
A critical look at environmental performance during construction and use of effective platforms to communicate environmental best practice.

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✓ GOING FURTHER

Performance
is elevated by
inspiration.



Lets begin with the problem?

- Are we effective with communicating environmental performance?
- Are we effective at understanding our audience and our role as as environmental practitioners?
- Are we up to date with communication platforms in 2014?



Communication - The Platforms 2014



Aol.

 **MessageMedia**
THE SMS SPECIALISTS



An analogy – Dorothy Wall and Blinky Bill



<http://www.youtube.com/watch?v=x6Ngc5mYuBg>



Lets look at a case study – 2013 Construction CSG fields Surat Basin Queensland



What did our conversations look like?

6 September 2013

File Reference:
13-S-121

Attention:
Carrisa Lynch
Fluor Australia Pty Ltd

RE: BLYTHDALE ROAD ACCESS

Reference is made to your email correspondence dated 30th August 2013 requesting permission to undertake the construction of a new access to the Blythdale North Road at coordinates E 702,123.911 N 7,071,623.48 within the road reserve on behalf of Fluor Australia Pty Ltd.

A copy of the various Local Laws can be accessed via the Queensland Government website for Department of Local Government and Planning.

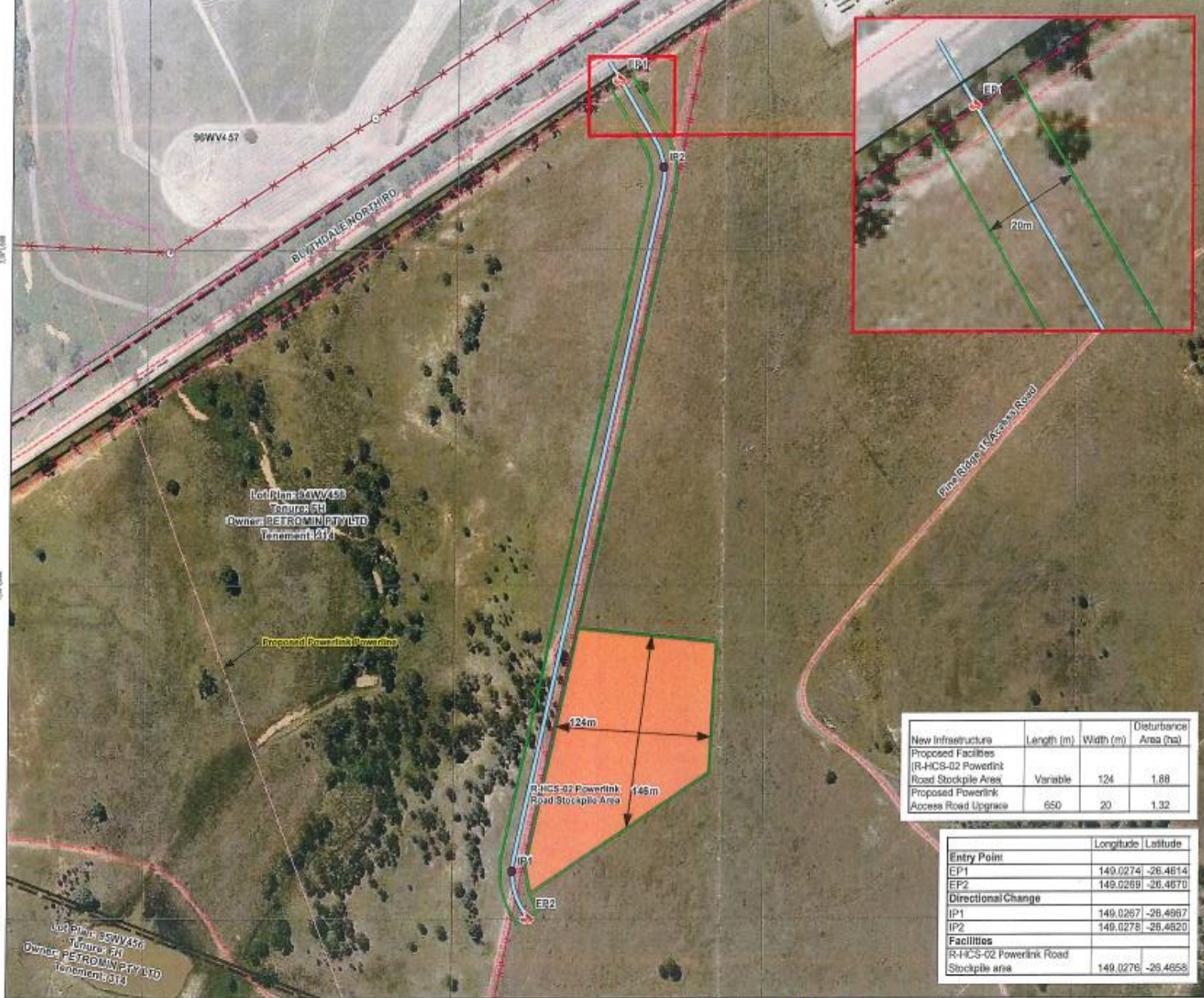
Specific Conditions

1. Access design specification should be able to cater for the type of heavy vehicles using the intersection. Please find attached DO4 – 221E.

Conditions of Permit

