

## Summary

# Car-free city solutions in three Nordic cities

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Authors: Oddrun Helen Hagen, Anders Tønnesen and Karin Fossheim

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*Car free city centres are high on the political agenda in many Norwegian cities and in a range of European countries. New policy measures are applied and in many cases, significant increases in the car-free downtown area are planned. This report describes car free city-centre areas in Helsinki, Stockholm and Copenhagen. The pedestrian areas have different sizes and regulation. Goods distribution is allowed at given times in all three car-free areas. In Helsinki, goods delivery has partially been moved to an underground tunnel system. In both Copenhagen and Stockholm there are consolidation centres relieving the pedestrian zone. All cities are planning further solutions where pedestrians are prioritised.*

## Background

This report describes car-free city centre solutions in three Nordic capitals; Helsinki, Copenhagen and Stockholm. The pedestrian areas have been mapped and analysed. In addition, data about experiences gained with the arrangements have been obtained, and so has plans for future development. The report is particularly focused on how the car-free area is regulated in relation to city-centre visitors arriving by car or bike and goods deliveries. Data were gathered through literature studies and interviews with experts in the three cities. These were experts on urban and transport planning and delivery of goods. Data collection also includes a study visit to Helsinki.

The report was prepared with fundings from the Norwegian Public Roads Administration (Statens vegvesen) and the Nordic Road Association (Nordisk vägforum), and builds on the TOI report "European Cities with pedestrianised centre" written by Tønnesen Meyer, Skartland and Sundfør (published in 2016)<sup>2</sup>.

The introduction of car-free areas raises a number of questions, both related to how such measures should be implemented and what consequences they will have. Assessments of how car-free areas are governed and how they work in practice provides a knowledge base that can be used by decision makers in cities where implementation or expansion of car-free areas are being discussed.

Below some characteristics and choices of the three Nordic capitals' strategies for the car-free area will be highlighted.

## Underground solutions in Helsinki

Helsinki has worked with pedestrian prioritising for 30 years. The car-free area in the city centre is small, approximately 0.1 km<sup>2</sup>, and consists of three pedestrian streets and a street with wide sidewalks and roadway for the tram. There are walkways and other pedestrianised areas in the city, but these do not form a coherent whole. Within the car free area, it is allowed for goods deliveries and taxis, but it is actively worked on reducing the

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<sup>2</sup> Prepared on behalf of the Oslo Alive Secretariat (the Real Estate and Urban Renewal Agency, Municipality of Oslo)

number of vehicles in the downtown area. Large parking lots and structures for goods deliveries have been placed in a large city-centre underground facility. There are public elevators to the parking areas from several locations in the city centre. In addition, several malls and apartment buildings have goods elevators with direct access to the underground tunnel running under the city centre. This enables goods delivery taking place without interfering with activities at street level. However, there are substantial costs associated with connecting to the tunnel system and not all blocks in the city centre are connected. Therefore, the delivery of goods at street level remains. In Helsinki, more pedestrianised solutions are planned, among others pedestrian zones and wider sidewalks. A principal plan for pedestrians is being developed.

## **Narrow streets and innovative solutions in Stockholm**

In Stockholm, Gamla Stan have for long been pedestrianised. Along with pedestrian street Drottninggatan these two areas form a continuous pedestrian area of 0.3 km<sup>2</sup>. In the pedestrian zone, goods deliveries are allowed within given times, but especially in Gamla Stan such delivery is challenging due to the narrow streets, alleys, stairways and narrow entrances. In cooperation with the private sector, the municipality works on developing new solutions for deliveries. Among other things, a consolidation centre outside the Old Town has been established. Here, goods can be loaded in to smaller and more environmentally friendly vehicles. In Stockholm, there is also a project where two special trucks have been excepted from the inner-city driving restrictions, supplying goods at late evening, night, or early morning. Further, there have recently been established new pedestrian areas and other types of pedestrianisation in the streets outside the main car free area. Recent years, so-called 'summer pedestrian streets' have also been introduced, being streets with temporary pedestrian status between May/June and August.

