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LONDON LUTON AIRPORT

A STUDY TO UNDERSTAND TRAVEL BEHAVIOUR AND DEVELOP STRATEGIES TO DELIVER MORE SUSTAINABLE TRAVEL AMONGST AIRPORT EMPLOYEES – EXECUTIVE SUMMARY

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1 INTRODUCTION

- 1.1.1 Parsons Brinckerhoff (PB) has been commissioned by London Luton Airport Operations Limited (LLAOL) on behalf of Fundació Abertis to investigate journeys made by staff to and from London Luton Airport (LLA), with a view to implementing practical measures to reduce localised congestion and CO₂ emissions from employee travel. This document provides an Executive Summary of the full Recommendations Report completed by PB for LLAOL and Fundació Abertis in February 2009.
- 1.1.2 Encouraging the take-up of sustainable transport options by employees is becoming increasingly important across the UK. At LLA this is crucial in order to ensure that the Airport is able to operate and develop in a way which adheres to relevant government policy whilst meeting its own Corporate Social Responsibility (CSR) objectives and LLA's proposed Airport Surface Access Strategy (ASAS) target for reducing employee single-occupancy vehicle modal share amongst staff to 60% or less by 2011.
- 1.1.3 Presently, LLA has a variety of surface access options available for both passengers and staff. These include an excellent bus and coach network and a high frequency rail service (with a dedicated rail station and shuttle bus link) together with the nearby M1 motorway and local road network. In addition, several public transport infrastructure improvements are ongoing or planned in the near future which will further increase sustainable transport options for staff members, including the Thameslink Programme and Luton Dunstable Busway projects.

2 DATA REPORT

2.1 Modal Split and Trends Established for Staff

- 2.1.1 In order to develop an understanding of present surface access choices made by staff, PB undertook a staff travel survey in March 2008. The surveys included questions about current travel behaviour, likelihood of modal shift¹ and awareness of the 'Airport Travelcard', a discounted public transport travel scheme open to LLA employees. An employee survey conducted by LLAOL in 2000 provides a modal split baseline against which this study can be compared (Table 2.1). Staff levels at the Airport in 2000 were broadly similar to the present, at around 8,500 employees.
- 2.1.2 Table 2.1 shows that the majority of staff commute to LLA by either driving alone (72%) or car sharing (10%). This is followed by bus (6%) and train (5%). There has been a shift from the private car to public transport between 2000 and 2008, although this has been less pronounced amongst shift-workers, for whom public transport options may be less accessible.

¹ Modal shift – change in means of transport used by employees to reach the airport

Mode	2000	2008
Car driver	78%	72%
Drive with passengers	n/a	4%
Car passenger	11%	6%
Motorcycle	2%	1%
Taxi	1%	2%
Bus / coach	2%	6%
Rail	2%	5%
Cycle	1%	1%
Walk	3%	3%

Table 2.1 LLA employee journey to work modal split in 2000 and 2008
(sources: LLAOL ASAS, 2000; PB staff travel survey, 2008)

2.1.3

A plot of the residential area for surveyed staff (Figure 2.1), based on postal area, shows the vast majority (55%) live in the Luton area. The Milton Keynes and Stevenage areas, both located close to Luton, also provide a high proportion of Airport staff (12% and 10% respectively). The vast majority of staff residing in these three areas travel as lone drivers. Beyond the local area, the proportion of staff residing in a particular area decreases with distance from the Airport.

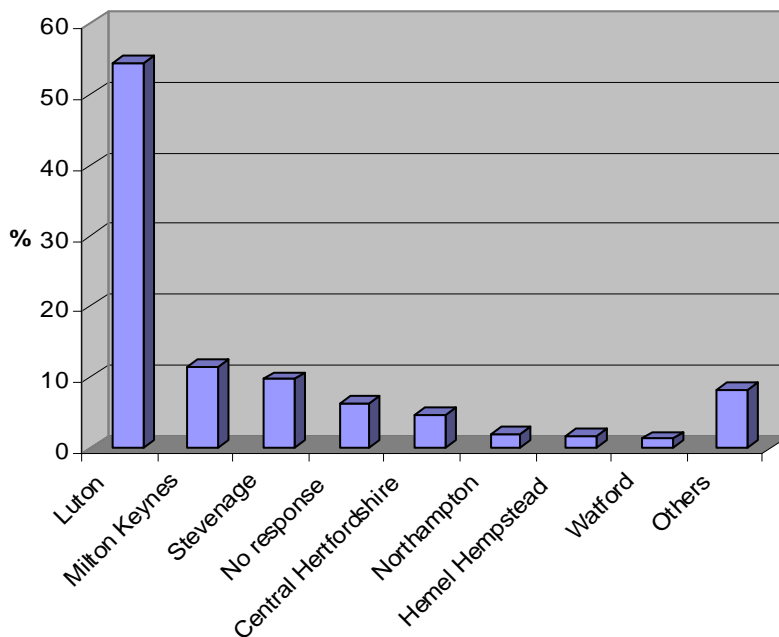


Figure 2.1 Indicated home postal area for LLA 2008 staff questionnaire respondents.

