHA will in some manner review further the detailed forecasts already reviewed by MM, and specifically use the WHA methodology further as part of the capital expenditure review process. This is the basis on which we feel that it is imperative for us to put on record our deep misgivings about the approach adopted, as we would be very worried at any suggestion that this methodology could

be used as a key element in the capital expenditure assessment process, or for future capacity analyses.

We are strongly of the view that in order to move forward on this issue, there needs to be general consensus on all sides about the capacity analysis methodology. Our previous material contained letters from key stakeholders confirming their confidence in the runway methodology employed by the DAA, which are attached with this document. We believe that it is crucial to have agreement on a reasonable and robust methodology going forward - one in which all parties can have confidence. Unfortunately, DAA does not have the required level of confidence in the methodology currently applied. This view is also expressed by the BAA, which is cited by WHA as providers of a key element of the methodology applied.

To the extent that WHA's conclusions based on its methodology (discussed further below) conflict with those of DAA and its advisers, DAA considers that its views should be accepted by the Commission. DAA considers that the arguments in the favour of accepting WHA's assessment based on its methodology are weak relative to the weight of opinion against it, and such a judgement would be inappropriate and unduly risky.

In our initial feedback report, we commented in detail on the individual steps of the WHA review, and as part of this we commissioned BAA to review the WHA draft terminal analysis. While it would be inappropriate to publish the DAA report previously submitted to the Commission in full in this document, we feel that it is necessary and appropriate to highlight our main areas of concern with the material previously received. The following sections summarise the key issues raised in our earlier response. We would also specifically request that Commission considers again the material previously sent to CAR & WHA as part of this submission.

Runway and Airside Delay

DAA has already communicated to the Commission that it believes the DAA approach to runway and airside capacity review is preferable to the WHA method, for the following reasons:

- DAA adopts an industry standard approach used throughout Europe in assessing runway capacity and evaluating changes to maximise runway capacity at Dublin.

- DAA contracts with NATS, recognised world leaders in this field, based on detailed observations and use of a fast time simulation model. The methodology is consistent with runway assessments undertaken by NATS at Heathrow, Gatwick, Stansted and Manchester.

- The NATS work currently forms the basis of the declared runway capacity used by Airport Coordination Ltd, by ATC, and the programme of work for the Runway Capacity Group, IAA and DAA.

- The DAA approach is endorsed by the stakeholders of the airside operation at Dublin Airport such as:

    - Air Traffic Control (See attached letter from Malcolm Campbell, GM-Dublin ATC)
    - Airlines (See attached letter from capacity group)
    - Dublin Airport Runway Capacity Group (See attached letter from RCG group)

- Dublin Airport Coordination Committee (See attached letter from Executive committee member)
- Dublin Airport Coordinator

- The WHA model is not consistent with the industry standard approach used by UK NATS, Eurocontrol and other experts in this field across Europe.

  - It does not employ the best recommended assessment tools – HERMES, CAMACA
  - There has been no consultation with Dublin IAA management regarding the methodology or the feasibility of delivering the results
  - WHA results are at considerable variance with NATS work

- DAA does not believe that the WHA methodology has the fidelity of fast time simulation models commonly used for capacity assessments, nor has it the robustness or the level of detail required to allow a new approach for capacity declaration at Dublin.

- In view of this, it cannot be used to contribute to the basis for assessing runway capacity at Dublin Airport.

Specific Dublin Airport concerns are:

- The use of one busy four-hour period to represent a year's operations is non-standard and inadequate: It contrasts with the current DAA approach of taking over 60 hours of observations over 10 days for analysis.

- Treatment of Delay is inadequate: Without analysis, WHA assumes there is "a continuous demand for service" during the four-hour period, which is incorrect. Delays for arriving traffic due to holding, path stretching and speed restrictions to the runway, which are the key measures of delay from an airline perspective, are ignored.

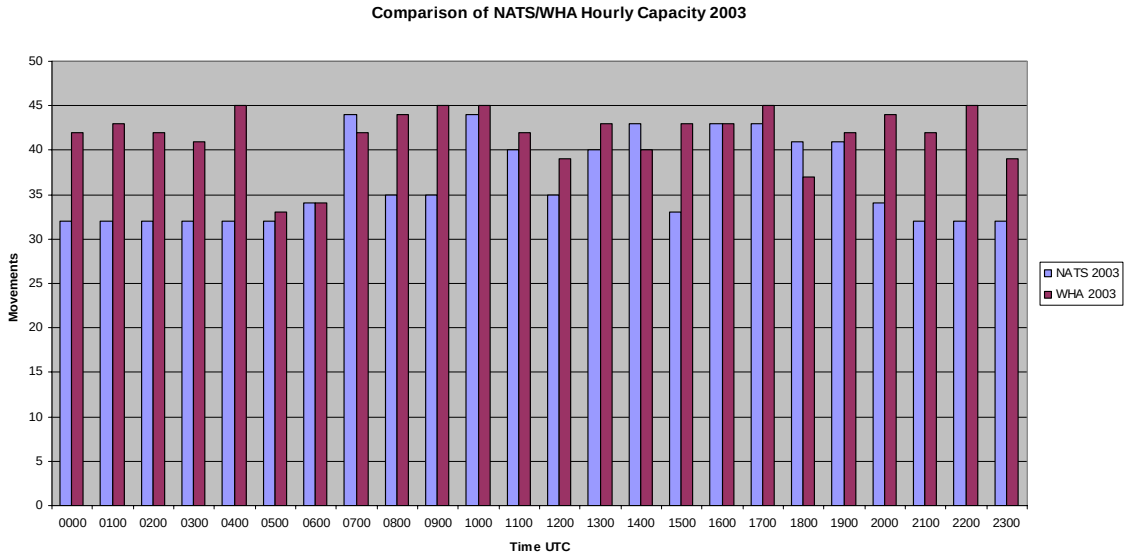
- Treatment of capacity of Runway 28 v Runway 10 is unclear: The identified four-hour busy period is based on runway 28, but all conclusions are assumed to be valid for runway 10.

- Capacity of runway 10/28 is based on probabilities derived from a limited sample: This contrasts with current practice at Dublin where observations and recordings of the actual arrivals and departures sequence takes place over a period exceeding 60 hours prior to analysis.

- Assessment is based on current protocols and procedures: The capacity of runway 10/28 as presented excludes the potential for improvements to infrastructure or changes to procedures by pilots / ATC to maximise efficiencies at Dublin Airport, which would be incorporated in the DAA assessment.

Review of Results:

Figure 1.1



The above graph compares WHA results (red) with the equivalent 2003 declared capacity based on the NATS assessment (blue).

- WHA assesses that the runway can accommodate 127 movements more than the NATS analysis outcome.

- WHA assesses capacity at 45 for 5 hours of the day, while the NATS analysis shows a maximum of 44 movements can be achieved for 2 hours only.

- The WHA results have not been endorsed by or agreed with the IAA and ATC who are the service providers in this area.

Aircraft Capacity Review

- This analysis is predicated upon a review of the actual manner in which aircraft were handled within a given period in 2003, and concludes that there were not enough stands to accommodate the level of demand that was, in fact, accommodated on the actual day studied. In addition to this basic anomaly, we have a number of fundamental concerns on the detail of this analysis:

- Peak periods for runways and stands do not necessarily coincide, so it is inappropriate to use runway peak periods to assess peak stand demand.

- Assessment based on one 4-hour period to represent a year's activity is too limited and restrictive to allow a detailed assessment to be carried out.

- The specific 4-hour period examined misses periods of intense and specific activity in relation to stands.

- We would question the value of an 'integrated' approach which incorporates passenger loads into the analysis of runways. Aircraft still need to arrive and depart on schedule regardless of how full they are on the day.

- The airside model derives the number and type of stands to handle the traffic based on the aircraft stands used rather than the aircraft type demand.

- A number of assumptions/adjustments are included about which the DAA has concerns:

    - Stand occupancy times are adjusted for some aircraft on the ground for extended periods
    - Aircraft based on the ground throughout the 4 hour period reviewed are completely omitted from the analysis. WHA indicates that this is because the analysis is intended to focus on active demand within the period. This means, however, that an incomplete set of stand data is being used to represent the full stand system
    - For aircraft on the ground inside and outside the 4-hour window examined, the full parking time is included in the WHA analysis, which causes the model to overestimate demand in relation to such aircraft

- The sample size used in the WHA analysis is, by virtue of the limited time period examined, very small. It is of concern that far-reaching conclusions are reached about available capacity from such small samples.

- WHA has assumed in the model that the trends for aircraft subcategory usage in this 4 hour period are typical. Hence the analysis is inevitably skewed towards a potentially serious misrepresentation of the occupancy times and levels of congestion on the apron.

Review of Results:

The graph below shows the practical limitations of the approach used:

- The pink columns show the number of narrow body equivalent stands used on an hourly basis during the day chosen by WHA for its assessment (14th September 2003).

- The yellow bars highlight the actual demand during the hours selected by WHA as the 4 hour busy period for analysis.

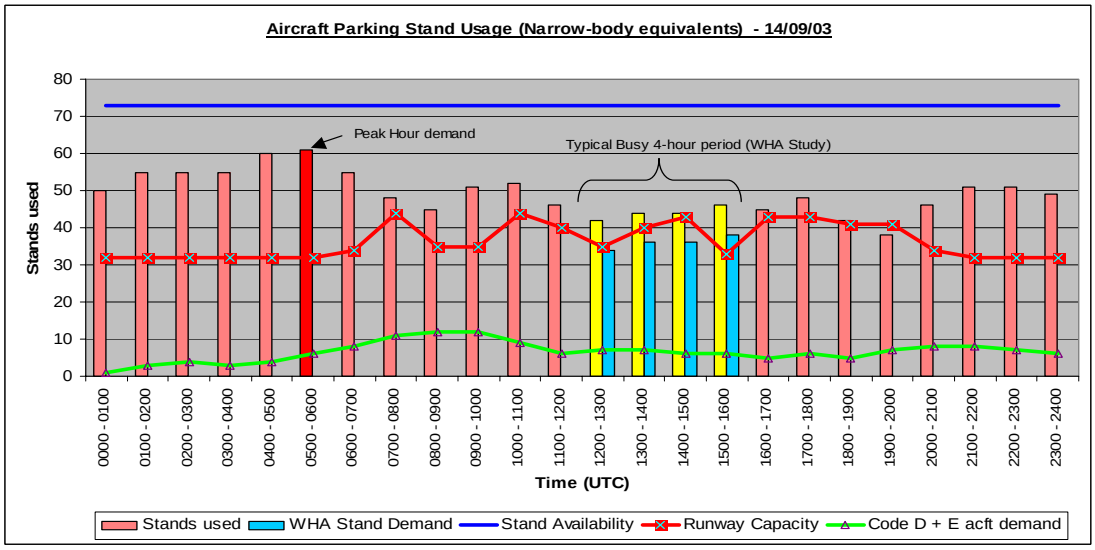
- The blue bars represent stand demand as indicated by WHA. The difference between the blue and the yellow arises from the fact that WHA failed to include aircraft parked throughout the 4 hour period (i.e. did not arrive or depart) in his assessment.

- The red bar depicts the actual peak hour of the day, which was not in fact included at all in the WHA analysis.

- The green line shows the level of wide-body demand during the day, and it is evident that the period of maximum demand is outside the period reviewed by WHA and so is not included. There are in fact 4 other hourly periods where wide body stand demand exceeds that shown in the selected 4-hour period. This will inevitably lead to an underestimation of demand for wide-body stands at Dublin, which is particularly critical regarding transatlantic

operations in the context of current discussions on changes to the Dual Gateway regulations.

Figure 1.2



Terminal Review

- The terminal section is closer to an 'industry standard' approach than other sections of the WHA model, with its adoption of some BAA standards. However, it must be borne in mind that nowhere within the industry do decisions regarding capacity provision and capital expenditure requirements of this magnitude depend simply on this first stage approach to the assessment of capacity.

- This is borne out by the BAA in its review of the WHA work which was previously submitted to the Commission:

  "It must be emphasised that BAA regards the Guidelines calculations as a quick approach to derive the facility and space requirements for terminal areas. However, the BAA does not use these calculations as the basis for determining significant redevelopment investment, or capacity assessment projects. In such cases they are used as the starting point for much more detailed assessments using simulation based terminal modelling…

  "The BAA would not recommend that the project be undertaken by WHA using these calculations as the sole method of analysis", without the support of more detailed simulation assessment.

- The increased complexity of some key processing areas has led the BAA to revise its model in the years since WHA modified the previous BAA approach. DAA strongly believes that the WHA model does not take key operational constraints into account, which mean the model results are not robust.

Check-In Requirements:

- The model estimates the number of check-in desks required (to handle a typical busy hour number of passengers) assuming any check-in desk could handle any passenger at any time.

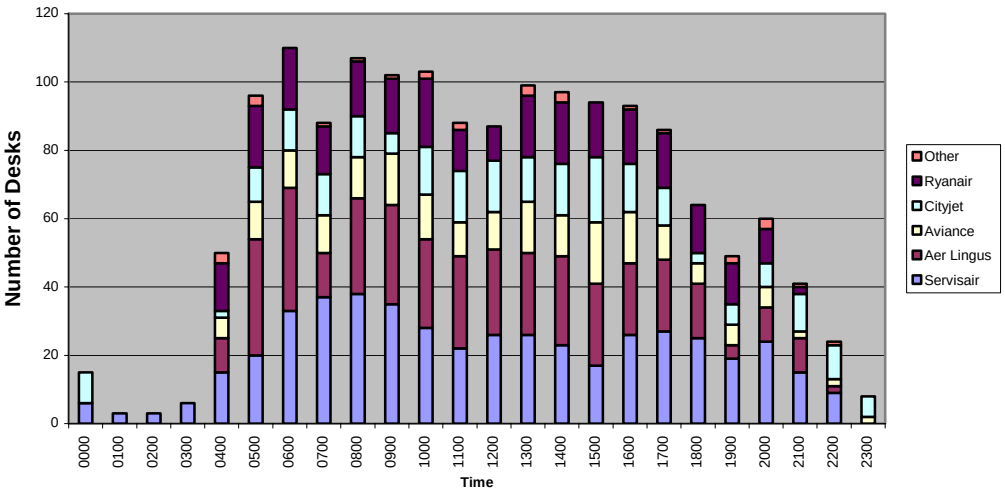
- No account of operational limits is taken such as:

  - Ground handler areas/efficiencies, which limit handler mobility in relation to desks
  - Fixed location of ticket desks, which airlines like to operate proximate to check-in desks
  - Limitations of baggage system/carousels, impacting on handlers' check-in desk choices
  - Fixed location of SSKs, which may limit handler/airline mobility
  - Limited queuing area for charter operations

- Incorrect Assumptions:

  - Average trends are assumed to be adequate to represent peak profiles
  - No space allowed for SSK queues- BAA allows 5m
  - Non BAA standard assumptions regarding area allowances

Figure 1.3 Check In Requirements Sunday 15th June S03



- The chart above shows the number of desks requested by each handler on a busy day in 2003.

- WHA suggests that only 93 desks are required to facilitate demand. We exceeded this level for 9 hours on this day.

- Clearly average values should not be used to represent peak periods.

Security Check:

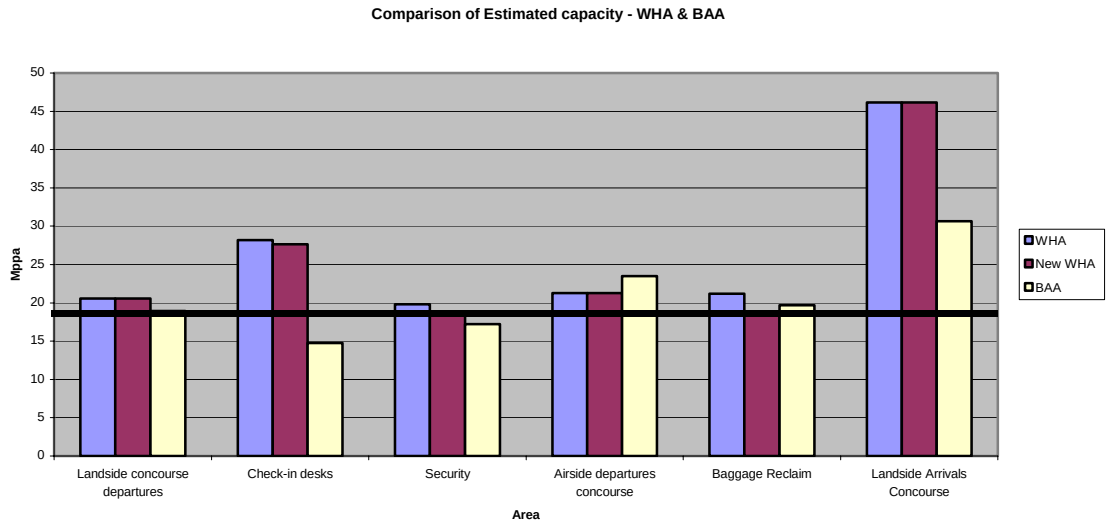
It should also be noted that WHA's analysis was carried out before the procedure alteration at the security positions at Dublin Airport, which resulted in an increase to the average processing times per passenger. Thus WHA's suggested annual capacity throughput of this area of 18-20mppa should be correspondingly decreased.

