



FNQ Tropical Rainforest Ozflux Robson, Daintree ... Status report.

Presentation by :
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Robson Creek Tower site

❖ Lamb Range

Simple Notophyll Vine Forest (SNVF) 26 – 40m canopy

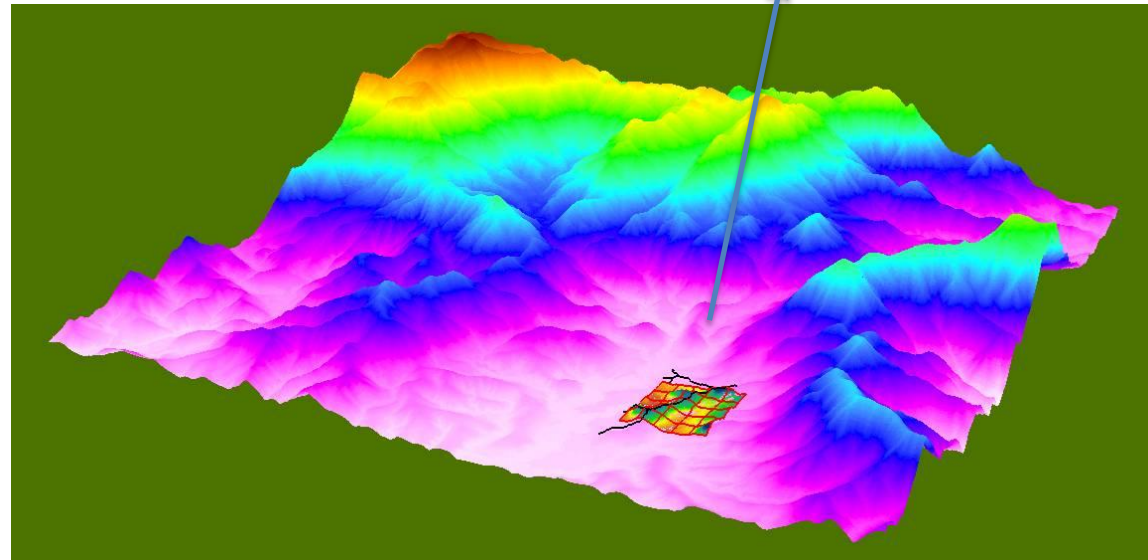
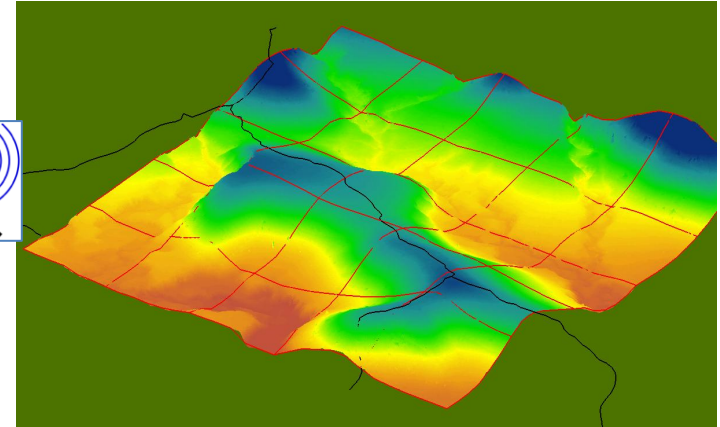
❖ **Soil pit:** Acidic, Dystrophic, Brown Dermosol

