



ATTACHMENTS

**Ordinary Council meeting
Separate Attachments 1**

Monday, 4 September 2023

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International
Experience and Policy
Trends in
Urban (Including
Dynamic) Road Pricing

**Variable Road Pricing Study
- Tauranga**

Waka Kotahi

29 March 2023



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Sensitivity: General

International experience and policy trends in urban (including dynamic) road pricing

1.1 Introduction

The purpose of this paper is to provide a high-level summary of international experience and lessons learned in implementing urban road pricing schemes around the world, including dynamic road pricing. This paper takes into account the context of the scale, geography, urban form and transport mode use patterns of Tauranga City in reviewing the experiences of cities across the world.

The paper is structured as follows:

- Definitions of urban road pricing, dynamic road pricing and types of urban road pricing scheme concepts;
- Identification of relevant urban road pricing systems based on functionality, rationale and scale, taking into account the conditions of Tauranga
- Summary of the characteristics of cities with urban road pricing systems, noting those with smaller populations and higher mode share by car;
- How policy objectives for urban road pricing schemes affect pricing strategies;
- Implementation considerations;
- Impacts of urban road pricing schemes;
- Modelling of operational urban road pricing schemes;
- Summary of current trends of urban congestion pricing systems, and the latest developments of policy and studies (noting specifically Singapore and Brussels, and recent studies in Australia);
- Summary of key elements in development of options for The Congestion Question and for Let's Get Wellington Moving;
- Policy issues: revenue management and system governance; and
- Key conclusions.

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1.2 Definitions

Urban Road Pricing

The term *urban road pricing* is used in this paper to describe any type of pricing of existing roads that only operates during specific times of day (and days of the week). It is distinguished from tolling (as is applied in Tauranga) in the following ways:

- Tolls are used *exclusively* to recover capital (and operating) costs of the tolled infrastructure;
- Tolls operate 24 hours a day, seven days a week to maximise net revenues (and because all vehicles using the tolled road are expected to contribute towards the costs of that infrastructure), rather than seek to change behaviour;
- Tolls *may* be removed after the capital costs of the tolled road have been fully recovered, so that the ongoing maintenance costs are recovered from general highway funding (through the National Land Transport Programme).¹

Urban road pricing may be applied to a single point on a road network, or onto an entire network of roads, with its purpose being primarily to *change road user behaviour and* raise revenue, which may or may not be applied to the network being priced. Although the primary objective of an urban road pricing scheme may be either behaviour change or revenue generation, any urban road pricing scheme will cause behaviour change (because it increases the price of travel on that road at specific times for specific types of vehicles) and will generate net revenues (as it is fundamentally a tool of revenue collection).

Urban road pricing is not permitted in New Zealand under existing legislation, which is specifically confined to permitting tolling on new road infrastructure for the purposes of recovering the costs of planning, designing, supervising, constructing, maintaining and operating that infrastructure.

Urban road pricing does not include regulatory measures, such as low/ultra-low emission zones (which apply charges or fines for vehicles that don't meet specified emission standards) or time/location-based restrictions on vehicle access. Generally such measures are not introduced to raise revenue, nor to reduce congestion, but rather to lower noxious air pollution and improve local amenity by reducing traffic volumes in sensitive locations.²

Managed lanes

Managed lanes is a term that encompasses any road lanes that have controls on access limiting them to a subset of vehicles which may be based on either the vehicle characteristics (e.g., bus lanes), vehicle occupancy (e.g., transit or High Occupancy lanes) or price (tolled or High Occupancy Toll (HOT) lanes). These controls only apply to selected (not all) lanes within a corridor, with general (unmanaged) lanes continuing to exist with no such controls. If all

¹ The Land Transport Management Act 2003 (ss. 46-55) enables tolling for new road capacity only and requires that there be a feasible untolled alternative route.

² Low-emission zones are widespread in Germany and increasingly being introduced in UK cities. Regulatory access schemes are widely used in Italian cities to limit vehicle access to residents' vehicles, service vehicles and local deliveries.

Sensitivity: General

lanes are managed by regulation, the road is only for a specific class of users (e.g., a busway) or if by price, the entire road is effectively subject to a toll or an urban road pricing scheme.

Types of urban road pricing schemes

There are five general types of urban road pricing scheme

Cordon: A cordon places a virtual line across a series of roads, so that all trips in either one or both directions across that line are subject to a fee during specific times of day. This type of scheme is seen in Singapore, Stockholm, Gothenburg, Abu Dhabi, Milan, Oslo, Valetta, Tehran and Durham. A cordon is a recommended option for the Auckland city centre from The Congestion Question study.

Cordons can be applied in a single direction of travel, or both, and may be applied for peak periods only, or all day, with charges varying on the time of day. All cordons apply similar charges for entering the cordon regardless of location, but multiple cordons may be applied concentrically (e.g., Oslo) with different charges.

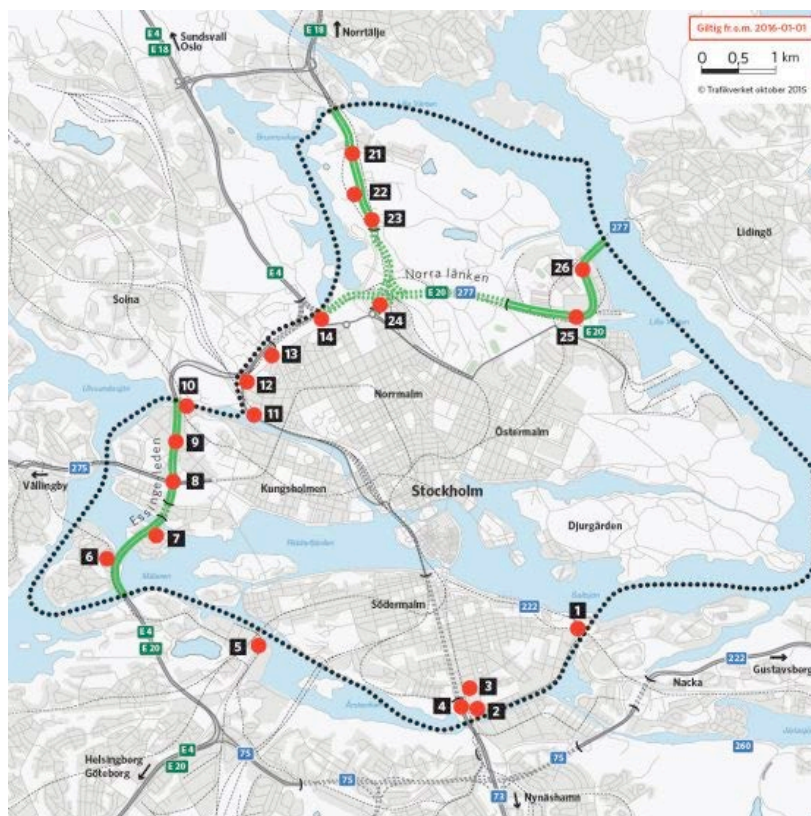


Figure 1 Stockholm congestion tax cordon with charging points