2.1.4

To identify which measures may be successful in facilitating a change in travel behaviour, it is important to understand what would influence single-occupancy drivers to use an alternative mode. To do this it is necessary to consider what alternative methods of transport staff members have used on the occasions that driving alone is not practical. The survey showed the most popular alternative is to travel in a car with others. Alternative modes are less popular, with approximately 90% of single-occupancy car drivers reporting that any alternative to the car would be used “only if I had to”.

- 2.1.5 Having established the preferences of staff members who choose to drive alone, the reason for this choice was investigated. Survey responses reveal that most drivers feel the distance to travel between home and work is too great to walk or cycle. Furthermore, for most respondents the availability of rail or bus services is the key issue. Some 40% of drivers feel public transport is not available at the right time of day, 37% believe that there is none available at all, and where it is available it is considered by many to be too expensive or slow.

2.2 Employee Travelcard Scheme

- 2.2.1 LLA has operated an Employee Travelcard scheme since 2004. LLAOL, on behalf of airport employees, has negotiated significant discounts for local public transport services to encourage more sustainable travel behaviour. The airport travelcard is free to all airport employees and offers discounts of up to 50% on some public transport services. Staff awareness and usage of the scheme was investigated through the questionnaire.
- 2.2.2 Awareness of the travelcard scheme amongst employees is fair at 50%. However, only 18% of respondents actually have a travelcard and only 13% regularly use the card. This indicates that whilst there is a reasonable level of awareness amongst staff, actual levels of use are low on a day-to-day basis.
- 2.2.3 Home postcode information for travelcard transactions in 2008 shows that almost half the total participants (48%) live in the Luton postal area. These employees undoubtedly take advantage of local bus services to the airport. A further 12% of travelcard users travel from the Milton Keynes area.

3 REVIEW OF OPTIONS

3.1 Introduction

3.1.1 A number of options could be implemented to encourage modal shift amongst LLA employees, thus delivering against the study objectives, as well as LLAOL's ASAS and CSR objectives. The staff travel survey identified several characteristics of public transport, car sharing, walking and cycling that are commonly seen as issues by single occupancy car drivers, the key target for transport initiatives.

3.1.2 This section seeks to understand whether addressing these issues would encourage modal shift away from private car use and hence identify measures that could be implemented to increase the use of alternative modes. To examine these measures, each major initiative group is looked at in turn. In addition, estimated potential CO₂ savings with modal shifts to car sharing and public transport are discussed.

3.2 Modal Shift Initiatives

3.2.1 To understand what measures would influence single-occupancy drivers to consider alternative modes, a series of questions was asked to identify the measures which would influence drivers to change commuting choices.

Public Transport Measures

3.2.2 Public transport measures usually relate to service improvements as a wish for "better public transport" is often the answer given by those who say they may consider switching from driving alone. For some, better public transport may mean better waiting facilities whilst for others it means services running more frequently. Whatever the personal interpretation of 'better public transport', public transport must offer a more attractive mode of travel than the car for the journey that someone wishes to make.

3.2.3 The commercialisation of the bus industry in the UK following the 1985 Transport Act means that route choices by commercial operators are primarily made on the basis of profit maximisation. It also means that the bus industry adopts a very conservative, risk-averse business approach. As such, routes which would benefit commuters but may incur higher costs for the operator are unlikely to initially be chosen without local authority subsidy to allow a passenger base to develop. This could act to restrict the expansion of bus routes in the Luton area, and suggests that in order to develop levels of service greater engagement with both local authorities and bus operators will be crucial. Some UK airports have taken the decision to subsidise bus services, although LLA has not yet adopted this approach.

3.2.4 As the airport operates 24 hours a day, seven days a week, it is essential that public transport services suit the working patterns of Airport staff. Improved service frequencies along with better service connections will encourage single occupancy car drivers to switch to public transport. Better connections are important for those members of staff who do not have a direct bus link to the airport.

