60 Martello Court
Portmarnock
County Dublin

24 June 2005

Mr. Cathal Guiomard,
Head of Economic Affairs,
Commission for Aviation Regulation,
Alexandra House,
Dublin

Dear Mr. Guiomard

Uproar (United Portmarnock Residents Opposing Another Runway) is a group of residents in North County Dublin (mainly Portmarnock) opposed to the building of the new runway at Dublin Airport. We met Commissioner Prasifka on 14 February last and explained our position to him and two of his colleagues. On behalf of Uproar I wish to respond to the Commission's Draft Determination (CP2/2005) and am pleased to pass on the following comments.

It is stated on page 4 that the purpose of publishing a draft determination is to allow interested parties to ascertain the impact or effect of the proposed levels of maximum airport charges. In that regard you will not be surprised that our comments relate to the effects on us of the airport operations that are subject to and affected by these charges. These effects include the prospective blighting of the lives of 10,000 plus people by the new runway; the negative impact on our health and on our children's education; the never-ending torture of our community by night flights and flights deviating from their flight paths; and road congestion resulting in millions of road users, many of them airport users, suffering serious inconvenience due to congested roads around Dublin airport. Our points are made under seven numbered headings.

1. Off-peak traffic.

There are various mentions of off-peak traffic in the draft report and on page 54 the Commission says that it will consider the continued application of the sub-cap on off-peak landing and take off charges. We have not been able to find in the report where off-peak hours are defined and are concerned that this sub-cap that is intended to make better use of off-peak hours might encourage even more nighttime flying, which is a serious abuse of the rights of the people of Portmarnock to a night's rest. As you will be aware, Dublin Airport is one of the few large airports in Europe that does not have a nighttime curfew. Might the Commission take the opportunity to discourage nighttime operations by clearly defining nighttime (e.g. 22:00 – 07:00) and while maintaining the sub-cap for off-peak operation outside those hours, introduce a penal charge which would act as a disincentive to nighttime operations (see also below)?

2. Runway capacity.

As noted below, the WHA consultants' report on capacity in Annex 3 estimates that the existing 10/28 main runway will reach maximum capacity around 2013/14. We could quibble with that early date but are more concerned that no capacity analysis was done of the proposed new runway. An eminent airport design consultant has advised us that the new runway will rapidly run into diminishing returns. In his opinion, pending confirmatory analysis, the restricted manoeuvring area available airside will severely limit the operating capacity of the new runway. It might be limited to no more than half the capacity of the existing 10/28 runway. If this is so, it means that the investment envisaged in the new runway will be very wasteful in comparison with the construction of a new runway and new terminal on a greenfield and uncongested site, i.e. a second Dublin airport. The Draft Determination says on page 8: "…the amendment has strengthened the emphasis on economic efficiency as a principle of airport charges regulation." It would appear to be incumbent on the Commission to analyse thoroughly the capacity of the new runway, with particular attention given to the effects of airside congestion, if the Commission is to ensure that the price cap determined will enable and oblige Dublin Airport to invest and operate in an economically efficient manner.

3. Road traffic congestion.

On page 20 the Commission says: "The price cap seeks to provide the DAA with a level of revenue that is sufficient to operate and develop airport facilities on an efficient and economic basis in line with the reasonable requirements of current and prospective users." "Users" are now widely defined and clearly include passengers and business people trying to access the airport by road.

Robert Kelly, a transport expert, has carried out on Uproar's behalf a review of the traffic and transport impacts of the new runway proposal as set out in the DAA's EIS. A copy of his draft report is attached. He concludes that the traffic analysis is wrong, and that the impacts predicted for the road network surrounding the airport do not correctly reflect either existing observed traffic flows or likely future flows. This arises from incorrect use of a traffic model by the DAA and means that the road traffic impact conclusions of the EIS are misleading. The likely result is that, with the expansion of activity proposed by the DAA, Dublin airport will be difficult to access by road, due to traffic and public transport congestion. Journey times to and from the airport will be unacceptably long and unpredictable due to the congested road network. He further concludes that proposed improvements to the road network and the building of a metro link to the airport will not resolve the congestion.

It is estimated by the DAA that 38.4 million passengers will pass through Dublin airport by 2025, 10 million of whom due to the new runway. Therefore millions of passengers trying to access or leave the airport will be severely inconvenienced if this runway is built. So will people doing business at the airport. This inconvenience means that significant economic costs will be imposed on these users. If the Commission's brief it to ensure efficient investment and operation in line with the requirements of users, it must consider these costs to users when considering the DAA's capex proposals and determining the appropriate price cap. Surely a

reasonably convenient level of access would be a "reasonable requirement" of users. Indeed, as set out below, road congestion costs should actually be included in the price cap and would help to bring about a better outcome for users. Whether or not that is done, the Commission will be remiss in its duty if the huge consequences for millions of users are ignored in its determination of the price cap. If economic efficiency really is a principle of airport charges regulation these costs cannot be ignored even if they do not appear on DAA's balance sheet.

4. Runway building dates.

Is the new runway included in those scenarios which include DAA capex, e.g. S4?