1. Fluor Australia Pty Ltd must indemnify Maranoa Regional Council (MRC) for all works performed on Blythdale North Road, by Fluor Australia Pty Ltd in relation to this permit. A signed copy of the attached Deed of Indemnity must be returned to Council prior to any work taking place.
2. All work is to be carried out in accordance with Queensland Workplace, Health and Safety Legislation, Codes of Practice, the relevant Australian Standards and Manual of Uniform Traffic Control Devices (QLD) Part 3 – Works on Roads. All machine operators must have current and appropriate Certificates of Competency for all machines operated. Council's Workplace Health and Safety department require notification of any Accidents or Injuries whilst undertaking the proposed work on roads. Contact *Ollie Dowd on Ph 0488 422 817*
3. All work must adhere to the *Environmental Protection Act 1994* and the *Aboriginal Cultural Heritage Act 2003*. Any issues regarding removal of trees, noxious weeds, environmental spills and cultural heritages please contact the Council's Environmental Department. Contact *Kay Crosby on Ph 0428 880 574*.
4. A Traffic Management Plan shall be submitted to this office a minimum of seven (7) days before commencing work.
5. Fluor Australia Pty Ltd must supply a Certificate of Currency of Public Liability Insurance for the company and proposed contractors to be used, or of a value equal or greater than \$10 million.
6. After construction of the access, adequate signage must be erected either side on the Blythdale North Road at a safe distance to warn motorists that trucks are turning ahead, in accordance with Parts 1 and 2 of the Manual of Uniform Traffic Control Devices (MUTCD).

