# Local Authority Geographic Information System (LAGIS)
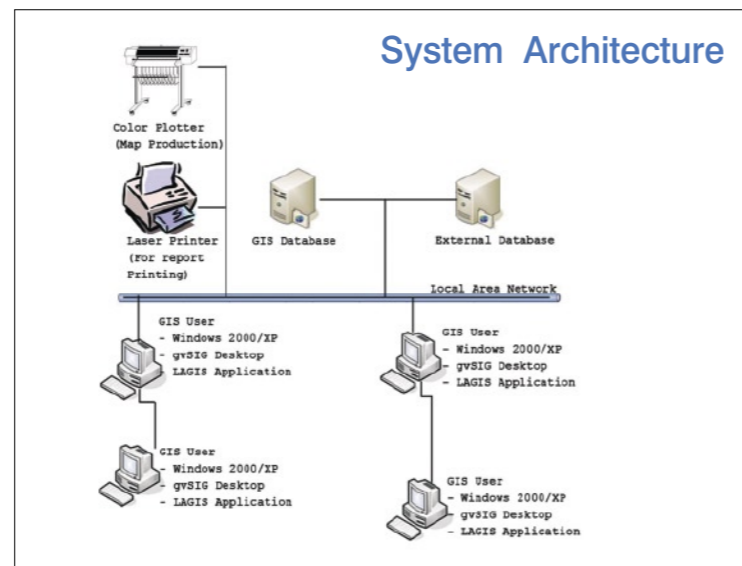
**LAGIS**

Local Authority Geographic Information System

## "Geographic Intelligence in Local Government"

**LAGIS** takes advantage of many recent advances in GIS technology, incorporating them into a seamless single system that nevertheless addresses a wide range of the day-to-day operational and managerial processes and responsibilities of Local Authorities. It offers the Local Authorities a "quick-start" way to computerise these processes within a framework that is consistent with the way Local Authorities function and operate.
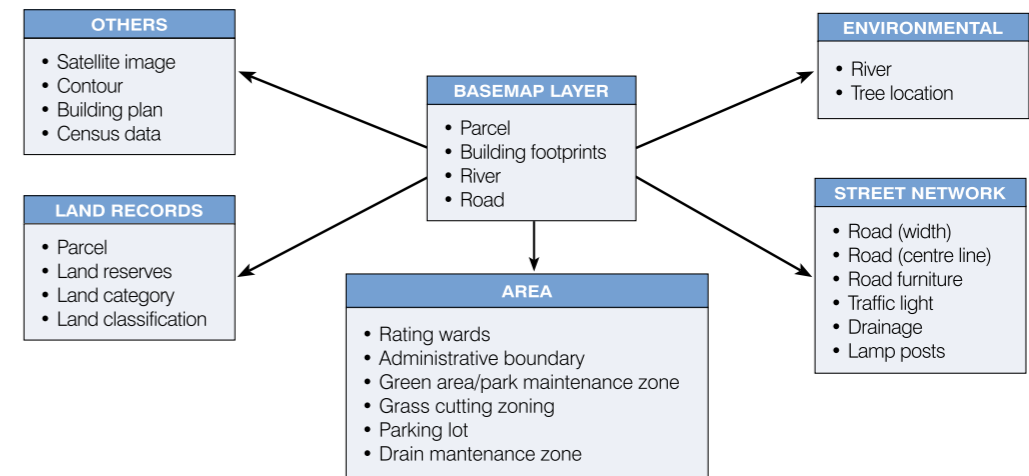
Because of standard data formats and processes built into LAGIS, users will find that they become part of a community of Local Authority Users where not only data is shared, but also standard business processes and best practices.

# Benefits

- Faster decision-making and improved responsiveness to customers
- Improvement in the quality and delivery of services
- Geospatial data resource sharing in a fast, secure and easy manner
- Productivity gains by greatly reducing the redundant, laborious task in developing land use and ownership information

## System Architecture



## The proposed GIS data model can be divided into 6 main categories as listed below



**OTHERS**
- Satellite image
- Contour
- Building plan
- Census data

**ENVIRONMENTAL**
- River
- Tree location

**BASEMAP LAYER**
- Parcel
- Building footprints
- River
- Road

**LAND RECORDS**
- Parcel
- Land reserves
- Land category
- Land classification

**AREA**
- Rating wards
- Administrative boundary
- Green area/park maintenance zone
- Grass cutting zoning
- Parking lot
- Drain mantenance zone

**STREET NETWORK**
- Road (width)
- Road (centre line)
- Road furniture
- Traffic light
- Drainage
- Lamp posts
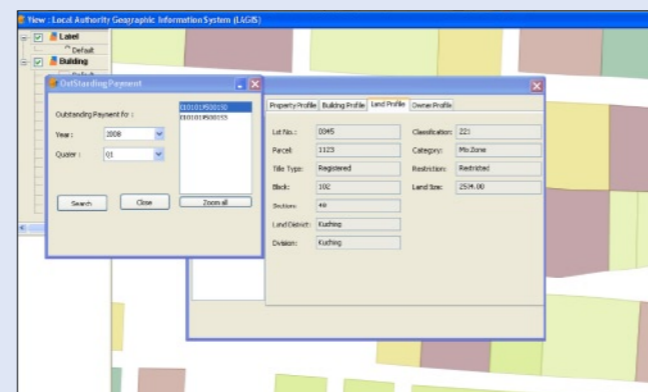
# Modules