On page 43 it is stated: "Accordingly, the Commission seeks submissions from all users on the DAA Capex Programme as set out in Annex 7." The table in Annex 7, Part 3, has no title but indeed it looks like the DAA's capex programme. Under "Stands and Airfield" for the years 2012, 2013 and 2014 we have capex amounting to €141.65 million. A figure of €141 million labelled "runway" in 2013 also appears in a chart entitled "10 Year Capital Plan Elements" in Annex 7, Part 2, "Capital Investment Programme 2005-2014." This seems to confirm that the DAA's capex plan envisages the runway being built around 2013. Page 19 of Annex 3, the WHA capacity assessment, says: "Therefore, based on the maximum mixed operations runway capacity of 45 aircraft movements per hour … an initial assessment indicates that the hourly capacity of Runway 10/28 will be reached by approximately 2013/14, at which time a second parallel runway will be required." These dates correspond to what Minister Ivor Callely told Uproar at a meeting on 23 May last.

As the determination is intended to apply to the period 2006 to 2010, it would seem that no allowance should have been made for the runway capex in the determination, if the runway is to be built in 2012-2014. However, on page 26 of the main text, in explaining the differences between S4 and S1 the report says: "Removing the costs of capacity-driven capex projects (Pier D, the second terminal and *the second runway*) from the resulting €5.94 (a per passenger reduction of €0.82) reconciles the DAA base case with the Commission's base case of €5.12." This clearly says that the runway capex is included in S4.

On page 14, the text says for S4: "This scenario uses the same assumptions as S2 but the RAB is rolled forward on the basis of the full capex programme of the DAA in the years 2006 to 2010." Which implies that the DAA capex programme is being used unmodified. If it is the case that the runway expenditure has been erroneously included in the 2006-2010 determination then those caps are clearly exaggerated. If the capex programme as outlined by DAA was modified to envisage the second runway completed by 2010, some explanation for the conflict should be given.

It is stated on page 5 of the FCC Planning Officer's Report (Ref P/0436/05) of 10 February 2005:

"It is anticipated that the proposal will take three years to build, with construction proposed to commence in January 2007."

Table 6.8 of the EIS also implies that the new runway will exist by 2010 even though this flatly contradicts the DAA sources above which have it being built around 2013.

Does the Commission assume the runway will be built by 2010 and if so, why does that date contradict some of the documents supplied by the DAA, which date construction to around 2013? The confusion obviously started with the DAA but how can this conflict in dates be resolved for the purposes of this determination? In this regard I note that on page 42 it is stated: "An assessment as to the required CAPEX programme and its efficiency is, therefore, a central element of the economic regulation of airports. Consequently, it is necessary that a regulated firm's investment plans be carefully scrutinised as to their *timing* and efficiency." If this scrutinising was done, it has not been made clear in the Draft Determination what the Commission believes the timing of the runway investment to be.

If an allowance for a new runway is included prematurely and a price cap is set accordingly, it will allow the building of a new runway earlier than needed. In fact, Uproar believes it should never be built and if traffic looks like growing to a point where a new runway is needed, it should probably be built on a green-field site west or southwest of Dublin. Ryanair is also of the opinion that this runway is not needed and formally advised the County Manager of FCC to that effect in a letter dated 9 March 2005, a copy of which we have sent to the Commission.

5. Scenarios and actual developments.

It is not entirely clear if the Commission intends to choose one of the seven scenarios analysed when it makes its final determination or if the seven scenarios or a subset of them as finally determined will constitute a set of determinations which will apply in the light of developments at Dublin Airport. Presumably, in this case, the scenario that most closely reflects the real situation at a given time would apply. But if this is so, it would appear that the determination is reactive rather than proactive. Rather than using the determination to direct Dublin Airport to take an efficient path, Dublin Airport may be tempted to take the path that would maximize revenues to finance unneeded expansion. On the other hand, if one scenario is chosen to set the cap, what will happen if the outcome in the 2006-2010 period does not correspond to the assumptions made for that scenario? For example, what will happen if S4 is chosen to set the cap but the runway is not started or built by 2010?

6. Opex and jobs.

On page 20 it is stated that in determining operating expenses (opex): "The Commission was required, in its first Determination, to project opex and commercial revenues using a simplistic assumption of a one-to-one linear relationship with passenger traffic." It is also said that the projections were drawn in part from the DAA's own projections. As the Commission will be aware, in Chapter 6 of the DAA's EIS, entitled "Employment and Economics", the DAA projected that without a new runway, jobs at the airport would actually decline by 2025. This comes about from a serious misuse of out-of-date ESRI projections for labour productivity growth. If the runway is built, jobs are projected by DAA to increase somewhat by 2025.

As the DAA's projections did not assume a simple linear relationship between passenger numbers and opex, because of its allowance for (exaggerated) labour productivity growth, it appears that the Commission is not following the DAA's EIS projections. It is therefore not clear what assumption the Commission made. If it did follow strictly the DAA's method as presented in the EIS, then payroll costs are seriously underestimated because the DAA's job projections are grossly underestimated. See the attached Word file entitled "Jobs modified" where this is explained. Presumably the Commission only projected opex to 2010. In the light of item 4 above about the confusion of the timing of the building of the new runway, it is not at all clear what DAA job projection figures were used and how reliable they are.

