

APGA Convention 2022 - Brisbane

Pipeline Encroachment - Who Should Pay?

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Agenda

- “Who Pays for Encroachment?” presentation covers: -
 - Review some arguments for and against who should pay
 - Review some Case Studies
 - Suggest opportunities for improvement

Current AS2885 Requirements w.r.t. Planning

- Pipelines are designed for up to 80 years
 - Always based on Government/Council Future Plans known at the time
 - Always designed for the known current & probable future risks (SMS)
- We also identify a procedural control to include “Planning Notification Zones” (AS2885.1.5.4.6(b)(ii))
- But how do we as designers and operators help inform the Planning Tools of Government Authorities?

Who Should Pay for Pipeline Encroachment Mitigations?

- Governments/Councils trigger encroachment
 - To accommodate expanding populations
 - Create economic growth
 - Improve the amenity of an area
- When Government/Council changes the plans they should bear the **COST** (i.e. similar to other “supporting infrastructure” sewer, water and power)

Who Should Pay for Pipeline Encroachment Mitigations?

- Developers are normally acting upon opportunity presented by planning changes to make a profit
- They pay for sewer, water & power infrastructure and so pipeline protection should also be considered
- It becomes more complicated when a Developer is perhaps one of many but are the “first one in”!
- Governments/Councils need to plan for this

Who Should Pay for Pipeline Encroachment Mitigations?

“But Pipeline Companies make plenty of money so they should pay?”

- If a pipeline is government regulated then this can prevent cost recovery
- Other infrastructure is paid for by Councils through rates/taxes or Developers through sales prices.
- Just because a pipeline is privately operated, it is often critically important to the wider community (remember Longford)
- The pipeline has a certain level of residual risk (reassessed every 5 years)
- If a third party materially changes the risk profile then as the “Agent of Change” they should carry the cost.
- Often the mitigation makes it harder to access the pipeline

Who Should Pay for Pipeline Encroachment Mitigations?

- Every development is different and each pipeline is different.
- AS2885 asks us to undertake a risk based design but what is the alternative?
 - Build pipelines that are entirely effective against all risk at every point (CAPEX) (not helpful for existing pipelines)
 - Absorb all mitigation costs (OPEX), will drive risk vs profit behaviour.
- If society wants cheaper gas prices then having developers pay for the localised cost of mitigation is fundamental (its just another utility)

