

3937285 ENAT/M : MAJOR : APPROPRIATE TECHNOLOGY FOR RESOURCES
DEVELOPMENT

KEY WORDS : BIKE LANE / TRAVELLING / RATTANAKOSIN CITY

MUTITA PINSUNTORN : THE PLANNING OF BICYCLE LANES FOR
TRAVELLING IN RATTANAKOSIN CITY. THESIS ADVISORS: KASEM KULPRADIT,
M.Sc., WADANYU NATHALANG, M.Arch.,M.A.Ed., APICHAT WONGKAEW, DR.-ING.,
157 P. ISBN 974-662-941-7

Bangkok as it is known today was founded at Rattanakosin city, which was established with the aim of recovering the image of prosperity that existed during the old Ayudhaya period. Rattanakosin city was the center of Thai culture, and the present Rattanakosin city has been turned into an important tourist attraction. Every day many tours groups by bus through Rattanakosin city, which causes pollution and traffic jams in the area. This thesis aims to explore the use of cycling, a sustainable travel mode, as a means of reducing this problem. Cycling highly energy efficient, generates no greenhouse gases or noxious exhaust emissions and helps reduce the need car parks. Cyclists, however want to have facilities and appropriate bicycle lane systems.

This thesis studies possible appropriate bicycle lanes for travelling in Rattanakosin city by Potential Surface Analysis and Geographic Information System. The major factor which determines the possibility of establishing bicycle lanes is the presence of roads or footpaths. Suitability of road is determine by four minor factors : size of road, presenece of shade providing trees, the numbers of bus routes which follow the road and whether the river is within sight of the road. Suitability of footpaths is also determined by four minor factors : size of footpath, presence of shade-providing trees, the presece of sidewalk shops and whether the river is within sight of the footpath. Eleven people who had expertise concerning bicycle riding, city planing or the rattanakosin area evaluated roads and footpaths in terms of these factors.

The results show that approximately 13.5 kilometers of road and footpath could be suitable for use as bicycle lanes. The planed rout would have 8 stations which would offer bicycle rental, repair, and first aid services. As planed, the route would be suitable for tourists wishing to tour the hisotric old city, view the way of life and visit interesting shops. If bicycle travel in Rattanakosin city was adopted, it would help improve the area's environment.