7. Economic efficiency.

On page 8 it is stated that the Commission is permitted to regulate airport charges with reference to productive, dynamic and allocative efficiency. Welfare economics is the branch of economics concerned with the application of economics to public policy questions. Charges at Dublin Airport are clearly a public policy issue. Therefore the principles of welfare economics should apply to the determination of airport charges. Welfare economics requires that social costs and benefits be considered in determining economic efficiency in the widest public policy sense. As such, the negative externalities generated by the operation of Dublin Airport on populations living under or near flight paths and on commuters and businesses forced to use congested roads should be included in the price cap, whether they be airport users or not. This welfare approach is also required under the Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector, published by the Department of Finance in February 2005.

If a welfare economic approach were taken by the Commission, a welfare maximising optimum outcome could be brought about by a regime of charges, tailored to reflect full social costs and benefits. All aircraft would pay the full social costs of their operation. Noisier and more polluting aircraft would pay more. As suggested above, nighttime flying and deviating from flight paths could be penalised and discouraged. If charges would be expected to rise as road congestion due to airport operations increased, serious attention would be given early to expanding airport capacity at a green-field site with uncongested access and good transport links, away from established population centres.

Does the Commission believe this to be an appropriate way forward?

We would welcome your observations on our comments at your earliest convenience.

We would also be happy to expand on our comments should you believe that to be appropriate.

Yours sincerely on behalf of Uproar,

Matthew Harley

Summary and Conclusions of Findings Report

By

*RK*elly & *A*ssociates

On
The Environmental Impact Statement

For the Dublin Airport Authority proposed Northern Parallel Runway

20th April 2005

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

Summary and Conclusions of Main Report:

Dublin Airport Authority proposes to construct a Northern Parallel Runway at Dublin Airport. This proposal requires Planning Permission from the Planning Authority – Fingal County Council. The size and scope of this project requires that a full Environmental Impact Statement (EIS) be submitted as part of the planning application process.

This report is dealing in particular with the Traffic and Transport element of the EIS submitted as part of the above planning application.

Average traffic growth projections in passenger numbers indicate that by 2025 Dublin Airport will handle some 38 million passengers providing a second terminal and new northern runway are built.

The above proposal is of immense concern to the communities that will be affected by the ensuing noise pollution and restrictive planning environment that will be placed on the areas affected by the new flight paths to be created.

Rkelly & Associates have been asked by the Portmarnock Community Association to assist them in reviewing in particular the traffic and transport impacts of the new runway proposal as detailed in the abovementioned EIS.

EIS Report, Chapter 13 – Findings:

Traffic Assessment – approach and results:

Prior to undertaking the traffic impact assessment a method statement was prepared by Mouchel Parkman Consultants Cumberland Street, Dun Laoghaire, Co Dublin, and submitted to Fingal County Council. This method statement was subsequently discussed and agreed with the Council at a meeting held at the County Council offices on 28th July 2004.

The agreed method was based on use of the DTO AM Peak Period to model the impact of the new runway extension on the general road network.

Finding 1:

Why has the consultant not modelled the pm peak? Airport impacts could be greater for passengers in PM peak. Significantly higher volumes of passenger departures occur in the off peak and pm peak periods see table 13.16 later. For a project of this scale three peak periods of the day should be examined AM peak, Off peak, and PM peak.

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

Finding 2:

The DTO Saturn traffic model used by Mouchel Parkman was the DTO 2001 validated model. This model did not include elements such as the Dublin Port Tunnel nor the M1 extension north of the Airport.

Finding 3:

The 2001 model had to be calibrated to 2004 conditions. This required the addition of elements such as the Dublin Port Tunnel, and the M1 extension north of the Airport. This process of adding-in major elements to an existing model makes calibration very difficult

The report states the following:

'The validation check confirmed that the adjusted model provided a good reflection of the current traffic flows in the study area, and hence the suitability of the model for use as a traffic forecasting tool.'

This is very erroneous, and represents a fundamental flaw in the traffic analysis and assignment work within the EIS report. The GEH values obtained after the model validation runs are not within acceptable ranges on 7 out of the 14 link flow analyses undertaken. The traffic flows used in the 2004 model understate the actual traffic flows on the road network significantly. In one case the flows are over 110% under observed flows and in other cases the percentage error is from 20 to 55%.

This validation process and resultant model does not comply with the Traffic Validation Guidlines stated in the UK and NRA Design Manual For Roads and Bridges - DMRB Vol 12 section 2 Part 1 Traffic Appraisal in Urban Areas Chapter 4.

Finding 4:

Since the base 2004 Saturn Traffic Model does not provide an accurate picture of traffic flows on the road network for the current year (ie 2004) the future predictions for 2010 and 2025 are flawed and cannot be relied upon. It is also very likely that these traffic flows underestimate the future road traffic impacts predicted in the report.