## **Step by step Copenhagen has become largest**

With its 0.6 km<sup>2</sup> Copenhagen has the largest contiguous car-free area of the three cities in this report. This has happened through a gradual expansion since the 1960'ies. Downtown cycling has been facilitated with dedicated cycling streets. Strøget and its surrounding streets are regulated as pedestrian zones, but there are also many streets in which driving is allowed (often only in one direction). Within the car free area there are marked spaces for parking. Goods deliverance is limited, but also occurs outside the allowable time. The municipality has together with the private sector initiated a goods-delivery arrangement which has become a commercial entity. The arrangement involves that businesses get their goods delivered to a consolidation centre outside the city, where it is collected and repackaged before delivered to the recipient.

## **Adaptations and compromises in car-free areas**

The pedestrian areas in the three cities are of different sizes. Although there remains some work before the refinement and design of the expanded car-free area of Oslo is finalised, it is likely that this will be substantially larger than that of the three cities in this report.

None of the three cities' downtown areas are totally pedestrianised. There are various exceptions, including goods delivery, service cars, residents and people with disabilities. An important issue related to the car-free areas is the extent to which it is opened for driving or public transport in individual streets. Different solutions have been implemented in the three cities. A part of the car-free area in Stockholm (north of Gamla Stan) is characterised by numerous transverse streets allowed for driving. This regulation has many similarities

with the solution applied for the lower part of Karl Johansgate in Oslo. In several of the streets in the pedestrian zone in Copenhagen, motorised traffic is allowed for, but on the terms of pedestrians. In Helsinki one of the streets in the pedestrian zone is a public transport-street.

The three cities have different strategies for establishing pedestrianised centre areas. Copenhagen is characterised by a gradual expansion of the pedestrian streets from the '60s, spreading from the shopping street Strøget, followed by the incorporation of new streets and squares in a stepwise process. In Stockholm, there has long been strong restrictions on car use in Gamla Stan, but new areas are prioritised for pedestrians. In Helsinki, there is an ongoing discussion and planning of pedestrian priorities in the city, including the expansion of the current pedestrian area and other measures for pedestrians. None of the three cities have done what Oslo is planning to do; to expand the pedestrian zone significantly within a short period.

All three cities are working strategically with pedestrian prioritising and urban life. In these strategies, non-motorists are considered main contributors to urban life and vitality of downtown areas. However, conflict may also arise between non-motorists. The interviews and document studies have shown that the challenges associated with mixing cyclists and pedestrians are a familiar theme in the cities. Good pedestrian areas thus seem to imply a certain separation between pedestrians and cyclists. Moreover, the survey shows that car-free downtown areas does not mean that the central parts of the city are inaccessible for cars. In all three cities, there are street parking outside and parking garages spread around the pedestrian zone. Helsinki stands out, in that much of this infrastructure is underground. In Copenhagen, there is street level parking also within the pedestrian zone. A shared characteristic between the three cities, parking must be on dedicated lots and there is a fee attached. Although the cities have different measures to reduce car usage in central parts of the city (also in the adjacent areas to the very city-centre core), the use of car is not an impossibility. For example, no point in the three cities' car free areas have more than 250 meters (as the crow flies) to the nearest car road. In all three cities, however, there are ongoing work to improve public accessibility to the centre, including the recent and ongoing expansion of the metro system in Helsinki and Copenhagen, as well as new tram lines in both Helsinki and Stockholm.

Restrictions on car use can generate solutions contributing to less traffic and better urban environment in the centre, simultaneously as the needs of the private sector are ensured. Removing ordinary car traffic can make goods deliveries more efficient. In the three cities deliveries are also sought performed effectively and gently, using consolidation centres outside the pedestrian downtown area or by delivery of goods taking place when there are few cars and pedestrians. However, deliveries on evening, night and early morning may provide a noise challenge for those living in the area. This illustrates that there are many different needs to be balanced in the regulation of car-free areas.