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# FINAL YEAR PROJECT 2004/2005

By :  
**Dr. Aminuddin Ab. Ghani**

**16<sup>th</sup> - July - 2004**

**9.30 am**

**Supervisor : Dr. Aminuddin Ab. Ghani**

## **Student :**

1. Aishahturizdah Bte Ashgul
2. Fakrul Fahmy Bin Taufiak
3. Mahadi Bin Baharudin
4. Mohamad Ansar Bin Derani
5. Tengku Saiful Tengku Shariff

**Supervisor : Dr. Nor Azazi Zakaria**

## **Student :**

1. Nasruddien Bin Mohd Nor Saidi




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## Pollutant Removal Capability of An Ecological Swale

Student : Aishahturizdah Bte Ashgul

Facilitator : Pn. Khairul Rahmah Ayub 

### Scope of Work

Data Collection : Water sampling by grab – 2 Set @ 10 minit / 4 botol

Data Analysis : TP, TSS, Pb

### Reference


1. Chew Ying Ying  
Chew, Y.Y., (2004). *Stormwater Treatment Using BIOECODS' Ecological Pond (Wetpond, Detention Pond & Wetland)*, Final Year Project Thesis, Universiti Sains Malaysia, Penang, Malaysia.
2. Maznah Makhtar  
Makhtar, M., (2004). *Rawatan Kualiti Air Larian Menggunakan Sistem Saliran Bio-Ekologikal (BIOECODS)*, Final Year Project Thesis, Universiti Sains Malaysia, Penang, Malaysia.




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## Pollutant Removal Capability of An Ecological Swale

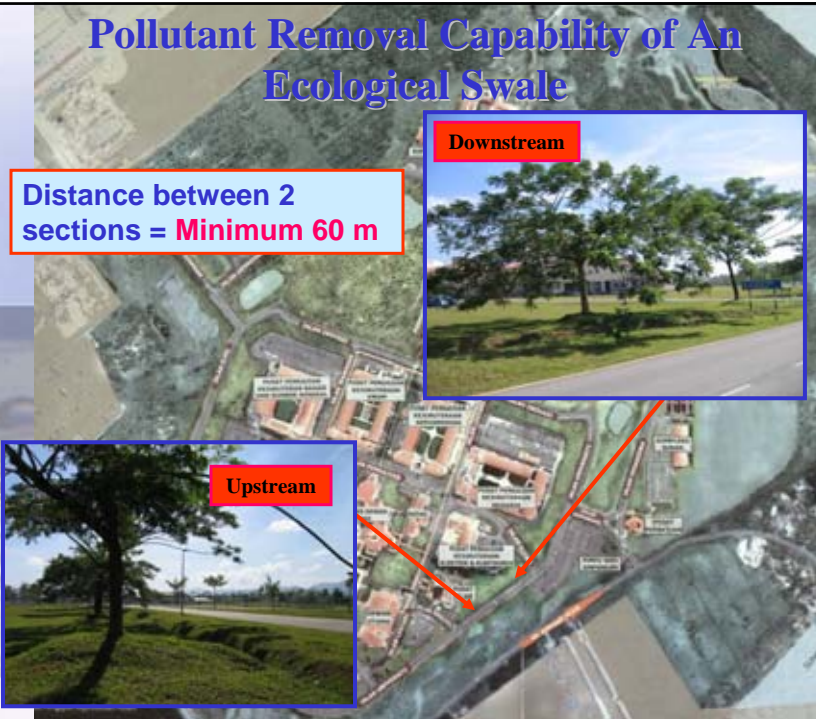




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## Pollutant Removal Capability of An Ecological Swale



Distance between 2 sections = **Minimum 60 m**



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## Flow & Sediment Characteristic of Sungai Kulim