❖ **Tower at 691m**

❖ **Rainfall:** $\approx 2000\text{mm}$

❖ **T_{mean} :** $\approx 18.9^{\circ}\text{C}$

❖ **$T_{\text{min}} - \text{max}$** $^{\circ}\text{C}$
 $\approx 2.9 - 35.0$

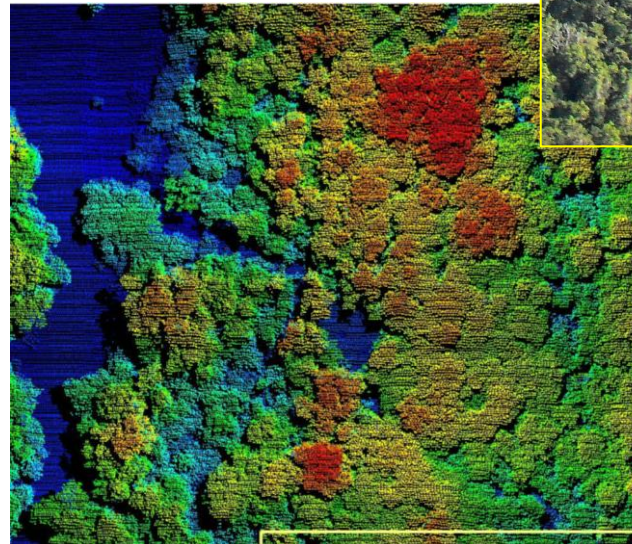
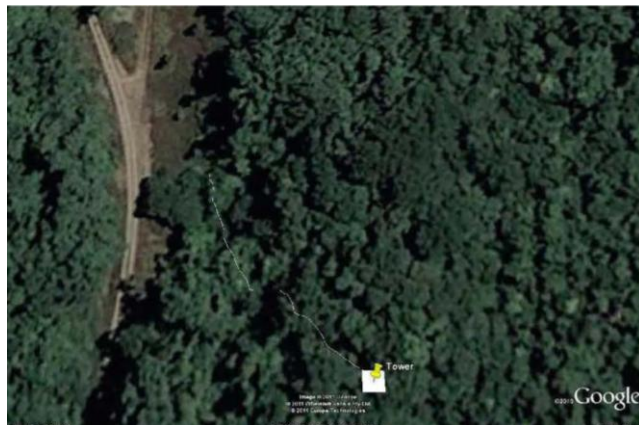




Robson Creek : Mission (near) Impossible I

❖ **Choose the location : microlite style**

Site chosen – March 2010!





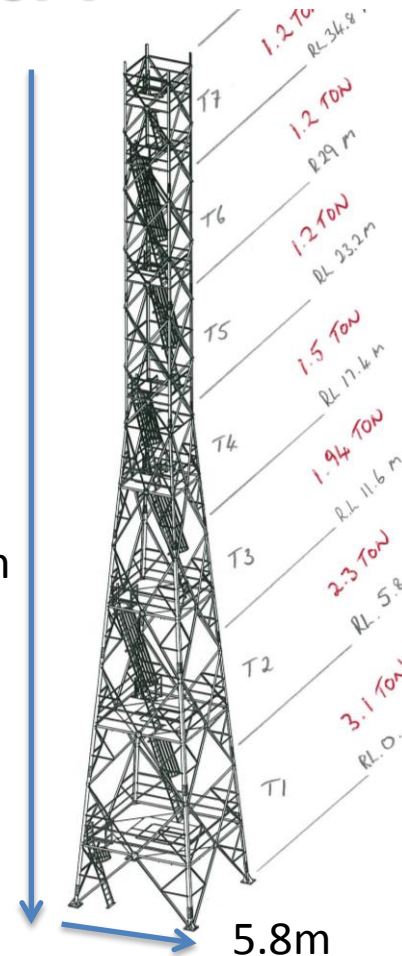
Robson Creek : Mission (near) Impossible II

