



An assessment of the experiences in Urban Consolidation Centres

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Executive Summary

- Traditional urban consolidation schemes (UCCs) based on the top-down 'city-logistics' approach have largely failed and that the alternative, a planned solution, only works where the area concerned is controlled.
- Planning or development guidance led by local authorities may allow for delivery and service planning (DSP, piloted by London and adopted by Newcastle) which may trigger consolidation.
- Larger receivers with non commercial agendas such as Universities may offer a new opportunity.
- The new White paper creates new boundaries and opportunities.



Definition

- Various definitions of UCCs have been proposed and debated, the most workable definition is that proposed by Browne, et al:
 - ... a UCC is best described as a logistics facility that is situated in relatively close proximity to the geographic area that it serves, be that a city centre, an entire town or a specific site (e.g. shopping centre), from which consolidated deliveries are carried out within that area. A range of other value-added logistics and retail services can also be provided at the UCC. (Browne, Sweet, Woodburn, & Allen, 2005)
- Prior to the 1990s, there was a tendency for UCCs to be perceived as break-bulk facilities that replaced larger vehicle access to city centres with small vehicles which were seen to be less intrusive.
- From the 1990s onwards there seems a growing understanding that many small vehicles increases congestion and a move to consolidation to increase load factors within larger trucks.
- However with the green car initiative (GCI) this is reversing.



Traditional UCCs failed

- In a liberal economy where free trade is guaranteed, it's difficult to control the delivery of goods.
- Traditional urban consolidation schemes were dirigiste, and yet offered no commercial advantages:
 - They often added cost,
 - They often delayed goods,
 - They duplicated existing commercial networks,
 - They often increased rather than decreased trip kilometres,
 - They targeted the carriers who were not the decision makers
 - Where they combined with access restrictions they could break the Single Market free movement of goods and services.



Analysis

- It is our contention that traditional city logistics UCCs fail in a liberal economy where free choice and market economics exist.
- To that end we have compiled and categorised a set of the UCC schemes known to have operated, left evidence of their existence, and been captured by the research community; (Browne, Sweet, Woodburn, & Allen, 2005; Karrer & Ruesch, 2007; Quak, 2009) □
- Key to our research is the definition of how and why a scheme succeeded or failed. Where the onward viability of a scheme is debatable, we have reached an expert judgement.



Analysis of UCCs 1960s-2010

Factor Combinations	No
Number of Initiatives, which left records	39
Number of Successful Initiatives	27
Number of Successful Initiatives Viable without Subsidy	17
Number of Successful Initiatives with Controlled Locations	14
Number of Successful Initiatives with Controlled Locations and Viable without Subsidy	8
Number of Successful Initiatives without Controlled Locations	12
Number of Successful Initiatives without Controlled Locations viable without Subsidy	0
Number of Successful Initiatives with Private Venture	15
Number of Successful Initiatives with Private Venture and Viable Without Subsidy	14

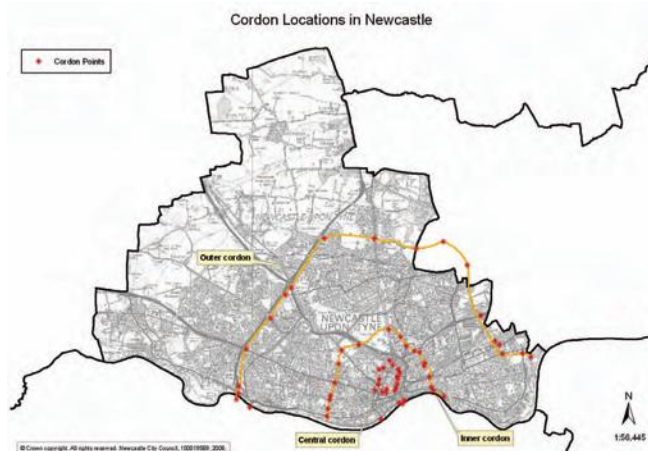
A simple analysis of this data shows that the key factors in determining ongoing viability of a UCC scheme are the degree to which a location is controlled, and whether it is a private enterprise venture (albeit often within a public-private partnership).

Keen to update the data set in 2011!



Delivery Service Plan

- Following previous well known Sustainable Travel Plans (school and workplace) – how about logistic delivery travel plan?
- LTP3 (UK policy) is clear in helping freight operation in the region run smoothly (especially for HGVs), but how about city logistics to meet air quality management targets? (AQMA)
- Freight Consolidation and Low Emission Zones are the two tools available at LTP3 to help city logistics but more may be needed.
- Will delivery service plans within the city context be feasible?



No growth in traffic policy cordon system (LTP3)





Coherent Campus Strategy: a case study of delivery service plan



- The University is the second largest employer in Newcastle
- Newcastle University main buildings are located well at the historic city of Newcastle and therefore characterised by non-car friendly built environment.
- University policy is to promote sustainable travel (including reducing car parking facilities to develop further city campus; 4 year travel plan reportedly achieve only 25% single car occupancy travel – source: LTP3)
- The University is dealing with various logistics requirement with various materials including stationary, chemical, medical, food, etc to be supplied but recent issues has arisen of the increasing unnecessary freight traffic around the city campus.



Freight Consolidation Centre

- The T&W FCC aims to achieve a successful and viable solution by learning from the past:
 - The decision maker in the supply chain is often seen as the receiver, and yet they rarely perceive themselves as such.
 - Few will pay extra for a disruptive step in the logistics chain, so looking for added value such as repacking, storage, reverse logistics is necessary.
 - The use of clean vehicles is a key policy and this can be added value.
- The T&W FCC 'hub' will be sold to retailers, run by Clipper Logistics, Newcastle City Council and Your Homes Newcastle and offers solution that eliminates store stock areas and the associated management challenges while maximising sales and profitability.
- It also likely that it would provide added value to major freight receivers such as the University and the National Health Service.



New White Paper 2011

- The new White Paper 2011 creates opportunities for new optimisation of urban freight:
 - It calls for all urban transport by 2050 to be electric or clean,
 - This creates a urban-non-urban boundary.
 - It calls for all freight over 300km to be carried by rail or water,
 - This creates a 300km boundary.
- Boundaries require solutions and one common in logistics is the hub-spoke bundling and unbundling.
- Maybe the new boundaries can help build efficiency into long haul and also urban?



SmartFuSION 2012

Smart Urban Freight Solutions

EU funded Public-private partnership (PPP)



- Urban freight development strategies with 3 demonstration regions to demonstrate smart urban freight solutions, 2 car manufacturers, 3 commercial businesses
- Explore the wider technological innovations from Green Car Initiative – using electric and hybrid trucks to deliver the last mile
- Urban consolidation centres as a collaborative approaches for urban interurban shipment planning and execution among shippers
- Planning and Telematics in urban delivery using remote monitoring system for electric vehicles enabling dynamic mission management integrating energy forecasting and algorithm for urban interurban shipment planning



Conclusions and Questions?



References

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