## 1. Map Management

- Act as core module to store and manage the entire base map layer for LAGIS application
- Allow map searching, viewing, overlay and query of geo-database information through an easy to use Graphic User Interface (GUI)
- Users can add comments and graphical notation to the map
- No duplication of data collection and management
- Extract and print maps and report easily
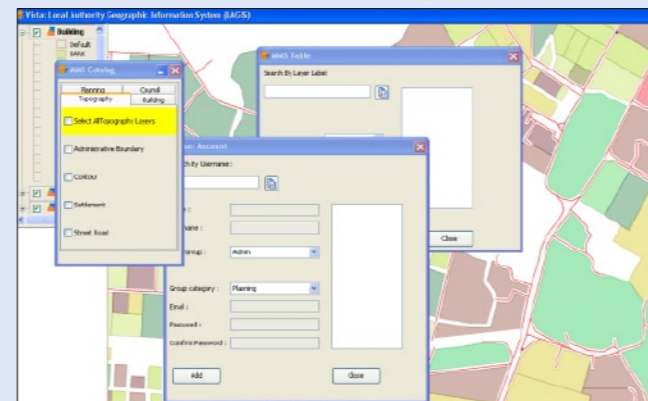


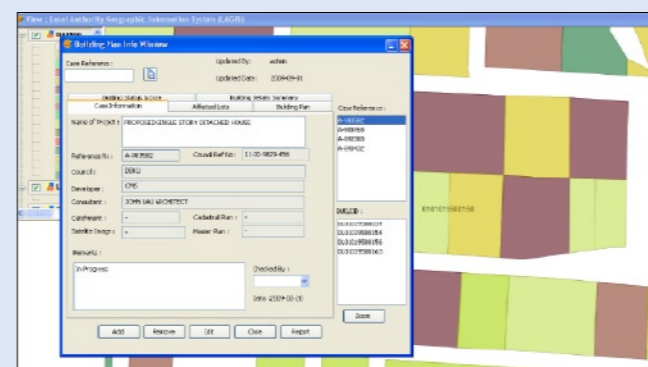Map Management Module

## 2. Rating and Valuation Management

- Simplify administration of rating wards boundaries and Local Authorities boundaries
- View properties information such as ownership, land title of household, conditions and lease terms, lot number and size
- View valuation information such as chargeable rate for each property type
- Fast and easy search of property database details; service type, assessment bill, outstanding amount, rebate information, owner profile, etc
- Analyze and manage assessment rates revenue by area and collections
- Modeling functions and tools for comparative analysis of rating, valuation and assessment of property



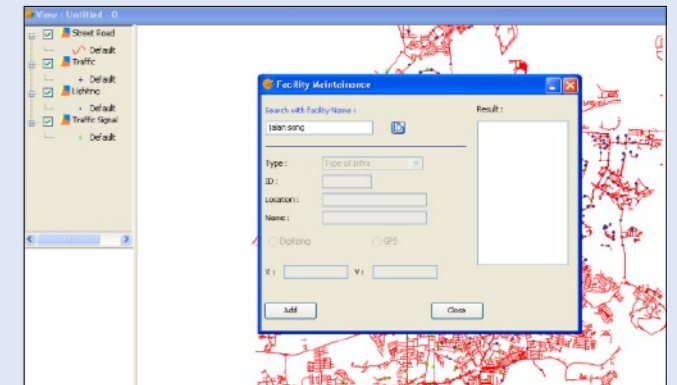Rating Management Module

## 3. Building Plan Management

- Maintain and track approved plans, subdivision plan, engineering plan and Occupational Permit (OP)
- Store and organize submitted plan in digital format
- Facilitate faster verification of illegal structures under jurisdiction of the Local Authority



Building Plan Management Module

## 4. Facility Management

- Track and monitor facilities and assets belonging to the Local Authority such as parks, libraries, community halls, stadiums, swimming pools, markets and hawker stalls, etc.
- Fast look-up and easy information update of the asset or facility such as locality, dimensions, last date of maintenance, repair costing, etc
- Information provided can be viewed on the map with tabular information related to individual asset or facility
- Enable analysis of maintenance and repairs history
- Database and tools to assist in town development planning and better management of maintenance schedule



Facility Management Module

## 5. Zoning Management

- To manage and update zoning systems used in Local Authority such as rating wards zoning, enforcement zoning, grass cutting zoning, and parking areas zoning
- Graphical view of the various zoning boundary to assist in planning, resource allocation and scheduling, etc