Around the Grounds - SA

Case Study 1

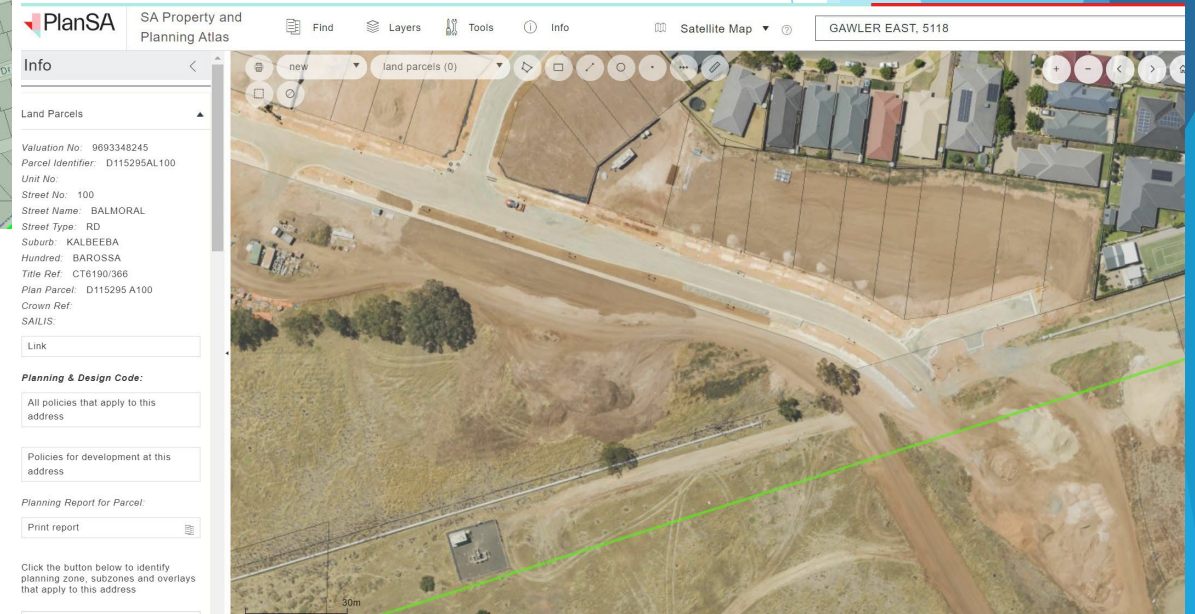
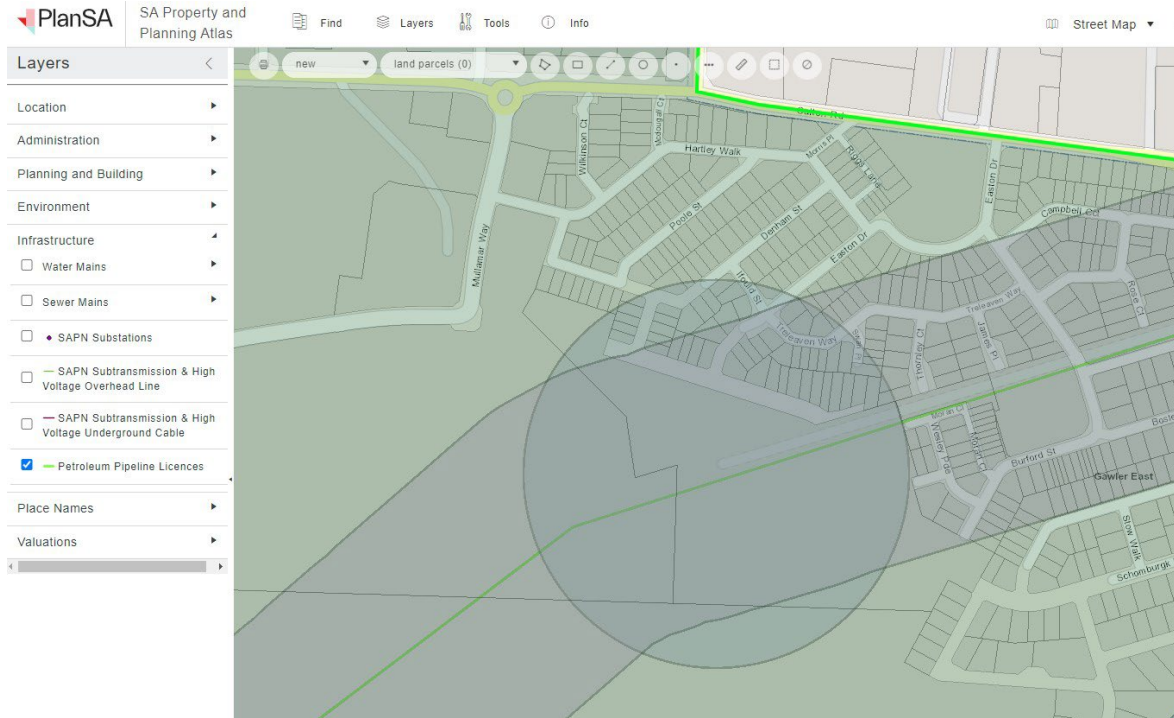
- ▶ 2009 Developer lobbies State Government to rezone rural land north of Adelaide to residential
- ▶ Area includes 15MPa gas pipeline supplying 50% of Adelaide complete with MLV & Process Vent
- ▶ State Government did not engage with pipeline licensee before rezoning
- ▶ Developer planned for residential within 45m of process vent, making use of the vent all but impossible
 - Noise (~135dBa)
 - Gas impingement leading to ignition
- ▶ 12 years after rezoning and significant staff, lawyer and engineering time and cost, a confidential settlement has been reached between parties in 2021 (there were no winners!)

Around the Grounds - SA

Case Study 1 - Key Messages

- ▶ Government planning authorities need a proper appreciation of pipelines & their infrastructure w.r.t. pipeline and public risk,
- ▶ Pipeline licensees and APGA should endeavour to inform government planning authorities (particular new planners) of pipeline risk.
- ▶ Government authorities need to engage with pipeline licensees prior to major rezoning decisions being taken.
- ▶ In March 2021 SA State Planning Commission established a new “Planning and Design Code” specifically identifying pipeline licensee referral triggers backed up by a new “SA Property & Planning Atlas”

Around the Grounds - SA



Around the Grounds - WA

Case Study 2

- ▶ 2014 Developer sort to build a rural residential estate in North Dandalup next to the DBNGP south of Perth
- ▶ WAPC Planning Bulletin 87 provides building “Setback Distances” (50 to 200m, QRA) for WA Pipelines
- ▶ PB87 also references AS2885 and directs Developer to engage with pipeline licensee
- ▶ The Developer
 - Followed PB87 w.r.t. building envelopes set back from pipeline
 - Did an SMS as they interpreted AS2885
 - Prepared a Pipeline Risk Management Plan as per PB87
 - Ensured their allotments were “just” > 1Ha so as to “comply” with AS2885 Part 6. 2.3(b)(ii) for Rural Residential R2 Location Class
- ▶ Developer and DBP could not agree on the outcomes from the SMS leading to an impasse