Other Areas

The body of the report previously submitted outlined in detail a range of errors made by WHA in relation to application of BAA standards, measurement of terminal area and mathematical errors in relation to Departures Search, CBP area, Arrival Through-routes, Baggage reclaim and the Arrivals concourse.

The published WHA report estimates gates lounges capacity at just under 40 million. We suspect that the WHA value is based on an incorrect calculation and that the corrected value would be ca. 19 million.

Review of Results



- The graph above shows the original (blue) and revised (red) WHA output alongside the output of the BAA review (cream) of the WHA draft report. The BAA results are based entirely on the use of WHA assumptions that have been correctly applied by the BAA to its own model. Note that corrections have been made only for obvious measurement errors or misquoted BAA standards; any inaccurate/inappropriate assumptions are unchanged in this exercise, which is undertaken only for comparative purposes, and not as a stand alone BAA capacity analysis.

- It is noteworthy that there are some sizeable differences in the outcomes of the WHA and BAA analyses, specifically approximately 12 million in relation to the check-in area and ca. 15 million in relation to the landside arrivals concourse. As the latter arises because of a small assumption change, it serves to highlight the danger of the use of such a model to

make significant decisions regarding airport investment that will have a long-term impact on development at the airport.

- It is important to recognise that BAA does not itself interpret the output of this type of BAA analysis as a full capacity analysis. In this regard, the BAA states that:

  "It should be emphasised that this analysis provides only a review of the accuracy and appropriateness of the model used by WHA. It does not provide a full assessment of capacity at Dublin Airport and the information produced should not be used in this context. Further consultation would obviously be required regarding the correction of WHA data and the operational parameters at Dublin which are not addressed within the WHA model."

Landside Review

The landside analysis used by WHA has serious methodological flaws, which DAA has previously notified to the Commission. A notional integration using inappropriate static analytical methods produces output that does not adequately reflect the landside system, and could not be used for robust capacity analysis purposes.

- Using 95% busy hour for passengers to analyse landside operation is inappropriate.

- Service standard deterioration for cars and buses would have serious implications for the landside operation, so the principle of using a 95% basis is questionable. While it is possible to crowd more people into a specific area, this is less practical with cars and buses.

- Using average profiles to represent busy times does not adequately represent landside operations.

- For the departures road kerbside, practical operational issues are not considered with this method, while the method employed smoothes the traffic profile in an unrealistic way.

- For buses on the arrivals road, the WHA approach is to analyse the level of bus services provided, rather than any attempt to assess the level of kerbside capacity provided to accommodate buses.

- In relation to short-term car parks, the period examined is too narrow and the ongoing use of averages so prevalent through this analysis inevitably skews the outcome.

- In relation to almost all aspects of this analysis, a range of sensitivity analyses were previously presented to the Commission to illustrate how relatively small changes in input assumptions have a significant effect on the outcome of this analysis, indicating that the WHA results are not robust.

Conclusions of the DAA Review:

- The overall effect of the analysis undertaken by DAA is that we are convinced that the individual components of the WHA model are inappropriate for the type of review

that WHA is undertaking. In a number of cases, the model simply does not do what it purports to do, due to either modelling flaws or mathematical errors, some of which may have been corrected in the latest version received. A consistent feature of the analysis is that traffic profiles are smoothed through the use of averages and factors that do not adequately represent the traffic profile. The results are in many cases highly sensitive to relatively small changes in key assumptions. The overall combination means that the tendency is to underestimate the capacity required, and hence overestimate the available capacity.

- The WHA method has not been endorsed by stakeholders, or the BAA itself whereas the DAA approach uses industry standard methods, which have the support of stakeholders.

- These conclusions are supported by external experts in the area (see letters attached).

- Given the serious implications for DAA that arise from the use of this analysis, we are deeply concerned that it might influence the Commission for Aviation Regulation in its deliberations on the level of existing capacity or the required level of capital expenditure, as the results are unsound.

Appendix III – Mott McDonald: Preparation and Evaluation of Dublin Airport Traffic Forecasts

The report issued by Mott MacDonald (MM) confirmed that the DAA forecast is prepared in accordance with industry best practice. DAA welcomes the fact that Mott MacDonald recognizes the knowledge and expertise of the DAA in this area. The overall differential produced by the forecast produced independently by MM differed by just 4% from the DAA report, which, as MM says, "is considered negligible".

We have, in the intervening period, discussed a number of issues raised by MM in its report, and MM indicated it was satisfied subsequent to our discussion. The issues raised and our responses are briefly summarized below:

Contacts with Airlines: MM had suggested that discussion with airlines other than the key players at Dublin airport would have been desirable, to complement the consultation with major customers. DAA explained that the airlines spoken to as part of the forecast consultation comprised over 70% of the traffic. In addition, where other airlines did not wish to engage in detailed discussions directly because of their relatively small footprint at the airport, the Traffic Development unit was able to represent their views adequately by virtue of their regular and detailed discussions with such customers.

Base Traffic data and Market maturity: MM suggested some additional information on market maturity would be helpful. DAA discussed origins of assumptions and back-up sources. MM accepted fully the data provided.

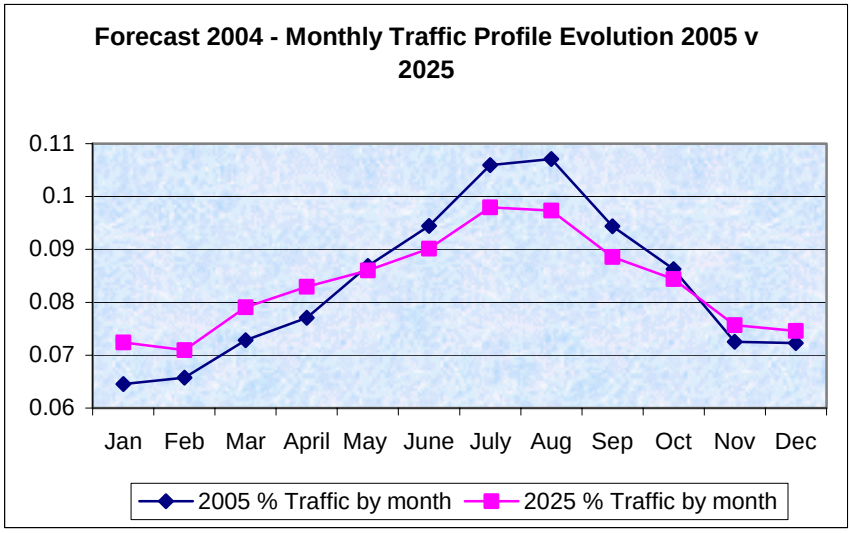
Elasticity Assumptions: DAA provided MM with a comprehensive review reference, plus an extract from a recent CAA presentation on this issue confirming the reducing elasticity as leisure fares fall. DAA had also, both in the original forecast report and at a previous meeting, provided detailed information on the profile of VFR traffic.

Fares and Yield Data: MM suggested that DAA should provide information to illustrate that airfares are tracked over time. DAA has tracked airfares over a number of years, and indeed some of this information had been provided to MM. The MM report suggested that internet tracking of fares might be of use for forecasting. However, DAA pointed out that without detailed information on airline booking profiles, which DAA does not have, it would be impossible to apply the Internet airfare information directly into a forecasting model. Thus while DAA regularly reviews internet airfare information, this information cannot be applied for forecasting purposes. MM accepted this approach.

Air Transport Movement Forecasts / Airline Capacity and Service development: MM expressed concern that DAA might be overestimating the increase in aircraft unit size, with a consequence that the runway might be required earlier than anticipated by DAA. DAA pointed out that the expected increased aircraft size was almost exclusively due to the increase occurring within the next few years based on airline fleet plans. In addition, the DAA forecast does, in fact, assume the continued existence of small aircraft operations, mainly on smaller routes. MM accepted the information presented as adequately explaining the approach used by DAA.

Capacity Assumptions – Runway, terminal, ATC, access and other. MM queried why peak day forecasts were not shown in the forecast report, and incorrectly assumed that the DAA

assumptions were for pro-rata traffic increases throughout the year. DAA explained that the main purpose of the DAA forecast is the production of the annual traffic information for use in business planning and capacity analyses. In the latter case, a further series of steps are involved to develop a comprehensive review, at sub-system level, of the various key capacity components. It would be inappropriate for such an analysis to be included in the forecast. DAA also pointed out that, in contrast to the MM assumptions, DAA assumed that future traffic grew less rapidly in peak periods, with a resulting moderation of the existing peak profile over time, as illustrated in the graph below.



Major origin airport – UK-London area: MM suggested that DAA growth projections on London might be too high. DAA explained that growth is primarily expected at Stansted and Luton, and that the growth is assumed to be unconstrained at these airports. Growth at Heathrow and Gatwick is already constrained in the DAA forecast, with traffic spillage to other airports assumed.

Model Calibration: MM state that GDP projections could grow faster than predicted by NIESR or the ESRI, as has happened. DAA agrees that such projections, which are externally produced by experts in this area, are open to error, which could impact in turn on the forecast, but advised that it is much more sensible to accept the advice of an expert group such as the ESRI than to develop independent economic forecasts, a view accepted by MM.

Imposition of environmental taxes on aviation: MM notes that no allowance has specifically been made either for the introduction of any environmental taxes, or for any significant increase in airport charges over the period. As subsequently discussed with MM, in relation to the former, since there are no plans to our knowledge to introduce any such Irish tax, it does not seem appropriate to assume such a development in the forecast. For the latter, the inclusion of a term implying a significant change in airport charges in the future would seem to be inappropriate in the context of a review for a regulatory Determination which sets the maximum charge level permitted. In any event, DAA believes that the use of a low growth scenario allows for a situation where for whatever reason whether local or global, traffic growth is depressed for a significant period, which we think adequately allows for a negative scenario without requiring specific detailed assumptions on issues where there is little or no solid information available at this time. The Commission, however, would need to ensure that its financial scenarios are adequate to withstand such a negative development.

Airport Competition: MM suggest that a detailed outline of the effects of the change to the Dual Gateway status of Shannon on passenger numbers at Dublin would have been useful. DAA informed MM that, while these analyses have been undertaken, they are confidential as they are related to the business plans currently in preparation, and cannot be published at this time.

MM also suggest that the impact of consolidation at the two Belfast airports could be considered. In the DAA report, we comment on our regular examination of market fragmentation effects in the market, which deals with this issue. However, it appears that MM's perception of traffic from Northern Ireland to/from Dublin is on the high side.

MM further comment on the possibility of another airport within 50 miles, and specifically Ryanair establishing another airport. As we have discussed with MM, we do not consider this to be a realistic possibility at this stage.

Transatlantic Common Aviation Area: MM suggest that the projected date for changes to the current transatlantic regulations as they affect Dublin and Shannon may be somewhat later than implied in our forecast. This is a very reasonable point. At the time our forecast was undertaken, the best information available, from sources including the Department of Transport, suggested an early implementation date, but in the intervening period it has become clear that this is now unlikely.

Runway Capacity: MM notes that the forecast is contingent on the completion of the parallel runway, and DAA agrees with this. In the period before this happens, the DAA will continue to take all possible measures to extract the maximum utilisation from existing capacity.

Macro Passenger forecasts: It is not surprising that in the context of the small number of material issues raised by MM, the difference between the MM forecast and the DAA forecast over the extended period is comparatively small.

Summary

In overall terms, we are glad to see that the MM review endorses the methodology and expertise applied within DAA. While we disagree on some minor points, both forecasts show similar trends.

Appendix IV – Report on the Performance of Dublin Airport: The Findings of the Comparative Reports of TRL & ATRS

This document is the Dublin Airport Authority's (DAA) response to the report entitled "The Performance of Dublin Airport: The Findings of the Comparative Reports of the TRL and the ATRS" which was published by the Commission for Aviation Regulation (the Commission) as part of its Draft Determination on the Proposed Maximum Level of Airport Charges in respect of ublin Airport.

- In overall terms, DAA is very pleased that the results of both studies confirms that Dublin Airport is very efficient, in terms of
  - cost efficiency (e.g. Costs per passenger 60% of the peer average in 2002)
  - labour efficiency (e.g. Labour costs per passenger 44% lower than European average)
  - capital efficiency (e.g. Passengers processed per gate twice that of others reviewed;
  - runway utilisation highest in sample except for 2 largest UK airports)

- The more negative comments are made in the context of comparing Dublin Airport's performance to that of Copenhagen Airport, which is deemed best in class. Copenhagen Airport is indeed a highly efficient airport and scores much higher than other airports in Europe under most of these indicators. However, we would caution against over-interpretation of results in this regard, as such comparisons do not take into account differences in the underlying business models.

- The use of partial productivity indicators for the assessment of airport operational efficiency is fraught with difficulty, and results must be treated with caution, as widely acknowledged by industry experts[43].

The TRL/ATRS report is divided into three main sections – Main TRL Findings on the Relative Performance of Dublin Airport, Main ATRS Findings on the Relative Performance of Dublin Airport and the Commission's Conclusions – our response will address each section in turn.

TRL Findings on the Relative Performance of Dublin Airport

TRL carried out an analysis of comparative data for 2001 and 2002 comparing what it termed 'core aeronautical costs' across airports. Core aeronautical costs are considered to be costs associated with the provision of aeronautical services, specifically excluding non-core services (such as retailing and car parking) as well as out-sourceable services (cleaning). In its analysis, TRL looked at comparative performances across a full TRL dataset (34 airports and 14 airport groups), a European data set (15 airports and 10 airport groups) and a seven airport group composed of airports considered to be most similar to Dublin in terms of their 2003 passenger traffic (Vienna, Oslo, Stockholm, Brussels, Zurich, Copenhagen and Manchester).

DAA notes the recognition by TRL of the high level of cost efficiency at Dublin Airport when compared to peer airports and in particular the following TRL results:

[43] NERA, TRL, Professor Tae Hoon Oum, *The Application of Benchmarking to Airports Phase: Data Collection and Assessment, A final Report for the CAA,* June 2001
Also see responses by Aer Rianta to IMG Benchmarking report in the context of the initial Determination

- Total core costs per passenger were ranked second lowest of 25 European airports in the data set

- Dublin Airport's total core aeronautical costs per passenger were estimated at 60% of the 7 airport average

- Staff costs were circa one-third lower than comparators

- Non-pay operating costs were about one-quarter lower than comparators

These results suggest that Dublin Airport is extremely cost competitive relative to its peers. DAA also notes that the TRL analysis demonstrates how Dublin Airport became relatively more efficient over the period 2001-2002. In this period, the TRL analysis indicates that the total cost per passenger at Dublin grew at half the rate of the best European performer. This illustrates that the cost efficiency gap as determined by TRL between Dublin Airport and the European airport identified by TRL as the best performing airport was narrowing from 2001 to 2002 as Dublin Airport's total cost per passenger moved closer to that of the best European airport performer.

ATRS Findings on the Relative Performance of Dublin Airport

In its comparative analysis of European airports, ATRS looked at 2003 data for 33 airports and 9 airport groups. In order to carry out a series of partial productivity analyses ATRS broke down the 33 airport sample group into a number of sub-groups based on passenger size.

ATRS stated that Dublin Airport was compared to:

- 7 airports in the 12-19 million passenger range (Manchester, Copenhagen, Zurich, Brussels, Stockholm, Oslo and Vienna)
- 9 airports in the 15-25 million passenger range
- The best performing European airport for each of the partial productivity measures

DAA notes that a number of the ATRS results recognise Dublin Airport as a highly efficient airport and in particular identify the following:

- The number of passengers processed per gate is twice that of the other airports reviewed
- Runway ultilisation at Dublin Airport is the highest in the sample with the exception of the 2 largest UK airports

When retail at Dublin Airport is treated as a concession, as is necessary to improve data comparability:

- Dublin Airport's labour costs per passenger are 44% lower than the European Airport average
- Dublin Airport has an average variable cost per passenger which is 35% lower than the European Airport average
- Dublin Airport has an average variable cost per movement which is 22% lower than the European Airport average

- Based on the ATRS Unit Variable Cost Index Dublin Airport has an 18% lower unit variable cost than the average European Airport
- Dublin Airport's variable factor productivity defined as an aggregation of labour and soft cost productivity is on a par with the European airports average and the 9 airport average

DAA notes the comparisons drawn with Copenhagen Airport. It is worth noting that the Copenhagen performance is far better than the performance of all other airports examined under all measures considered. Thus in terms of the relative performance of Dublin Airport against its peers, exclusive focus on Copenhagen Airport at a very high level is inappropriate, without a detailed comparison of the underlying business models and operating environment. It is also worth noting that aeronautical revenue per passenger at Copenhagen is approximately double that at Dublin, so despite being efficient, Copenhagen is also a considerably more expensive airport.

