

Narrabri Gas Project

Community Consultative Committee Meeting – September 2022

Santos



- + This presentation contains forward looking statements that are subject to risk factors associated with the oil and gas industry. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, geotechnical factors, drilling and production results, gas commercialisation, development progress, operating results, engineering estimates, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals and cost estimates.
- + All references to dollars, cents or \$ in this document are to Australian currency, unless otherwise stated.

- + Welcome
- + Apologies
- + Declaration of pecuniary or other interests
- + Confirmation of minutes and actions arising
- + Correspondence - CWA
- + Santos Update
- + Field Development Plan for consultation
 - + Consultation Schedule
- + Proponent Reports
 - + Advisory Group Updates
 - + Member updates
- + General Business
 - + Next meeting



Welcome

- + Welcome
- + Apologies
- + Housekeeping



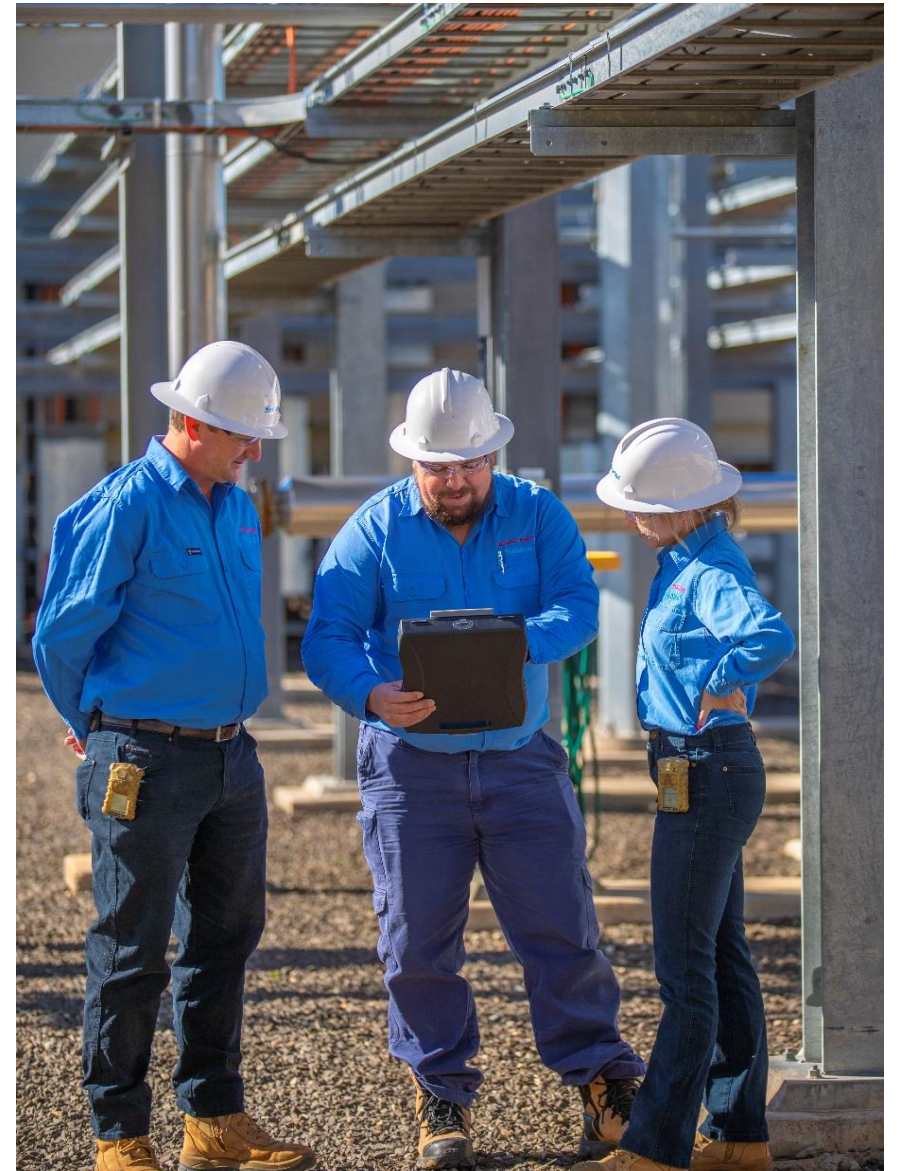


Santos half-year results for 2022 released 17 August

- + Underlying profit US\$1,267 million, up 300%
- + Statutory net profit after tax US \$1,167 million, up 230%
- + EBITDAX \$2,731 million, up 122%
- + Free cash flow US\$1,708 million, up 199%
- + Annual merger integration synergies target increased to US\$110-125 million
- + US\$605 million in shareholder returns comprising:
 - + a 38% increase in the interim dividend to US7.6 cents per share unfranked (US\$255 million)
 - + An increase in the previously announced on-market share buyback from US\$250 million to US\$350 million
- + Purchase of Hunter Gas Pipeline Pty Ltd (see later slides) as a transport route for the gas produced at Narrabri
- + Santos, as operator of the Pikka Unit joint venture, announced a final investment decision (FID) has been taken to proceed with the US\$2.6 billion gross (US\$1.3 billion Santos-share) Pikka Phase 1 oil project located on the North Slope of Alaska.