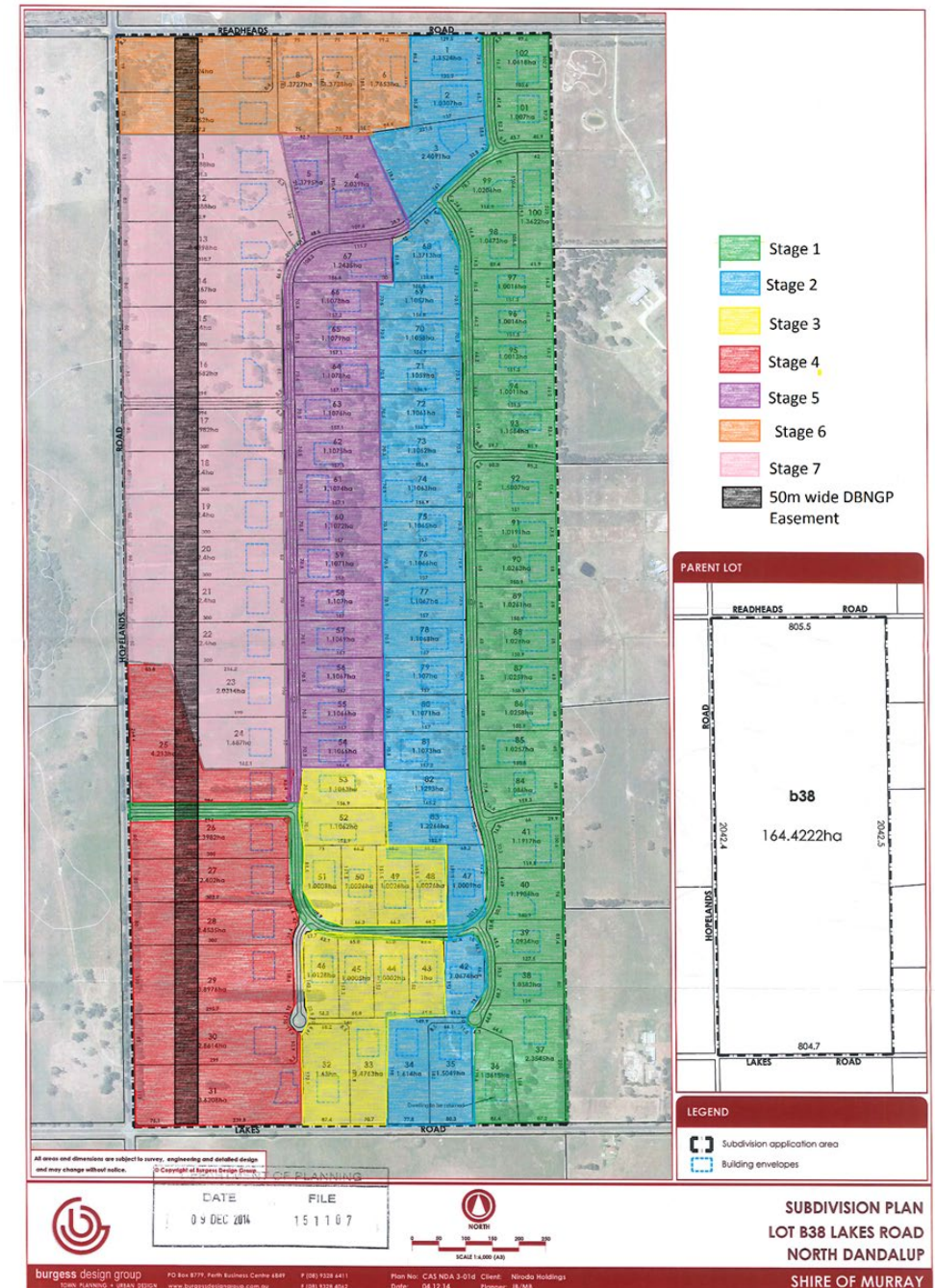
Table 1: Width of the high pressure gas pipeline setback distances at 90° to the edge of the pipeline corridor/easements (adapted from Summary of Quantitative Risk Assessment Studies¹, Metropolitan Area, Gas Pipeline Working Group, September 2004).