Car Sharing Measures

- 3.2.5 Car sharing has increased in popularity over the last few years with both individual employers and many local authorities developing car sharing websites. A car share database allows users to enter journey details enabling the database to search for other members with the same journey requirements.
- 3.2.6 Initiatives related to car sharing were examined, with three measures indicating significant potential changes in commuting patterns. The most attractive measure was the provision of a lift home in case of emergencies, highlighting the need to retain the independence inherent in private vehicle trips.

Walking and Cycling

- 3.2.7 Measures that would encourage walking and / or cycling to the site were also considered. There are very few respondents that presently walk or cycle to the site and the measures that could encourage an increase are generally not seen to be sufficiently attractive, with only about 1 in 10 single occupancy drivers very likely to consider changing travel behaviour.
- 3.2.8 Postcode plotting can identify those who live within a couple of miles from their place of work and who may be able to walk or cycle. Living within theoretical walking or cycling distance from work does not necessarily mean that staff are able to walk and this is why ensuring that the facilities are of a sufficiently high standard is important. To ensure that the on-site facilities and those in the wider environs of the site are also of a suitable standard in order to minimise anxieties about personal safety, discussion and ongoing liaison with the relevant local authority will be needed.

Airport Travelcard

- 3.2.9 LLA currently have a travelcard scheme in place which includes a number of public transport discounts for staff. Raising awareness of the scheme, particularly amongst car drivers, would be key in leading to increased use and hence achieving a further modal shift towards public transport.

Travel Plan Coordinator

- 3.2.10 A Travel Plan Coordinator (TPC) is an individual responsible for the day to day operation of a Travel Plan and can act as a focal point for information relating to each mode. They need to have an appropriate amount of time and budget set aside for this responsibility as well as support from staff. The amount of time that needs to be allocated to such duties will depend on the size of the company and the complexity of the Travel Plan. For smaller employers it is common practice to have a member of staff devote some of their time to Travel Plan related duties. Where a larger employer operates a travel plan, a TPC may be employed on a full-time basis. The potential modal shift that this measure could achieve, however, was disappointingly low compared to other initiatives.

3.3 CO₂ Emission Savings

3.3.1 In 2007, LLAOL participated in the Carbon Trust's² 'Carbon Management Programme' (CMP), a six month programme looking at the business case and opportunities for carbon reduction from its operations at LLA. The CMP identified that over 60% of LLA's CO₂ emissions were generated by surface access journeys, estimated at over 100,000 tCO₂ per annum. Therefore, if LLAOL is to continue to grow sustainably, it is imperative that it seeks to positively influence passenger and employee travel behaviour.

3.3.2 This study has sought to quantify the scale of CO₂ savings that could be achieved, using a methodology discussed in the full report. These CO₂ emission savings have been summed to show the total expected saving per working day for survey respondents (Table 3.1). This shows that CO₂ emissions will be reduced more if car sharing initiatives are implemented at LLA – although fewer people are willing to car share, they are likely to live further from LLA than public transport users, leading to the greater reduction in emissions. It must be stressed that these values are based only on survey respondents, and applying the initiatives to the wider LLA staff could lead to further reductions.

	Public Transport	Car Share
Total single car users who are very likely or likely to change	233	216
Potential CO ₂ saving given assumptions	64.7 tonnes / yr	139.8 tonnes / yr
Potential total travel distance saved	808,130 km / yr	931,694 km / yr

Table 3.1 Calculated CO₂ saving per year for surveyed single occupancy vehicle drivers

3.4 Technological options

3.4.1 Achieving sustainable transport choices by staff members will require concerted efforts by all LLA partners. These could be assisted by a number of technological opportunities, including:

- Public transport display boards;
- SMS messaging;
- Car sharing website;
- Staff communications; and
- Mapping surface access trends.

² The Carbon Trust (set up by the UK Government in 2001) aims to accelerate the move to a low carbon economy by working with organisations to reduce emissions and develop commercial low carbon technologies

3.5 Potential Modal Shift

3.5.1 This section has highlighted the options which would help shift staff commuting at LLA away from single occupancy vehicle commuting towards more sustainable travel. The twelve actions identified by the staff travel survey as having the greatest potential to implement change are listed in Table 3.2. This assumes that two- and one-third of single occupancy vehicle driver respondents who indicated a measure would be very likely and likely to influence a modal shift respectively. From this, it is clear that pursuing measures aimed at encouraging car sharing and public transport use would be the most likely to succeed.

