



BUCKINGHAMSHIRE NEW UNIVERSITY

EST. 1891

Downloaded from: <https://bnu.repository.guildhe.ac.uk/>

This document is made available with permission. Copyright remains with the author(s).

Use of items from Buckinghamshire New University's institutional repository must comply with the usage guidelines.

This work is made available under a **Creative Commons Attribution-4.0 International Licence (CC BY 4.0)**: <https://creativecommons.org/licenses/by/4.0/>

Under this licence, you may:

- Share — copy and redistribute the material in any medium or format
- Adapt — remix, transform, and build upon the material for any purpose, even commercially.

You must:

- cite the authors, title, and full bibliographic details of the item
- include a hyperlink/URL to the repository record in any citation
- keep all files required for use of the item together
- Indicate of changes were made.

You may not:

- sell any part of an item
- refer to any part of an item without citation
- use or adapt the work in a way that misrepresents the author or impugns their reputation
- remove or alter the copyright statement on an item
- You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

If you need further guidance contact the Library and Learning Services at Library@bnu.ac.uk



BUCKINGHAMSHIRE
NEW UNIVERSITY
EST. 1891

UTSG Annual Conference 2026

Locally Driven Airport Surface Access Strategies: The Case of Buckinghamshire and the Surrounding Airports of LTN and LHR

Prof David Warnock-Smith | Embry-Riddle Aeronautical University

Dr Uchenna Nweke | Buckinghamshire New University



Brief Intro

David Warnock-Smith (Professor of Aviation Management)

Associate Dean, Academics and Operations, College of Business -
Worldwide, Embry-Riddle Aeronautical University

Uchenna Nweke (PhD, SFHEA, CMBE, CMgr, FCMI)

Senior Lecturer & Programme Lead MSc International Business
Management, College of Leadership & Innovation, Buckinghamshire New
University



Contents

Context and Research Problem

Research Goals

Summary of Methodology

Overview of Results/Findings

Key Takeaways

Next Steps

References



Research Problems - Luton

1. Bucks (inc. MK) private vehicle access 23% above LTN 2022 target (2023 data). Excluding MK this rises to 33%

2. 26% below 2022 sustainable public transport mode access (29% if excluding MK LA area)

- Airport catchment areas lying outside the relevant local authority boundaries generally have poorer sustainable surface access alternatives and choices
- Lack of granular flow and service data from these areas to inform airport, LA and operator decision-making
- Dearth of airport, LA and operator budgets to support additional infrastructure and services in these areas



Research Problems - Heathrow

Surface Access - Mode of Transport		Avon	Bedfordshire	Berkshire	Buckinghamshire
Charter Coach/Bus		1.88%		2.31%	0.59%
Hotel Shuttle				1.28%	
National Express Coach	5.84%	34.19%	5.78%	2.35%	2.39%
Other		0.39%		0.90%	
Other Scheduled Coach		3.83%		3.30%	1.10%
Private car	50.53%	30.77%	46.74%	38.69%	51.80%
Public bus		1.87%		3.87%	0.66%
Rail: All other services		2.63%	2.26%	0.39%	
Rail: Heathrow Express		6.65%	2.62%	0.15%	0.59%
Rail: TFL Rail / Elizabeth Line / Heathrow Connect		3.43%	4.21%	4.58%	1.30%
Rail: Underground	16.65%	3.65%	9.37%	1.57%	2.18%
Rental car		2.51%	4.28%	3.46%	3.54%
Taxi/minicab	26.98%	8.20%	24.73%	37.14%	35.87%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Bucks 9% PT v LHR target
of 50% & 13.5% below
benchmark group of home
counties (Berks and Beds)

- Airport catchment areas lying outside the relevant local authority boundaries generally have poorer sustainable surface access alternatives and choices
- Lack of granular flow and service data from these areas to inform airport, LA and operator decision-making
- Dearth of airport, LA and operator budgets to support additional infrastructure and services in these areas



