

# **Traffic modelling: The Tigné Peninsula, Malta**

Yury Zammit

Planning Assistant

Adi Associates Environmental Consultants Ltd

# Background



- Very high rate of car ownership
- Local Plan encourages more development
- FAR – Floor Area Ratio

# Background

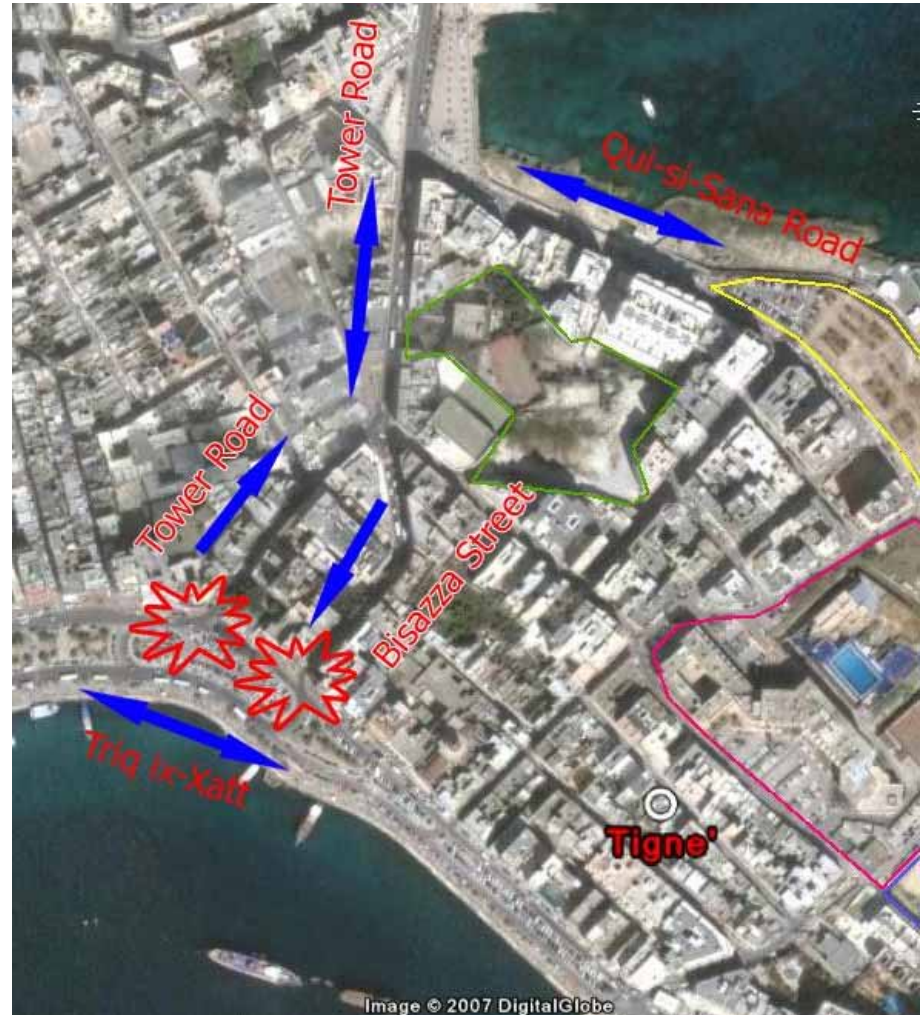
- Peninsula subject to large scale urban redevelopment projects
  - Multi-use complexes (F&B, retail and residential) (incl high-rises)
  - Two under construction, one at advanced planning stage
  - Large car park facility
- These are likely to give rise to major traffic problems
- Extensive modelling by Adi Associates on behalf of three of the four major projects
  - To ascertain the impact of the projects
  - To validate the Sliema Transport Plan by the Malta Transport Authority
- Residents and NGOs concerned about traffic

# Background



# Current traffic situation

- Chaotic
- Road closures
- Rat running
- Long queues and delays



# Sliema Transport Plan

- Pedestrianisation of Bisazza Street
- Provides route around peninsula



# Residents' Concerns

- Concerned with parking and traffic circulation problems
- Road closures, traffic diversions, parking spaces taken up by construction vehicles or workers' cars and vehicle damage
- Increased business => less parking spaces available
- New development (increase in business and population) will worsen the situation
- Sliema Transport Plan will make things worse

# The model

- Aim is to emulate traffic flows on each street
- Based on traffic counts that were carried out in 2005
- Model superimposes the 2005 data onto the Sliema Transport Plan
- Baseline traffic counts increased by 2% annually
- 2007, 2012 and 2017 networks (without the developments) were derived

# The model > Development traffic

- Modelling traffic generated by each land use for each development
- Modelling temporal distribution of trip generation
- Trips accumulated to derive traffic movements into and out of each development
- Use of previous surveys
- The total parking requirement for each land use estimated
- Results compared with parking space required by Malta Environment and Planning Authority (MEPA)
- Peak hour trips assigned to links and junctions and distributed 25% to and from North and 75% to and from South.

# The model

- Queue lengths and delays modelled for four key junctions and site egress
- Junctions perform adequately
- 2012 => approaching capacity
  
- Model considered only four developments
- Small redevelopment projects not likely to affect the traffic flows that would be considered as absorbed by the two percent annual growth in traffic

# Conclusion

- Sliema Transport Plan should ease traffic flow
- 2012 => approaching capacity
- Limits in the system
- Nationwide public transport system
- Moratorium on future developments (?)
- Rewrite local plan (?)