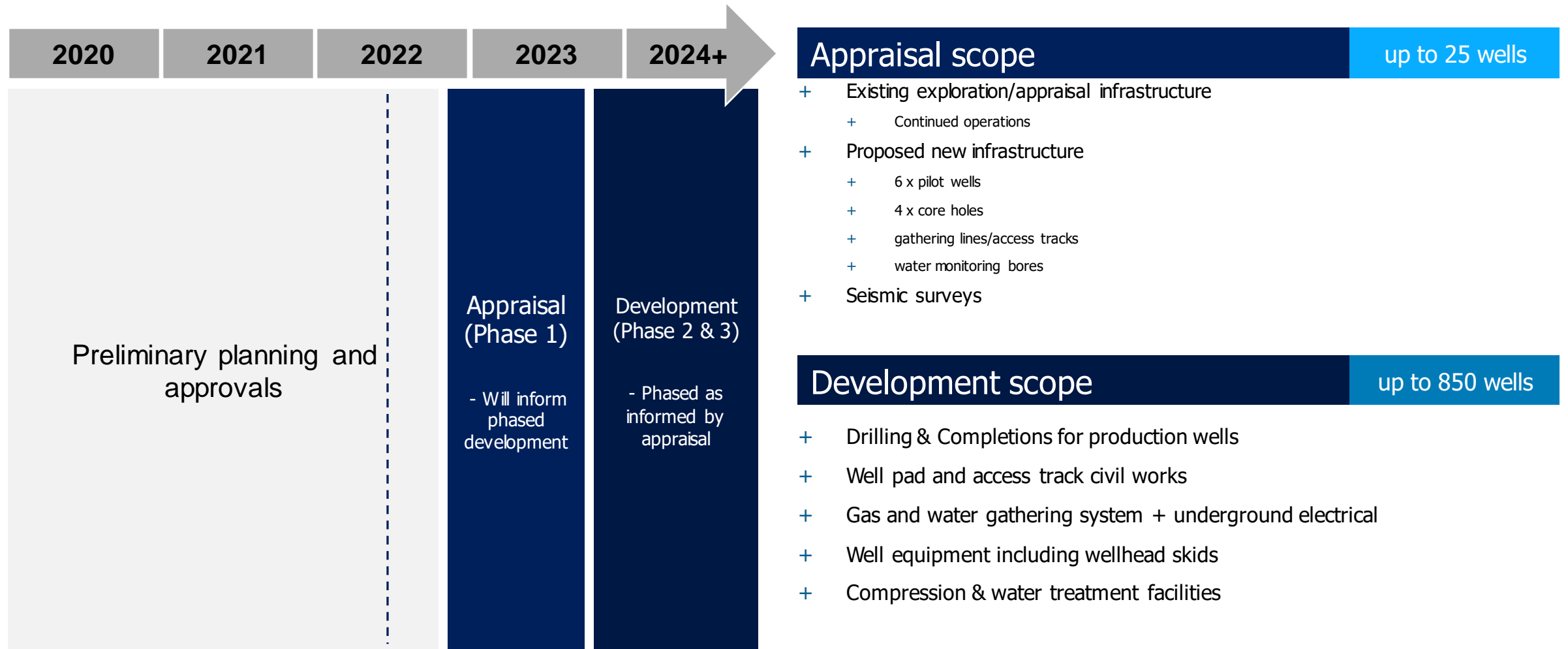
Narrabri Gas Project update

- + Santos continues work on the preparation and approval of the management plans required as a condition of consent by IPC.
- + Meet approval Conditions of Consent prior to Phase 1:
 - + Management plans must be approved by planning secretary
 - + Currently 26 plans & sub-plans progressing through various stages of consultation and approval
 - + Once approved, all plans will be displayed on the NGP website
 - + Next plan to be circulated for consultation will be the Field Development Plan.
- + Santos will undertake a 12 to 18 month appraisal program ahead of a Final Investment Decision for the next phase of project development.



