RAPTOR'S View
Home Owners Association

INFORMATION EVENING

18 June 2015

Agenda

- MOI
- RULES & REGULATIONS
- CAPITAL PROJECTS – FEEDBACK/STATUS
- WASTE WATER TREATMENT SYSTEMS
- LEOPARD FEEDBACK
- GENERAL

RAPTOR'S View
Home Owners Association

CAPITAL PROJECTS

Peter Hartley

Electrical Upgrade
Situation Appraisal

Initial distribution network was under-specified

System was partially upgraded in 2009

As the Estate has grown, so the system has come under more strain

In 2014, Motla completed a study of the current electrical system and confirmed the need to upgrade further

Electrical Upgrade
Plan

Motla have been commissioned to complete detailed design at a cost of R190k (August 2015)

Distribution network will be designed for 5kVA ADMD* - fortunately household consumption is below national average

Project will most likely be implemented in a phased basis – based on priorities and cost

Cost estimate: R3.8m

**After diversity maximum demand*

Electrical Upgrade
Pre-condition

To reduce costs of the upgrade we have agreed:

To limit the supply to each house to 40 amps

To replace any under-sized cables to specific houses

To encourage homeowners to become more energy efficient in their homes

Electrical Upgrade
Homeowner Responsibility

To be sustainable we must be

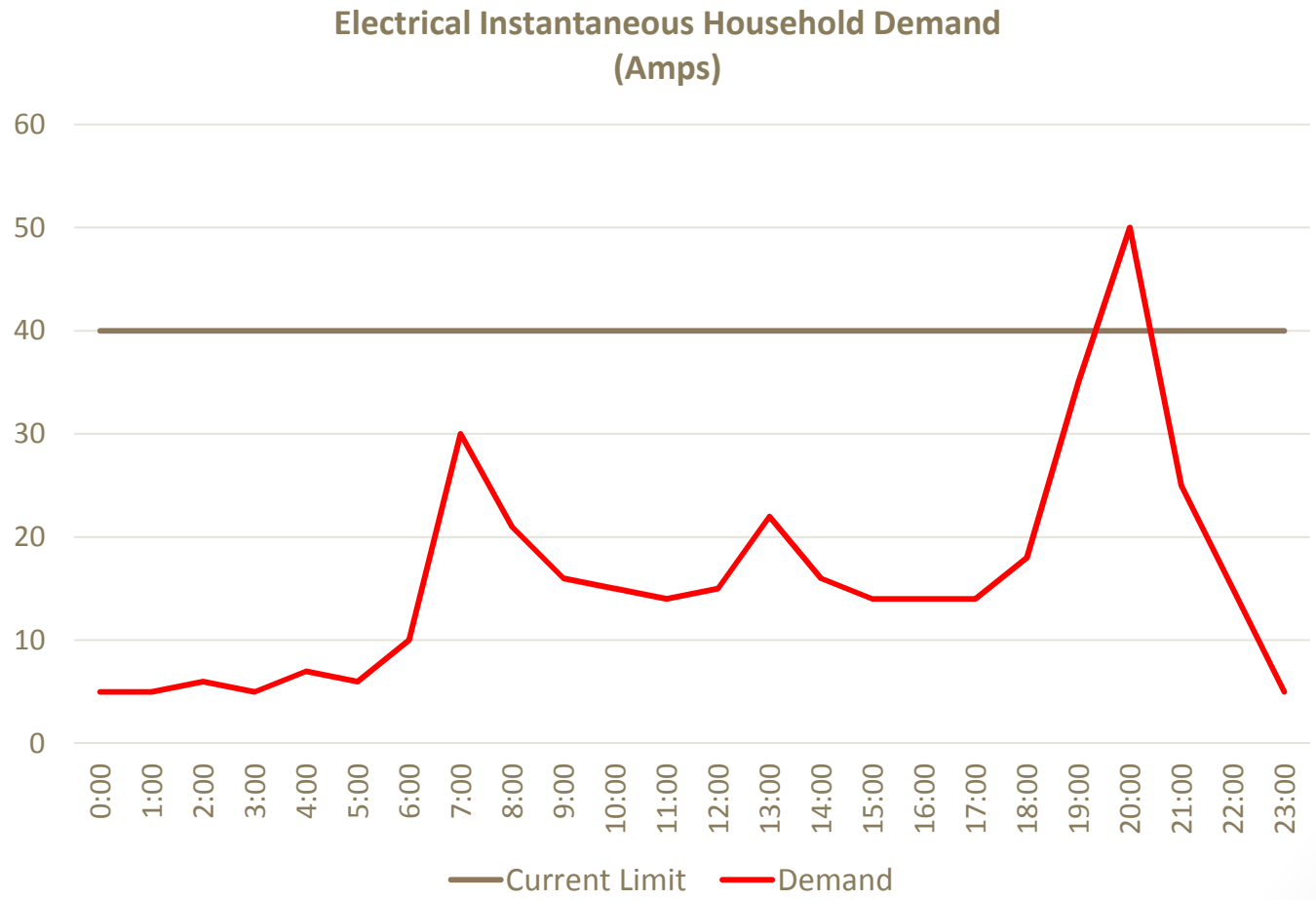
more energy efficient

- Hot water heating – solar panels or heat pumps
- Cooking – gas hob as a minimum
- Lighting – no incandescent bulbs
- Appliance – when you replace, install the latest energy efficient units
- Demand management – install load management unit

We recommend you replace your internal circuit breaker with a 40 amp unit - a bulk discount is being negotiated

Electrical Upgrade

Purpose of installing a load management unit



Water Supply Project
Situation Appraisal

- Current supply unreliable and inconsistent
- As Hoedspruit grows, so the system comes under more strain
- No indication of any upgrade by the Municipality
- Situation can only get worse

Water Supply Project
Proposal

Phase 1: Install water storage tank – at least 4 days of capacity

- Install a 750 kl water storage tank on stand 10
- Relocate pumps and modify pipeline network
- Estimated cost: R1.4m

Phase 2: Install water treatment facility

- Draw water direct from the Blyde Pipeline Scheme
- Treat our own water supply
- Become independent of the municipality