Commission's Conclusions

DAA is disappointed that despite the many positive findings of the TRL/ATRS reports which indicate that in many areas Dublin Airport is positioned well ahead of the comparator average, the Commission adopts a predominately negative tone and concludes that "there remains scope for efficiency improvements in Dublin Airport".

In reviewing the conclusions of TRL/ATRS analyses it is important to acknowledge that there are shortcomings associated with the use of partial productivity analysis in assessing airport efficiency. This form of analysis looks at a single comparative measure and does not take account of differences between comparator airports such as the proportionate use of capital and labour resources, the range of activities carried out by the airport, passenger mixes, the airport's stage in its investment life cycle, capacity availability, service quality, peakiness of traffic and levels of airport charges. Such partial productivity analyses give indicative information at best, and in some cases can produce misleading outputs.

A failure to 'normalise' data used in deriving partial productivity measures can have a considerable impact on the emerging results. For example in the case of the ATRS analysis, partial productivity measures are derived from data for the different airports which has not been fully adjusted to reflect the fact that certain activities such as security, car parking, cleaning, trolley provision may be carried out directly by certain airports but outsourced by other airports. In the case of ATRS, the only adjustment, which appears to have been made, is in relation to Dublin Airport's retail activities. There is nothing to suggest that any further adjustments have been made with regard to either Dublin Airport or any of the other airports included in their benchmarking analysis.

This failure to normalise the comparative data can result in airports, which carry out a broader range of activities appearing more inefficient when compared with comparator airports who have outsourced certain activities. In this regard, DAA is concerned that Dublin Airport's unfavourable comparison with Copenhagen Airport is related to the fact that Dublin Airport engages directly in retail, car parking and other activities, which Copenhagen Airport does not. As the direct costs associated with these activities are included in Dublin Airport's operating costs but do not feature in Copenhagen's therefore any comparison of results is skewed against Dublin Airport, without it being necessary or evident that there is any underlying inefficiency arising from the Dublin operating model. Therefore the assumed gap between the

efficient frontier and Dublin Airport is smaller than suggested by ATRS/TRL and may not even exist when like is measured with like.

In addition we note that the benchmarking is predominately based on 2001-2003 data. It is important to bear in mind that DAA continues to achieve productivity gains. In particular, the DAA response to the Commission's queries re operating costs, submitted on 19th May, demonstrated efficiencies in payroll and non-payroll operating costs amounting to 20% and 25% respectively for the period 2001 to 2005, with a significant element of these efficiencies gained during 2004 and 2005. These efficiencies are already factored into the cost base assumed for the DAA projections.

DAA Conclusions

- DAA welcomes the broadly favourable results of the TRL and ATRS comparative analyses, which recognise the high level of efficiency at Dublin Airport when compared to peer airports.
- DAA is disappointed with the Commission's, predominantly negative, conclusions regarding benchmarking which are at variance with the body of the benchmarking reports.
- We note that a large proportion of negative comparisons are by reference to Copenhagen Airport which the consultants rate the most efficient airport in the world in 2004, therefore,
    - In terms of the relative performance of Dublin Airport against its peers, exclusive focus on Copenhagen Airport at a very high level is inappropriate, without a detailed comparison of the underlying business models and operating environment. It is also worth noting that aeronautical revenue per passenger at Copenhagen is approximately double that at Dublin, so despite being efficient, Copenhagen is also a considerably more expensive airport.
    - In making their comparison, ATRS do not appear to have adjusted for the fact that Copenhagen Airport carries out a different range of activities to Dublin Airport and has significantly higher charges. Such differences have a significant impact on the relativities of airport performance.
    - The consultants point out that it cannot be expected that "any one airport could match the performance of the best performers across the full spectrum of measures"

Appendix V – Booz Allen Hamilton: Dublin Airport Bottom-Up Efficiency Study

This document is the Dublin Airport Authority's (DAA) response to the Booze Allen Hamilton (BAH) report entitled "Dublin Airport Bottom-Up Efficiency" which was published by the Commission for Aviation Regulation (the Commission) as part of its Draft Determination on the Proposed Maximum Level of Airport Charges in respect of Dublin Airport. The BAH report is divided into three main sections – Analysis of Existing Operations, Airport Quality of Service, Cost Assessment – this response will address each section in turn and presents our conclusions at the end of the document.

1. Analysis of Existing Operations

DAA welcomes the recognition by BAH that existing operations are, in general, efficiently managed. We note, in particular, the following statements in this regard:

- Slide 28 – "Contact stand utilisation is high and well managed"
- Slide 33 – "Apron efficiency and infrastructure utilisation are high"
- Slide 72 – "DAA has been taking operating decisions consistent with the aim to increase service quality"
- Slide 83 – "In terms of aircraft handling and throughput the airport generally appears to be performing well"

BAH also rightly recognises the fundamental impact of a lack of capital investment on the quality of the passenger experience at Dublin Airport and the importance of considering the role other players at the airport have to play in delivering an efficient operation and appropriate service quality:

- Slide 53 – "The causes of congestion in the check in hall are multifarious with many beyond the direct control of the DAA"[44]
- Slide 72 – "Recently DAA has invested little at Dublin Airport and capacity is becoming strained reducing some aspects of quality of service"
- Slide 72 – "In a complex interactive environment such as an airport, the interplay between the actors is extremely important and it is necessary that all actors involved in a particular process fulfil their obligations to ensure the overall quality of the process is maintained"
- Slide 79 – "Increases in traffic will further degrade passenger comfort levels and increase congestion…infrastructure developments are likely to be needed as capital projects"

The interplay of these factors are important considerations in the context of delivering the statutory objective to facilitate the efficient and economic development and operation of Dublin Airport which meets the requirements of current and prospective users.

There are some specific comments in this section of the published document that we wish to comment on as follows:

[44] In this context, Transport Minister Martin Cullen has recently written to the Airline Operators Committee in order to encourage airlines to put more resources into their check-in facilities at Dublin Airport. The Committee represents both airlines and ground handling companies.

- Slide 23/24 - Runway and Taxiway Systems "DAA is currently forming a panel of suitably qualified service providers to tender for the undertaking of a Runway Capacity Study at Dublin Airport…(it) is intended to deliver an assessment of the runway capacity at Dublin"; "Taxiway configuration is not optimal"

The Runway capacity study has now been awarded to National Air Traffic Services (NATS) for a period of three years. As part of this study NATS has been specifically requested to assess the impact in terms of capacity of a second rapid exit taxiway on Runway 28 and a by-pass taxiway to runway 10.

While the above two issues in relation to taxiway configuration are being assessed, the vast majority of the taxiway system works extremely well. During recent years, Taxiways F2, F3 and part of apron taxiway 5 were constructed to provide a full (almost) parallel taxiway system to Runway 34 and to provide a dedicated route for aircraft moving from one area to another rather than being delayed by aircraft pushing back on Piers A and B. In addition new taxiway access was provided to Runway 28 so that there are now multiple access routes to this runway to give maximum flexibility. Finally, the layout of taxiways P2 and H2 in a parallel configuration allows enhanced flexibility when Runway 10 is in operation, as P2 is used for out bound aircraft and H2, H1 is used as a second inbound route which allows aircraft to exit the runway earlier than E2 or the runway end.

- Slide 24 – "There is only one rapid exit taxiway restricting the rate of movements that can be handled on the runways"

The NATS study shows that the provision of an additional RET is just one of a range of improvement initiatives (including changes to ATC procedures etc.) that would enable us to leverage maximum capacity from the existing assets. Expenditure on an additional RET for Runway 10/28 is proposed in the Capital Expenditure Programme that DAA has submitted to the Commission.

- Slide 24 – "Long queues can form when runway 10 is in use. There are no passing points on the parallel taxiway reducing flexibility to rearrange aircraft queues"

The point regarding queues on Runway 10 should be placed in context, as due to the prevailing winds this runway is used at Dublin Airport for only approx 20% of movements. The significant issue is that the position of aircraft in the queue should relate to their order of departure. This process is arranged and managed by ATC which has several options and considerable flexibility in so doing. When operating on Runway 10, there are three designated intersection take off points from the runway at E5, E6 and E7 which give ATC additional flexibility in sequencing take offs.

- Slide 27 – "the reduced standard in place for Pier A enables the operation of A321 and B737-800 aircraft"

The reduced standard on Pier A does allow for B737-800/A321 aircraft but not on all 15 stands on Pier A:

  - Stands 1T can accommodate aircraft A320/B737-800
  - Stands 2T-8T can accommodate aircraft A321/ A320/B737-800
  - Stands 9T to 14T can accommodate aircraft A320/B737-800
  - Stand 15T can accommodate B737-400

- Slide 31 – "There is a perception amongst some of the airlines using the airport that the rules for stand allocation, and hence the impact of towing, are not applied uniformly"

Stand allocation is carried out using the stand allocation rules, which were the subject of consultation with users, and these are applied equally across all airlines. As towing is very time sensitive, the scheduled time of arrival or departure of the aircraft is usually the most critical factor involved and this generally dictates which operators are towed and which operators are left on stand overnight. Specifically, the greatest demand for contact stands at Dublin Airport is for early morning departures and arrivals. In particular, aircraft which are scheduled to depart after the first wave departure are more likely to be subject to a tow than an aircraft with a first wave departure. In addition, some airlines specifically request that their flights should operate from remote locations rather than be towed (e.g. Aer Arann).

Therefore some operators are subject to less towing than others based on their operating profile or by specific request to stay remote. This may be why airlines believe that towing is not applied uniformly.

Some operators believe that they should not have to tow their aircraft to facilitate other flights on contact stands, regardless of the length of the turnaround. However, operating on this basis would result in a significant decrease in contact stand utilisation, therefore towing will continue to be a feature in stand allocation for the foreseeable future.

In relation to the point that towing increases the risk of damage to aircraft, there is no specific evidence at Dublin Airport to suggest this. A major initiative was carried out in 2005 to highlight the importance of carrying out a tow in a safe and efficient manner. Tug drivers are trained for this specific function and are only permitted access to certain portions of the airfield.

- Slide 49 – "Some belts have insufficient capacity for the amount of baggage carried on larger aircraft and even those now used for short-haul such as the A321 and B737-800"

Only one of the inbound baggage carousels (belt 1) has a capacity issue and its use is confined to smaller aircraft and for premier baggage. This has not presented us with any problems to date. We are satisfied that the other nine inbound baggage belts have sufficient capacity to handle the largest aircraft operating at the airport at the present time. We accept that the main problem is balancing the flows of traffic between the areas 1 - 5 and 6 - 10. This, however, requires the full co-operation of all handlers, which is an issue we have been addressing and will continue to address.

- Slide 52 – "The bye-law assumes check-in desks are dedicated to specific flights (most cases at DUB), but is not valid where flights are combined across check-in desks"

The bye law has effectively been superceded by the implementation of the Service Level Agreements (SLAs) on check in desks. The SLAs have been agreed with the AOC and performance is measured in respect of the following indices: check-in opening times, check-in queue length and check-in queue time.

- Slide 54 – "The throughput target, which is achieved, is for the maximum queuing time from a certain point in the security queue to be less than seven minutes, 95% of the time...however, the target, as a service quality indicator, is difficult to interpret as it does not

take into account queuing times when the extent of the queue is greater than the marker point"

The service level standard agreed with the Airport Operators Committee is for a queuing time of no more than 7 minutes 95% of the time. There is a second service level standard related to queue length. A point is marked in the queuing area at each of the passenger screening areas that is checked under the service level agreement monitoring system. If the queue extends beyond the designated point it is recorded as a fail in the service level monitor.

- Slide 62 – "Equipment analysis is monitored and measured against a 98% target – this target has been met and exceeded...More detailed analysis indicates that a few systems within each category failed to meet the target over this period
    - airbridge AB2 (out of 15 in total)
    - lifts CP5, PT18 and PT31 (out of 66 in total)"

Availability targets for airbridges and lifts are 98% while other equipment is expected to attain a 99% serviceability rating. DAA target is that 95% of the individual assets meet these targets and this was notified to the BAH during discussions.

- Slide 63 – "Level 3 security screened baggage dumped on Aer Lingus carousel"

All Level 3 bags in the 8-bay area are not delivered to the Carousel No 2, which is primarily used by Aer Lingus. It is an exception for another handlers' bag to be re-directed to Carousel No 2.

- Slide 64 – "Pier A users choose, or are restricted to using, the old baggage system
    - the new system is not compatible with manual check-in processes
    - the new system does not facilitate the optimisation of baggage handling processes

    ...

    Pier C users are forced to use the new system also at the opposite end of the terminal"

The fact that pier A users might choose to use the old baggage system is a problem for the airport and lowers service quality for passengers. However, it is accepted there are a number of issues related to the new baggage hall that need to be resolved. The DAA policy is to seek to minimise walking distances for passengers. We are currently in discussions with a number of handlers in order to make greater use of the new inbound hall, which would greatly reduce the crossover traffic referred to in the report.

- Slide 68 – "Positioning and orientation of the FIDS is not always optimal"

DAA reviews the positioning of FIDS and the means of providing information to passengers on a regular basis. As BAH notes, the installation of the new large display screen in the check-in concourse is the latest initiative in this regard.

- Slide 96 – Car Park Direct Overheads

BAH overstates the potential efficiencies that may be gained from contracting out these operations. Costs incurred historically in relation to Car Park Direct Overheads have already been substantially outsourced, i.e. bussing contract / security for Harristown, therefore the potential to gain further efficiencies from a third party is limited.

- Slide 108 – "Dublin Airport operates many of its own retail facilities, including some catering facilities, and others are operated on a concession basis"

This is factually incorrect as, in fact, all catering activities in Dublin are handled by external concessionaires. DAA directly operates Duty Free and Travel Value outlets only and manages concession retail and food and beverage activities.

- Slide 112 – "... DAA retail does not experience direct competition and slack performance, if any, is not exposed"

Airport Retailing is a long established activity and area of expertise within the DAA group. Given the heavy reliance on Commercial Revenues in a Single Till environment, opportunities to improve performance are routinely explored, with direct and concession retail performance being monitored on an ongoing basis to identify areas for improvement.

Separate profit and loss accounts are maintained for all aspects of retail operations, whether they are directly managed or concessioned. Revenue and costs directly associated with retail or concession activities are separately identified in the general ledger for control and reporting purposes. On a monthly and annual basis, a profit and loss statement for retail activities is reported as part of the detailed management accounts.

In relation to the observation that DAA retail does not experience direct competition it should be noted that in most airport settings the approach is to have a mix of concessionaires providing a broad range rather than multiple locations competing in the same product areas. For example, the BAA model is similar to the one used at Dublin in that they use their own company, World Duty Free, to provide their core offers in the areas of Liquor & Tobacco, Perfume & Cosmetics, etc., but would not have direct competitors in these areas at their airports in order to avoid margin dilution. Also, as passengers can choose to shop in any outlet, the direct retail outlets compete with concessions for available spends.

2. Airport Quality of Service

DAA accepts BAH's pragmatic and balanced approach to service quality issues. In particular we welcome the statement by BAH in the confidential appendix supplied to DAA that there is no evidence to suggest that Dublin Airport seeks to reduce operating expenditure at the expense of service quality. This is a clear vindication of DAA's commitment to customer service.

DAA also welcomes the fact that BAH highlight the fact that airports are not a self-contained system and that the overall performance of processing passengers, freight and aircraft depends on the collaboration of "partners" (e.g. airlines, handling agents, customs, immigration and aerodrome navigation services).

> "*in a complex environment such as an airport, the interplay between the actors is extremely important and it is necessary that all actors involved in a particular process fulfil their obligations to ensure the overall quality of the process is maintained*"[45]

[45] BAH, Dublin Airport Bottom Up Efficiency Study, May 2005, pg 72

DAA believes that the delivery of service performance should be evaluated as part of the five yearly regulatory reviews. In this way quality of service should be another factor in judging the performance of the company and the reasonable rate of return it should earn, based on any given performance. The company supports the selection of a monitoring approach to service quality rather than a more complex penalty based system that would more likely lead to regulatory complications and associated distortions. A monitoring approach would also be in keeping with BAH's recognition of the fact that the case for regulating service standards at airports is weaker than in most other regulated industries.