Finding 5:

Following detailed research into the most appropriate methodology that should be used in this case; I have concluded that the correct procedure

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

would have been to take the DTO 2006 Saturn Model, cordon it and validate it to 2004. This model includes all the added road links that are not in the 2001 model and updated traffic information.

Finding 6:

When developing the 2025 traffic scenarios with and without Metro there was a problem because the DTO model only predicts traffic impacts up to 2016 at this point in time. The report therefore uses NRA (National Roads Authority) traffic growth figures to derive 2025 traffic flows on the road network. The report states the following:

'Since 2016 represented the extent of DTO forecasting; indices produced by National Roads Authority (NRA) (2003) were used to derive a factor to grow the 2016 matrix to 2025. and further The matrix total **was controlled** to that derived by the application of the NRA growth to provide the 2025 'with Metro' (final) matrix.'

This is a significant error and is likely to under predict traffic flows in the whole modelled area as the NRA traffic growth figures do not include extra traffic generated by developments such as new housing or residential/commercial developments.

Finding 7:

The EIS report states

'It is self evident therefore that the provision of Metro to the airport would be expected to make a substantial contribution to reducing car traffic to/from the airport. Even with the provision of Metro, there would be expected to be a near doubling of car trips to the airport by 2025 with the construction of the northern parallel runway.'

When the Metro link is provided to Dublin Airport this does not eliminate severe congestion and saturation on many key roads servicing the Airport. Roads in the vicinity of the Airport such as the M1 north, M50, the M1 airport access, R132 etc are operating well over capacity. This is even with the weak base traffic model used.

Finding 8:

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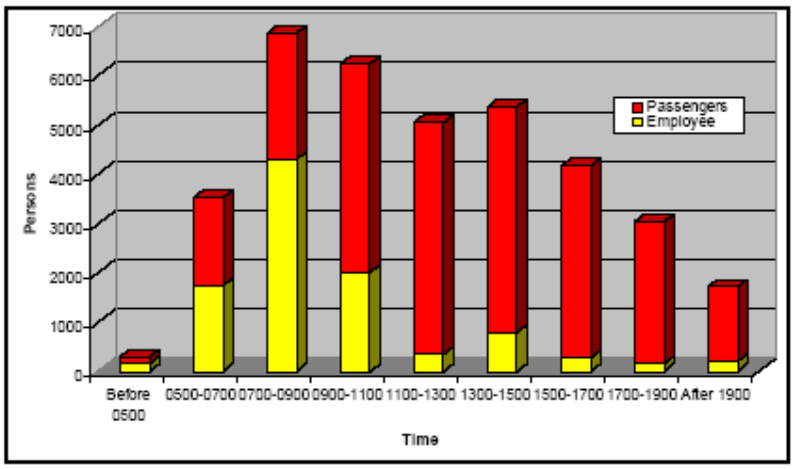


Text Figure 13.16 Employee/Passenger Arrivals (from DAA).

The term arrivals above refers to motor vehicular traffic arriving at the airport during the day. The motor vehicles include both cars and delivery vehicles. These vehicles have been split into staff, passenger, goods vehicles, they have then been converted to PCU's (passenger car units) and are graphed as such.

As discussed earlier the only time period during the day that is examined is the morning peak period. Even though this is the peak time for airport arrivals, (60% of which are employees), it is not the peak arrival period for passengers. Peak passenger arrival time at the airport is the afternoon and PM peak see above graph from EIS. The report should examine accessibility impacts for passengers wishing to get to the airport as well as the impact the airport extension has on the general road network

Finding 9:

The EIS report states the following:

'The above assessments show that the road network in the vicinity of the airport will become significantly over-capacity over the next few years irrespective of the construction of the northern parallel runway.'

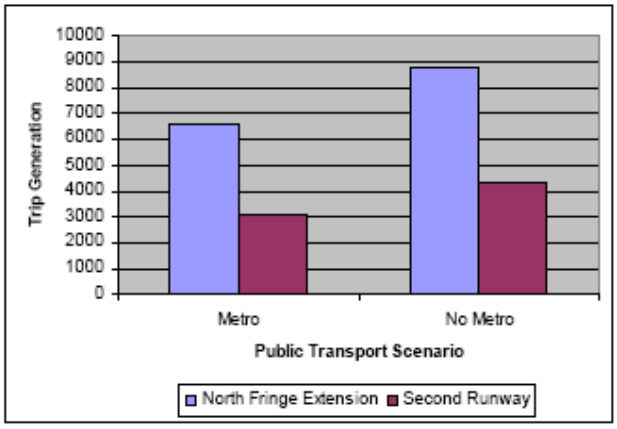
If the current road network including the network with all the planned improvements cannot cope with the future developments in the area why exacerbate the situation with the extra addition of the Northern Parallell Runway. The road network will have to cope with the growth of Dublin Airport which will occur naturally and as a result of the 2nd terminal, a further development will make a bad situation worse.