Student : **Fakrul Fahmy Bin Taufiak**

Facilitator : **Mr. Chang Chun Kiat**



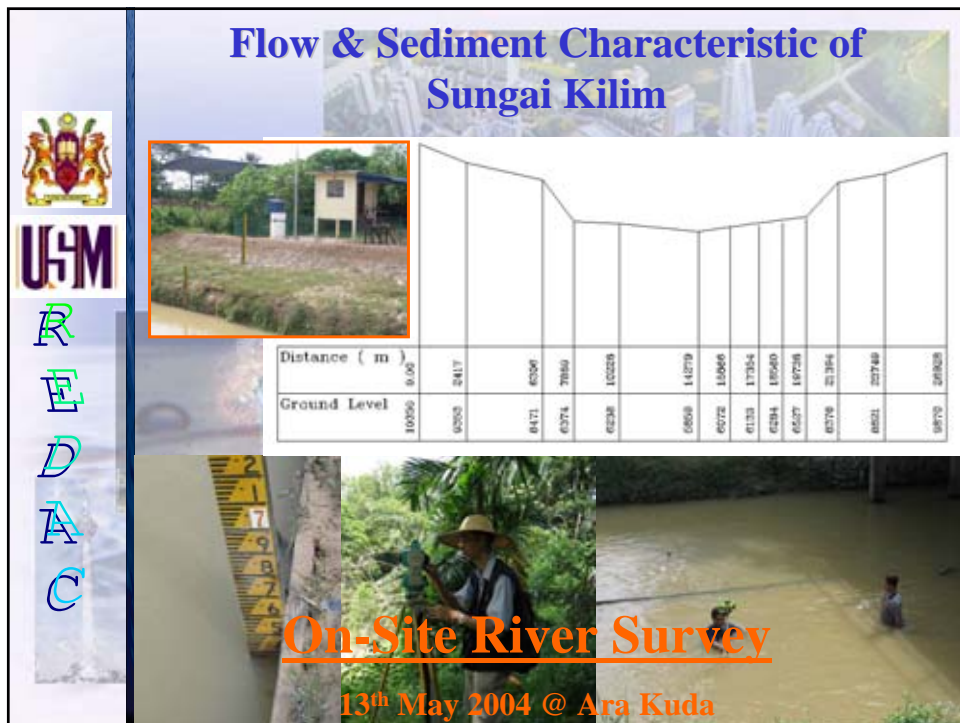
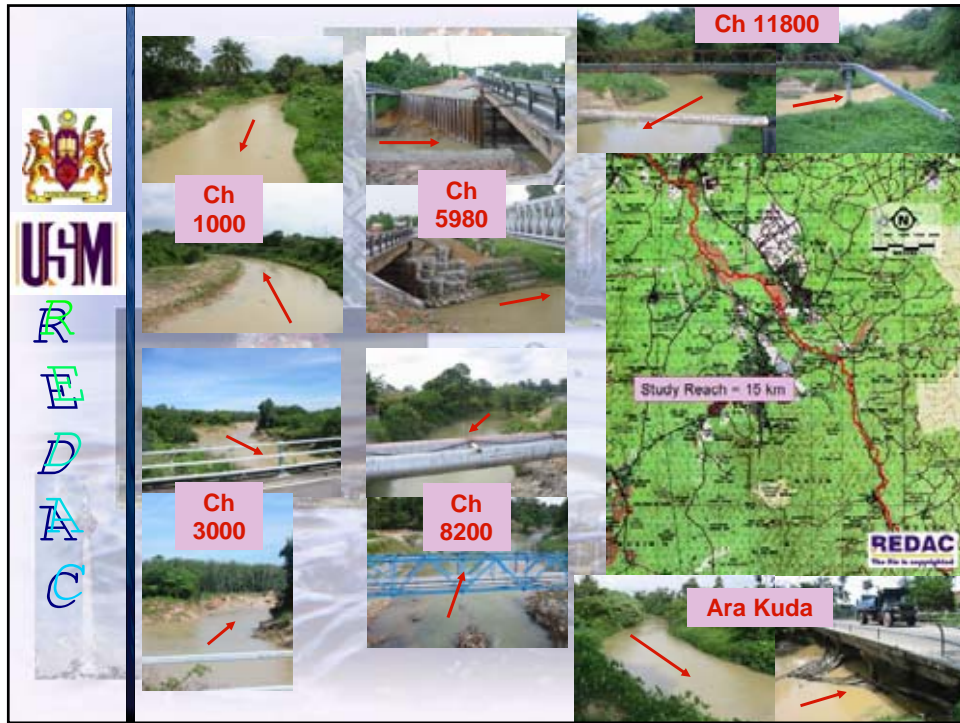
### Scope of Work