Initiative Group	Measure	Potential modal shift	Drive alone	Sustainable benefit		
				Environment	Social	Economic
Car share	A guaranteed lift home in case of emergency	25%	47%		X	
Car share	Free, guaranteed parking available for car sharers	21%	51%	X		X
Public transport	More frequent buses and/or trains on your route	20%	52%	X	X	X
Car share	A facility to find a car share partner	19%	53%	X	X	X
Public transport	Discounted multi-trip tickets with no time limit	18%	54%			X
Public transport	Better bus connections	17%	55%		X	X
Public transport	Longer running hours of local buses and trains	17%	55%	X	X	X
Public transport	Better bus waiting facilities	14%	58%		X	
Car share	Car pools available for business trips	13%	59%	X	X	X
Cycling	Changing, shower and locker facilities	13%	59%		X	
Public transport	Interest-free loans and season tickets	11%	61%			X
Walking & cycling	Improved standard of cycle and pedestrian routes	11%	61%	X	X	

Table 3.2 Top 12 measures for encouraging shift from single occupancy vehicle commuting, as identified from staff travel survey. Potential modal shift based on two- and one-third take-up for 'very likely' and 'likely' responses respectively.

3.5.2 Improving the journey by public transport is key to encouraging current staff to travel by bus and train, as well as encouraging job seekers to seek out work opportunities at LLA. In terms of increasing the use of public transport, it is clear that there is demand for more frequent services. Improvements will require close partnership working with local bus operators, local authorities and other stakeholders to organise the necessary service amendments and improvements. The public transport measures will be more challenging to implement as they are outside the immediate control of LLAOL and Fundació Abertis.

- 3.5.3 From this assessment, potential mode split for each individual measure and hence maximum for each initiative group has been calculated. Table 3.3 illustrates the alternative modal split potential compared to the modal split of the 2008 staff surface access, based on assumed measure take-up and the most popular measure for each initiative group.

2008 staff surface access		Initiative Group				
Mode	Split	Public transport	Car sharing*	Cycling	Walking	Travel Plan**
Drive alone	72%	52%	47%	59%	61%	63%
Drive with passengers	4%	4%	17%	4%	4%	5%
Car passenger	6%	6%	19%	6%	6%	7%
Taxi	2%	2%	2%	2%	2%	2%
Motorcycle	1%	1%	1%	1%	1%	2%
Train	5%	15%	5%	5%	5%	6%
Bus	6%	16%	6%	6%	6%	7%
Cycle	1%	1%	1%	14%	6%	2%
Walk	3%	3%	3%	3%	8%	4%

Table 3.3 Alternative modal split potential calculated assuming two- and one-third take-up for 'very likely' and 'likely' survey responses respectively. (* Car sharing modal shift is split evenly into drivers and passengers; ** Modal shift derived from travel coordinator activities distributed from drive alone to car sharing, bus, train, motorcycle, walking and cycling)

- 3.5.4 There are a number of potential benefits to be gained by all stakeholders from encouraging sustainable staff commuting. These potential benefits will cover environmental, social and economic aspects and vary according to the particular stakeholder. All of the measures listed will have some cost associated with their set-up and initial operation, so LLAOL will need to prioritise accordingly, or identify potential partnership funding opportunities.
- 3.5.5 It is impractical to undertake all measures which were put to staff members when conducting the survey. This is partly because some measures were unpopular and hence unlikely to lead to modal shifts, plus they are likely to be financially prohibitive. In addition, such a process would be both overly disruptive and unlikely to allow individual measures to be established satisfactorily. As such, these are placed into the following Action Plan.

4 ACTION PLAN

4.1 Introduction

4.1.1 A series of measures have been outlined which would have the potential to influence travel behaviour of staff commuting to LLA. Although each of these has financial implications associated with it, these could also contribute to a number of benefits to all Airport stakeholders, including staff, passengers, employers, LLAOL, Fundació Abertis, local authorities, public transport operators and the wider community.

4.1.2 These potential measures have been placed in a provisional implementation timetable, guided by the results of the staff travel surveys but taking into consideration deliverability and wider business objectives. This will allow LLAOL, Fundació Abertis and delivery partners to identify key areas of focus and hence ensure that efforts to influence staff travel behaviour are both practical and successful. Further measures which could be implemented in the longer term are also identified, but would need to be reviewed by LLAOL to consider the wider business implications.

4.1.3 It is important to place any initiatives which LLA undertakes in the wider context of infrastructure improvements which will affect surface access at LLA. A number of such schemes relating to both road and public transport access are expected to come to fruition in the near future, which will influence how LLA takes forward the recommendations:

- East Luton Corridor;
- Thameslink Programme; and
- Luton Dunstable Busway.