Research Goals

- For the two nearest commercial airports to the Buckinghamshire ceremonial country area - LHR and LTN:
 - Stage 1a: Develop a **granular view** of current service alternatives available and flows/modal share for 99 MSOA areas
 - Stage 1b: Develop an MSOA airport surface access **Prioritisation Criteria**
 - Stage 2: Measure possible impact of a **shortlist* of locally driven initiatives** to encourage more sustainable surface access to/from Buckinghamshire

* Shortlist of initiatives determined by stakeholders (LAs/airport operators) by estimated cost versus emissions reductions



Summary of methodology (Stage 1) - Framework

MSOA information

- List (99) and determine population weighted centroid points – ONS Geography

Current capacity information (linked to MSOA)

- Road options – Google maps (cost est. 45p per mile) / Purple Parking
- Rail options – National Rail/Train Operator websites/TfL website
- Bus/Coach options – Bus and Coach timetables and fare information from operator websites

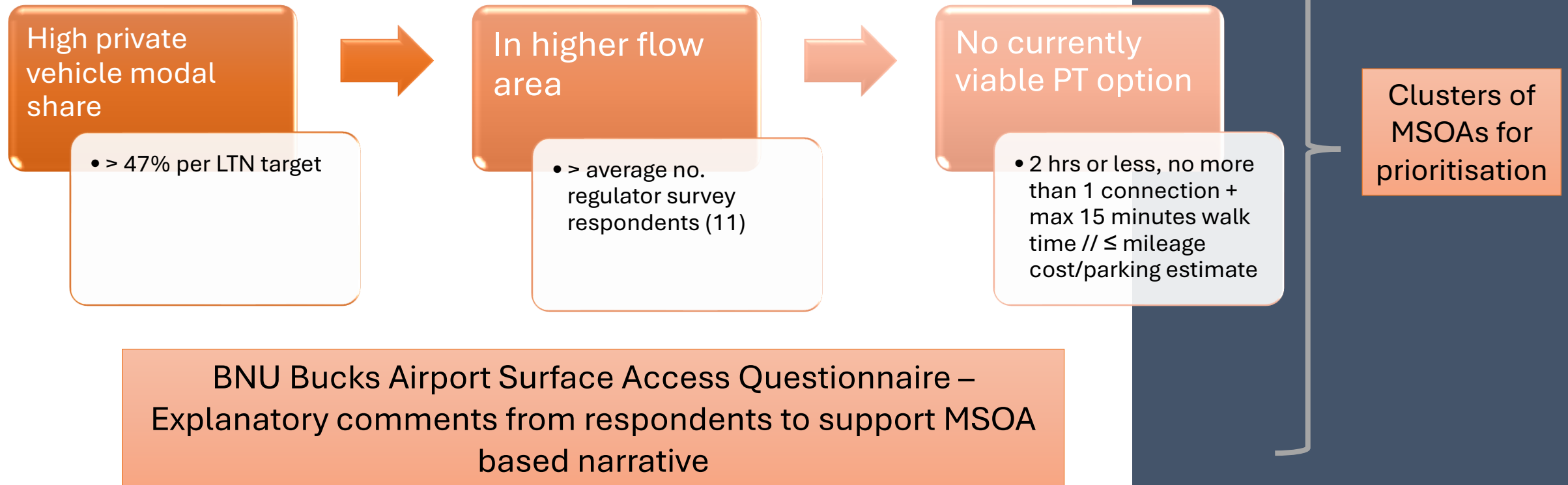
Flow/Share information (linked to point of origin – MSOA)

- BNU Airport Surface Access Survey – qualitative data: open comments (September-October 2024)
- National regulator - quantitative survey data (2023)

Study extends existing UK airport surface access research (see Budd et al., 2011, Humphreys et al., 2005, and Yilmaz et al., 2026) by generating the first granular, MSOA-level assessment using case of Buckinghamshire (inc. MK)