Grass Cutting Zoning Area

## 6. Road Furniture Management

- To locate, update and maintain road furniture inventory information such as road names, road signage, directional signage, other signboards, banners and advertisements
- Additional road attributes such as length of road, road maintenance, road drainage, traffic lights, lamp posts, tree and landscaping, etc. can be added
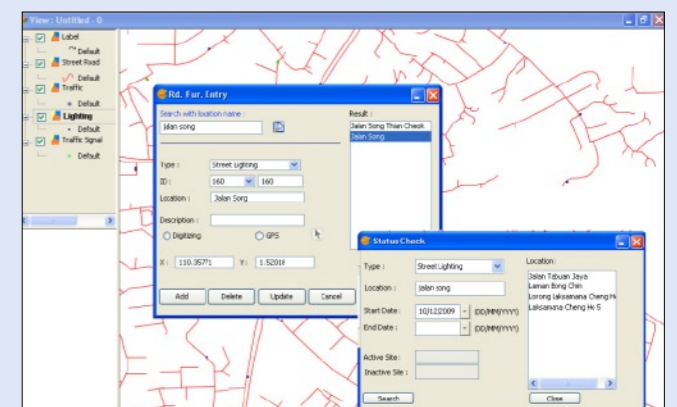


Road Furniture Module for Road Furniture Management

## 7. Public Request Management

- Design to manage feedbacks (request and complaints) from public in relation to the Local Authorities' services to the community
- Better coordination and management in responding to public requests
- Immediate view of the reference site on the map to assist in identifying problem
- Enable details of request with site reference to be routed instantly to the relevant action officer
- Review history of request at similar locations
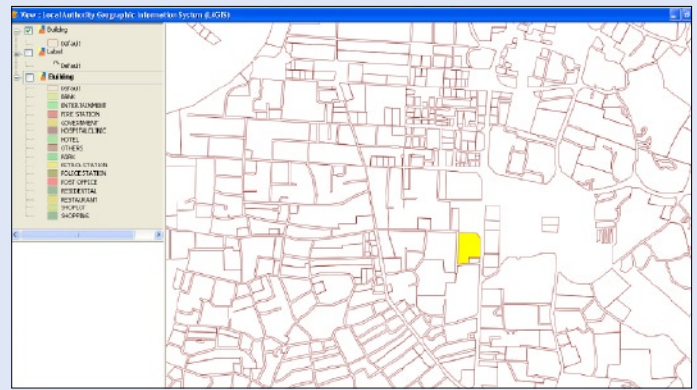

Screen of illegal dumping site

## 8. Parking Management

- To view information such as gazetted parking zones and parking lots within each zone
- All parking venues will be mapped into spatial layer with information such as lot number, warden in-charge, etc
- Analysis on parking revenue and analysis of demand and supply of parking facilities
- To ease parking administration, duty roster preparation and parking zone coverage


Screen of parking Lot databae

## 9. Enforcement Management

- Able to prepare Enforcement duty roster according to facilities in each zoning areas
- The system can display, browse, track enforcement related information such as history of illegal parking, advertisement regulation, hawkers licensing, etc by zones
- To view and monitoring legal action of each of the zoning areas
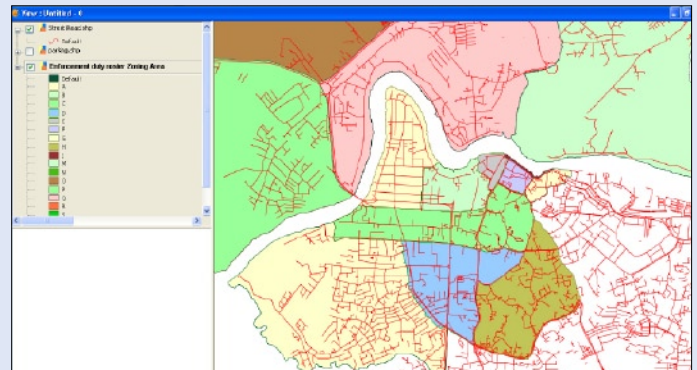

Screen of enforcement duty roster zone

## 10. Public Health Management

- Support the administration and management of public health
- Query health licensing and permit information from the mapped area
- Plan, schedule and manage contractors for services such as waste disposal, grass cutting, drain clearing, recycling centre etc
- Resource allocation and scheduling for tasks such as health inspection for vector control, license renewal related to eateries and food markets cleanliness, etc
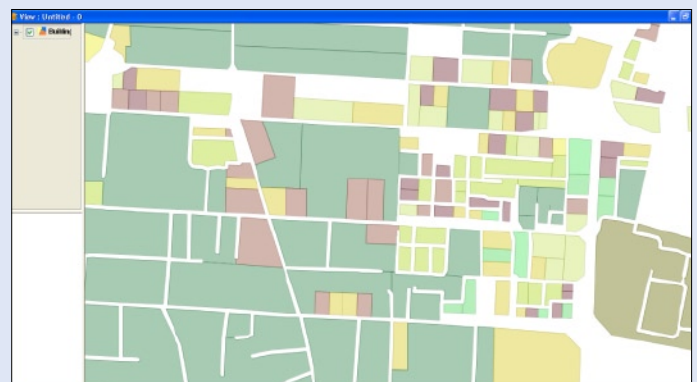

Screen of premises based on type of license