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

P.S. The Metro project is still essential to the successful development of the North Fringe Area and the future growth of Swords. It is also essential to protect the capacity of the M1 north of the Airport

Finding 10:

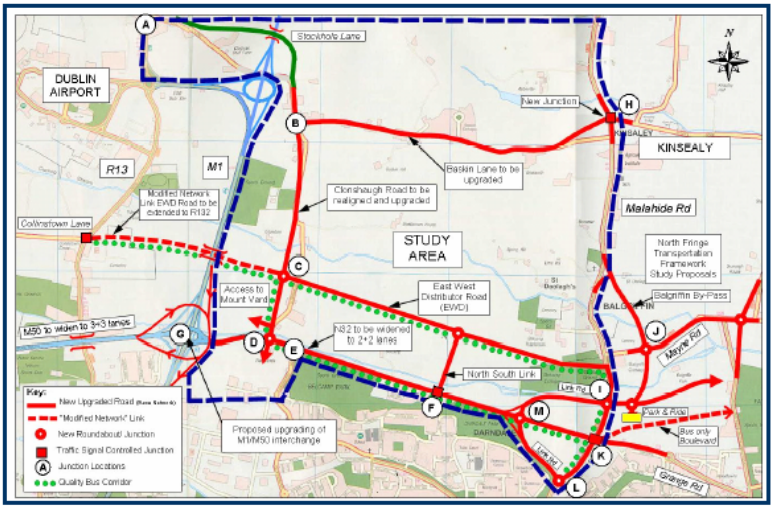
The EIS report repeatedly states that the new Northern Runway extension has little impact on the capacity of the road network in future years and most of the impact comes from development. However the impact is significant (accounts for almost 50% of North Fringe impact) see graph below (from EIS)



Text Figure 13.10 Development Trip Generation: 2025 AM Peak Hour.

Note:

1. The North Fringe Extension refers to the proposed development (commercial, retail and residential) on lands north of Dublin Airport see map below:



Text Figure 13.6 Extract from North Fringe Extension Area Study Report.

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Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

2. Trip Generation refers to PCU's (passenger car units) arrivals and departures at the airport during the morning peak hour.

Finding 11: - Junctions:

Airport Access Roundabout:
The Airport Access Roundabout is the main access point from the M50 and M1, N1 to Dublin Airport, The EIS states the following:

'The initial assessment which modelled the roundabout in its current form confirmed that the junction does not have sufficient capacity to cater for the predicted future traffic volumes'.

Following junction improvements the EIS states:

'This assessment confirms that the junction will provide a reasonable level of service for expected traffic volumes (in 2010). Whilst the assessment indicates over-capacity on some arms, examination of the level of queuing shows this not to be excessive, particularly when compared to current actual conditions'.

Following simulated improvements to the roundabout there are still two saturated links/arms on the junction. The arms that are at saturation are the most critical i.e. the access to the airport (westbound cut through) and the M1. These links show 95%, and 105% degrees of saturation. This is not an acceptable level of service to the National Airport. The junction has not been modeled in the pm peak so we have no information on how it will perform at the busiest time for passengers wishing to access the Airport.

Finding 12:

South Corballis Road Junction: This junction provides the second point of access to Dublin Airport, The EIS states the following:

'whilst the results in text figure 13.20 indicate a couple of movements operating at a degree of saturation at, or close to, 100%, the level of associated traffic queues are not considered to be excessive compared to current conditions'

However the 2010 model shows a problem with access to the car parks. The access to the car parks are operating at saturation as is the right turn to the airport from the North, this is not an acceptable solution for an alternative airport access point and in particular for over 60% approximately of passenger traffic wishing to park their cars.

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Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

Finding 13:

Due to the future uncertainties surrounding new projects such as new car parking proposals, the outer orbital road proposal, the Metro to the Airport, etc the Consultant decided not to model the junction capacities for the year 2025.

Why then did they undertake the road link modeling to the year 2025?

Conclusions were then drawn from this work that with the Metro to Swords and the Airport together with many road improvements over and above those planned that there would remain an 'adequate' level of service on the road network.

Without modeling the junctions on the network to 2025 this conclusion cannot be reached.

Finding 14:

Finally in the conclusion of chapter 13 the report states the following:

'In the longer term, there is a degree of uncertainty in relation to the phasing of land-use developments and transport improvements. However, **even a conservative view** of future developments in the Fingal area will place significant strain on the road network independent of any developments at the Airport'.

This appears to be an admission of failure despite the re-assurances provided throughout chapter 13.

Finding 15:

The AM peak period has not been defined in the report. It is normal now to model two AM peak periods i.e. 7.00 – 8.00 and 8.00 to 9.00. In fact the peak has spread so much that one must determine the 'peak within the peak'.