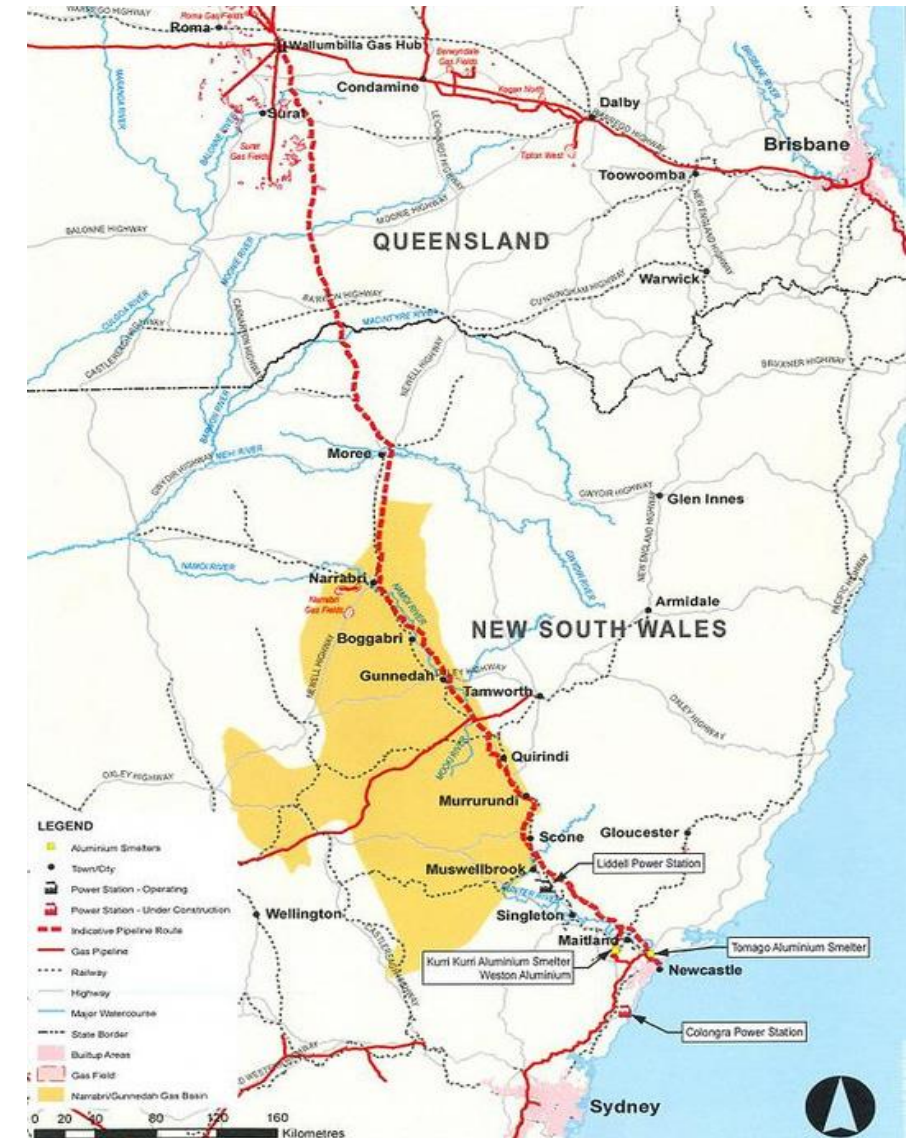
NGP indicative timeline and scope

Once all approvals are in place, a 12 to 18 month appraisal drilling program will be undertaken to inform the phased development of the Project.



Hunter Gas Pipeline Overview

- + The Narrabri Gas Project (NGP) supported by the Hunter Gas Pipeline (HGP) are critical for energy security and reliability in NSW with 100% of the gas committed to the domestic market.
- + The underground pipeline route passes close to the Narrabri Gas Project and the goal is to work with infrastructure developers and owners to construct the pipeline and deliver much-needed gas to east coast domestic markets in the shortest timeframe possible.
- + The underground pipeline to the locally produced gas will provide the cheapest gas available for NSW families and businesses.
- + The pipeline is expected to commence construction in early 2024 once the route is finalised and all secondary approvals are completed.
- + Once constructed, it will potentially connect the Wallumbilla Gas Supply Hub in Queensland to NSW, providing a second route to southern markets for Queensland gas and adding competition to the domestic market.



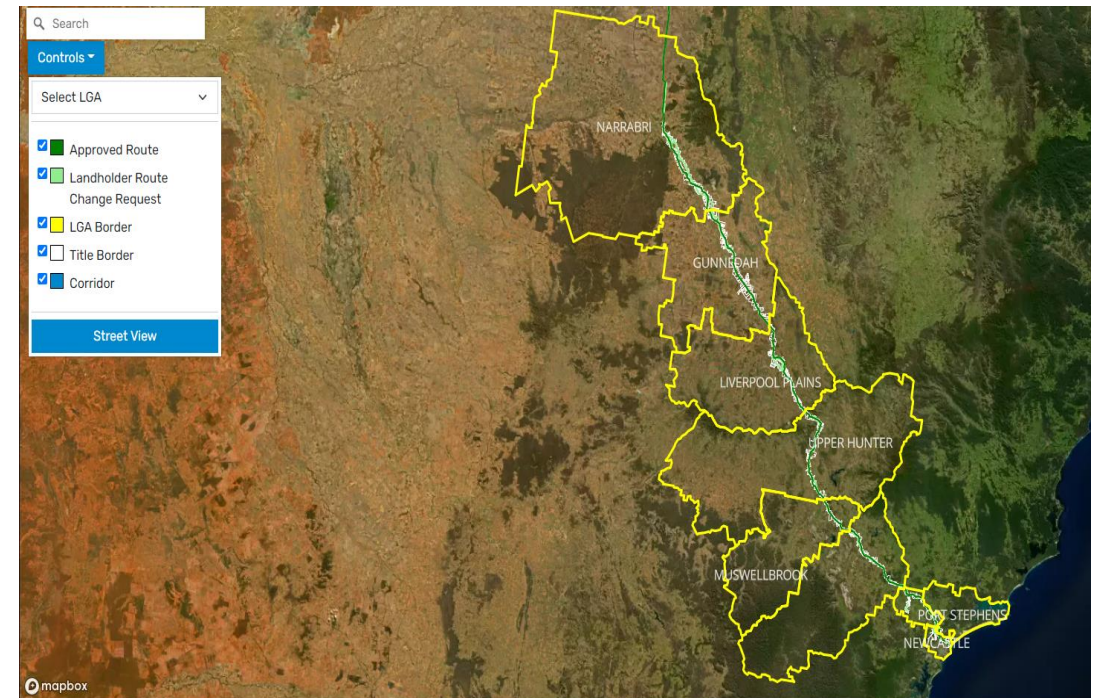
Hunter Gas Pipeline Overview

- + The 833-kilometre HGP has planning approval from the NSW and Queensland governments.
- + Stage 1 will deliver gas from the Narrabri Gas Project to Hexham with offtake points at regional towns along the route.
- + The pipeline will also be designed to transport hydrogen as customer demand evolves during the energy transition.