❖ Choose a tower :
July 2011 IDEC

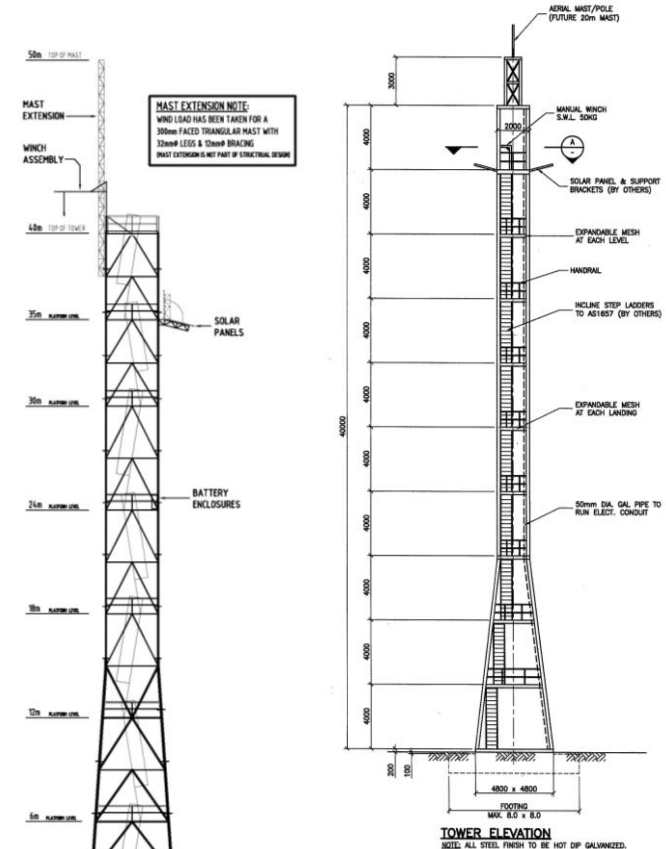
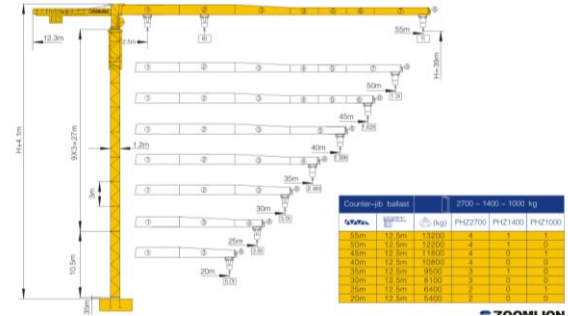
Ardill Payne
November 2011

ECS
June 2012 40.6m

Le Blanc
isometric
April 2013



TCT5510-6G





Robson Creek : Mission (near) Impossible III

❖ Choose the exact site
Soils and Trees..





Robson Creek :

Mission (near) Impossible IV

- ❖ **Budget** : \$200K (initial in 2010 was \$70K)
Final cost of (just) the Tower 2013: \$306K (ex-GST)
Funding from DEEDI, EIF and JCU



- ❖ **Permitting** :

- 1) QPWS Section 107
contingent on Trad. Owner sign off, two parties contest native title took 12 months to agree.
- 2) WTMA Cooperative Management Agreement
- 3) Tablelands Regional Council Public Utility permit
- 4) SEWPAC EPBC Referral – Not a controlled action
- 4) Aircraft lights – 3 levels of referral - not needed.



Robson Creek CONSTRUCTION

❖ Stage 1 Footing:

Monday 4th February 2013

Submerged raft footing.

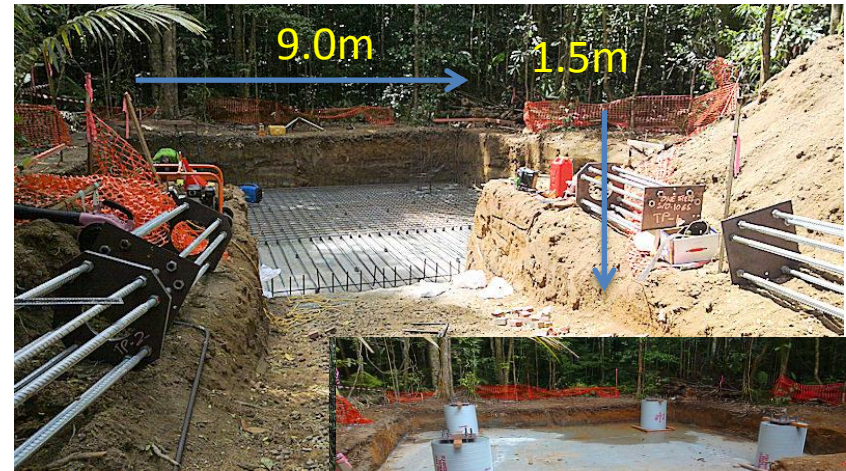
Dug through the soil pit and set the base 45° from North! Concrete to cure.