Conclusions:

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

- My primary conclusion from the above analysis of the EIS Chapter 13 is that the traffic analysis is weak, and impacts predicted for the surrounding road network do not reflect existing observed traffic flows or future flows. The conclusions and analysis within the report are therefore not robust and are probably misleading.
- The base traffic model validation is poor and therefore the traffic predictions are unreliable.
- The EIS has not demonstrated to my satisfaction that the future road network and public transport proposals can cater for a much expanded service to and from Dublin Airport.
- The effect of the above may result in the future Dublin Airport been difficult to access by road as a result of traffic and public transport congestion. Journey times to and from the Airport will be unacceptably long and unpredictable due to the congested road network.
- The provision of a Metro service to the Airport does not resolve the traffic congestion and high degree of saturation on the M1 North or on the Airport Access Roundabout junction. At best public transport will only cater for 40% approximately of trips to and from the Airport.
- The capacity of the M1 motorway will be severely affected irregardless of a Metro service to the Airport.

Recommendations:

- The traffic model work needs independent validation; this should be carried out by the Dublin Transportation Office on request from Fingal County Council or An Bord Pleanala.
- Following this validation exercise a decision needs to be made on the acceptability or otherwise of the EIS report.
- Should it be determined that the EIS is not robust or acceptable from a traffic and transportation perspective then this analysis needs to be re-done and re-assessed with independent validation of the model work.
- If the above analysis proves that the further extension of facilities above and beyond the 2nd Terminal at Dublin Airport cannot be catered for adequately by the road and public transport network a new alternative site should be investigated in more detail.

Rkelly & Associates Consultants
Tel: 087 2414265 / 053 44688;Email: robertwkelly@eircom.net

Comments on the "Employment and Economics" (EIS) chapter of the Environmental Impact Statement prepared for the proposed new runway at Dublin Airport.

This chapter, in Part 2 of the EIS, uses projections of job numbers arising from the new runway as a means of evaluating the economic benefits of that project. The conclusions about job and income effects are misleading. The methodology used is unclear, and the report is heavily biased in favour of the project and therefore cannot be taken as an independent or rigorous economic analysis of the new runway project.

Economic benefit.

The objective of the chapter is stated to be to provide "estimates of the employment and income generated, locally, regionally and nationally, both currently and in the future, by Dublin airport."

Evaluation of the job and income implications of a major public project is one means of assessing the effects of such a project. Such an approach does not however constitute a proper economic evaluation of a project, nor does it constitute a valid estimate of the net employment creation effects of the project.

While this analysis does not claim to be a Cost Benefit Study, the language used implies that the projected job-related income generated by the project can be considered an economic benefit. For example, it says in 6.8.1.6: "Finally, it should be emphasised that the analysis has not addressed the wider economic benefits that would be generated by the expansion of Dublin Airport with the new runway." It proceeds to list such wider benefits as inward investment and inbound tourism. The clear implication is that the income projections presented in Table 6.10 should be taken as a measure of economic benefit, albeit in a narrow sense. The claim that jobs are an economic benefit is stated quite explicity in 7.4.3.9: "The most immediate visible economic benefit of the aviation industry is the employment of labour at, or immediately around, airports." That is an error of economic methodology of the most unprofessional kind. The study may or may not be a valid analysis of the job and job-related income impact of the new runway, but it is not an economic analysis in any sense of measuring economic benefit.

Cost Benefit Analysis.

In a proper Cost Benefit Analysis of a project, labour is a cost, not a benefit. It is a resource whose cost is represented by the term "opportunity cost". Opportunity cost means the benefit forgone elsewhere in the economy because the labour was diverted to the project being evaluated.

In times of high unemployment, extra jobs are seen as a good thing, and the value of extra job creation would be taken into account by the low opportunity cost that could validly be applied to labour that would otherwise be unemployed. But in times of full or near full employment, the opportunity cost of labour would have to be costed at the competitive wage/salary rates of the jobs in question.

The benefits from a project are the value of the stream of extra products and services arising from the project. In this case, this would be measured largely by the extra business generated by the new runway and not by the wages paid to labour. A proper CBA would also include an estimate of the welfare costs arising from the negative consequences for society, mainly for residents under or near the new flight-path, arising from pollution, noise, road congestion, flooding, etc. The EIS does report elsewhere on these issues, but no economic evaluation is made of projected impacts.

An estimate of the cost of these factors to the people of Portmarnock alone can be made by considering the possible effects on property prices in Portmarnock of the new runway project. Some property experts say that property prices under a flight-path lose 10% to 15% of their value. With 2340 households in Portmarnock (Census 2002) and probably about 2500 in 2005, residential property alone in Portmarnock is worth about €1 billion. A 10% to 15% loss of property value for the residents of Portmarnock implies a cost of €100 million to €150 million. That is a proxy economic evaluation of the welfare loss to the residents of Portmarnock caused by this new runway development as a result of the adverse effects of noise, pollution, congestion, educational disadvantage, etc., on the community. If the effects on other affected communities were also considered the costs would be even greater. Construction of a new airport on a green-field site far from built-up areas would not have these costs to be set against the economic benefits of the project.

As presented, the income figures contained in Table 6.10 will probably be widely misread as referring to the benefits from the project, with no reference to the real costs of the project. The clear implication is that if the runway is not built, the economy will lose these jobs and the large associated income. This is stated explicity in 3.1.1.5. It is very misleading.