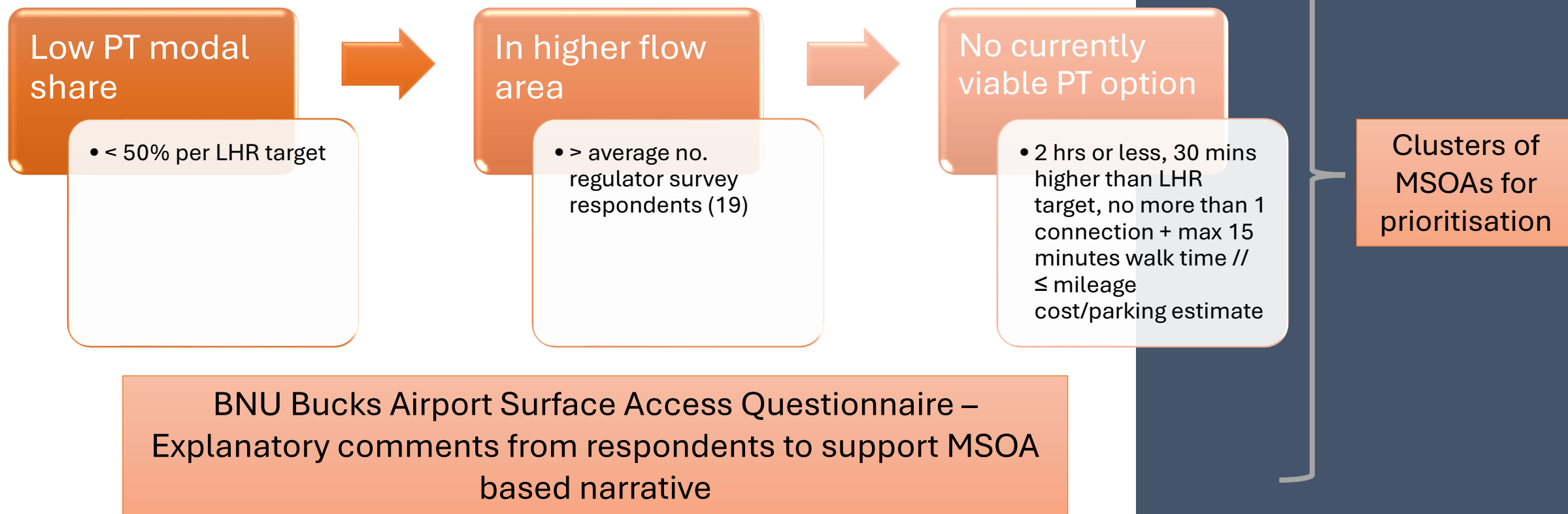


Summary of methodology (Stage 1) – MSOA Prioritisation Criteria (LTN)





Summary of methodology (Stage 1) – MSOA Prioritisation Criteria (LHR)





BUCKINGHAMSHIRE
NEW UNIVERSITY
EST. 1891

Overall Results/Findings



Summary of MSOA prioritisation results - LTN

#	MSOA cluster name	Catchment estimate/# participants	Airport access mode sustainable %	Viable PT options (trip duration)	Viable PT option (cost)
1	Furzton – The MK Anomaly	26	4	No	N/A
2	Aylesbury Vale North	21	14	No	N/A
3	Aylesbury Town (Surroundings)	15	13	No	N/A
4	Aylesbury Vale South	14	0	No	N/A
5	Chesham, Missenden and Surroundings	17	0	No	N/A
6	Gerrards Cross Area	18	6	No	N/A
7	Princes Risborough Area & Hughenden Valley	12	8	No	N/A

BNU Survey - Selection of comments

#2 'Financial incentives (e.g. discounts on fuel, parking, transport fares) would be most likely to encourage modal shift

#2, 3, 4, 5, 6, 7 'We are (very) satisfied (private vehicle; private taxi) with our last surface access trip'

#2 'Access to Heathrow and Luton from the Aylesbury Vale area by public transport is non existent, despite the relative proximity. This leaves no option but to travel by car often by back routes/cross country'

#3, 4, 6, 7 'New/improved PT service would be most likely to encourage modal shift'

#7 Need better public transport options. I don't drive, my husband does. I often accompany him to collect people from the airport, but its often a hassle, because of traffic.