7. All works within the road Reserve shall be signed in accordance to the Traffic Management Plan and the latest edition of the Department of Transport and Main Roads document MUTCD. Any traffic control is to be performed by authorised persons only.
8. If the work involves excavation or trenching in the existing road pavement the pavement shall be reinstated to meet to the following requirements:
 - a. Approved backfill materials for the open cut trenches within the road reserve shall be compacted in 150mm layers to 95% maximum dry density and in accordance with MRTS04.
 - b. Subgrade layer (150mm) below the 300mm pavement layers shall be compacted to 97% maximum dry density and in accordance with MRTS04.
 - c. Pavement (300mm minimum) shall be compacted in 150mm layers to 100% maximum dry density.
 - d. A copy of compaction test results shall be submitted to Maranoa Regional Council.
9. Trenches should not be left open over night. However, if it is to be left open overnight, temporary barricades and required signage shall be installed to warn the travelling public. This shall be included in the Traffic Management Plan.
10. Current public travel movements shall be maintained during construction so as to cause minimum disruption to traffic, pedestrians, and access to adjacent properties.
11. Council's representative shall be contacted a minimum of forty-eight (48) hours prior to commencing work. If an inspection is required, the cost associated with this inspection shall be payable by Fluor Australia Pty Ltd. Contact Danny Draper on Ph – 0408 327 467.
12. Council Officers will inspect the site with Fluor Australia Pty Ltd staff after the completion of all works to ensure the reserve is left in a safe and suitable condition.
13. Works on roads will incur a 12 month call back for any failures to the road reserve. Any corrective actions required by Council will be carried out by Fluor Australia Pty Ltd in the first instance and if required by Council with Fluor Australia Pty Ltd to be responsible for all cost associated to the works. The call back period will take effect from the completion and final inspection from Councils Offices. All costs will be a direct cost plus 20% basis.
14. Ensure that the table drain profile is functional prior to the installation of the driveway crossover pipes.
15. The hydraulic capacity of the crossover pipes and the overland flow path across the vertical curve in the driveway will be sufficient to prevent stormwater runoff in the table drains being diverted onto the roadway.
16. Approved works shall be in accordance with the plans and specifications submitted.
17. The approved works shall be carried out between 6am and 6pm.
18. The Applicant shall identify by all required means any existing underground facilities, cables, structures, drainage, etc. even if not shown and shall obtain all the required approvals from the authorities concerned.



Legend

- IP
- Entry Point
- Existing Power Pole
- Existing Pipelines Symbols
- Fence
- Existing Road/Track
- Proposed New Road/Road Upgrade
- Assumed Corrected Cadastral Boundary
- Existing Powerline - Aerial
- Existing Powerline - Underground
- Proposed Powerline - (Other)
- Disturbance Area
- Proposed Facilities
- Cadastral Boundary



Metres
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia 1994
 Grid Map Grid of Australia 1994, Zone 55

New Infrastructure	Length (m)	Width (m)	Disturbance Area (ha)
Proposed Facilities (R-HCS-02 Powerlink Road Stockpile Area)	Variable	124	1.88
Proposed Powerlink Access Road Upgrade	650	20	1.32

Entry Point	Longitude	Latitude
EP1	149.0274	-26.4614
EP2	149.0269	-26.4670
Directional Change		
IP1	149.0267	-26.4667
IP2	149.0278	-26.4620
Facilities		
R-HCS-02 Powerlink Road Stockpile area	149.0276	-26.4658

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Drawn by: [Name]
 Checked by: [Name]

REV	NO	DATE	DESCRIPTION	BY	CHKD

C: [Name] (31/05/2015)
 S: [Name] (31/05/2015)
 D: [Name] (31/05/2015)
 R: [Name] (31/05/2015)

REV NO	DESCRIPTION	DATE	BY	CHKD

7886 ELECTRIFICATION
 132Kv Switchyard at R-HCS-02
 Landholder Scope Summary (LSS)
 PETROMIN PTY LTD

TRAIN 2 GAS SUPPLY PROJECT

Drawing No: 7886-000-REP-10001-FLR02-ELEC

Rev: C

Project: TRAIN 2 GAS SUPPLY PROJECT

Drawing No: 7886-000-REP-10001-FLR02-ELEC

Landholder Scope Summary (LSS) PETROMIN PTY LTD

Scale: 1:1000

The Result? Confusion (and stand-down \$\$\$)



The Risk?

- 3000 construction workforce requiring environmental induction (excl staff & turnover)
- 10 days pre-mobilisation inductions/training per person
- \$10 000 estimated cost to mobilise per person including medicals and 4WD
- 11 minutes of environment component versus 16hrs on safety
- 2000 environmental compliance obligations and other requirements
- 20 000 engineering drawings prepared overseas
- 500 GIS constraints layers
- 200 environment plans/sub-contractor and sub-sub-contractor EWPs
- 190 environment, water, CH field advisers (excluding landholder & community advisers)
- \$2M field validation studies provided to 3rd party environmental consultants
- Zero matters of national concern significantly impacted more than 150 yrs cattle grazing
- Zero state & local impacts significantly impacted more than 150yrs cattle grazing
- Daily conversations, contacts, with landholders – traffic, water for drought, weeds
- Monthly changes to Environment or Resource Authority licences and approvals to convey

Source: N Madden personal conversations with Santos, GLNG US, Environmental Advisors, June 2014



How can we better perform?