On the contrary, stimulating more jobs in a period of full or near full employment in a congested area of Dublin with great pressure on residential property prices could be seen as imposing additional costs, rather than benefits, on the economy of Fingal. These costs would not arise, or could be much less, if the new runway was built elsewhere. This would be even more the case if a new airport was located in an area of low employment.

The analysis makes estimates of the direct on-site impact on employment, direct off-site employment, indirect impact and induced impact. This is a very dubious practice if read to mean a net increase in employment. If account is not taken of the diversion of employment from other areas of activity, these figures cannot be read as additional jobs to the region or the economy. In a period of full-employment most, if not all of these jobs may be diverted jobs and there may be little or no net effect, at least nationally. Fingal may "gain" jobs by taking workers from outside the Fingal area. While neither full-employment nor high unemployment can be assumed for the lifetime of the project, some projection of the unemployment rate up to 2025 in the Fingal area would be needed in order to assess the extent to which these runway-related jobs would be additional.

In Part 1, the Non-Technical Summary (item 0.1.1.15) it is stated: "The impact of the proposed new runway in 2025 would be around 30% more local, regional and national employment. This translates into around 3,900 and €145 million in income (at 2001

prices) locally, 7,200 jobs and €451 million of income regionally, and 11,900 jobs and €741 million of income nationally." The reference to "30% more local regional and national employment" is clearly absurd. But the claim that all these jobs are net gains in employment is highly dubious. It would take some serious economic modelling to determine the real job impact of this project.

Job projections.

Looking at the job projections in their own right, serious methodological reservations are raised.

The analysis begins by making projections of passenger numbers in 2010, 2017 and 2025 under a range of growth assumptions and under two scenarios: an unconstrained scenario and a constrained scenario. The unconstrained scenario assumes "there are no runway (or other) capacity constraints relating to the growth of Dublin Airport." The constrained scenario assumes effectively that there will be no new runway over the forecast period. The reference to "other" capacity constraints is of some concern, as they are not identified. To be valid, such "other" constraints must be directly related to the new runway. While the methodology is not explained, it would be correct to consider that the difference between these two scenarios would produce an estimate of the effect of the new runway on passenger numbers. The centreline (medium) growth option estimates that in 2017 there would be 11.3% (3.4 million) fewer passengers without the new runway. The figures for 2025 are 26% (10 million) fewer.

Similar projections are made for aircraft movements (thousands) and freight (tonnes) with and without the runway. Job projections for different categories of employment are made using these three sets of projections. E.g., Employment in Airlines/ Handling Agents and Concessions (the largest category) is expected to grow in line with passenger traffic. Employment in cargo is projected to follow freight traffic and employment in aviation support services is expected to grow with aircraft movements.

A fundamental problem with the analysis is the lack of transparency on the critical issue of distinguishing between the growth in passenger numbers, etc., with and without the new runway. Although it seems the forecasting methodology was approved by consultants (6.3.1.1) we have no independent evaluation of its application or of the results obtained. The forecasting methodology may be sound but the critical factor is the determination of the differential effect of the new runway on the results. For example, there is a difference of 10 million passengers by 2025 between the constrained and unconstrained scenarios. The jobs and income results critically depend on that difference, but no explanation for it is given anywhere in the report. We can therefore make no determination of the validity of these results, on this score. There is some material in Appendices G6 and G7, which may be relevant, but it is not at all clear how it might be so. Essentially, we are asked to take on faith that this critical factor has been handled properly in a report, which is clearly biased in favour of the new runway at Dublin airport, to the exclusion of alternative locations.

Circularity

Some of the reasoning used is circular. That circularity is well represented by the following statement in the Non-Technical Summary paragraph 0.1.1.7:

"Dublin airport Authority has carried out a number of studies into alternative approaches for runway capacity. As part of the process of preparing the Environmental Statement, these alternatives have been reviewed and updated. It has been found that the development of a northern parallel runway best meets the projected traffic needs of the future."

This statement seems to imply that growth will take place independently of developments of capacity at Dublin airport. Although the constrained/unconstrained analysis appears to make the "with runway/without runway" distinction, here the new runway is rather seen as a necessity to meet projected future needs that would arise regardless of capacity. This is further emphasised by the fact that the report excludes any consideration of a second terminal. This is odd as it is virtually impossible to imagine the projected number of passengers (28.4 million in 2025 in the unconstrained scenario and 10 million more with the new runway) being handled with the existing terminal building. It would be more honest for the report to say: "if we want to expand Dublin airport to handle 38 million passengers by 2025 we need a new runway (and a new terminal building)." It does not say that, but rather tries to imply that the runway is needed because of exogenous growth in passenger numbers, etc., at Dublin Airport.

Productivity growth.

Paragraph 6.6.1.2 says, "Future employment ……will be subject to productivity growth." Annual productivity growth assumptions published by the ESRI are given for the period 2001 to 2025. It can therefore be assumed that the job growth assumptions, however carried out, were reduced by the assumed productivity growth rates for both constrained and unconstrained scenarios. Unfortunately no detail is given so it is impossible to verify the figures. There are some oddities.