Length	~ 833km Stage 1 - Narrabri to Hexham ~ 413km Stage 2 - Narrabri to Wallumbilla ~ 420km
Material	Epoxy coated high strength steel line pipe
Size	Nominally 20" or ~508mm diameter
Depth	Generally 900mm Minimum 750mm Maximum 1800mm
Design	Strictly in accordance with the latest version of Australian Standard (AS) AS2885 Pipelines Gas and Liquid Petroleum.
Pipeline easement	Nominally 30m wide

Proposed Route

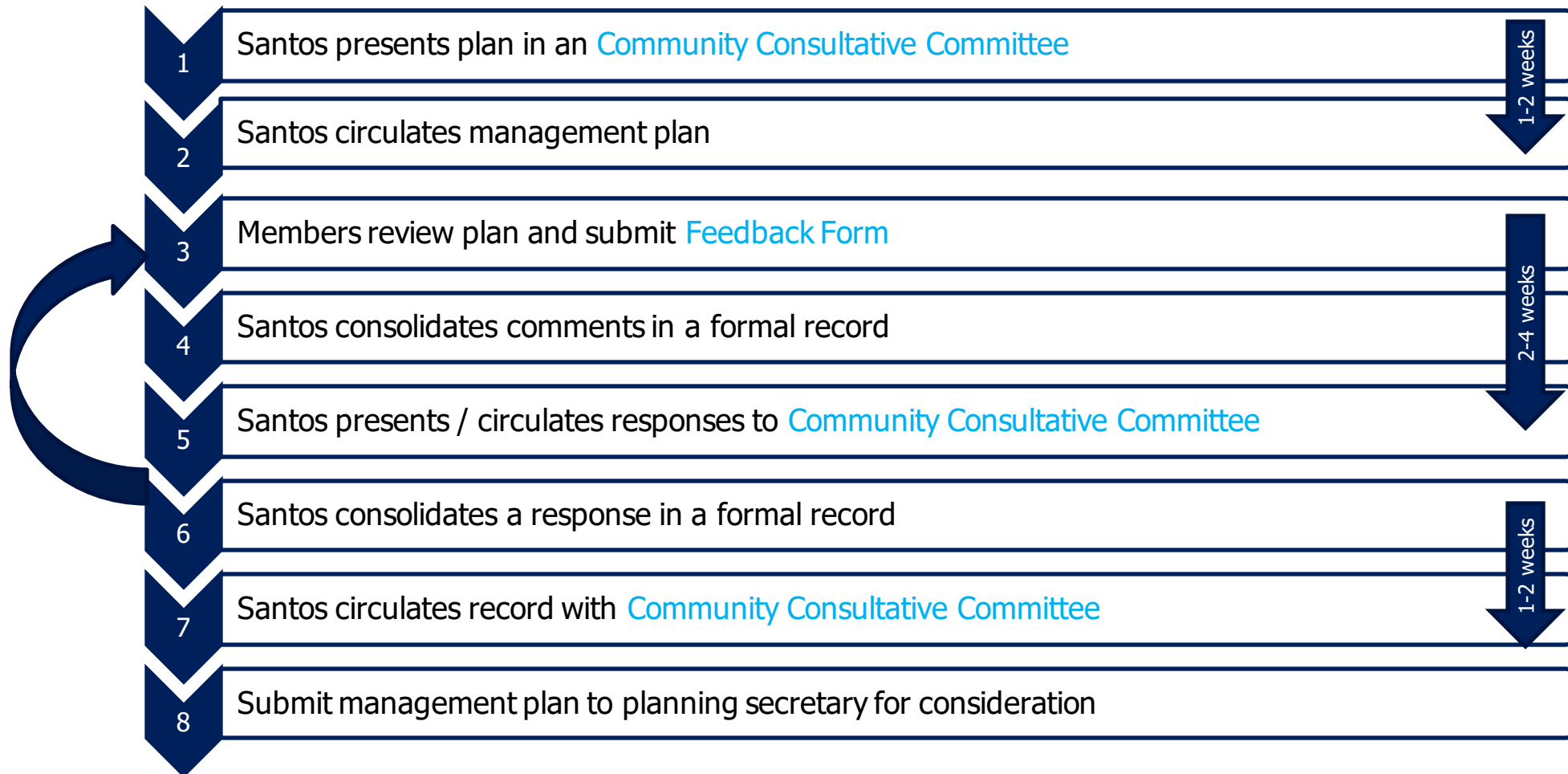
- + The approved 200m corridor was selected to ensure minimum impact on communities, landowners, and the environment.
- + The exact location of the pipeline and the 30-metre construction right-of-way will be refined and informed by landholder feedback and preferences, resolve potential constructability issues and environmental considerations identified in upcoming survey work.
- + Santos will continue to engage with the directly affected landholders, local councils and state government agencies to finalise the pipeline alignment within and around the approved corridor.
- + HGP interactive map on updated website available to allow landholders to view the approved route and route change requests that have been submitted by landholders through engagement to date.