❖ Stage 2 Backfill:

Monday 27th February

❖ Stage 3 Steel construct:

Multi-Rig (Townsville)

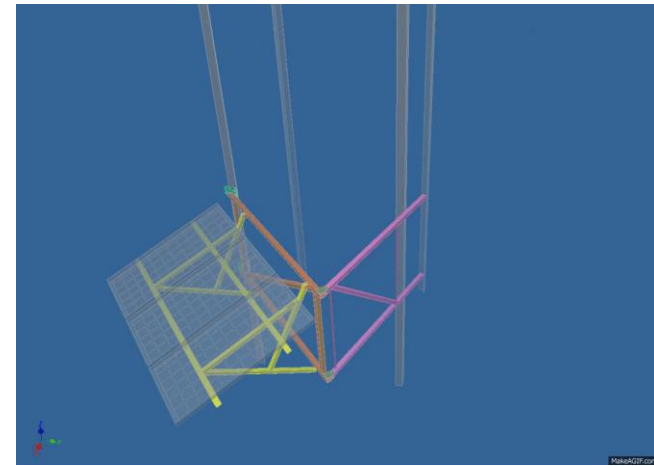




Robson Creek CONSTRUCTION

❖ **Stage 3 Steel construct:**

Monday 23rd April
- finally underway



MRT-02 Semi Transport



MR-Hire-01 Telehandler



MRC-20AT-01 20ton Crane



MR-Hire-02 Helicopter





Robson Creek CONSTRUCTION

❖ The wet season:

During construction nature provided
120mm of rain!



TERN Robson Creek CONSTRUCTION

❖ **The Cranes :** The 20 ton crane was not tall enough. A 40T crane with extension was called in from Kurumba.



8th June the top went on.





Robson Creek THE TOWER

❖ **Practical Completion:**
Monday 13th May

JCU WH&S took over...

❖ **Flux tower operational:**
Monday 26th June

❖ **Flux data on ODP:**
Monday 30th June
- whew!



Robson Creek Ozflux tower site

The flux tower site is classified as tropical upland rainforest (simple notophyll vine forest).

Created by Nico Weigand, Creation date: 2013-06-30 08:52, Modified by Mike Liddell,

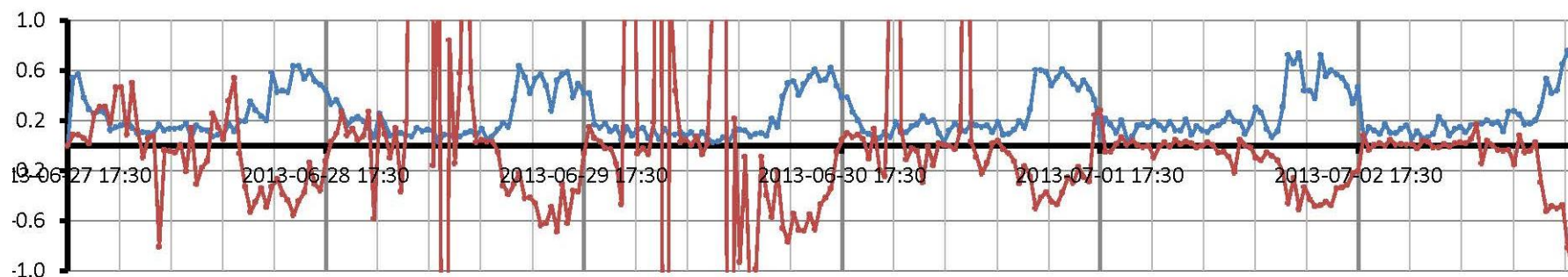
Temporal Coverage: 2013-06-26 - 2013-06-27