It seems that productivity growth will actually reduce jobs in the constrained (no runway) scenario. E.g., directly created jobs in Fingal fall from 13700 in 2010 to 12500 in 2025. (Table 6.8). We are therefore being told that passenger numbers can grow from 22.9 million in 2010 to 28.4 million by 2025, with no new runway at the airport but that employment at the airport will drop by 1200 in the same period as a result of productivity growth. This looks very dubious (see below). In the unconstrained scenario passenger numbers grow to 38.4 million by 2025 while direct employment in Fingal grows from 14000 to 16200 over the same period. Again, these are critical results for the study but it is impossible to verify them from the published material.

The validity of the methodology used in the EIS to extrapolate job numbers due to the new runway is shown to be even more suspect by an article by Dr.Garret Fitzgerald in the Irish Times of 22 January 2005. In his opinion, labour productivity figures for recent years have been overweighted by certain modern manufacturing industries. Large increases in Irish productivity has been due to high-tech investment by US multinationals; he cites Viagra production, for example. These effects will diminish

in the future as the share of services in our economy grows. More recent productivity growth has been very modest. This may well indicate the ESRI's projections of continuing fairly high productivity growth used in the EIS may therefore be challenged, if these are indeed the latest ESRI figures. However, a further serious flaw in the methodology is also revealed. The ESRI indices of productivity growth are for the full labour force where, it seems, average productivity growth has been heavily influenced by growth in manufacturing labour productivity in contrast with more modest growth in services labour productivity. As the likely jobs created by the new runway are service type jobs, rather than manufacturing jobs, it is wholly inappropriate to apply these average productivity growth projections to jobs at Dublin airport. The conclusion that little or no growth will occur in airport jobs by 2025 without a new runway, even while passenger numbers grow to 28.4 million, is wrong and needs to be completely redone.

No date is given for the ESRI source used for the productivity growth figures, but as the first period cited is 2001 – 2008, it is likely the estimates used pre-date 2001. The figure of 3.4% per annum for that period seems very high in the light of what we know of the 2001-2003 period where, according to Dr. Fitzgerald, annual productivity growth did not reach one per cent, and is unlikely to have been much better in 2004. For an average of 3.4% to apply to the period remaining (2005 to 2008) it would require annual growth for the next three years to average something near a staggering 7 per cent. It seems that data wholly inappropriate for a study in 2004/5 has been used. If so the job projections given are meaningless and cannot be used to justify this project. Upon enquiry, the ESRI has confirmed that the figures used in these projections are not the latest ESRI productivity figures.

Sensitivity Analysis.

No sensitivity analysis is undertaken or presented. Serious studies of projects of this magnitude need to vary assumptions within likely bounds and report results at those bounds. The Low Growth, Centreline (Growth), High Growth figures presented do not represent sensitivity testing as the assumptions made are neither stated nor justified.

Much of the analysis presented could apply with similar effect to a new runway in a radius of 100 km of Dublin. Indeed it is very possible that a full comparative study of the present proposal against a new green-field airport elsewhere in a less densely populated, less congested, higher unemployment area, would not favour the Dublin airport project.

Summary.

This is not a satisfactory economic evaluation of the proposed new runway project at Dublin Airport. It misleadingly implies that the jobs created directly and indirectly by the project, represent additional jobs in the economy and additional income, both of which will be lost if the project does not go ahead. This is false. It is false because no account is taken of the effect on a full employment economy of a major investment project. Diversion of labour from other valuable economic activities may well be very large with few new jobs created. Indeed, stimulating job growth in a high-density, congested part of the country would impose additional costs on society, and

contribute to wage inflation. Full employment cannot be assumed indefinitely but the likely future annual rates of unemployment need to be taken into account in deciding how much of these runway-related jobs might be truly additional.

It is false because income, even if it were additional, is not a measure of economic benefit. Labour is a cost, and would be treated as such in a proper Cost Benefit Analysis. It is an especially high cost in a full employment economy. The main benefit would be the value of the extra business generated by the new runway. No estimate is made of this.

It is false because, whatever its value, much of the analysis would apply to an airport/runway development anywhere within 100 km of Dublin. Indeed, if a proper Cost Benefit Analysis was undertaken that compared Dublin with other possible locations; it is very likely that the Dublin project would score badly.

The job growth results critically depend on the differential rates of growth in passengers and other activities in two scenarios representing respectively, a future with, and a future without the new runway. Unfortunately, the methodology used to make this distinction is nowhere explained in the published material; it is therefore impossible to validate the results. It would also appear that out-of-date ESRI labour productivity projections were used in a wholly inappropriate manner to make the extra jobs projections, making them essentially worthless.

It is imperative that a full Cost Benefit Analysis should be carried out on the runway project by an outside independent body that would also compare the Dublin Airport location with alternative sites within 100 km of Dublin. Indeed, given the extent of the bias in this part of the EIS and the need to have independent estimates of the negative welfare effects due to noise and pollution, etc., to feed into a proper CBA, a full new EIS needs to be carried out by an independent body.

Matthew Harley M. Sc. (econ - TCD)

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