Water Supply Project

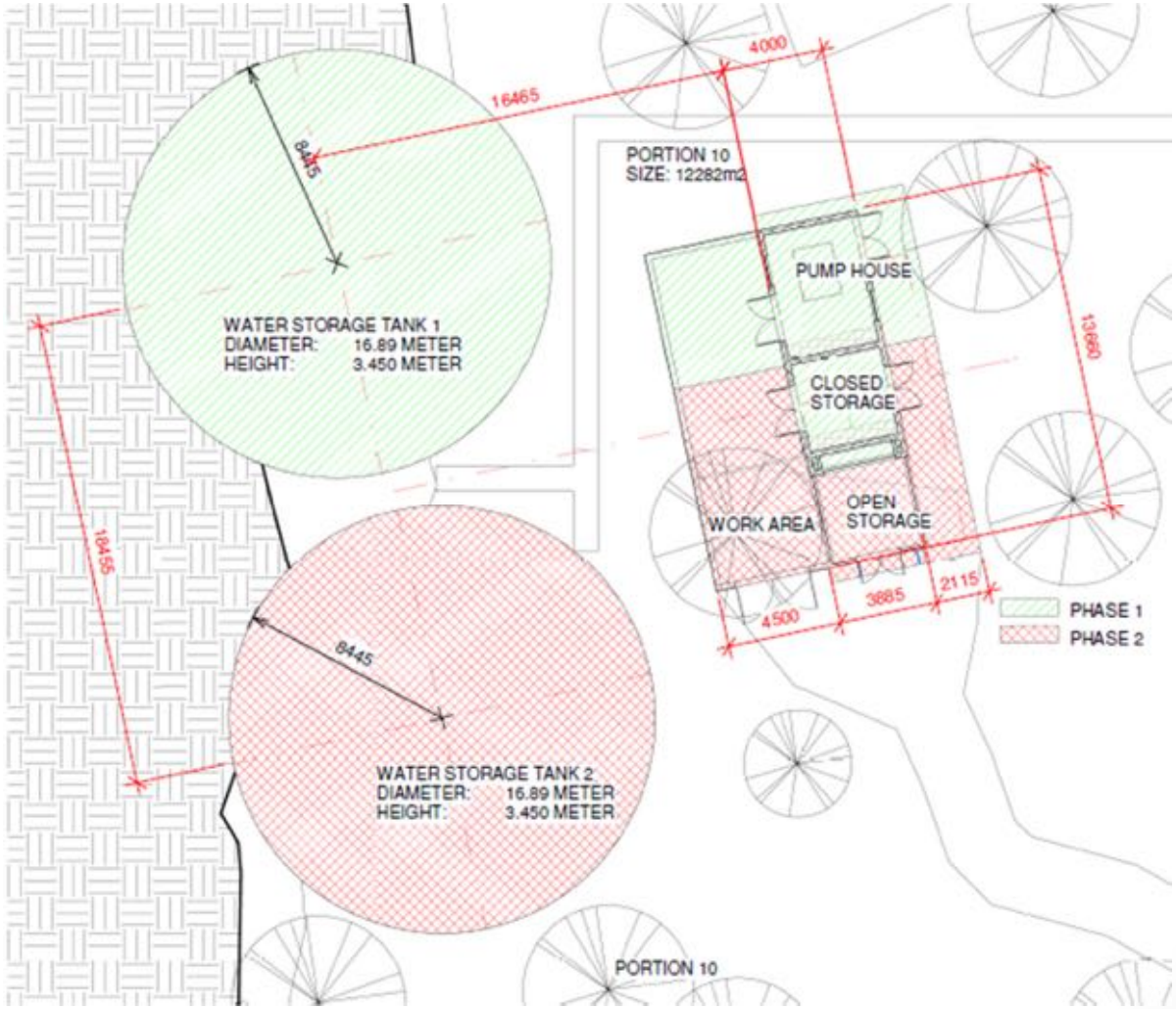
Examples of proposed tank

Water Supply Project

Examples of proposed tank

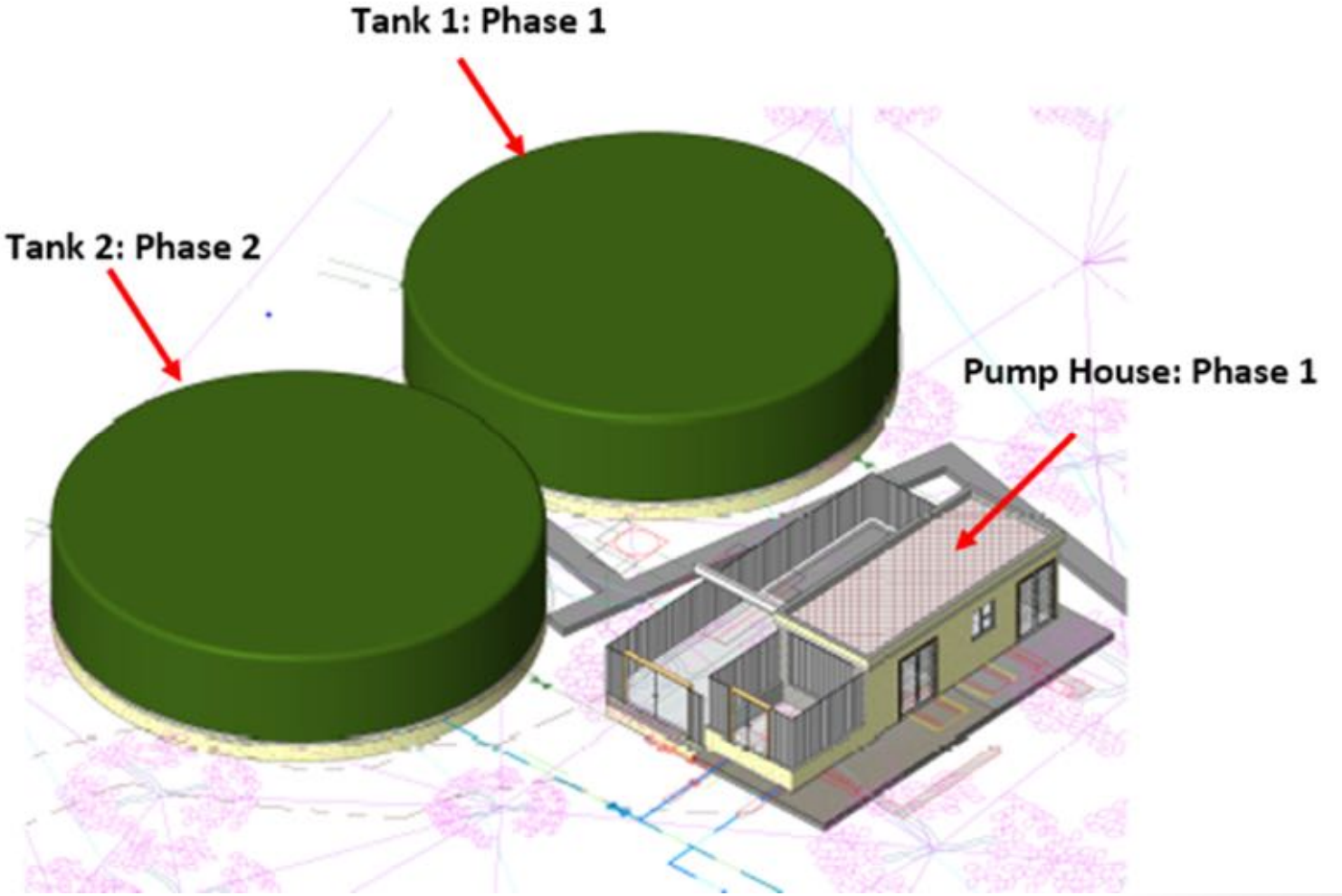
Water Supply Project

Site Layout on Stand 10



Water Supply Project

3D view of tanks and pump house



Water Supply Project

Project Timeline (Phase 1)

- Rezoning of Stand 10 and building approval – applications have been submitted
- Levelling of building site – commence 22 June
- Pipework changes – August 2015
- Deadline for tenders - reinforced ring beam and pump house – 30 June 2015
- Tank installation - late July 2015

Two short interruptions to supply will be necessary to modify piping and to connect into the new system. You will receive prior notification

Water Supply Project
Water Pressure

- The water pressure will increase to 8 bar at the pump house
- We recommend installation of a pressure reducing valve just after your isolation valve to prevent bursting of your pipes
- We are negotiating a bulk discount for members

Repair of Dams

- All three dams have been damaged by flood waters
- The estimates to repair range from R700K to R1.3m
- We proposed doing the repairs ourselves using in-house resources
- We do not have final costs but expect this to be less than R500k
- We should have more information by the AGM

Sewerage Treatment Systems

- Why convert to Sewerage treatment systems:
  - Environmentally responsible
  - RV has overall bad percolation
  - Grey water systems were not always installed/maintained correctly
  - Traditional septic tank and French drains can still pollute underground water sources
  - Other estates are implementing these systems