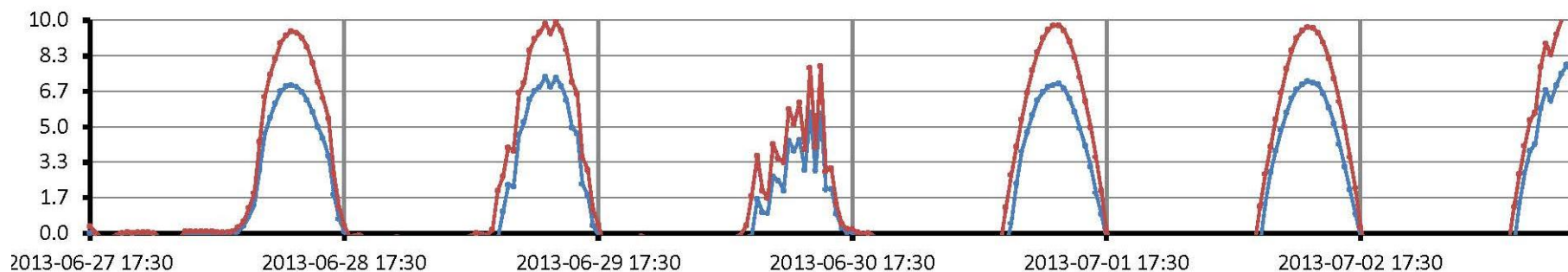
Robson Creek : L1 Data

TERN-EIF 2013

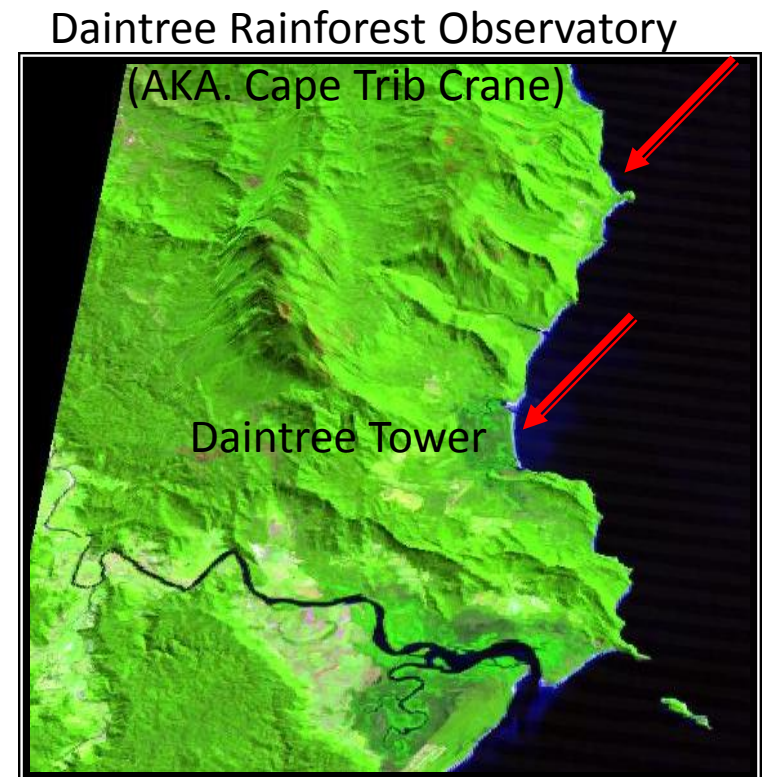
$F_c(\text{WPL}) \text{ mg/m}^2/\text{s}^{-1}$



Net Radiation (raw signals)