DAA is happy to work with the Commission in developing an objective system to quantify and publish certain key aspects of service quality as recommended by BAH, though it believes that decisions on the appropriate service quality indices etc should be taken after a specific period of dialogue on this specific issue as the complexities associated with it will be difficult to address as part of the current, time-limited consultation (see section 1.5 above). In the meantime, the Commission could adopt the performance targets agreed between the airport authority and airline users as part of the existing voluntary Service Level Agreements (attached) and could publish performance against these standards.

3. Cost Assessment

General Points

It is unfortunate that BAH did not have the opportunity to revisit the cost assessment element of its work in light of the updated operating expenditure projections provided to the Commission by the company in April 2005. This is particularly important given that that the Commission is applying the efficiencies calculated on the basis of BAH's review of our 2004 projections (i.e. using budget 2004 as the base) to a set of projections using actual 2004 as a base. This is an entirely inappropriate methodology.

It is difficult to understand how efficiencies proposed by BAH following detailed examination of one set of projections could remain valid when applied to a set of projections that encompass a more up to date analysis and adjustments to reflect developments in the business and the economic environment in the intervening period.

Exceptional efficiency was achieved in the last few years, however, it should be noted that the period was also characterised by high traffic growth, staff reductions and no capacity additions. While the company will continue to strive for efficiency gains in its cost base, as noted in the BAH analysis, it will be increasingly difficult to achieve these gains – a commonly acknowledged issue for companies approaching the efficiency frontier. In this context, the benchmarking studies by TRL and ATRS (though based on a simple partial productivity approach) indicate that DAA is a top quartile company. In addition, one of the principal problems associated with the CPI -X model of regulation is that it becomes increasingly difficult for the company to continue to make significant efficiency or productivity savings from one regulatory period to the next, as the regulator re-sets X at each review to incorporate efficiencies made in the previous period.

Given the points made above, it would clearly be inappropriate to incorporate in the Final Determination operating expenditure figures using actual 2004 as the base, which incorporate the proposed efficiencies presented in this report that were based on projections using budget 2004 as their base. To implement the operating expenditure figures, as currently proposed, in the Final Determination, without BAH having the opportunity to first review their proposed efficiencies to light of the current projections, would be inappropriate.

DAA Comments on Cost Assessment Work

BAH propose a further "€7m other efficiencies" in addition to the "€23m accounted for by DAA volunteered efficiencies "over the five year period via, inter alia:

- Various revisions to non-payroll costs e.g. phase out of Aviation Customer Support over 3 years
- Reductions in payroll and related costs
  - A reduction of 20 Cleaning FTEs
  - A reduction of 9 FTEs in Terminal Services (specifically related to the Trolley Section)
  - A reduction of FTEs in Head Office
  - A reduction in the inflation applied to cleaning wages of 0.5% per year. A reduction in the inflation applied to terminal services wages of 1% per year (again specifically related to the Trolley Section within Terminal Services)

Non - Payroll Analysis

BAH has proposed that a number of efficiencies could be achieved in non-payroll costs. DAA's response to these proposals is set out below:

- Aviation Customer Support – "Our view is that this is no longer necessary at a congested airport at Dublin's state of development. Recommend it should instead be phased out." (Slide 96)

The DAA has a statutory duty to develop Dublin Airport in the interests of users and of the wider economy. Currently, according to A T Kearney, Ireland is the most globalised economy in the world but we do not yet have air services to the Middle or Far East, India, Africa, Central and South American or the Antipodes. In the context of increasing globalisation and the needs of the Irish economy the DAA expects to continue its efforts to attract air services to some of these global regions over the next five years. We know from our regular contacts with target airlines that we will require a significant marketing budget to attract such services and we consider it appropriate to retain this budgeted cost over the full quinquennium, even though there will be capacity constraints for some or all of this period. The economic benefits of a service to Hong Kong, Singapore or Dubai together with the commercial benefits for the airport, justify the retention of marketing support.

- CUTE costs – BAH believe that a reduction of 10% is achievable with no subsequent growth on the basis that "the current tendering exercise is more likely to reduce CUTE costs by 10% through competition; and since CUTE terminals are not growing, cost will not grow. The airport's second largest customer, who supplies much of the airport's growth, does not use CUTE, so there is potentially an opportunity to reduce the number of CUTE terminals: we have not taken that further opportunity into account." (pg B8)

The removal of hardware leasing costs over the last 2 years has been a contributing factor to the lower costs we currently incur for CUTE. In the case of the new CUTE contract, new equipment would be required as the current equipment is at the end of its useful life. This will increase the cost going forward and is reflected in the DAA's 2005 projections for CUTE costs as a once off step increase was incorporated. Thereafter the only increases are for inflation - no passenger related increases are projected. This is further evidence of the importance of projecting efficiencies on the basis of the latest information.

Possible cost efficiencies resulting from the removal of CUTE equipment at desks currently used by Ryanair has previously been explored with SITA and it has been established that they will offer no reduction because the overall overhead costs for supporting CUTE remain the same.

- Head Office Costs
    - Head office employee related overheads should reduce slightly rather than remain constant as DAA projected

BAH suggest that employee related overheads should be driven by FTE numbers. In the most recent projections submitted to the Commission, this is the basis adopted by DAA for projecting employee related overheads.

- Head Office travel and subsistence should also reduce rather than remain constant as DAA projected

The BAH assumption is that this category of cost is driven by FTE numbers and has therefore been linked to changes in FTE numbers by BAH. As previously advised to BAH travel and subsistence is incurred to enable operational assessments and avail of conferences/training courses etc. A reduction (or increase) in staff does not necessarily result in a reduction (or increase) in travel associated with these requirements.

- A reduction of 30% in Head Office rents due to accommodation for temporary staff at Cork being no longer necessary. DAA forecast that this cost heading would remain constant in nominal terms

A decision on accommodation for Group Procurement upon completion of the New Terminal in Cork has not yet been made. It should be noted that were Group Procurement to occupy space within the Terminal Building there would still be a rental charge to Head Office from Cork Airport, therefore there is no reason to reduce the charge currently included.

- Many areas where Head Office costs are forecast to remain constant in nominal terms are deemed volunteered efficiencies

The 2004 plan assessed the implications of the Government's decision to establishment 3 autonomous airports at Dublin, Shannon and Cork. The current forecast reflects the as-is situation as the impact of this restructuring remains uncertain and a more accurate assessment of the services required by the airports needs to be carried out to determine the impact of the change. [redacted]

- Energy Costs - BAH note that energy costs seem reasonable but "should be capable of ex post review if the energy market proves to be soft" (slide 96).

Energy costs are outside the control of DAA and these are expected to rise substantially in 2005 with actual increases over 2004 of 23% projected for electricity and 26% for gas. A recent report from the Commission for Energy Regulation has suggested that electricity prices in Ireland could be set to rise by as much as 36% in 2006 due to escalating fuel charges and higher carbon emission costs. This is a higher rate of increase than anticipated - the cost increases factored into DAA's 2005 financial projections are as follows:

- 6% for electricity and 12% for gas in 2006 and 2007;
- 3% for electricity and 6% for gas thereafter

Therefore, if the CER predictions for 2006 materialise, the DAA's projections for energy going forward will be underestimated by circa €500k per annum. In making its Determination, the Commission must take account of the high probability that, rather than the energy market being "soft", significant increases in this cost category will be experienced by DAA in the period of the Determination. If the Commission wishes to review the development of energy costs ex post it must do so on a symmetrical basis i.e. if energy costs increase or decrease beyond what is incorporated in the Determination, this should be taken into account at the next review.

Payroll Cost Analysis

Cleaning Services

The Cleaning Services Department was restructured in 2001, a process that yielded significant efficiency gains. The main emphasis in the restructuring was the concentration of resources on terminal areas, which involved a withdrawal from involvement in cleaning all third party areas. As a result of this move, contract cleaners were introduced for common areas and tenants took responsibility for cleaning offices etc. The supervisory/ management structure was also reorganised, resulting in the elimination of a layer of supervisors from the system. New reduced pay scales were implemented for any new entrants into the department and a number of staff reduced their hours of work to match operational requirements. New dedicated 14 hours per week weekend workers were introduced. This resulted in the transfer of 7 days cycle shift workers to Monday to Friday duties. [redacted]

This is despite the fact that during the period 2000 to 2005, passenger traffic increased significantly (by 33%) and the terminal infrastructure increased in area due to the addition of the 6-bay extension.

The cleaning operation is under constant review as we have an objective of continuously improving the productivity of the operation. Staff turnover in the cleaning section is minimal and the natural growth in areas to be cleaned and passenger numbers would not present a viable opportunity to reduce costs by utilising outside contractors. The use of contractors in these circumstances would incur additional costs that can be avoided by our existing cleaning staff subsuming further work associated with some of the proposed capacity expansions into their work schedule. Overall, therefore, the cleaning efficiency targets identified in the BAH report are expected to be achieved over time through increased productivity from the existing staff, when capacity increases (not currently reflected in BAH's report) are taken into account.

In relation to the summary of cleaning analysis we would comment further on the following:

- The rostering contingency factor of 34% commented upon by BAH is incorrect as it does not take account of Pest Control staff. The annual average contingency factor of 28% also does not include Pest Control staff. The difference between our contingency factor and industry norm must be considered in the context of the zero overtime regime in Cleaning which is extremely unusual in this type of business.

- In relation to the full cleaning complement at 09.00 hours, as already stated while there is a correlation between cleaning staff and passenger traffic in terms of cleaning floors and toilets there are also periods outside of peaks when it is more appropriate to perform cleaning duties. The cleaning section carries out a number of cleaning activities that

cannot be undertaken when the terminal is highly congested during off-peak periods. There is also a requirement to cover all terminal areas during breaks. Similarly the night staff complement is not related in any way to passenger traffic throughput. The heavy cleaning conducted throughout the night is concentrated on having the terminal presentable for commencement of business and is consistent with similar operations at other airports. This includes the use of large floor scrubbing machinery, hoists etc, which can only be deployed when the terminals areas are quiet.

Passenger Screening

BAH note that fire service manning is largely dictated by regulation, however this also applies to the passenger screening operation, which is also subject to stringent security Regulations laid down, nationally, by the Department of Transport and internationally by the EU and International Civil Aviation Organisation (ICAO). All aspects of civil aviation security at Dublin Airport are subject to regular audits and inspections by the Department of Transport, ICAO and the EU to ensure compliance with the standards laid down. Given the nature of the aviation industry, security standards applying to both passenger and staff search operations are very dynamic and subject to frequent changes, particularly in heightened threat situations. For example, the EU has recently implemented a new regulation[46] that will increase the amount of random passenger searches to be conducted. This is likely to have a direct impact on staffing requirements. We obviously have no choice but to staff up to meet any statutory requirement related to the screening operation.

Additionally, there is a service level standard agreed with the Airport Operators Committee for a queuing time of no more than 7 minutes, 95% of the time. There is a second service level standard related to queue length. A point is marked in the queuing area at each of the passenger screening areas that is checked under the service level agreement monitoring system. If the queue extends beyond the designated point it is recorded as a fail in the service level monitor.

We welcome BAH's recognition that ASU operations appear to operate relatively efficiently and have previously raised with BAH the fact that it is inappropriate to rely on anecdotal evidence in its report. With regard to the anecdotal comments re the ASU roster not matching the operational demand during the early morning peak, it should be noted that we have been using 4-hour part time staff to match our staff resources to the operational demand. There are serious cost implications in deploying staff prior to 05.00 as this would involve a significant increase in the amount of staff required for night duties that would prove very costly. We are currently addressing this issue by way of increased staffing at 05.00 hours, which is having a successful impact on reducing the effects of the early morning peak.

Since the BAH analysis was undertaken, it has been necessary to introduce new security measures. These have reduced the number of passengers being processed through the X ray machines to an average of 3 per minute. BAH indicated in its report that "current staffing numbers would be sufficient to cope with the current level of passenger traffic within current service levels, provided X-ray machine throughput is maintained at or above five passengers per minute" (pg 111). The reduction in throughput performance due to the increased security measures has therefore had a serious impact on the staff numbers required in the area resulting in an increase of 60 FTEs. The number of x-ray points in the passenger screening

[46] EC No.857/2005 of 6th June 205 amending Commission Regulation (EC) No.622/2003 Laying Down Measures for the Implementation of the Common Basic Standards on Aviation Security

areas has increased from 11 to 16 and will shortly increase to 17. The increased staffing has been primarily achieved through the use of reduced hours staff, which again allows the targeting of peak operational demand times. The resulting increase in FTE's and payroll costs from these changes had not been finalised at the time of submitting the current projections to the Commission [redacted] However the review is not complete as yet and further changes to security regulations introduced by the EU this month could add as much again. These additional requirements need to be incorporated into the Commission's analysis of DAA's operating costs for the Final Determination.

Due to some negative media coverage of our operation, passengers are presenting themselves extremely early at the screening points causing increased queuing at peak times. We do however expect this to dissipate over time. The BAH report suggests introducing mitigating measures during peak times. The suggestion that airlines advance passengers through the queues at such times is extremely difficult to implement as it involves combing queues or preventing passengers joining the security queue who have later boarding times. From a customer service perspective this is not an optimal solution. We already have a policy of allowing late passengers, passengers with young families and elderly/infirm advance to the top of the queues at peak times. The speedy and efficient processing of passengers through the security points and efficient queue management are key customer service priorities for DAA at present. To this extent it is our objective to have the maximum amount of x-ray machines operating at peak times in order to minimise processing times.

We have carried out a number of examinations on the processing times at each of the passenger screening areas throughout the daily operation. We are using this information to calculate the resources required both in terms of equipment and staff to provide a throughput time through security screening that will meet an acceptable service level standard. We are satisfied that with the continued use of reduced hours staff we can continue to match the staffing complement with the operational demand in as efficient a manner as possible.

Trolleys

Pay Rates

As mentioned in the report there are 18 incremental points on the scale and the first 8 points are competitive with external benchmarking. It should be noted that only a minority of the staff will go beyond the 8th point due to the nature of the job and the fact that most staff in this area either move on within the organisation or leave the organisation after a period of 4/5 years. In this context the additional 1% per annum efficiency on Terminal Payroll proposed by BAH is not achievable on the basis of proposed adjustments to trolley pay scales. It should be noted that BAH themselves have estimated the impact of the new cleaning pay scales will deliver a saving of 0.5% p.a. as staff from the old higher scales are replaced by staff on the new lower scale, therefore it would appear applying 1% to the full Terminal payroll (of which less than 30% relates to trolley staff) is not a reasonable target, especially when it is taken into account that BAH are proposing this reduction starting in 2005, not allowing for the lead-in time required to negotiate such a change in pay scales with staff and unions.

Seasonal Staff

All seasonal staff are paid the same rate as permanent staff members as required by legislation. These staff are available during the Summer months when the operation is at its busiest. The average length of time these staff remain with us is 2 summers. As a consequence, they will not progress beyond the 2nd point on the salary scale.

Roster Coverage

We have discovered that the roster information supplied was not an accurate reflection of the actual roster for the period 4th to 10th July. As a consequence of this, the assumptions produced and accompanying graphs do not reflect reality. We are attaching the actual rosters and a revised table reflecting the hours worked. This shows that peak staff numbers match peak demand and reduced staff numbers are in place during the week when traffic is lighter. The data also shows that, contrary to BAH's understanding from the old data that weekdays have more staff than weekends, at the weekends we have 36/37 staff on duty i.e. 20% more than during the week when 30 staff are on duty. Details of staff allocation are set out in the next section.

We would appreciate if BAH could re-examine their findings in relation to the trolley section based on the corrected staffing levels now attached for the time periods stipulated. We regret the inconvenience caused by this error.

Allocation of Staff

[redacted]

Efficiency of Deployed Levels of Staff

The suggestion that a static resource of 10 staff could cover an operation of the magnitude of Dublin Airport does not seem to take account of passenger demand. From our experience the suggestion that a large proportion of passengers may not utilise trolleys is not the case. Passengers use trolleys irrespective of demographic considerations.

In addition we have responsibility under our Service Level Agreement to provide a trolley to every passenger that requires one.

Additional Comments

The trolley staff are responsible in the winter months for gritting the car parks and public roads in the event of frost and are also responsible for snow clearing. They also have certain responsibilities in the cases of emergencies/diversions/ alerts/hi-jacks to prepare emergency rendezvous points in line with Dublin Airport Directions. In addition, they assist in the movement of seating, barriers, etc around the terminal building to maximise efficiencies.