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Field Development Plan

CCC Consultation Process



How to provide feedback

- + Represent interest and canvas advice from your group
- + Submit feedback within ~2 weeks (via Chair) following meeting
- + Please use the Feedback Forms
- + The format
 - + Section of the Plan
 - + What 'type' of feedback
 - + The issue to address
 - + Be objective
 - + Be concise
 - + Provide reasons where possible

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Management Plan Consultation Feedback Form

DOCUMENT TITLE: Erosion and Sediment Control Plan

STAKEHOLDER: Insert organisation name

CONSULTATION RELEASE DATE: 3 August 2021

COMMENTS DUE DATE: 7 September 2021

General Feedback

Key Issues

Suggestions for improvement

Section	Type	Specific Feedback
eg Section 2	Legislative + Regulatory reqs./ Readability / Usability /	Further detail is required about when a report is required and how the report is to be submitted.

Management Plan Consultation Feedback Form Page 1 of 1

A Field Development Plan (FDP) is required under consent condition B4.

- + identifies how the final location of the Phase 1 infrastructure is determined
- + is based on the approved Field Development Protocol (condition B2), and combines the relevant requirements of all other environmental management plans for the NGP:
 - + Biodiversity Management Plan
 - + Aboriginal Cultural Heritage Management Plan (ACHMP)
 - + Historic Heritage Management Plan
 - + Water Management Plan and sub-plans
 - + Noise Management Plan
 - + Rehabilitation Management Plan
 - + Property Management Plans

The FDP is to be prepared in consultation with:

- + CCC
- + Water Technical Advisory Group
- + Greenhouse Gas Emissions Advisory Group
- + Aboriginal Cultural Heritage Advisory Group
- + Biodiversity Advisory Group
- + EPA
- + DPE Water
- + BCS
- + Resources Regulator
- + Narrabri Shire Council
- + owners of land upon which gas field infrastructure is proposed to be located

What is the Field Development Plan:

- + Field Development Plan is a culmination of all previously developed management plans
- + Displayed the final disturbance limit
- + Displays how the conditions of consent have been addressed through the planning phase