Driving at night is hard and we'd prefer to relax and chat to guests and family instead of navigating under pressure'



Summary of MSOA prioritisation results - LHR

#	MSOA cluster name	Catchment estimate/# participants	Airport access mode sustainable %	Viable PT options (trip duration)	Viable PT option (cost)
1	Milton Keynes (City) East	26	19	No	N/A
2	Aylesbury Vale Buckingham Area	25	8	No	N/A
3	Aylesbury Vale West	20	10	Yes	No
4	Missenden & Hyde Heath	29	3	No	N/A
5	Burnham Area and Bourne End	23	14	Yes	No
6	Marlow Area	23	11	Yes	No

BNU Survey - Selection of comments

*#2,3,4,5‘New/improved PT service would be most likely to encourage modal shift’
#6‘Parking to pick up and drop off is an expensive hassle and stressful experience (private vehicle - neutral). A park & ride option nearby with free parking and frequent buses, so more easily able to take family into airport and collect from arrivals on return would be a much better solution’*

#6‘We would use public transport only if we believed it was sufficiently frequent and reliable’

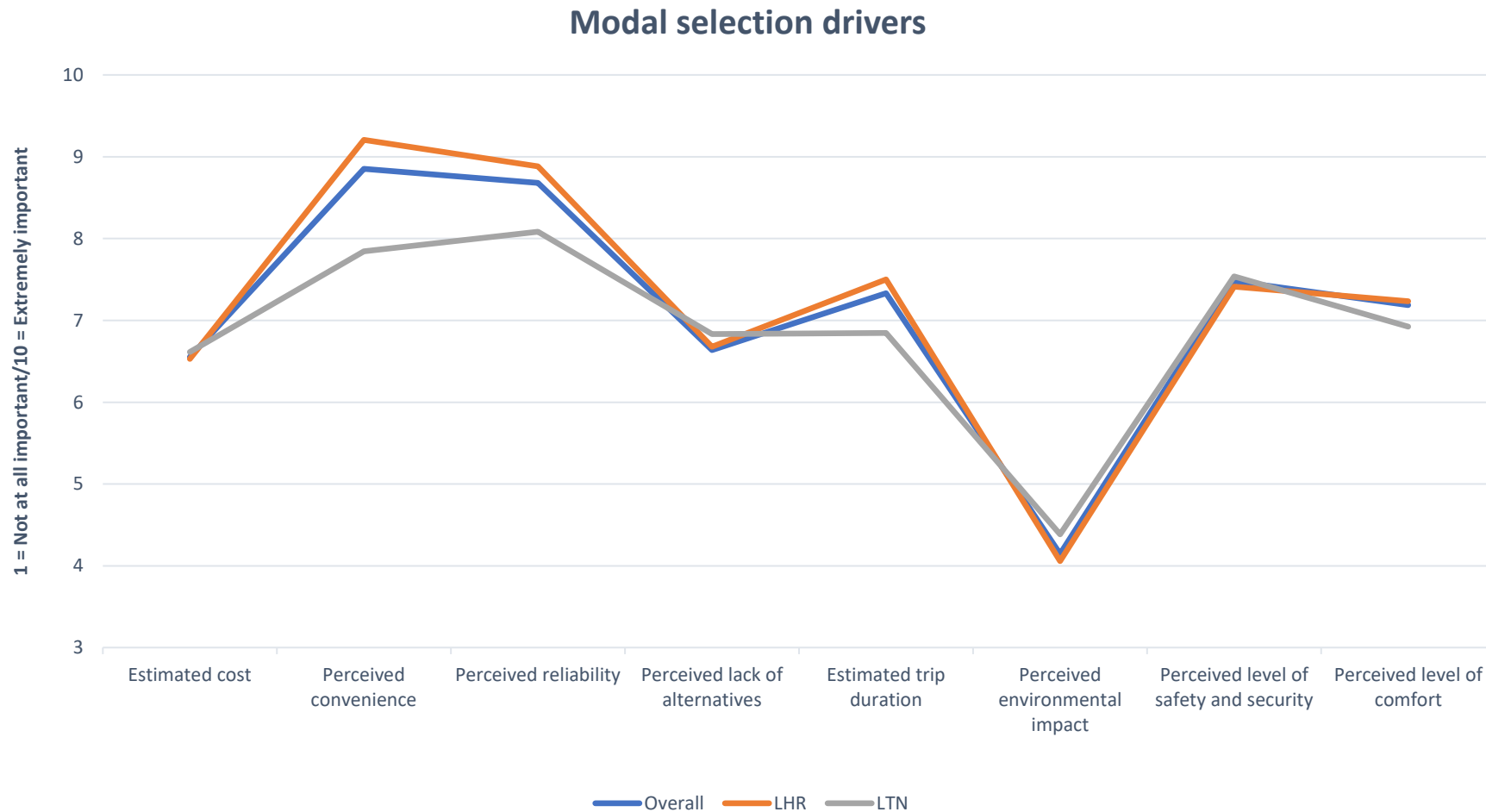
#2, 4, 5 ‘We are between satisfied and very satisfied with our last surface access trip (private vehicle/taxi)’