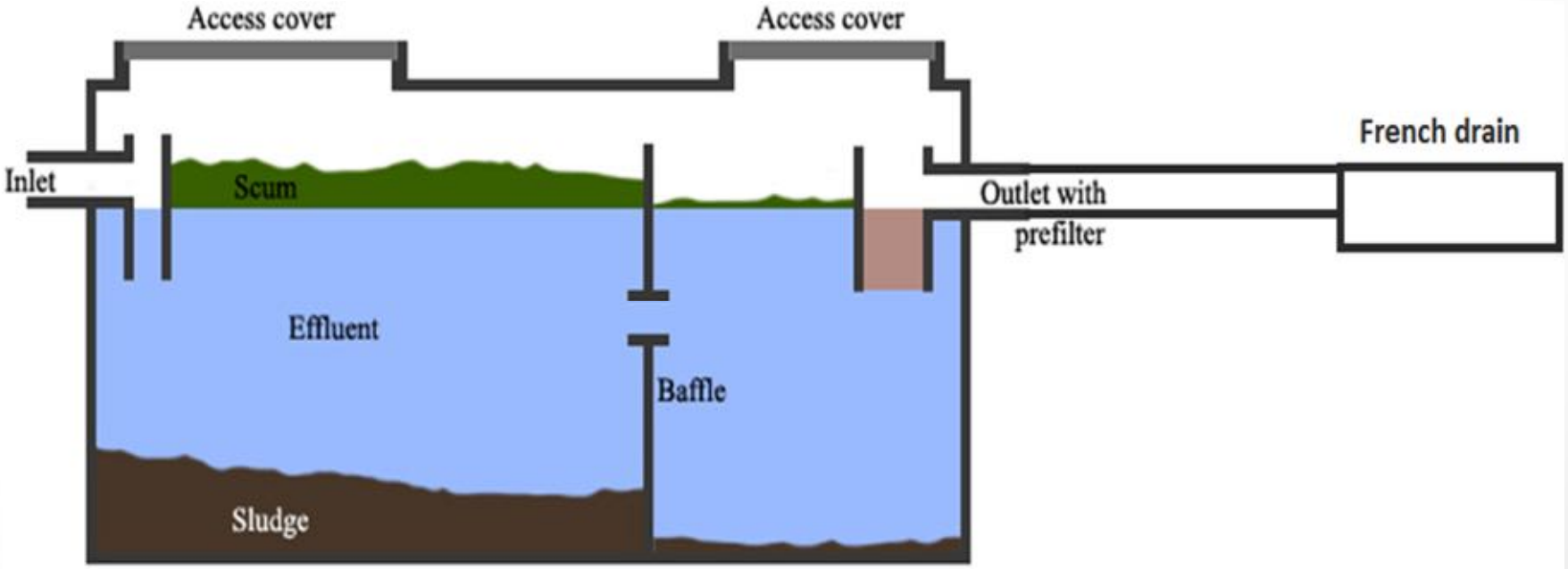
- Maintenance & Monitoring
  - Frequent inspections
  - Maintenance

Sewerage Treatment Systems

- Waste consists of organic / inorganic matter:
  - Carbon, Hydrogen, Nitrogen, Sulphate, Oxygen
- Sewer Treatment Processes (3 Processes) consists of:
  - Primary – Separate inorganic material (Anaerobic)
  - Secondary – Cleaning of the effluent (Aerobic)
  - Tertiary processing – Settling / disinfection

