To:	Place Directorate
From:	Adrian Davis
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Subject:	Essential Evidence on a page: No 174 Traffic & environmental impacts of Urban Freight Consolidation Centres (UCCs)

Top line: Research indicates that UCC have the ability to improve the efficiency of freight transport operations & thereby reduce congestion & environmental impacts of this activity.

There is much interest in UCCs as a means by which to alleviate local environmental and traffic problems within urban areas. However, outstanding questions about the success of UCCs in terms of their financial, transport and environmental impacts have remained largely unaddressed. UCCs are logistics facilities that are situated in relatively close proximity to the geographic area that they serve be that a specific site (e.g. shopping centre or airport), city centre, or an entire urban area. The key purpose of UCCs is the avoidance of poorly loaded goods vehicles making deliveries in urban areas and thereby a reduction in goods vehicle traffic. This objective can be achieved by transhipping and consolidating goods at the UCC onto vehicles with high load factors for final delivery in the urban area. The UCC also offers the opportunity to operate electric and alternatively powered goods vehicles for this urban delivery work. A range of other value-added logistics and retail services can also be provided at the UCC.

Researchers undertook an international literature review of both printed and online resources.[1] The paper addresses a range of issues results and lessons learned from UCC trials and initiatives including traffic and environmental impacts. The review identified 114 UCC schemes in 17 countries worldwide (12 in the European Union (EU) and 5 outside the EU) that had either been the focus of a feasibility study, trial or fully operational scheme. majority of this activity has taken place in the UK, Italy and the Netherlands. Over the entire period from the early 1970s to 2012, the countries in which most interest in UCCs has occurred are France, Germany, Italy Netherlands and the UK. Between them, these five countries have accounted for approximately 80% of the 114 UCC schemes, with the UK alone accounting for approximately one-third of all the UCC schemes identified in the literature review.

Three categories of UCC were identified: 1) those serving all or part of an urban area, usually associated with the supply of retail products, but are also used for the supply of office products, and occasionally food supplies for restaurants and cafes. 2) UCCs serving large sites with a single landlord: These UCCs are most commonly associated with the supply of retail products and food supplies for restaurants and cafes. There are also examples of them being used for supplying hospital products. 3) Construction project UCCs: used for consolidating construction materials for major building projects including housing, office blocks and hospitals. Quantification of the transport and environmental impacts exists for only 24 of the 68 UCC schemes identified in the review that involved a trial or were fully operational. In these UCC evaluation studies, improvements in vehicle load factors ranged from 15% to 100%, reductions in vehicle trips and vehicle kilometres travelled were typically between 60% and 80%, and reductions in greenhouse gas emissions from these transport operations ranged from 25% to 80%. All of these improvements refer only to the change in transport activity that takes place between the UCC and the final point of delivery, rather than in the entire supply chain for the product.

[1] Allen. J. et al, 2012. The Role of Urban Consolidation Centres in Sustainable Freight Transport, *Transport Reviews*, 32, (4), 473–490.