Since the report was issued the coin mechanisms have been removed from the trolleys in line with passenger expectation and demand. Trolleys are now more dispersed with significantly less trolleys being replaced in trolley bays by passengers. Another recent significant change is the Department of Transport requirement to have a security sterile area means that trolleys cannot be returned directly from landside to airside. The implication of this is that we are now obliged to have dedicated staff airside.

We do not have capacity to absorb the additional workload generated as a result of these developments within existing resources and do not accept BAH's conclusion that there is scope for delivering efficiencies in this area amounting to a reduction of 9 FTEs.

Head Office Payroll

[redacted]

[redacted] Until a review is carried out and agreed with the airports it is difficult to assess the impact restructuring will have on the services required at Head Office. It is interesting to note that BAH have benchmarked the number of HR and Finance staff and found them to be close to the benchmark. They state "these two labour intensive parts of Head Office functions do not seem materially different from benchmarks in general commercial companies". It is therefore a reasonable assumption on DAA's part, prior to airport restructuring, to keep Head Office staff levels constant going forward. [redacted]

Timing of Implementation of Payroll Efficiencies

It can be seen from the above that DAA does not accept that the scale of efficiencies projected by BAH is reasonable or achievable in all cases. Furthermore, we note that the underlying assumption in CP2/2005 is that they can be implemented from 2005. Given that the Final Determination incorporating the definitive efficiency assumptions will not be published until October, it is unreasonable to propose that headcount reductions, amendments to pay scales and proposed reductions in non-payroll costs could be delivered during 2005. On this basis, any proposed efficiencies that may be incorporated in the Final Determination should be incorporated as taking effect only after an appropriate implementation period and certainly not before 2006. This would be consistent with the treatment of efficiency targets incorporated by the Commission in the current determination, where efficiencies were only incorporated from the effective date of the determination and not prior to that.

Costs of Implementing Assumed Payroll Efficiencies

Any efficiencies delivered through headcount reductions assumed by BAH have been factored into the Commission's scenarios without allowing for the associated severance costs associated with delivering them. This is a completely inconsistent approach, particularly given that BAH acknowledges that DAA employees have considerable protection under the State Airports Act 2004. Adequate provision must be made to cover the costs associated with the operation of a voluntary severance scheme within the regulatory Determination if headcount reductions are assumed. This is supported by other regulators e.g. the CAA concluded as part of its recent review of NATs that

> "As a matter of principle it would be inappropriate for users to enjoy the long-term savings that NERL produced without also compensating the company for one-off costs that it incurred during the transition"[47]

4. DAA Conclusions re BAH Report

- The BAH assessment is a more robust basis for assessing the options for achieving efficiencies in the business than the partial productivity benchmarking analysis previously used by the Commission to set its efficiency targets. DAA believes that the BAH exercise is largely sound and balanced, and welcomes the many positive conclusions arrived at by BAH in respect of DAA's efforts to operate efficiently and to deliver a quality service at the airport within the many existing constraints.

[47] Civil Aviation Authority, *NATS Price Control Review 2006-2010*, November 2004, Page 61, Paragraph 7.41

- However it would clearly be inappropriate to accept the operating expenditure figures and proposed efficiencies presented in this report and implement them directly in the Final Determination as:
  - BAH note that the operating expenditure efficiency assessment is based on the current facility i.e. on constant capacity and indicate that operating expenditure should be reassessed in light of any capital expenditure that is confirmed for the period of the Determination. This is a key issue for consideration by the Commission in light of the statutory obligation to have regard to the costs or liabilities for which Dublin Airport is responsible in making its Determination.
  - BAH did not have the opportunity to revisit the cost assessment element of its work in light of the updated operating expenditure projections provided by the company in April 2005. Though the two sets of projections are not hugely dissimilar at a high level, there are significant differences at a detailed level (both in terms of individual cost assumptions and timing) which impact on the reliability of the BAH proposals, and the reasonableness of the Commission applying BAH's proposals based on budget 2004 figures to updated, actual and budget 2005 figures as included in the more recent financial projections provided by DAA. A review by BAH of their proposals in light of the revised forecast will need to be completed before a final set of operating costs is incorporated into the Determination.
  - The biggest operating expenditure adjustment relates to Head Office costs. DAA projections are based on the existing headcount in Group and Shared Services functions.
  - The efficiencies proposed in the trolley section are based on incorrect roster information supplied by DAA. The actual rosters show that peak staff numbers match peak demand. This point, together with the additional workload associated with the removal of coin mechanisms from the trolleys, means that the efficiencies proposed by BAH for this area are inappropriate.
  - It is unreasonable to propose that headcount reductions, amendments to pay scales and proposed reductions in non-payroll costs could be delivered during 2005. Whatever efficiencies are incorporated in the Final Determination should be incorporated as taking effect only after an appropriate implementation period and certainly not before 2006.

- Significant upward adjustments have been made to some cost headings that are not reflected in DAA's 2005 projections and should be incorporated by CAR/BAH in the final operating expenditure numbers factored into the Determination:
  - Additional costs for passenger screening
  - Energy cost increases projected by the Commission for Energy Regulation

- As DAA has made significant productivity gains over recent years, it will become increasingly difficult to achieve further cost savings in the future as we approach the "efficiency frontier" a commonly acknowledged issue for regulated companies.

Appendix VI – ASA Assessment of Commercial Revenue

DAA Conclusions re ASA Report

The Commission in formulating its scenarios 1, 3, 5 and 6 incorporated commercial revenue projections based on the conclusions of ASA's assessment of DAA's commercial revenue earnings potential at Dublin Airport. These projections are on average €0.43 higher per passenger than the DAA's own commercial revenue forecasts. DAA does not believe that the Commission has made realistic commercial revenue assumptions. It is our view that the ASA analysis is not a reliable basis on which to base any business plan.

ASA Benchmarking

ASA appear to be basing its identification of material upside in commercial activity on a totally flawed benchmarking analysis, resulting in inflated expectations of likely increases in commercial revenue streams. The actual average commercial revenue per passenger at Dublin significantly exceeds the benchmark measure used by ASA.

Property and Concessions

ASA has assumed that the average revenue from property and concessions will fall slightly from €1.78 to 1.75 per passenger over the regulatory period 2006-2010 increasing to €1.77 per passenger by 2014 (all in constant 2005 prices) with the establishment of a second terminal. DAA does not believe that ASA's property and concession revenue assumptions are realistic. The primary factors directly impacting property revenues are rents pertaining to property leases, and renewal dates applying to those leases do not vary directly in line with passenger activity at the airport.

There is no provision in the company's CIP for additional commercial property space to be provided which would give the scope to develop additional rental opportunities, with the exception of Terminal 2 and Pier D, both of which are already reflected in DAA's forecast. This additional space thus provided is not nearly sufficient to achieve the increases in rental income envisaged by ASA even if the demand were to be generated, which is unlikely taking into account the current over-supply. Therefore, DAA maintains that its revenue projections provide a more realistic assessment of forecast property and concession revenues over the regulatory period 2006-2010.

Car Parking

Despite noting that car parking revenue per passenger has declined from 2002-2004, in its projections, ASA assumes that car parking revenues per passenger will essentially be maintained over the forthcoming regulatory period. DAA believes that it will be very difficult in the current climate to achieve the car parking revenue assumptions set by ASA for the regulatory period 2006-2010. It would, amongst other things, be contingent on the successful introduction of further car parking tariff increases at a time when the company was savagely criticised for recent increases both by public and airlines. Given the deficiencies of the ASA projections, DAA concludes that the company's revenue projections provide a more realistic forecast of car parking revenues for the period 2006-2010.

Retailing / Food and Beverage Concessions

ASA's projections incorporate revenues from capital expenditure proposed by DAA for the regulatory period. These revenues cannot be achieved unless the capex is allowed as part of the Final Determination.

ASA's retail and food and beverage (F&B) projections are excessive, because of a number of unreliable and simplistic assumptions:

- Dublin Airport's net retail income per passenger (in constant 2005 prices) to remain stable up to 2009 which would imply unrealistically high capture rates. [redacted]

- The derivation of additional retail revenues from an up-scaling of the retail offer at Dublin Airport, despite the fact that the passenger mix at Dublin Airport suggests that this would not be an optimal strategy to pursue.

- Landside/Airside space availability and allocation changes suggested by ASA, which are unrealistic in the short-term, given the physical confines of existing terminal structures and operational requirements.

[redacted]

It is the DAA view that as its own retail and F&B projections are underpinned by very detailed analysis and an awareness of the underlying issues likely to affect future revenues, they provide a more realistic assessment of forecast revenues for the regulatory period 2006-2010.

Summary

DAA is concerned that the statutory obligation on the Commission to ensure that DAA is able to operate in a financially viable manner is particularly challenging given the existence of the single till environment where commercial revenues not directly regulated are forecasted and factored into the calculation of airport charges. Any significant error in these calculations or forecasts, such as occurred during the regulatory period 2001-2005 can jeopardise the viability of the company. DAA considers that the review of commercial revenues and related forecasts carried out by ASA is lacking in substance and therefore does not provide a sound basis for forecasting commercial revenues in the 2006 - 2010 period.

Note: DAA's full response to the ASA study has provided separately to the Commission, as the information contained therein is confidential and commercially sensitive.

Attachments

1. [redacted]
2. [redacted]
3. Dublin Airport Authority / AOC Service Level Agreement
4. Letters from key stakeholders confirming their confidence in the capacity assessment methodology employed by DAA
5. [redacted]
6. Project Sheet CIP1.9 – Upgrade Eastlands Car Park to Permanent Status

30 June 2005

The Cost of Capital for DAA: A Response to the Kearney & Hutson Paper

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Summary

NERA has been asked by the DAA to analyse the Kearney and Hutson (hereafter K&H) proposed cost of capital for the DAA set out in their May 2005 paper: "*Dublin Airport Authority's Cost of Capital*". Table 1 below shows NERA's central estimate of the cost of capital for DAA as set out in NERA (2005) *"The Cost of Capital for the DAA: A Final Report for the DAA"*, and compares our estimate with the estimate presented by K&H in their paper.

Table 1
Cost of Capital for DAA's Regulated Activities

	Calculation	Parameter	NERA	K&H
		Gearing		
(a)		D/(D+E)	50%	46%
(b)	=1/((1/(a))-1)	D/E	100%	85%
		Tax		
(c)		Corporate tax rate	12.5%	12.5%
		Cost of Equity		
(d)		Real risk-free rate	3.0%	2.6%
(e)		ERP	6.0%	6.0%
(f)		Asset beta	0.7	0.61
(g)	=(f)*(1+(b)) NERA =(f)*(1+(1-(c))*b) K&H	Equity beta	1.4	1.1
(h)	=(d)+((e)*(g))	Post-tax cost of equity	11.4%	9.2%
		Cost of Debt		
(i)		Real cost of debt	4.0%	3.7%
(j)	**={(a)*(i)*(1-(c))}+{(1-(a))*(h)}**	**Real post-tax WACC net of debt tax shield**	**7.5%**	**6.4%[1]**
(k)	**={(a)*(i)}+{(1-(a))*(h)/(1-(c))}**	**Real pre-tax WACC**	**8.5%**	**7.4%**

** K&H's formula (2.7) on p. 18 gives an equity beta value of 1.06 although K&H (p.21) use an equity beta of 1.1 in deriving a WACC of 7.4% real pre tax (1) Our replication of K&H's calculations gives a 6.5% real post-tax WACC net of debt tax shield*

Overall, there is clear evidence that the WACC (real, pre-tax) of 7.4% estimated by K&H is too low. Our central estimate of the WACC to be applied to the DAA is 8.5%. We summarise the key reasons for this difference below:

§ **Risk-free rate proposed by K&H is not supported by robust evidence.** K&H present a wide range of evidence on the real risk-free rate. Conclusions on this evidence are not clearly drawn by K&H, however their estimate of 2.6% is consistent with three pieces of evidence presented: (i) average yields on UK index-linked gilts (ILGs) from 1995 to 2004; (ii) K&H's 2001 estimate of 2.6% based on nominal German 10Y government bond yields measured over 1984 to 2001; and (iii) a range of 2.5% to 2.75% taken from the 2002 UK Competition Commission's decision on BAA.[1] Our views on these sets of evidence are summarised below.

[1] K&H additionally state that their estimate is "*the average of previous Irish determinations"*. This evidence is not presented and therefore we cannot comment on this.

§ **UK ILG yields are downwardly biased from 1997 as a result of the MFR and supply side restrictions.** The Minimum Funding Requirement (MFR) was introduced in 1997 and artificially depressed yields by requiring pension funds to hold gilts. Combined with limited issuance of ILGs, yields have been depressed significantly in the period following 1997. This bias has been documented in a number of Bank of England reports since 1997 and taken into account in estimating the real risk-free rate in a number of recent UK regulatory determinations.[2] A recent FT article highlights the continuing bias arising from a shortfall in supply relative to pension fund demand stating that *"real yields are too low and there is not enough supply."*[3] Therefore any consideration of ten year historical UK ILG yield evidence will result in a downwardly biased estimate.

§ **Nominal German Government bond yield evidence is biased by approach.** Our three key comments on K&H's use of nominal German Government bond yields are as follows:

- *Use of actual inflation to deflate yields is incorrect.* Nominal gilts must be deflated by expected inflation in order to ensure an unbiased estimate of the real risk-free rate.
- *Inflation risk premium is not estimated robustly, is not applied correctly and is not supported by regulatory precedent.* K&H specify an inflation risk premium of 40%, based primarily on estimates made by Breedon and Chadha (1997) for 1-5 year maturity UK bonds over the period 1982-1996. Our views are summarised as:
  - The application of the Breedon and Chadha estimate to German Government bond yields measured over 1984 to 2001 is incorrect. The late '90s was a period of significantly lower inflation levels and volatility than those prevailing during the 1982 to 1996 period considered by Breedon and Chadha. The inflation risk premium estimate will therefore overestimate any inflation risk premium for nominal yields measured to 2001 and downwardly bias estimates of the real-risk free rate.
  - We also question the robustness of the estimate itself. Breedon and Chadha themselves conclude *"(but) we cannot be sure whether this underprediction results from an inflation risk premium or expectational error and also cannot know whether this overprediction will persist."*
  - Notwithstanding a lack of robustness and consistency in deriving and applying the inflation risk premium, the deduction of an inflation risk premium from the risk free rate used to estimate the cost of debt is incorrect. The DAA cannot feasibly access and refinance all existing debt to index-linked debt; therefore their cost of debt will include the inflation risk premium.

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[2] For example Competition Commission (2000) "*Sutton and East Surrey Water Plc: A report on the references under Sections 12 and 14 of the Water Industry Act 1991*", p117 and Competition Commission (2003) "*Reports on references under Section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O_2, Orange and T-Mobile for terminating calls from fixed and mobile networks"*, p188.

[3] FT (20/06/05) "We need more index-linked bonds".

- The deduction of an inflation risk premium is not in line with standard regulatory precedent.

§ **K&H's approach to estimating beta is arbitrary, lacks robustness and contains a calculation error.** We have two main comments on K&H's approach to estimating beta for DAA:

- *Error in K&H's BAA beta estimate.* K&H's derivation of BAA's asset beta contains a fundamental error since they only use the most recent 2004 gearing numbers for BAA to derive the asset beta but yet the equity beta of 0.74 is estimated using stock price data over the full period from September 1988 to December 2004. We estimate that K&H's flawed approach leads to an average downward bias of 0.13 in BAA's asset beta. This is due to the fact that BAA's 2004 gearing level is significantly higher than BAA's average gearing level over the whole period 1988 to 2004.[4]

  Our estimate of an asset beta for BAA of 0.67 based on time series data over the period 1988 to 2005 is consistent with the UK Competition Commission's (2002) estimate of BAA's asset beta of 0.68, which K&H appear to ignore.

- *K&H arbitrarily adjust BAA's beta estimate.* K&H arbitrarily upwardly adjust BAA's empirical beta by 20% to account for DAA's higher risk relative to BAA in estimating a beta for DAA, rather than considering wider evidence on other comparable international airport betas. By contrast, NERA present and analyse in depth evidence on beta for a range of international airports in ensuring that our beta estimate most closely captures DAA's likely risk exposures.

§ **K&H's cost of debt estimate of 3.7% is not supported by market evidence.** K&H estimate the cost of debt for DAA based on the sum of the risk-free rate of 2.6% plus an estimate of the debt premium of 1.1%. The debt premium estimate appears to be based on the UK Competition Commission's range of the cost of debt premium estimated for BAA in 2002 plus an allowance for transactions costs.