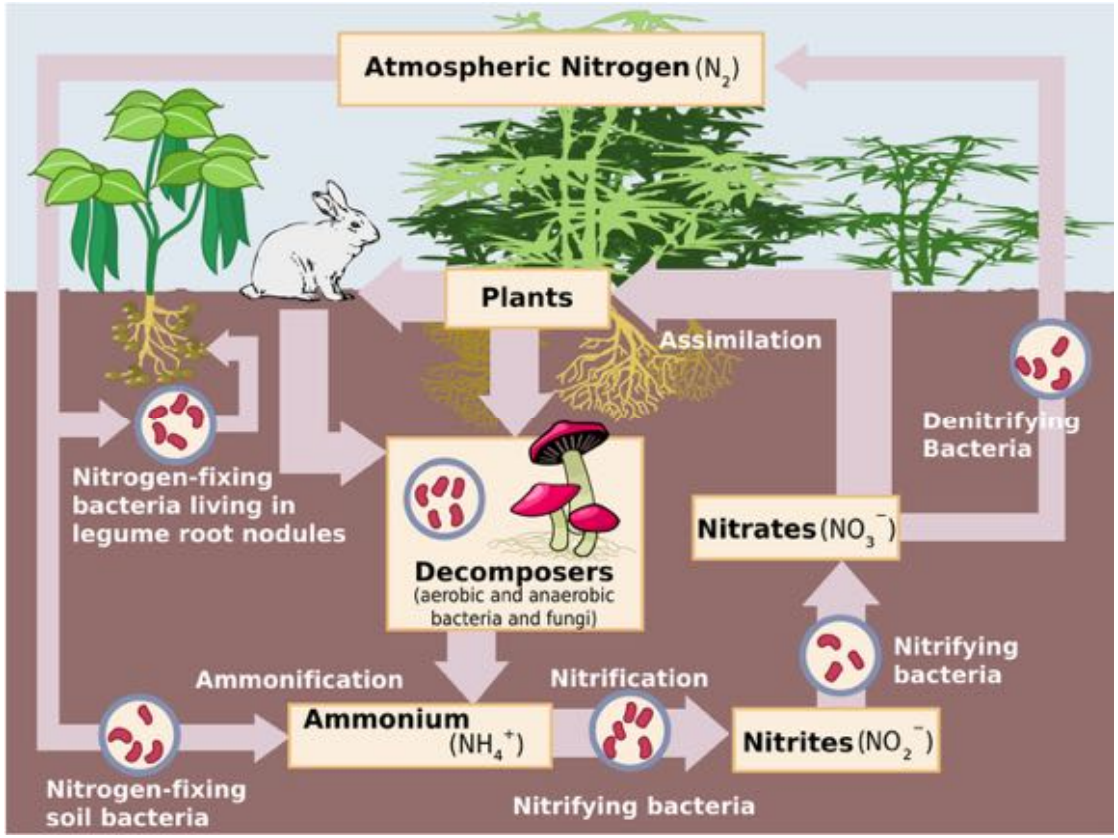
Sewerage Treatment Systems

- Traditional septic tank Flow Diagram



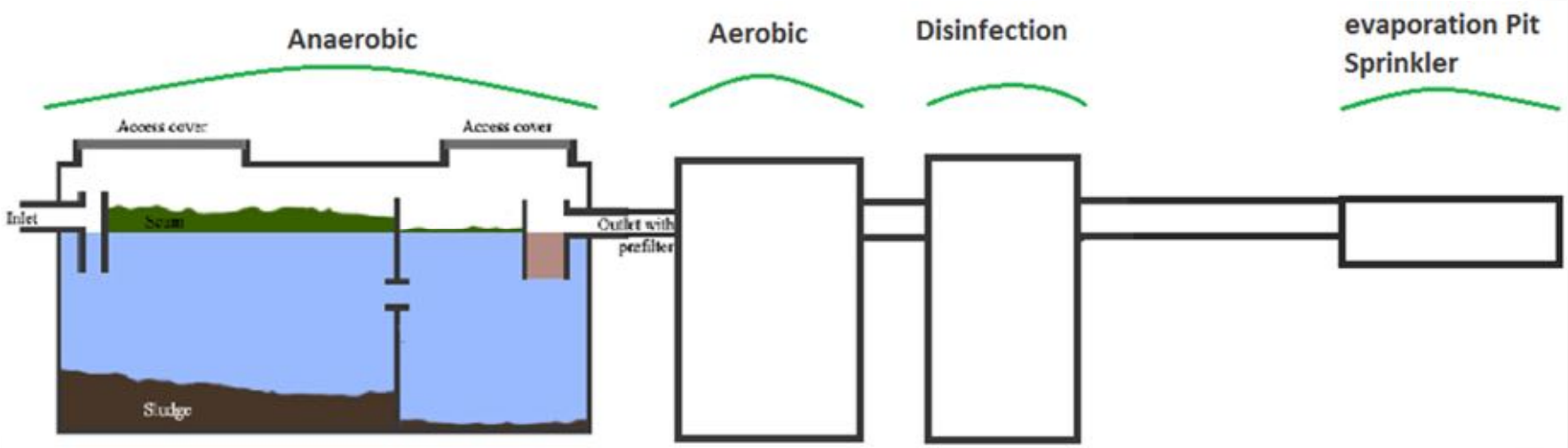
Sewerage Treatment Systems

- Flow of Nutrients in Nature



Sewerage Treatment Systems

- Waste Water treatment Flow Diagram



RAPTOR'S View
Home Owners Association

Young Leopard

General

- Feedback and Questions from the floor
- New Directors

RAPTOR'S View
Home Owners Association

INFORMATION EVENING

THE END