- How can we influence our workforce?
- How can we improve our environmental communication?

Effective decision making comes from acknowledging that our construction teams need the **confidence, understanding and empowerment** to make a decision.

We need the messages to be clear, strong and consistent

Lets **take five** and ask the simple questions



Understanding the Audience

- Who is the audience?
- What is their current and mainstream language?
- What communication platform is appropriate for this audience?
- What skills do the audience have?
- What are their schedules and contracts and personal agendas?



Understanding the Environmental Objectives

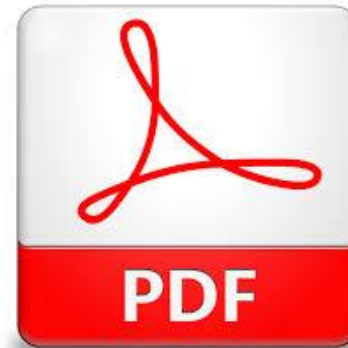
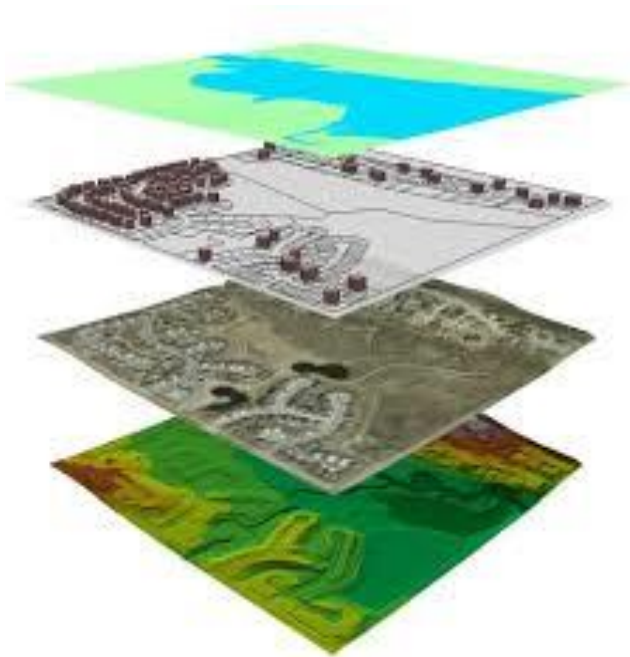
- What is our environmental objectives within this project?
- What are the key risks, values, and what is the key message?
- How do we present highly technical scientific investigations to this audience?



What communication tools can we use?

Interactive PDF mapping – capturing spatial information succinctly

<http://www.santosgln.com/the-project/interactive-map.aspx>



What communication tools can we use?

Quick Response Codes - Delivering information through tablet and smart phone software.

<https://www.youtube.com/watch?v=dtjwTrk-ons>



What communication tools can we use?

Mini Movies – capturing key messages in a interactive and visual manner.

<https://www.youtube.com/watch?v=l6P2KcMjWQU>



Take away message

Please ask yourself.....

Are you across your audience and what communication platform best suits their needs?





Acknowledgements

Opus International Consultants

RPS Group Pty Ltd
Ms Hannah Rowan and Dr Lynise Wearne

Santos GLNG Project
Environmental Team FEED

Santos
GLNG Project

✓ BEST MINDS TOGETHER

Success comes from
how you combine
your talent.





http://www.youtube.com/watch?v=KDPW_g2AhAU

✓ TRUE TO OUR WORD

Loyalty is built by
doing what you
said you would.