- Selective and outdated regulatory precedent does not by itself provide a robust basis for estimating forward looking cost of capital parameters. The Competition Commission's assumed gearing for BAA in 2002 was 25% and BAA was rated at AA-. Hence the cost of debt for BAA will be lower than the cost of debt for DAA with higher gearing and a lower credit rating. We estimate that the cost of debt is 0.3% higher for the DAA than assumed for BAA in 2002.

- K&H themselves acknowledge that DAA is of higher risk than BAA. This should be reflected in a higher cost of debt as well as a higher beta.

- In line with standard regulatory practice, we estimate a cost of debt of 4.0% for DAA on a forward looking basis using market evidence on Eurozone debt costs for

[4] In fact, the most recent 2004 gearing level is the highest reported level since BAA's first price quotation in September 1988.

comparable A- rated debt issues.

§ **Gearing.** The range of gearing cited by PwC underlying K&H's gearing estimate of 46% is lower than DAA projected gearing levels. In addition, the current gearing of DAA is consistent with a current credit rating of low single A. This is inconsistent with K&H's cost of debt assumption which is based on an AA- rating and a gearing of 25% assumed by the UK Competition Commission (2002) for BAA. This leads to a significant internal inconsistency and will underestimate the cost of capital for the DAA by assuming a cost of debt that is lower than that consistent with the gearing level assumed.

§ **Selective reference to regulatory precedent.** K&H selectively refer to regulatory precedent to support their estimates. As an example, they refer to the UK Competition Commission's (2002) report on BAA to support their estimate of a cost of debt premium and the risk-free rate, but they ignore the same report's estimate of an asset beta of 0.68 for BAA, despite acknowledging that DAA is more risky than BAA. K&H also appear to ignore recent UK regulatory precedent (eg. Ofwat (2004), Ofgem (2004)) that use estimates of the real risk free rate of around 3.0%. The apparent inclusion of regulatory decisions on parameters at the lower end of available evidence and exclusion of those that are higher is inconsistent with K&H's statement on p3 that *"Given the uncertainty that attaches to any estimate of the DAA's 'true' cost of capital, it is preferable that the regulator sets a rate that is more likely to err on the high rather than the low side."*

1. Risk-Free Rate

1.1. Overview

K&H's Approach

On page 9 of their report, K&H state that *"(O)ur recommendation is to leave the estimate of the real risk free rate at the 2.6% we used in K&H (2001)*".

It is not clear precisely how K&H's recommendation on the risk free rate is derived, however their report presents a variety of different evidence on the risk free rate:

- On page 5, K&H state that over the 20 year period 1985 to 2004, the average annual zero-coupon yield on British Government 10 year index linked gilts was 3.2%, although they note that over the recent 10 year period 1995-2004 average yields have declined over time to a substantially lower 2.6%.

- Table 1 (p.28) shows estimates of average real risk free rates for the UK, Germany and the US over 16 to 100 years in a range from 0.1% to 2.7% based on:

  - K&H's estimates of real risk-free rate of 2.6%, 2.6% and 2.7% for Germany, the UK and US respectively based on 1986-2004 nominal government bond data. K&H state that these are an update of the estimate based on 1984-2001 data presented in their 2001 report.

  - Risk free rate data over a 75 year period for bills and bonds for the UK and US showing a range of 0.7% to 2.1%.

  - Risk free rate data over a 100+ year period for bonds and bills for Germany, UK and US ranging from 0.1% to 2.3%.

- Table 2 (p.29) shows average real interest rates for the UK, US, and Germany over the period 1988-2004 based on nominal bond yields deflated by actual levels of inflation. This shows a range of 3.6% to 4.0%. K&H then downwardly adjust these yields for an inflation risk premium of 40% to derive an estimate of the real risk free rate in the range of 2.2% to 2.4%.

- K&H also refer to 2.6% as the "*average of previous Irish determinations*" and being within the range of 2.5% and 2.75% used by the UK Competition Commission (2002) in estimating the cost of capital for BAA.

- K&H's recommendations are to leave the estimate of the real risk free rate at the 2.6% used in K&H (2001).

NERA's Approach

NERA (2005) presents an estimate of the real risk-free rate of 3.0%. This is based on five years of historical evidence of index linked government bond yields meeting the following criteria:

- Preference of Eurozone data over other sources;
- Use of bonds with a maturity of 10Y or greater over the period of measurement, in line with the infrastructure asset lives in the airports sector; and
- Use of bonds issued before May 2000 to ensure that all bonds considered have a full set of data over our preferred measurement period of five years.

Our estimate for the Eurozone based real risk free rate is 3.0%. This is consistent with slightly higher estimates of 3.3% and 3.1% for second tier other European and North American ILG evidence.

Our views on K&H's approach and response to their comments on our estimate of the real risk free rate set out in NERA (2005) are set out in the following sections.

1.2. K&H's Interpretation of Evidence Presented is not Clearly Justified

Overall, K&H's conclusions are not robustly drawn from the presented set of evidence. Some evidence is apparently ignored, whilst weight is placed on other estimates without objective justification.

In addition, individual sources of evidence presented are in some cases biased and in others derived using incorrect methodology.

1.3. Evidence on UK ILG Yields is Downwardly Biased

K&H report that 20 years of historical evidence on 10Y UK ILG yields averages 3.2%, and over ten years, 2.6%. It is not clear to what degree this evidence is taken into account in their final conclusions. However, we strongly disagree with the use of UK ILGs in estimating the real risk-free rate.

There is clear and widely acknowledged evidence that UK ILG yields have been significantly downwardly depressed since 1997 as a result of a number of factors, namely the impact of the MFR and supply-side restrictions.

As noted by the Bank of England in 1999, "*The Minimum Funding Requirement led to strong institutional demand for ILGs. The combination of strong and rather price-insensitive demand (largely from pension funds) with limited supply has pushed real yields down, perhaps more than in the conventional gilt market. Consequently, real yields in the ILG market may not be a good guide to the real yields prevailing in the economy at large"*[1] (Bank of England (1999) *Quarterly Bulletin*, May). A 2002 Bank of England Study into the downward bias of UK gilt yields presents evidence to show that at the end of 1999 ten-year UK swap spreads over gilts were 60 and 80 basis points lower than the corresponding swap spreads for US Treasury and German Bunds respectively.[5]

Evidence further indicates that the MFR's replacement, the FRS17, has continued to impose downward pressures on yields. Commentary following the announcement of the abolition of the MFR indicates that in the short to medium term the FRS17 was expected to continue to place downward influences on yields, primarily via a "spillover" effect, as AA corporate

[5] Brooke, Clare and Lekkos (2000).

bond spreads decline. The DMO in 2002 stated that:

"However the AA sterling market is small relative to the value of investible funds held in UK pension funds. Pension funds may consequently move more into AAA-bonds, the gilts market and other mixed portfolios of gilts and corporate bonds..."[6] The DMO argues that over the long-run this effect may be temporary: "*Over the long-term any distortions to the gilts market caused by changes to the regulatory or accounting environment should prove temporary, as market participants become more adept at investing in non-gilt securities and other borrowers enter the market to take advantage of the high demand for debt securities*."[7]

In addition to demand side distortions to yields arising from pension fund and accounting regulations, a second factor believed to have placed downward pressure on yields since 1997 is supply restriction. Evidence on net gilt issuance presented by the DMO implies that the supply of gilts contracted by over 13% over the 4 years to 2002.[8, 9] A recent FT article emphasises the continuing bias in UK ILG yields arising from low supply relative to demand stating that *"real yields are too low and there is not enough supply".* It is also expected that this shortfall of supply will continue in the foreseeable future: *"short of a catastrophic deterioration in UK government finances, it is hard to see government issuance ever matching the needs of the UK pension fund industry."*[10]

Regulators in the UK have widely acknowledged the downward bias in UK ILG yields – see for example, UK Competition Commission (2003) "Vodafone, O2, Orange and T-Mobile: Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks", para 7.208.

In conclusion, both of K&H's presented UK ILG yield averages over 20 years and 10 years will be downwardly biased, in particular the latter estimate due to its greater weight towards post-1997 data, and cannot be used as a robust estimate of the risk-free rate for the DAA.

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6 (DMO (2002) "Annual Review 2001-02", p11). For example Boots' 2001 shift of its entire pension fund into high quality (AAA) bonds was attributed as a cause of a rise in long-dated gilt prices (*Reuters (9/10/01) "UK long gilts helped by Boots pension fund shift*") It was reported that Boots planned to move 15% of the fund back into riskier (non bond) investments in 2004 (Financial Times Mandate (14/6/04) "*Boots fund to diversify assets"*. Evidence indicates that the move to fixed interest assets has continued and is expected to further increase*: "UK pension funds have been increasing their allocations to fixed interest, particularly sterling bonds, over the past three years. This has been driven by the desire to match assets with liabilities more closely, the implementation of accounting rules such as FRS17 and poorly performing equity markets. This strategic allocation to fixed interest is only likely to increase in the future following the closure of defined benefit schemes to new members and as the profile of pension funds matures. Obviously, this requires a greater allocation to fixed interest at the expense of equities. In theory, this may lead to pension funds having 100% allocations to bonds"* Pensions Week (18/10/04) *"Special Focus: Fixed income – the burgeoning pension fund bond culture"*.

7 DMO (2002) "Annual Review 2001-02", p12.

8 This percentage was estimated using current values of net reductions in gilt issuance and the current (2002) value of the gilt market. Given that gilt prices are currently higher than over the past 4 years, this percentage should be taken as a lower bound. Source for calculation: DMO (2002) "Annual Review 2001-02", p11-15.

9 The Central Government Net Cash Requirement (CGNCR), a key forecaster of gilts supply, fell consistently between 1993 and 2000, with net gilts issuance falling and eventually becoming negative, between 1998 and the present.

10 FT (20/06/05) "We need more index-linked bonds"

1.4. K&H's Evidence on Nominal German Data Lacks Robustness and is Methodologically Unsound

K&H state in their text, p8, that Table 1 updates Table 1 in K&H (2001) and that the entries under '16 years' are estimates of the real risk free rate using 10 year government bond data for 1988 – 2004 for Germany, UK and US. However Table 1 states that the estimates are 1986 – 2004 and presents these estimates as 2.6%, 2.6% and 2.7% for Germany, the UK and US respectively. K&H also state that the calculation for these estimates is presented in more detail in Table 2. However Table 2 shows estimates of 2.4%, 2.3% and 2.2% respectively for 1988-2004, which are different from those in Table 1.

We therefore focus on the estimates presented in Table 2, as these are the numbers referred to in the text, and assume that the estimates presented in Table 1 are incorrect (they appear to match those presented in Table 1 (2001)).

Our views on this approach (and the 2001 approach which is identical in methodological terms) are summarised as:

1.4.1. Inappropriate use of nominal government bond evidence.

It is widely recognised amongst economists that the rate of return on index linked gilts is the best proxy for the expected risk free rate. The reason for this is twofold.

- First, the yield on index linked gilts is immune from the effects of unanticipated inflation and represents an estimate of the forward looking return that investors currently require.
- Second, there is evidence that the returns on index linked gilts are less correlated with the market than the returns on Treasury bills and other government bonds, and are therefore closer to satisfying the theoretical requirement of having a zero beta.[11] This requirement is noted by K&H on p4 "*The risk-free rate is a theoretical construct defined as the rate of interest that has no variance and no covariance with the market."*

K&H, however, choose largely to ignore evidence on index linked government bonds in reaching their conclusions on the real risk free rate of interest, despite the large development and strong liquidity of European index linked government debt markets in recent years.

1.4.2. Incorrect deflation by ex-post inflation.

The real yields presented in Table 2 (before deduction of the inflation risk premium) are deflated using actual ex-post inflation. This is incorrect, as demonstrated by the Fisher equation quoted on p4, which derives the nominal risk-free rate from the real risk-free rate and expected inflation. K&H additionally note on p8 that the use of actual inflation is at odds with the underlying determination of nominal yields: "*the ex-post real rates of interest calculated here must be interpreted with care. Implied in the current bond yield is the market's estimate of annual inflation over the next 10 years, rather than current inflation rates".*

11 This point was made by Stephanie Holmans in Ofwat RP5 (1996), Section 2.5.

The use of actual inflation is incorrect and therefore K&H's real interest estimates for Germany, UK and US presented in Table 2 and referred to in both 2001 and 2005 reports are not robust.

1.4.3. Deduction of an inflation risk premium is incorrect for the cost of debt and the estimate lacks robustness.

We do not agree with K&H's downward adjustment for an inflation risk premium, used also in their 2001 report, for a number of reasons:

- Fundamentally, we doubt the robustness of K&H's primary estimate of the inflation risk premium, based on Breedon and Chadha (1997). Breedon and Chadha themselves conclude *"(but) we cannot be sure whether this underprediction results from an inflation risk premium or expectational error and also cannot know whether this overprediction will persist."*

- The application of an inflation risk premium based on UK data for bonds with a maturity of 1-5 years, over the period 1982-1996 is inconsistent with the apparent use of German 10 year government bond yield data over the period 1984-2001 in their concluding estimate of the risk-free rate. Indeed, analysis of UK inflation over the period 1982-1996 as considered by Breedon and Chadha shows that the variance of actual UK outturn inflation was 8 times higher than the following period of 1997 to 2001.[12] Notwithstanding Breedon and Chadha's own concerns regarding the inflation risk premium, the substantial decline in volatility of outturn inflation in recent years means that an estimate of the inflation risk premium based on outdated evidence will be likely significantly upwardly biased. The inflation risk premium as measured is also inconsistent with other sources of evidence cited.

- The subtraction of an inflation risk premium in deriving a cost of debt is inappropriate regardless of how it is estimated. The cost of nominal debt will contain an inflation risk premium which must be paid by companies to lenders. The DAA cannot feasibly access and refinance all existing debt to index-linked debt; therefore their cost of debt will include the inflation risk premium.

- The evidence on the size of an inflation risk premium is weak and it is clear that any inflation risk premium that does exist will vary with the level of inflation, across countries and with the macro-economic situation. It cannot be correct to adjust all nominal gilts yields downwards by an assumed inflation risk premium of 40% as K&H do on p9 of their report.

- In justifying their use of a 40% inflation risk premium K&H cite an additional study by Dimson, Marsh and Staunton (DMS (2002)) who estimate "bond maturity" premia. K&H indicate that the previous UK estimate of 40% is supported by the DMS (2002) study which shows an estimate of 39%. This estimate is measured over an entirely different time period and for different maturity bonds. We therefore do not consider that this data is supportive of the original estimate of the inflation risk premium. K&H also report

[12] Based on the variance of UK All Items RPI (percentage change over 12 months) for 1982-1996 compared to 1997-2001.

DMS (2002)'s widely varying premia for Germany, UK, US and Ireland; the premium for Germany is over twice that estimated for Ireland. In the absence of a discussion into the reasons for this divergence, the use of this data out of context cannot be objectively justified.

1.5. Long Term Evidence on the Real Risk-Free Rate Appears to be Irrelevant to K&H's Conclusions

K&H additionally present a range of longer term evidence on the real risk-free rate ranging from 0.1% to 2.3%, derived from yields on bonds and bills for the US, UK and Germany. This evidence does not appear to feature in K&H's conclusions, other than the observation that shorter term evidence is higher. This observation appears to lead partially to K&H concluding that their recommendation is to leave the estimate of the real risk-free rate at 2.6% as used in 2001. It is not at all clear why the observation that updated shorter term historical evidence is higher than longer term interest rate evidence would lead K&H to conclude that 2.6% should be used.

We therefore do not consider this evidence in great detail, other than to comment that the selection appears arbitrary, unjustified and irrelevant given that it is not explicitly considered by K&H in its conclusions.

1.6. NERA Response to K&H Comments on NERA (2005)

K&H (p.5) criticise the NERA methodology for estimating the real risk free rate on the basis of "biased sampling" and without justification. However, our methodology for selection of ILG bonds used to estimate the real risk free rate is clearly stated in NERA (2005) as:

- Preference of Eurozone data over other sources;
- Use of bonds with a maturity of 10Y or greater over the period of measurement, in line with the infrastructure asset lives in the airports sector; and.
- Use of bonds issued before May 2000 to ensure that all bonds considered have a full set of data over our preferred measurement period of five years.

There is a strong logic for each of these criteria in estimating a real risk free rate. Our estimates of the real risk free rate, like other elements of the WACC formula, are calculated based on five years of historical data. Our primary reason for the use of this period is that robust and sufficiently liquid index linked government bond evidence has only been available for five years. Empirical evidence also shows that a period of five years is generally long enough to smooth for business cycle fluctuations and periods of excessive volatility deviating from trends.

K&H also refer (p.5) to averages of shorter term bond yields presented in our Appendix that would lead to lower estimates of the real risk free rate. However, short term maturity bonds are not appropriate for estimating a real risk free rate for financing long term capital intensive industries and clearly do not meet our criteria restated above.