4.1.4 It is also crucial that any action plan reflects LLA's distinctive split between shift and non-shift workers, for whom the practicality of sustainable transport, and hence the potential of the options identified in the previous chapter, are fundamentally different. This is reflected in the greater proportion of shift workers who drive alone to work. As such, it is unlikely that improved access to public transport service routes alone will be sufficient to facilitate a modal shift.

4.2 A timetable for implementation

4.2.1 Clearly, it is not practical to undertake all identified initiatives immediately. This is not only due to economic considerations but also important in terms of ensuring that staff members are approached in a consistent manner which focuses on appropriate mechanisms which can result in modal shift away from single-occupancy vehicle use.

4.2.2 Further to this, an additional consideration is the timeline adopted by LLAOL's draft ASAS, which is currently undergoing a period of stakeholder consultation. This is proposed to be adopted between 2008 and 2011, at which time LLAOL has committed to reappraising progress against targets. Given this, it is important that this timeframe is respected and that the mechanisms which the survey suggests will achieve a modal shift are adopted.

4.2.3 Considering the findings of this study, it is therefore recommended that LLAOL and Fundació Abertis focus primarily on the following key areas in the short-term:

- launch an airport car share website;

- develop marketing of the Airport Travelcard scheme and engage with public transport operators to seek wider approach to the travelcard scheme; and
- seek out improvements to public transport routes, working in partnership with key partners to limit LLAOL financial exposure.

4.2.4 In the longer-term, additional initiatives will be important to allow consolidation of short-term benefits. These should include those measures which will require more lengthy engagement with stakeholders to secure:

- development of a Travel Plan;
- focusing on the large number of local residents for whom walking and cycling could be an attractive option; and
- public transport improvements.

4.2.5 This proposed Action Plan, shown below, will help ensure that LLA and Fundació Abertis are well-positioned to move towards increased use of sustainable transport options amongst staff and hence deliver the associated economic, environmental and social benefits these bring to all stakeholders. The Action Plan is divided into two phases; Phase 1 – Incentivisation; and Phase 2 – Regulation.

Phase 1- 2008/2009

1. Launch Car Share Website
2. Promote Cycling
3. Identify Bus Service Improvements
4. Monitor Progress and Review

Phase 1 – 2009/2010

1. Enhance Public Transport Services/Airport Travelcard
2. Improve Public Transport Information
3. Identify Further Service Improvements
4. Raise Awareness of Car Share/Employee Travelcard
5. Monitor Progress and Review

Phase 2 – 2010/2011

1. Physical Improvements
2. Demand Management – Review Parking Charges and Spaces Provided
3. Introduce Parking Charges for LLAOL Employees
4. Subsidise Key Bus Routes (if necessary)

4.2.6 Monitoring of initiatives expanded and implemented by LLAOL to help facilitate sustainable staff commuting is also important, to allow the impact of different initiatives to be established. It is recommended that the ongoing yearly surface access monitoring, proposed by LLAOL as part of its draft ASAS, plays a role in this procedure. This will help ensure that monitoring is regular and that the aims of this study are fully integrated with the ASAS with which it shares a common aim. Further to this, monitoring of individual initiatives should be continued through the frameworks already in place.

4.2.7 Finally, engagement with both staff members and the local community will also be improved through wider publicity of LLA's present success and any future achievements in promoting staff to choose alternatives to single-occupancy car commuting. This could be achieved by promoting transport initiatives through either the local media or transport publications. It could also lead to wider participation and partnerships across the local area, which would benefit both LLAOL and Fundació Abertis.

5 CONCLUSIONS

- 5.1.1 This study shows that significant progress has been made to encourage modal shift since 2000. However, a large proportion of LLA employees still choose to drive alone to work, contributing towards localised congestion and CO₂ emissions. It is apparent, however, from the surveys that a significant proportion of staff who currently drive alone to LLA would be open to changing their travel behaviour.
- 5.1.2 Driving sustainable commuting choices by staff members will require engagement with Airport stakeholders, including employers and public transport operators, as well as the staff members themselves. Reducing the number of journeys made by single-occupancy vehicle would help ensure that LLAOL meets its ongoing ASAS commitment as well as the other economic, environmental and social benefits which such a change would lead to.
- 5.1.3 Given this, a timetable for implementing these improvements has been proposed which incorporates both short ('Phase 1') and longer-term ('Phase 2') measures. By selecting a balanced mix of schemes, LLAOL and Fundació Abertis will help ensure that staff commuting becomes more sustainable and that initiatives are supported appropriately. Marketing of present schemes would also be aided by press promotion, either through transport-specific journals or media in the local area.
- 5.1.4 LLAOL has already commenced the implementation of this Action Plan.