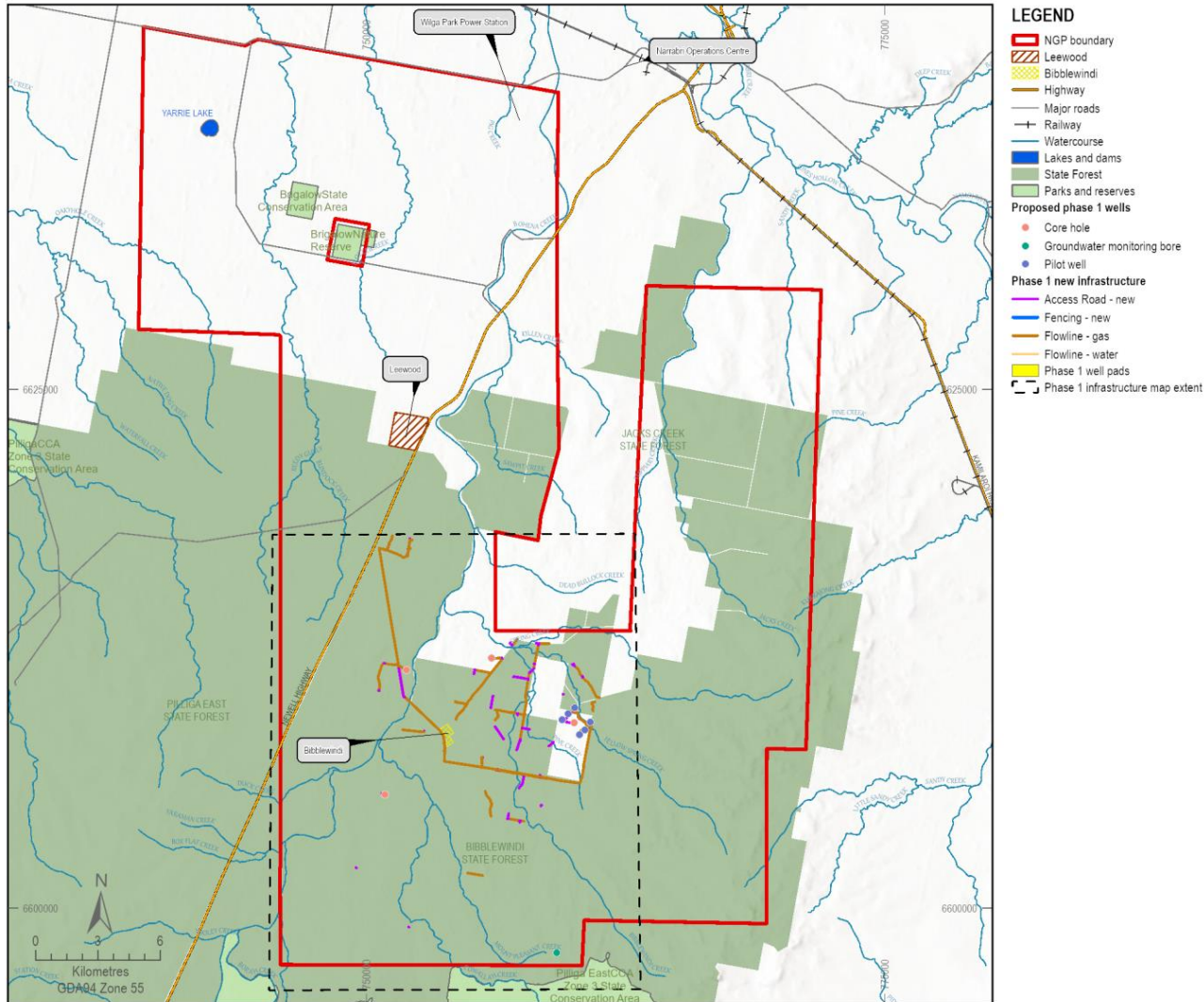
Phase 1 - proposed infrastructure

Type	Location / well name
Core holes	Bibblewindi 30
	Bibblewindi 31
	Dewhurst 34
	Dewhurst 35
Pilot wells	Dewhurst 37 (horizontal)
	Dewhurst 38 (horizontal)
	Dewhurst 39 (horizontal)
	Dewhurst 40 (vertical)
	Dewhurst 41 (vertical)
	Dewhurst 42 (vertical)
Groundwater monitoring bore	Dewhurst 43

- + Access road (new and some maintenance)
- + Gas and water flowlines
- + Shallow water monitoring bores on existing well pads (Bohena 1C, Bibblewindi 6, Dewhurst 9)
- + continued operation of the existing exploration and appraisal activities