Data Collection : Cross Section, Bed Material, Flow Discharge, bed Load

Data Analysis : Cross Section Changes, Bed Load rating Curve, Flow Rating Curve

### References

1. **Nasehir Khan** : Yahaya, N.E.M., (1999). *Development of Sediment Rating Curves for Rivers in Malaysia: Case Studies of Pari, Kerayong and Kulim Rivers*. MSc. Thesis, Universiti Sains Malaysia, Penang, Malaysia.
2. **Lee Chee Beng** : Lee, C.B., (2001). *Application of River Modeling (Fluvial-12): Case Study of Kulim River and Melaka River*. Final Year Project Thesis, Universiti Sains Malaysia, Penang, Malaysia.
3. **Koey Boon Chin** : Koay, B.C., (2004). *River Equilibrium : Case Study of Kulim River*, Final Year Project Thesis, Universiti Sains Malaysia, Penang, Malaysia.






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## Flow Characteristic of An Ecological Swale

Student : Mahadi Bin Baharudin

Facilitator : Mr. Shahrul Aiedey bin Mohammed



### Scope of Work

Data Collection : Flow Discharge

Data Analysis : Manning's n

### Reference

1. Wong Yin Meng :

Wong, Y.M., (2004). *Hydraulic Characteristic of Ecological Swale*, Final Year Project Thesis, Universiti Sains Malaysia, Penang, Malaysia.



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## Flow Characteristic of An Ecological Swale



Upstream




Downstream





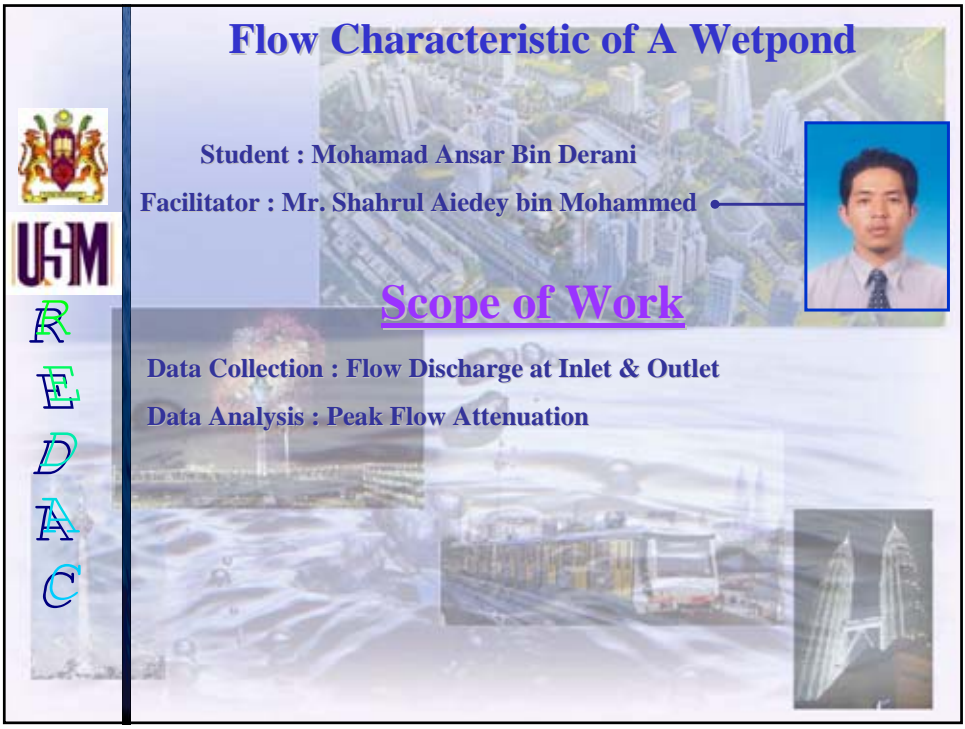
**Flow Characteristic of A Wetpond**

Student : Mohamad Ansar Bin Derani  
Facilitator : Mr. Shahrul Aiedey bin Mohammed