K&H further question our choice to exclude UK ILGs (p5), whilst including US ILGs despite acknowledging one-off supply side effects. We consider, as discussed in our report, that the bias to UK ILG yields has been substantially greater than influences on US yields. K&H also partially answer their own query – we consider that influences on US yields have been of

shorter duration than the impact of the MFR which was introduced in 1997 and subsequent distortions to UK yields. As stated in NERA (2005): *"i) the influence of reduced supply is likely to have only been felt over the recent couple of years and therefore not the whole of the five year historical period of our preferred five year average and ii) the extent of the impact of reduced supply vis-à-vis other "natural" influences that reflect underlying movements in the risk-free rate (such as increased demand from pension funds arising from demographic factors) cannot be robustly ascertained."*

K&H also state (p6) that NERA have made an error in Table 4.9 in the inclusion of 7 nominal 30-year German government bonds on the basis that expected inflation has not been subtracted. This is incorrect. All bonds have been deflated by expected inflation at the time of measurement. K&H's comment that the use of nominal yield evidence is "*inconsistent as nominal yields cannot be used to estimate the real risk free rate unless the expected inflation component is subtracted"* is therefore incorrect.

2. Equity Risk Premium

2.1. Overview

K&H's Approach

K&H argue for an equity risk premium of 6.0%, based primarily on long-run evidence of equity returns stating that *"it is widely accepted that expected equity returns are best approximated by actual (ex-post) equity returns over very long periods of time"*

- Long-run historical evidence on equity market returns for Germany, UK and US - K&H present evidence on returns over a 19 year period showing estimates of -1%, 1.8% and 5.1% respectively,
- A set of evidence over 75 years for the US showing a range of 4.5% to 7.3% and a set of evidence over 100 years+ for the US showing 5.3% and 6.0%.
- Long-run historical evidence from Dimson et al (LBS, 2001) shows ERP estimates ranging from 5.6% to 9.9% for Germany, UK, US and World average, and Dimson et al (2002) evidence ranging from 5.6% to 10.3% for the same set.
- K&H discuss other sources of evidence such as earnings, dividend and productivity models and surveys. K&H however dismiss these methodologies, the first due to the complexity and difficulty of application and the second due to recognition of biases and trends.

K&H conclude that expected equity returns are best approximated by actual (ex-post) equity returns over very long periods of time. Whilst their conclusions are not explicitly drawn, it appears that K&H favour the use of Dimson et al data, and conclude on an ERP of 6.0%, additionally stating that "*Six percent has become the norm for an estimate of the equity risk premium – in academic circles, in the financial services industry, and in regulatory rulings"*.

NERA's Approach

Our approach to estimating the ERP is based primarily on long-run historical evidence for Eurozone and world markets. Overall, we conclude that Dimson, Marsh and Staunton's (2001) analysis shows that the equity risk premium is most likely to lie in the range of 5.0% to 7.0%. The lower end of this range is consistent with the (contested) view that the prospective equity risk premium is likely to be lower than the historical equity risk premium. The upper end is derived from the unadjusted average of ERPs reported for Eurozone markets.

We agree with K&H's estimate of the ERP of 6.0%.

3. Beta

3.1. Overview

K&H's Approach

K&H's estimate of an asset beta of 0.61 for DAA is primarily based on empirical evidence on BAA's asset beta over the period 1988 to 2005 adjusted upwards by 20% for higher business risks associated with DAA's location, operating characteristics and future uncertainties regarding construction of a new terminal and the de-merger.

K&H discuss risk and distributional aspects of airport stocks on p13-14 but do not consider beta evidence on comparator companies other than BAA.

NERA's Approach

NERA's report (2005, Section 5) sets out reasons why we believe the true asset beta for DAA is at least equal to 0.7. Our estimate is based on time-series evidence on weekly betas for comparators to the DAA. Comparators are assessed for suitability on a number of criteria relating to a number of different types of risks in order to ensure that our estimate most closely captures DAA's likely risk exposures.

Our concluding estimate of 0.7 is based on our view of DAA's likely risk exposures relative to four first tier comparators: Manchester Airport Group, BAA, Vienna and Aeroporti di Roma.

The following sections set out our views on K&H's approach to estimating beta for DAA and responds to K&H's comments on our approach.

3.2. Error in K&H's De-Levering Formula

In this section we focus on a clear error in K&H's empirical analysis of BAA's beta, namely the data used to calculate BAA's asset beta in application of the de-levering formula (2.6) on page 16 of the K&H report.

In the CAPM framework, the traditional way to account for the impact of a change in gearing on the cost of equity is to adjust the beta coefficient in a linear manner, reflecting the fact that the additional variability of equity returns generated by gearing is directly proportional to the amount of profits paid out as interest payments.

To shift from an equity beta to derive an estimate of an asset beta for BAA, K&H use the following formula:

(3.1) $\beta_{asset} = \beta_{equity} / (1+(1-\text{tax rate})*(\text{Debt/Equity}))$

In applying this formula, it is crucial to ensure that the debt/equity ratio is measured over the same period as the equity beta estimate. K&H's derivation of BAA's asset beta, however, contains a fundamental error as they only use the most recent 2004 gearing numbers for BAA to derive the asset beta but yet the equity beta of 0.74 is estimated using stock price data over the full period from September 1988 to December 2004.

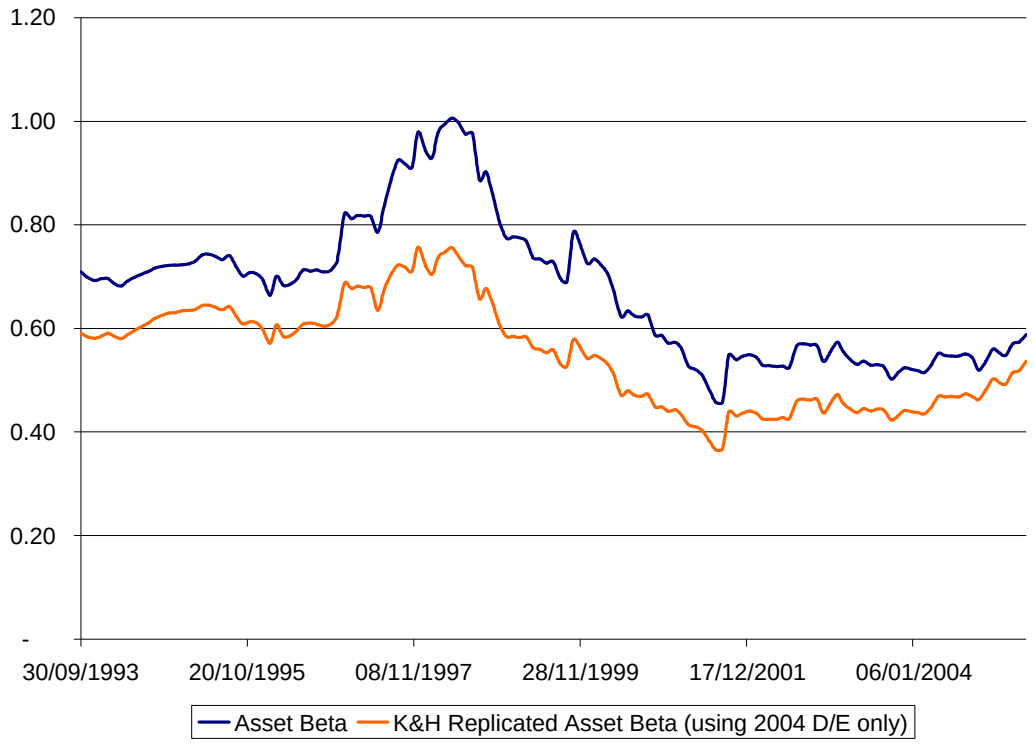
K&H's flawed methodology introduces a significant downward bias in the estimated asset beta for BAA due to the fact that BAA's 2004 D/E ratio of 67% is significantly higher than

BAA's average D/E ratio of 32% over the whole period 1988 to 2004.[13] Using data from August 1988 – May 2005, the following Figure 3.1 presents a rolling time series of 1-year asset betas for BAA across the whole period using BAA actual gearing levels for each year and compares these estimates to K&H's estimate of the asset beta based on a D/E ratio of 67%.

We estimate that K&H's incorrect approach yields an average asset beta of 0.55 across the whole period.[14] By contrast, we show that application of an internally consistent formula yields an estimate of an asset beta for BAA of 0.67, a difference of 0.13.[15]

Interestingly, our estimate of an asset beta for BAA of 0.67 based on time series data over the period 1988 to 2005 is consistent with the UK Competition Commission's (2002) estimate of BAA's asset beta of 0.68.

Figure 3.1
Five-Year Rolling Asset Beta (1993 – 2004): De-Gearing for 2004 only and De-Gearing over Period of Equity Beta Measurement



NERA analysis of Bloomberg data.

[13] In fact, the most recent 2004 gearing level is the highest reported level since BAA's first price quotation in September 1988.

[14] This is slightly higher than K&H's own estimate of BAA's asset beta of 0.51 which may be due to the fact K&H ignore 2005 data in deriving an asset beta.

[15] Our estimate uses FTSE All Share Index, our replication of K&H's approach uses FTSE 100 Index data; however we note that index choice makes little difference to the estimates. In other respects we replicate K&H's use of monthly data and de-levering formula.

3.3. K&H's Selection of BAA as a Sole Comparator is Inappropriate and its Adjustment of BAA's Beta is Arbitrary

We believe that additional empirical evidence on other airport beta values should be considered in estimating beta for DAA. K&H do not justify their exclusion of other potential comparators, but merely cite the similarities between BAA and DAA, before then concluding that DAA is likely to be of higher risk than BAA.

The exclusion of use of other comparators in estimating beta is also highly inconsistent with extensive use of other comparators in K&H's conclusions on the risk and distributional aspects of airport stocks (p13-14). In addition, K&H's assumption that DAA is 20% more risky than BAA appears rather arbitrary and does not appear to be grounded in robust analysis.

We strongly advocate the use of a set of comparators, and the undertaking of detailed analysis on likely risk comparability. NERA (2005)'s summary in Section 5 clearly states a range of estimates on this basis, and quantifies BAA as likely facing lower risk exposures than DAA, in order to more robustly estimate DAA's beta.

3.4. NERA Response to K&H Comments on NERA (2005)

K&H's comments that our exclusion of the period 1999 -2002 in estimating beta is equivalent to data mining seem entirely at odds with their own judgement made in their 2001 report that *"..BAA's beta has declined steeply since the beginning of 2000. It is impossible to determine whether this is a short-term trend that will be self-correcting over future months, or whether it represents the beginning of a permanent decline in BAA's beta. An element of judgement is required. Our estimate for BAA's beta reflects that our belief that some component of the recent decline is probably temporary in nature".*

In K&H 2005 it is stated that *"This is very similar to the beta of 0.73 recommended in Hutson and Kearney (2001), which was partly based on the premise that the calculated beta in 2001 might well rise over time, and this has been shown to be the case."* It is not clear how K&H made this adjustment in 2001, and no attempt to explain the rapid decline observed by K&H in BAA's beta was made, although the beta estimate was decomposed into variance and co-variance terms.

Our analysis presented in NERA (2005) clearly shows that this decline arose in conjunction with the abolition of the intra-EU duty free. K&H were therefore correct in 2001 in assuming that this decline would likely be temporary. K&H's comments in 2005 stating that the 1999 - 2002 period (excluded by NERA) "*is representative of the risks faced by the company and the market, and should be included in the dataset from which an average value of beta is estimated"* are therefore entirely inconsistent with K&H's earlier comments.

Additionally K&H's comments are not based on sound economic reasoning. The outturn of downside events is not in any way comparable with the impact on beta estimates of the perception of *risk* of downturn events. What determines beta is risk. The outturn of potential risks is only relevant to representative risks faced by the company and the market where they affect perceived risk on a forward looking basis. Under outturn scenarios, beta estimates can be expected to behave very differently from under normal conditions, as changes in the price of a stock mostly reflect changes in valuation arising from real changes in the expected *level* of future returns, not changes in *risk* to expected future returns. This causes the de-coupling effect observed in BAA's beta over the period 1999-2002. We would therefore argue that for this precise reason, periods of price behaviour influenced by the outturn of downside risk

events *should* be excluded.

4. Cost of Debt

4.1. Overview

K&H's Approach

K&H's estimate of the cost of debt for DAA is based on the sum of the risk-free rate of 2.6% plus an estimate of the debt premium for DAA of 1.1%. This leads to a cost of debt estimate of 3.7%.

K&H's basis for estimating a real risk free rate of 2.6%, based on evidence presented in their 2001 report, is discussed in Section 2 above.

The debt premium estimate appears to be based on the midpoint (1.05%) of the 2002 UK Competition Commission's estimated range for BAA of 0.9% and 1.2% and a transactions cost allowance of 10 basis points.

NERA's Approach

We recommend that the cost of debt, like other elements of the WACC formula, should be calculated based on long-term averages (over a business cycle, at least) of historical time series. The use of time series evidence rather than current evidence will ensure that cost of capital estimates are not unduly sensitive to the timing of regulatory decisions and abnormal capital market conditions.

This is particularly true for companies like DAA, who face greater restrictions regarding the timing for issuing new debt than private companies and other regulated utilities that do not face significant capital expenditure programmes. The use of longer-term time series is also consistent with the time period used for other WACC parameters.

In line with standard regulatory practice, we estimate the cost of debt of 4.0% on a forward looking basis using market evidence on Eurozone debt costs for comparable A- rated bonds issued since 2000 and with maturities at issuance of ten years or greater.

Our comments on K&H's approach to estimating the cost of debt are set out below.

4.2. K&H's Estimate of the Debt Premium Based on Regulatory Precedent for BAA is Not Appropriate

K&H's use of a single Competition Commission decision on the cost of debt for BAA from 2002 to estimate DAA's forward looking cost of debt is wholly inappropriate for several reasons:

- The precedent used by K&H is now significantly outdated and there are key differences in the financial and operating circumstances of BAA and DAA, as K&H themselves acknowledge in their estimate of beta. The increased riskiness of DAA should be reflected in a higher debt premium for DAA.

- There are significant differences between the financial structures assumed by the Competition Commission for BAA and K&H's assumption for DAA. The UK Competition Commission's assumed gearing for BAA in 2002 was 25% and BAA was rated at AA-. Since DAA has a higher gearing and lower credit rating than BAA, this is an additional reason why the cost of debt for BAA will be lower than the cost of debt for

DAA.

- We additionally note that the CAA proposed a cost of debt of 3.9% in its recommendations to the UK Competition Commission on BAA's cost of capital which is higher than K&H's estimate for DAA.[16]

- K&H appear to round down their estimate of the debt premium – a debt premium of 1.05% before transactions costs plus transactions costs of 10 basis points results in a debt premium of 1.15% which rounds to 1.2%. K&H state on p19 that "*our estimate of the debt premium is therefore 1.1"*. They then state that "*we estimate DAA's real cost of debt as our risk-free rate estimate of 2.6% plus 120 basis points for the debt premium. The resulting real cost of debt estimate for DAA is 3.7 percent."* As the real risk-free rate is stated at 2.6%, the addition of 120 basis points would imply a real cost of debt of 3.8%. It appears from the previous statement of a debt premium of 1.1 that the cost of debt is derived using this premium, which is apparently incorrectly rounded down.

- K&H's inclusion of transactions costs for debt issuance, (which were not included in the 2001 report) are based on our estimate of transactions costs ranging from 0.10% to 0.15%. It is not clear why the lower end of this range is selected. We consider that due to the fixed nature of many transactions costs and the relatively small size of likely future bond issuance by the DAA vis-à-vis average issues, the upper end of a range for "typical" bond issues is likely to be more applicable to the DAA.

- For other WACC parameters (eg. beta, risk free rate etc) K&H use time series evidence to justify their estimates of these values. However, they do not present any time series evidence on actual debt costs for airport operators.

[16] CC (2002) "*BAA plc: A report on the economic regulation of the London airports companies (Heathrow Airport Ltd, Gatwick Airport Ltd and Stansted Airport Ltd)"* p171 for CC proposals and p168 for CAA proposals.

5. Gearing

5.1. Overview

K&H's Approach

K&H base their gearing estimate on the actual (2004) gearing level for the DAA.

NERA's Approach

Our estimate of forward looking gearing for DAA is 50%, consistent with our estimate of the cost of debt which is based on a low single A credit rating.

5.2. K&H's Estimate of Gearing is Inconsistent with their Cost of Debt Assumption

K&H's assumed gearing based on DAA current gearing is slightly lower than DAA's stated current 2004 gearing of 47%. K&H's assumed gearing will also be lower than DAA's future gearing which is likely to increase from current levels.

