

CASE STUDY

Low Emission Zone Feasibility And Concept Design Study



Year: 2014-2015

Location: Abu Dhabi

**Client: Abu Dhabi Department of Municipal Affairs and
Transport**

Summary

TRL worked with partners Dar Al Handasah, TTR and RPS to investigate the feasibility of introducing a Low Emission Zone (LEZ) in Abu Dhabi. Our study identified a potential £41 million of health savings over 25 years from air quality improvements.



CASE STUDY



The Challenge

LEZs have been introduced in numerous countries worldwide. Typically a specific area or certain roads are defined as a LEZ and polluting vehicles are charged for travelling in the zone. London introduced the system in 2008 and plans to launch an ultra-LEZ by 2020.

The study in Abu Dhabi was to find ways to reduce the concentration of NO₂ to within safe limits. NO₂ is a known cause of health issues including eye and throat irritation as well as contributing to some forms of cancer.

Our Approach

To understand best practice and for an opportunity to see LEZs in operation, TRL led the Abu Dhabi Department of Municipal Affairs and Transport team to meet with European city authorities that have already implemented successful LEZ schemes.

TRL investigated and extensively appraised several options for Abu Dhabi using air quality modelling. We calculated the impact of each option on the economy, in terms of health benefits, cost to the driver and the capital and operational costs to run the scheme. We also developed new inventories for vehicle fleets and emissions in Abu Dhabi.

The Results

The steering group and key stakeholders were involved throughout the study; they chose a preferred scheme to implement a LEZ based on a levy charge linked to the proposed road user charging scheme in the central business centre of Abu Dhabi Island.

We provided the Abu Dhabi Department of Municipal Affairs and Transport with the detailed information needed to take it forward to implementation in 2018. Our study predicted air quality improvements that would result in health savings of 231 million Dirhams at 2015 prices (approximately £41 million) over the 25 year evaluation period.

DATA:

- Health savings of £41 million predicted over 25 years for the Abu Dhabi LEZ