Pipeline	Setback distance ²		
	Sensitive	Residential	Industrial / commercial
Dampier to Bunbury Natural Gas Pipeline (DBNGP) north of Muchea (MLV116)	200 m	150 m	100 m
DBNGP2 between Muchea (MLV116) and Kwinana (KJN)	90 m	0 m	0 m
DBNGP2 between Kwinana (KJN) and Baldivis (MLV141)	130 m	110 m	70 m
DBNGP2 south of Baldivis (MLV141)	115 m	100 m	80 m
Meter stations	95 m	90 m	85 m
Main line valves	90 m	85 m	55 m
Parmelia Gas Pipeline north of Caversham	80 m	70 m	60 m
Parmelia Gas Pipeline south of Caversham	70 m	65 m	45 m
Parmelia Gas Pipeline main line valves and above ground facilities	80 m	75 m	0 m
DBNGP corridor and Parmelia Gas Pipeline easement when adjoining between Muchea and Baldivis	110 m	75 m	60 m

Around the Grounds - WA

Case Study 2 - Independent Review

- ▶ Consequences of failure from DBNGP “Main Line” (ML of 466m) found societal impact of rupture was the “dominant consideration” as per AS2885 Part 6 2.3(d). Thus development should be considered a T1 LC
- ▶ A new SMS Workshop found both Developer and DBP agreeing risks to the DBNGP main line required additional physical protection
- ▶ But couldn’t agree what was ALARP: -
 - ~6km of concrete slabbing vs pipeline replacement



Around the Grounds - WA

Case Study 2 - Key Messages

- ▶ After 8 years of argument, negotiation, mediation, SAT hearings (+ staff & lawyer cost)
- ▶ Developer agreed to fund the cost of 6km of DBP Main Line replacement (+\$10M)
- ▶ Again, planning tool inconsistent with AS2885.
- ▶ The PB87 replaced with “Development Control Policy 4.3 Planning for HP Gas Pipelines”
- ▶ Policy 4.3 removed reference to Setback distances (still in DRAFT since 2018!).
- ▶ No firm policy guidance from WAPC but PlanWA provides an Infrastructure mapping portal
- ▶ WAPC will not agree to any development near a WA pipeline without approval of licensee

Around the Grounds - NSW

Case Study 3

- ▶ DPEI engaged a 3rd Party to undertake QRA Report for 3 major pipelines in the GMGA, SW Sydney
- ▶ QRA assessed risk to population referring to NSW HIPAP Guidelines for MHF
- ▶ QRA identified an exclusion Zone for Residential of 125m and 200m for Sensitive uses
- ▶ DRMC engaged on behalf of Lendlease to review the QRA Report
 - ▶ HIPAP requirements not appropriate to apply to linear, HP gas pipelines
 - ▶ QRA risk method did not consider actual credible risk to pipeline(s)
 - ▶ QRA considered all pipelines failing together

Around the Grounds - NSW

Case Study 3 - Key Messages

- ▶ Government authorities don't understand pipeline risk
- ▶ Applying QRA w.r.t. HP pipelines results in significant loss of benefit
“greater public benefit” vs “cost to a developer for pipeline mitigation”
- ▶ Government planning authorities should defer to pipeline industry for guidance & support
- ▶ Pipeliners & APGA should engage with planning departments at highest level to educate them.
- ▶ NSW Dept Planning & Environment now requires specific QRA if residential or sensitive use is required within setback distances identified.
- ▶ Planning Minister provides a “Circular” to local councils advising of pipeline setback/notification distances

Around the Grounds - Vic

Key Messages

- ▶ VPA undertakes early-stage master planning SMS workshops with pipeline licensees
- ▶ Planning terminology varies so SMS actions may not make it to key planning documents.
- ▶ How to deal with wide scale pipeline protection following Master Planning SMS . Mitigation costs can be significant
- ▶ “Development Contribution Guidelines” for costs of utilities (e.g. water & sewer) are contributed to by the developer.
This could/should be extended to pipeline protections.

Around the Grounds - Qld

Key Messages

- ▶ Limited “licensed” pipelines in developed areas of the state
- ▶ Each local council has its own notification zone for HP gas pipelines.
- ▶ Each council’s zone is different and none of them are related to pipeline ML.
- ▶ Educate gov authorities of pipeline risk to seek consistency across jurisdictions

In Summary

- Yes the “Agent of Change” should pay for pipeline mitigation
- APGA/Licensees should engage with state planning authorities to: -
 - Continuously educate new planning staff
 - Get consistency in referral distances and planning documents across states and councils
 - Ensure planners engage with pipeliners early?
 - Assist in prep of “Development Planning Contribution” mechanisms for large scale pipeline protections in development areas

So Who Should Pay for Pipeline Encroachment?

- Even though we think the Developer is meant to pay
- Without well considered planning tools
- Knowledgeable planning authorities
- Early engagement by planning authorities with pipeline licensees
- The pipeline licensee will continue to pay also, by way of:-
 - long drawn out negotiations
 - Significant staff, engineering & lawyer costs and
 - Sometimes even pipeline mitigation costs

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