**Scope of Work**

Data Collection : Flow Discharge at Inlet & Outlet  
Data Analysis : Peak Flow Attenuation



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Outlet

Inlet


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## Flow Measurement at Earth Channel


Bed




Water Surface






  
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## Peak Flow Attenuation Using Dry Pond

Student : Tengku Saiful Tengku Shariff


Facilitator : Mr. Shahrul Aiedey bin Mohammed




Scope of Work

Data Collection : Infiltration, Water Level

Data Analysis : Infiltration Curve, Ponding Time

  
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**Ponding Time**



KEMAJLIS  
MASJID  
HIDUP

(a)

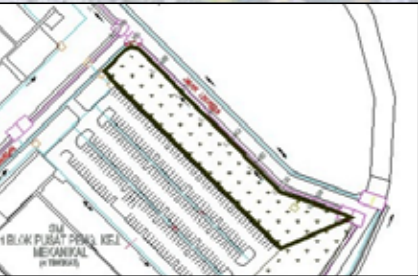



(b) (c)

**Dry Pond H**



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**Ponding Time**



DALAM  
RELOK PUSAT PERANGKAT  
MEKAWAL  
DI TAMBUK

(a)

(b) (c)


**Dry Pond G**

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**Ponding Time**



(a)



(b)




(c)


**Dry Pond E**

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**Ponding Time**



(a)



(b)



(c)

**Dry Pond C**

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# Infiltration Capacity @ Butterworth

Student : Nasruddien Bin Mohd Nor Saidi  
Facilitator : Mr. Mohd. Fazly Yusof



## Scope of Work

Data Collection : Infiltration  
Data Analysis : Infiltration Curve

## Reference

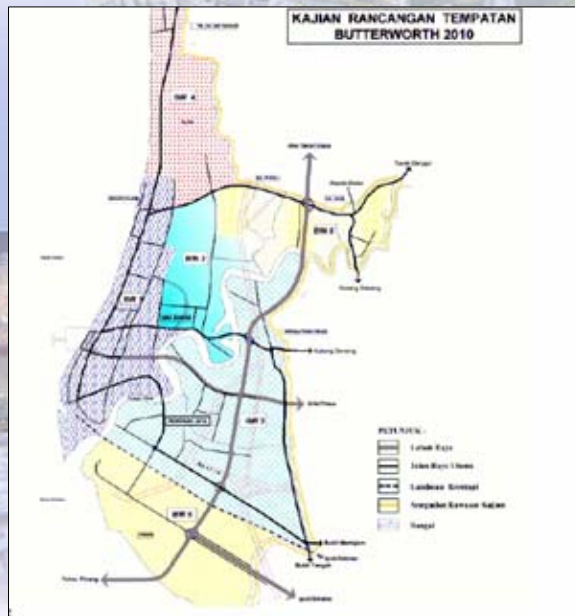
- Izwan bin Johari :  
Johari, I., (2004). *Pembangunan Peta Penyusupan Bagi Zon 1/2, Butterworth*, Final Year Project Thesis, University Science Malaysia, Penang, Malaysia.

# Infiltration Capacity @ Butterworth



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## Infiltration Capacity @ Butterworth



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## REDAC Technical Staff



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Mohamad Fauzi Ahmad Shah



Paker Mohamad Abd Hamid



Rahim Ghazali

Shahrul Aiedey bin Mohammed

Mohamad Firdaus bin Talib





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## Kemudahan

1. Makmal Komputer  
(8.30am – 12.00pm, 2.15pm – 4.30pm)
1. Fotokopi hitam/putih (RM 0.05 sekeping)
2. Fotokopi warna (RM 1.00 sekeping)
3. Pencetak hitam/putih (RM 0.05 sekeping)
4. Pencetak warna (RM 0.50 sekeping)

Maklumat lanjut & tempahan :

En. Nasrul Osman 



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## USM - IAHR Student Chapter

1. Perlancon – Rivers'04 : 21<sup>st</sup> Sept 2004
2. Membership Fee : F.O.C  
(Sponsor by REDAC)
3. Aktiviti di Sungai Randuk, Kolam Ekologi

Website :

<http://www1.eng.usm.my/redac/html/IAHRMSC.html>

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