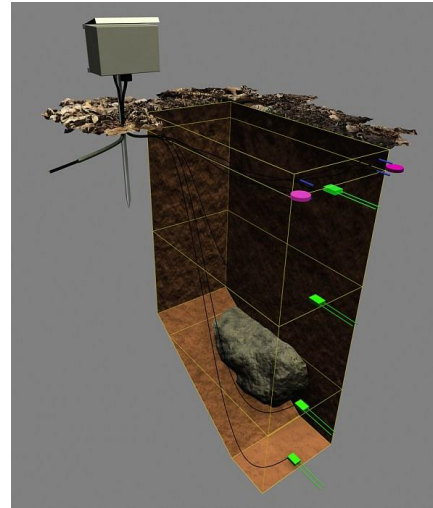


- ❖ Pristine lowland rainforest at both stations.
- ❖ Complex Type 1A mesophyll vine forest
- ❖ **Canopy height** 25-35m
- ❖ **Leaf area index** ≈ 4
- ❖ **Elevation:** 65m
- ❖ **Rainfall:** 4200mm (DT)
5700mm (CT)
- ❖ **T_{mean}**: 24.0 (CT)
°C 24.3 (DT)
- T_{min} – max °C**
- ❖ **Cape Tribulation**
10.6 – 37.5
- ❖ **Daintree Tower**
11.3 – 38.9



Daintree Tower

❖ TERN Ozflux Standard system.

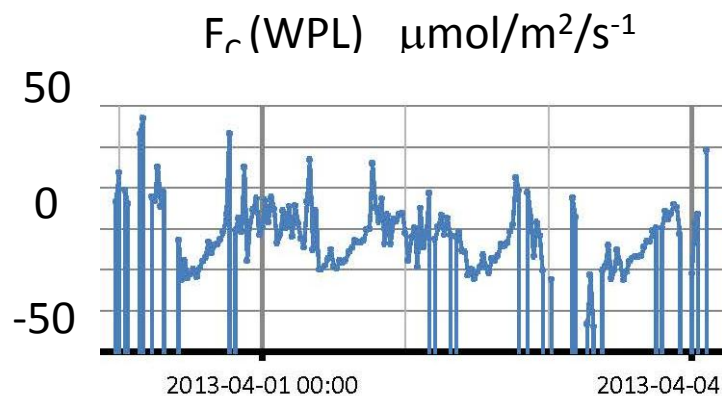




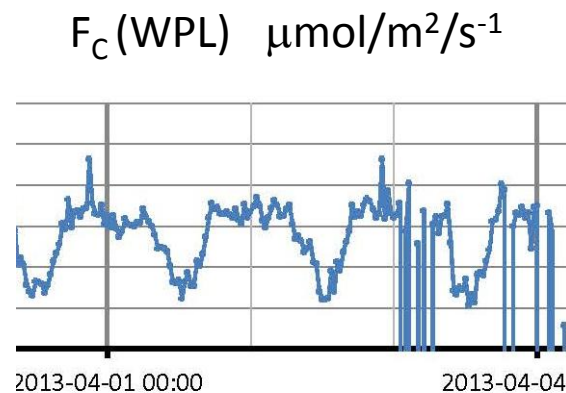
Daintree Tower : Progress

TERN-EIF 2013

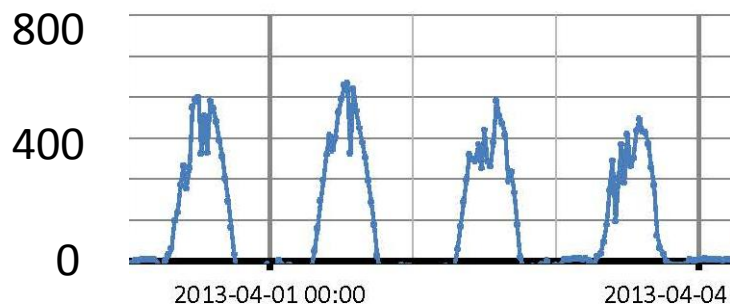
Daintree Tower



DRO (Crane)



Net Radiation (W/m^2)



Net Radiation (W/m^2)