#3 ‘Heathrow is preferred London airport as closest and convenient. However flights often dictate using Gatwick instead which takes longer and involves more (access) cost’.

#5 ‘It meant (private vehicle choice) that you are only paying the one charge but several people could come/be picked up for one cost’

#6‘Financial incentives (e.g. discounts on fuel, parking, transport fares) would be most likely to encourage modal shift’

BNU Buckinghamshire Airport Surface Access Questionnaire Modal Selection Drivers



Observation 1

Low importance of perceived environmental impact

Observation 2

Lower emphasis on cost and convenience for LTN respondents v LHR respondents*

*Note: Sample size and small differences in means = differences not statistically significant



Some key takeaways - Luton

- Flows generally higher in the MK and Aylesbury Vale areas of the county, with some notable flows also in the Missenden/Chesham, Princes Risborough and Denham/Gerrards Cross areas
- Modal splits generally more sustainable in the MK area versus the rest of the county - impact of service investments such as the MK1 bus are clear
- Applying granular MSOA analysis and set Prioritisation Criteria results in **seven MSOA cluster areas** deserving of specific attention in terms of PT offering (primarily focussed on trip durations) and increased awareness of existing offerings – six areas are in the Buckinghamshire Council area
- Supporting qualitative data shows typical utility-based resistance to change in travel habits but also opportunities for change with enhanced service offerings and/or accompanying messaging that can encourage some shifting without (overly?) sacrificing utility



Some key takeaways - LHR

- Flows generally increase progressively from North to South in the county with two exceptions (MK City East and Aylesbury Vale Buckingham Area)
- No obvious detectable geographical patterns for modal splits at the MSOA level
- Applying granular MSOA analysis and set Prioritisation Criteria results in **six MSOA cluster areas** deserving of specific attention in terms of PT offering (pricing in particular, but also trip durations in some cases) and increased awareness of existing offerings
- Supporting qualitative data shows typical utility-based resistance to change in travel habits but also opportunities for change with enhanced service offerings and/or accompanying messaging that can encourage some shifting without (overly?) sacrificing utility



Next steps

- Based on project team goals, respondent feedback to BNU questionnaire and industry partner feedback, consider adding:
 - Frequency estimates to the PT service offering data
 - Average pax. group size estimates
 - An indication of employee catchment within the Clusters (LHR already obtained)
- Initiative shortlisting analysis in conjunction with stakeholders: **LTN X4 Arriva route to Aylesbury started May 31, 2026 (with funding from BCC)



Thank you for
listening /
Questions welcome



List of references

Budd, T., Ison, S. and Ryley, T., 2011. Airport surface access in the UK: A management perspective. *Research in Transportation Business & Management*, 1(1), pp.109-117.

Humphreys, I., Ison, S., Francis, G. and Aldridge, K., 2005. UK airport surface access targets. *Journal of Air Transport Management*, 11(2), pp.117-124.

Yilmaz, O., Timmis, A. and Frost, M., 2026. Airport surface access. In *Research Handbook on Air Transport Management* (pp. 272-286). Edward Elgar Publishing.