More importantly, K&H's gearing estimate is inconsistent with assumptions underlying the cost of debt estimates made by K&H. The cost of debt estimated for DAA by K&H is based on the CC determination for BAA in 2002. At this time, BAA had a credit rating of AA- and a gearing level of 25% was assumed. Not withstanding other issues, the cost of debt assumed for DAA is therefore entirely inconsistent with the gearing assumption and will downwardly bias the cost of capital for DAA by understating the cost of debt relative to the assumed proportion of debt in total capital.

6. Summary of Differences between NERA and K&H Estimates and Impact on Overall WACC Estimate

Table 6.1 shows the differences between the NERA and K&H parameter estimates and the impact on the overall real pre-tax WACC (in terms of real pre-tax WACC increments).

Table 6.1
Differences between NERA and K&H Parameters and Impact on Overall Real Pre-Tax WACC Estimate

	K&H Est[1]	NERA Est	Difference in Contribution of NERA – K&H to Real Pre-Tax WACC
Tax			
Corporate tax rate	12.5%	12.5%	-
Cost of Equity			
Real risk-free rate (in cost of equity only)	2.6%	3.0%	0.25%
ERP	6.0%	6.0%	-
Asset beta	0.61	0.70	0.73%
Equity beta (before differences in gearing accounted for)	1.1	1.3	
Post-tax return on equity	**9.4%**	**11.4%**	**0.97%[1]**
Cost of Debt			
Real cost of debt	**3.8%**	**4.0%**	**0.14%**
Gearing			
D/(D+E)	**0.46**	**0.50**	**0.02%**
D/E	0.85	1.00	
Real pre-tax WACC	**7.4%**	**8.5%**	**1.13%[2]**

(1) 0.97% is derived as the sum of 0.25% and 0.73%, difference due to rounding.
(2) 1.13% is derived as the sum of 0.97%, 0.14% and 0.02% and is equal to the difference between the NERA estimate and the K&H estimate of the real pre-tax WACC for the DAA.

The impact of the differences in the various component WACC parameters on the real pre-tax WACC is calculated by adjusting each of the parameters shown in the Table for differences (if any) between the K&H estimate and the NERA estimate, adjusting each parameter from the K&H estimate to the NERA estimate in the order shown in the Table. The resulting impact on the real pre-tax WACC at each adjustment is noted in the fourth column.

Column four shows that the differences in the real pre-tax WACC are mainly attributable to differences in the cost of equity. The (weighted for 46% K&H gearing assumption) estimates of the impact on the real pre-tax cost of equity and debt of moving from K&H to NERA estimates of parameters are 1.0% and 0.1% respectively. The impact of changing gearing on the real pre-tax WACC from 46% to 50% after accounting for changes in all other parameters is negligible. The order in which the parameters within the cost of equity are changed will influence their respective impact on the real pre-tax WACC (as the cost of equity within the real pre-tax WACC is multiplicative), therefore we cannot certainly ascertain the balance of the roles of the difference in the real risk-free rate and the asset beta in determining the real pre-tax WACC. However, the relative roles of the cost of debt and equity are not dependent on the order of changes. We therefore can robustly attribute the majority of differences between NERA and K&H's estimates of the real pre-tax WACC to differences in the real risk free rate and the asset beta.

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Dublin Airport Authority/AOC Service Level Agreement

Service/System	AOC commitment	DAA commitment	Monitoring
Security Passenger Search		*Queuing time no longer than 7 minutes, 95% of the time, during the hours of operation*	*Airline Station Managers and DAA Duty Managers to monitor* *Sampling at peak times* *MRBI 2 days per month* *Constant Pax count per 15 minutes*
Baggage Handling System		*Overall system available 99% of the time during the hours of operation, measured monthly. Each individual component (outgoing conveyor stream, sorter, transfer line, etc) 95% of these assets to reach 99% availability*[1]	*Mainsaver*[2] *Reports*
Stand/Gate Allocation		*Compliance with Stand Plan*[3]	*Monthly report on stand allocation and usage*

[1] Planned preventative maintenance and stoppages etc due to operator issues excluded
[2] DAA maintenance system
[3] Requires operation to schedule ± 15 minutes

Service/System	AOC commitment		DAA commitment	Monitoring
Check in	Check in desks open STD – 2 hours, must be achieved for 95% of each airlines/handling agents' flights each day. For all flights check in desks must open no later STD – 1 hr 40 min No queue outside the defined area, 95% of operating hours. Manage passenger queues within demarked areas Queuing time, no more than 15 minutes for all flights, except 20 minutes for transatlantic flights, 95% of the time. Compliance with DAA check-in plan. Variance to be agreed by DAA Terminal Services For Common Check in, queue to be contained within demarked area, 95% of operating hours		Provide fixed barriers between Check in islands to create walk-through and define queuing area. Demark queuing areas as being between fixed barriers and check in desks (depth), and between end of check in desk island at front of terminal and rear of island inc conveyor canopy (width) Any DAA variance with the plan will follow consultation with the airline.	DAA Duty Managers and Airline Station Managers to monitor MRBI (external) survey plus peak sampling if required
Baggage Delivery (Contact Stand)	First Bag	Last Bag	To install "first bag, last bag" system for handling agent use	DAA Duty Managers to monitor Manual sampling, moving to automatic system capturing all data Monthly report on compliance with use of system and times produced, discussed at monthly meetings
Small Aircraft	15 minutes	25 minutes		
Medium Aircraft	15 minutes	35 minutes		

Service/System	AOC commitment		DAA commitment	Monitoring
Large Aircraft	15 minutes	45 minutes		discussed at monthly meetings
Baggage Delivery (Remote Stand)	First Bag	Last Bag		
Small Aircraft	20 minutes	30 minutes		
Medium Aircraft	20 minutes	40 minutes		
Large Aircraft	20 minutes	50 minutes		
General	100% compliance with correct use of “first bag, last bag” system, when installed			
Trolley Availability			*Trolleys to be available at identified key areas within/around terminal*	*Manual sampling*

IRISH AVIATION AUTHORITY
ÚDARÁS EITLÍOCHTA NA hÉIREANN
OPERATIONS DUBLIN

Elaine Jones
Head of Operations Planning
Dublin Airport

3rd March 2005

Runway Capacity Study

You expressed concern recently as to whether we at Dublin ATCC were satisfied with the NATS study of current and future capacity and if we felt that there were areas that could be further or better explored.

It is widely acknowledged that NATS are the market leaders in their field and that their methodology is both robust and highly effective. I have extensive dealings on a world-wide basis with such consultants and I am in no doubt that your choice of NATS for the capacity study was a sound one. Indeed, as we benchmark our progress against the high intensity/ high profile airports that NATS operates, it would seem imprudent not to take advantage of their skills and expertise.

My thanks, therefore, for your concerns but the study was highly beneficial and illuminating. We are unable to criticise or propose changes to the proven, tried and tested NATS methodology.

Malcolm Campbell
General Manager
Dublin ATCC

Monarch

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04th April 2005

Dear Elaine,

Following recent presentations of the runway capacity work undertaken by NATS on behalf of Dublin Airport Authority, I should like to confirm my support for the use of this ' best in class ' approach, as the basis of the runway capacity declaration process. Having been involved with this declaration process at Dublin for the last four years, in line with processes used at other airports and in liaison with my colleagues on the Dublin Airport Coordination Committee who have fully endorsed this approach.

NATS have extensive experience at capacity assessment at all the major constrained UK airports and use arguably the best and most sophisticated simulation modelling tools available. They work closely with the relevent airport authority and the local based airlines to seek the best solution to local demand issues.

As a member of the Gatwick Scheduling Committee Exec I have worked closely with NATS and GAL for over eight years, in the constant search for continued growth in utilisation from Gatwick's single runway operation. Constantly pushing the boundaries of what can be achieved safely and within the defined delay criterea, using tactical hourly arrival and departure declarations to more closely match demand.

I am concerned that this tried and proven system of capacity assessment should not be replaced by any ' non industry standard ' approach without good reason and even then only after discussion at the Coordination Committee, should this even be considered.

Yours Sincerely

Chris Marks
Commercial Planning Manager

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7th April 2005

Mr William Prasifka
Commissioner
Commission for Aviation Regulation
3rd Floor
Alexandra House,
Earlsfort Terrace,
Dublin 2

Dear Mr Prasifka,

I am writing on behalf of the Dublin Airport Runway Capacity Group (RCG), which comprises of Airlines, Airport personnel and both the Air Navigation Service Provider and the Regulatory function of the Irish Aviation Authority (please see attachment for a full listing of the members).

By way of background, since 2001, National Air Traffic Services UK (NATS) has been contracted to assess runway capacity at Dublin Airport and set out recommendations to enhance capacity. NATS are the recognised leaders in this field and carry out studies at UK airports and around the world. In 2002, Dublin Airport set up the RCG, with a scope to review the work undertaken by NATS to date and to endorse the current declared capacity limits that it supports. The group has also based a programme of current and future capacity enhancement measures on the results of these studies. Measures to enhance runway capacity at Dublin Airport are currently being implemented by Air Traffic Control, Dublin Airport and Aircraft Operators, based primarily around this work.

An example of the approach adopted by NATS is summarised within the programme used to assess the runway capacity at Dublin Airport for Summer 2004. This was as follows:

- Presentation and consultation by NATS to Dublin Airport and the IAA on the approach and methodology to be used prior to the study.

- Over 60 hours of visual observations of runway activity at Dublin Airport were taken by NATS over 10 days during the busiest month (July), on the busiest days (Thursday to Monday) and during the busiest times of those days (times varied) to build up a good sample size.

- Extensive use of data collected by visual observation, supplemented by data from Dublin Airport and IAA systems and other data sources available to NATS.

- The study followed the NATS benchmarked approach to runway capacity assessment, as applied in annual runway capacity studies at Gatwick, Heathrow, Manchester, Stansted and Birmingham airports. This approach makes use of a set of comprehensive and sophisticated software tools, developed over time by NATS specifically for this purpose.

- Presentations of the study results were made to the Dublin Airport Runway Capacity Group on the 24th September 2003 and the Dublin Airport Coordination Committee on the 1st October 2003. There was agreement from these groups on the study findings and Dublin Airport used of results of the study to declare runway capacity for summer 2004.

- Recommendations arising from the results and conclusions of the study formed the basis of the work programme of the Dublin Airport Runway Capacity Group and a five year strategy to maximise runway capacity was set out by the RCG resulting in an extra 29 runway 'slots' being declared for the summer 2005 season.

The approach to enhancing runway capacity at Dublin Airport is consultative, incremental and adopts industry recognised best practice. The Runway Capacity Group therefore wishes to endorse the NATS methodology used to date as an appropriate, sound and robust method of assessing, declaring and planning runway capacity at Dublin Airport.

The Commission is invited to consider whether it would be useful for it to attend meetings of the RCG, even as an Observer, in order to experience at first hand the work of the Group in extracting the maximum possible capacity from the existing runway infrastructure.

Yours faithfully,

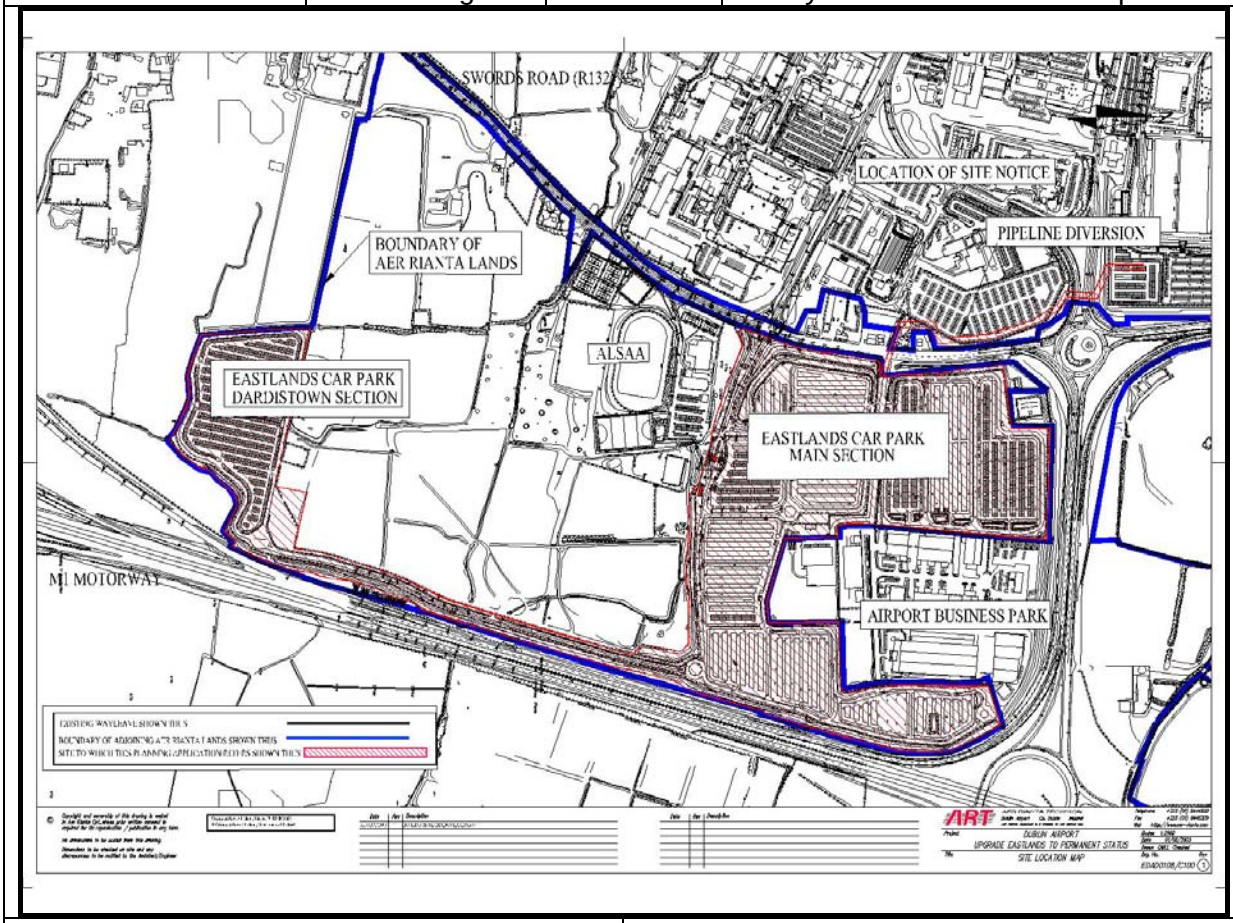
Robert Hilliard
Chairman - Runway Capacity Group
Dublin Airport

enc

Project Number	EDAD 0108	**Project Title**	Upgde Eastlands to Perm Status

Project Description
The project comprises the surfacing of the Eastlands car park, the provision of surface water attenuation facilities for Kealy's Stream catchment and the diversion of drainage from FLS Hangar to Kealy's Stream in accordance with conditions attached to planning permission received from An Bord Pleanala.

Classification	Car Parking	**Driver**	Safety / Environmental / Compliance



Output	• The provision of surface water attenuation for Kealy's Stream catchment and surfacing of parking and circulation routes in the Eastlands section as conditioned in the grant of planning permission. The project includes; ➢ 8,500 m3 of underground "*stormcell*" surface water attenuation tank ➢ 100,000 m2 of porous bitmac surfacing on parking bays and on circulation roadways. ➢ 550 m surface water drainage ➢ 3100 m of perforated drains ➢ Associated Landscaping

Justification	• Temporary planning permission was granted by An Bord Pleanala for a period of 10 years subject to a number of conditions - The relevant justification stated by the Board is to prevent flooding and ensure a proper standard of development • DAA is obliged to conform with the conditions of the planning permission • Project must be completed to maintain existing revenues
Project Commencement	• 2005
Project Completion	• 2007
Capital Cost Assumptions	• € 350 per m3 for attenuation (€2,975,000) • € 20 per m2 for porous surfacing (€2,000,000) • € 1200 per m for FLS drainage (€ 660,000) • € 60 per m for car park drainage (€186,000) • € 100,000 for drainage control structure • € 250,000 for Landscaping • Cost is less than € 1,000 per space as much of the infrastructure is existing • Soft Costs @ 10%
Cost Benchmarks	• BS = € 1,100 to 1,500 per Space • ATKINS consultants Report
Total Capital Expenditure	• € 7,000,000
Capex –2005-2010	• € 6,945,968
Project Stage	• Statutory Approvals
Stakeholder Evaluation and Consultation	• Extensive consultation with statutory authorities including Fingal County Council and the DTO • Consultation with airlines users via October 2003 CIP.