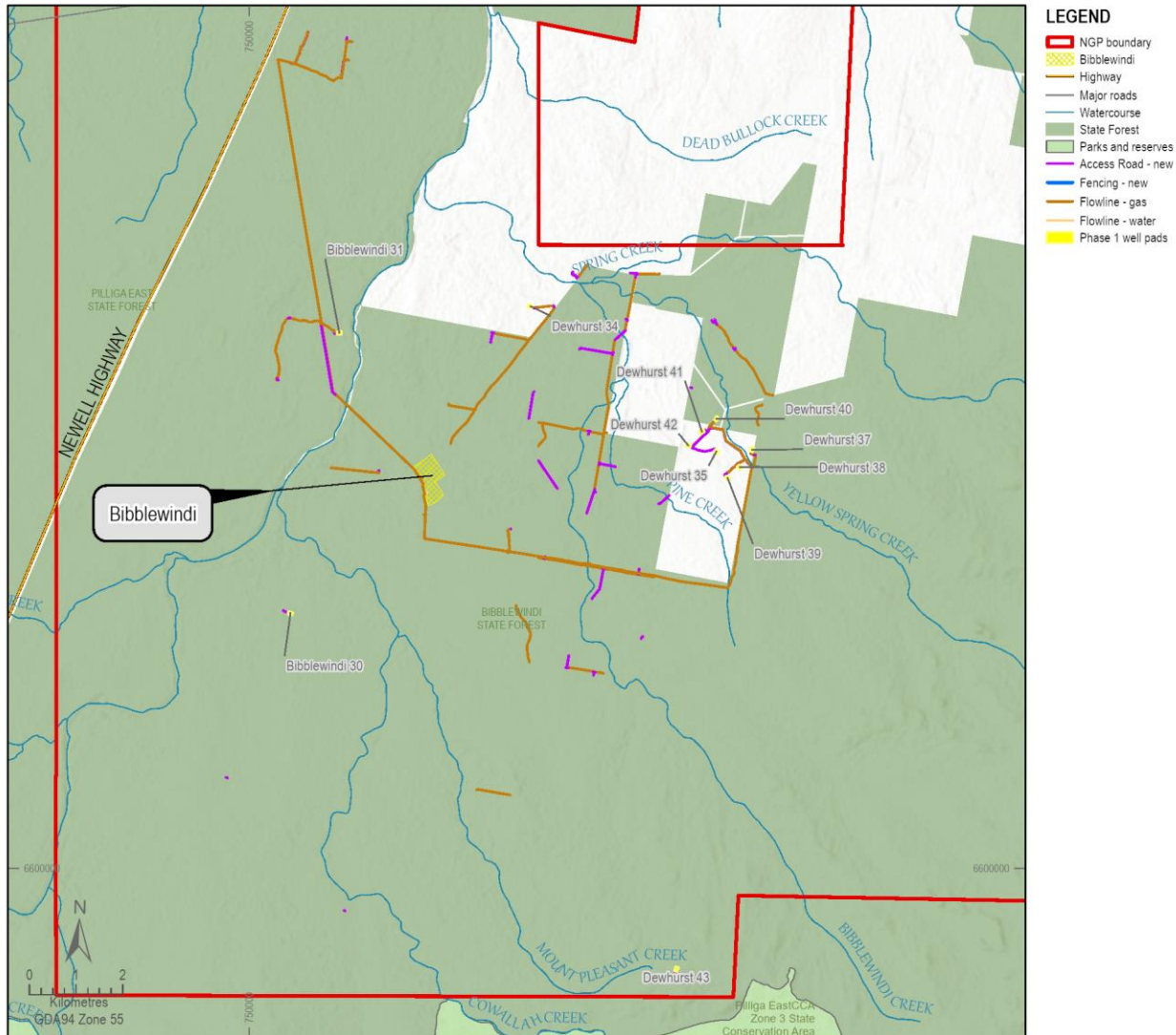
NGP Field Development Plan

Phase 1 - proposed infrastructure



NGP Field Development Plan

Phase 1 - proposed infrastructure



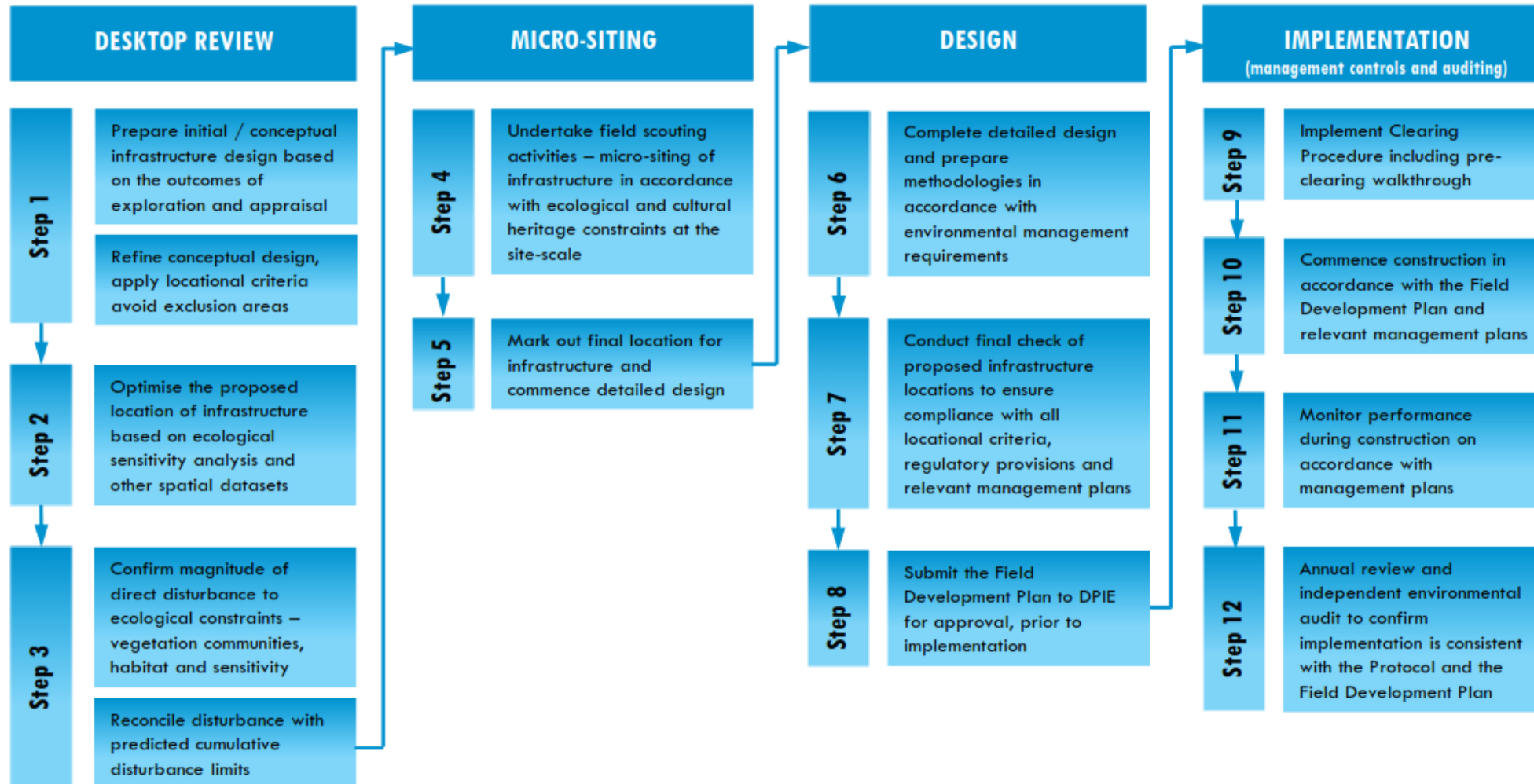
The FDP identifies a constraints mapping process, which overlays all the requirements, obligations and restrictions to find the acceptable and permissible locations

This process is divided into 4 separate stages:

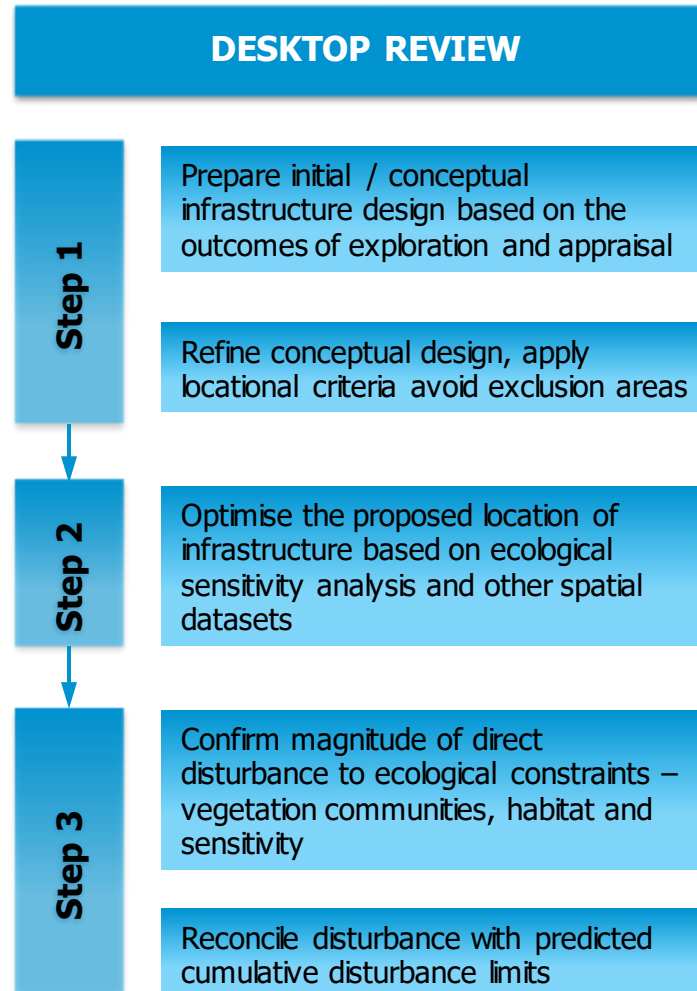


with each stage separated into a number of individual steps

Constraints planning process – detailed steps



Steps 1, 2 and 3 - Initial / conceptual design and desktop review

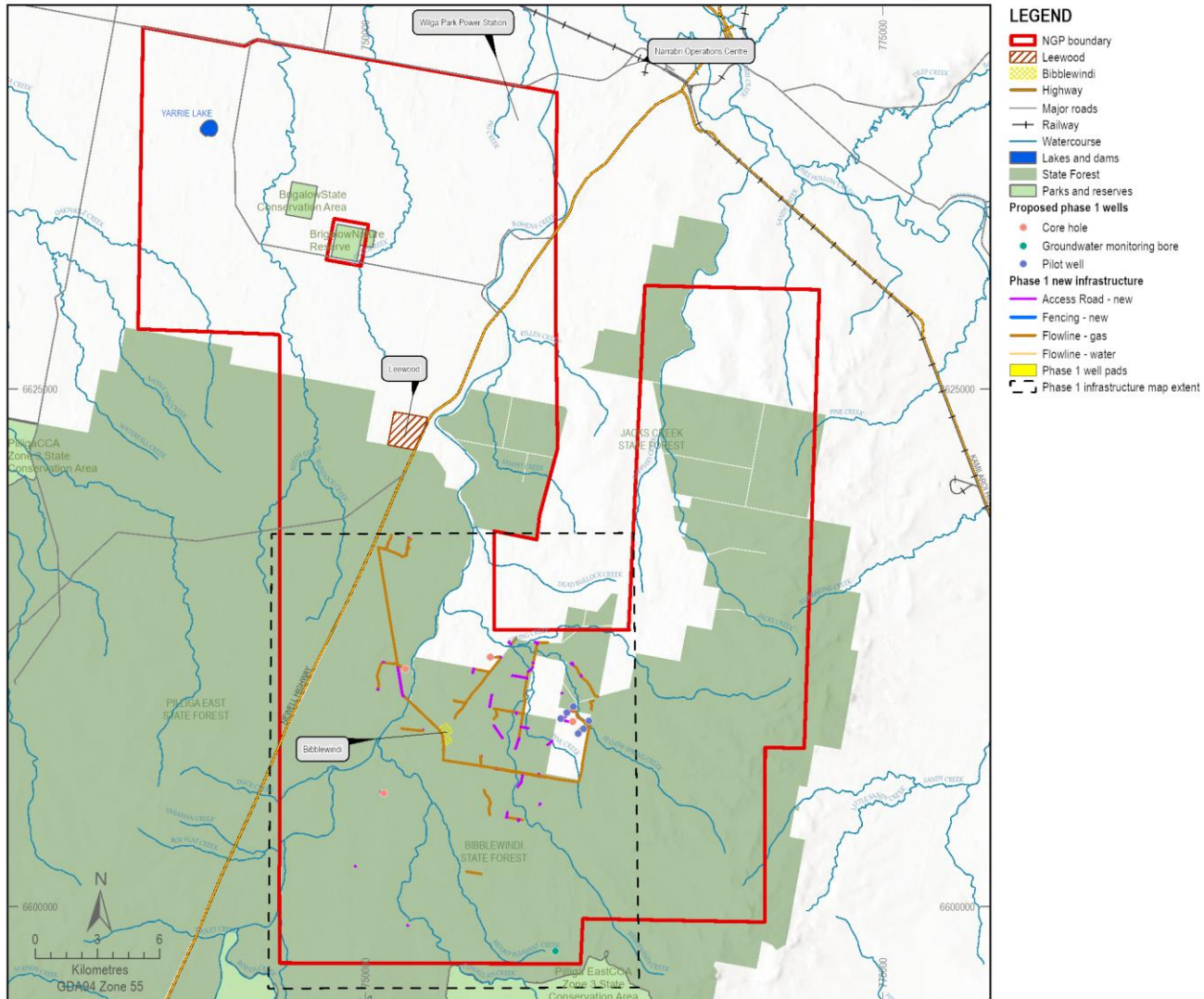


Locational criteria as per consent condition B1

Conservation areas

- + No surface infrastructure within 200 metres of Yarrie Lake property boundary
- + No surface infrastructure within 50 metres of Brigalow State Conservation Area
- + No sub-surface infrastructure below Brigalow State Conservation Area, from the ground surface to a depth of at least 110 metres
- + No surface infrastructure within 50 metres of Brigalow Nature Reserve

Locational criteria as per consent condition B1 – conservation areas



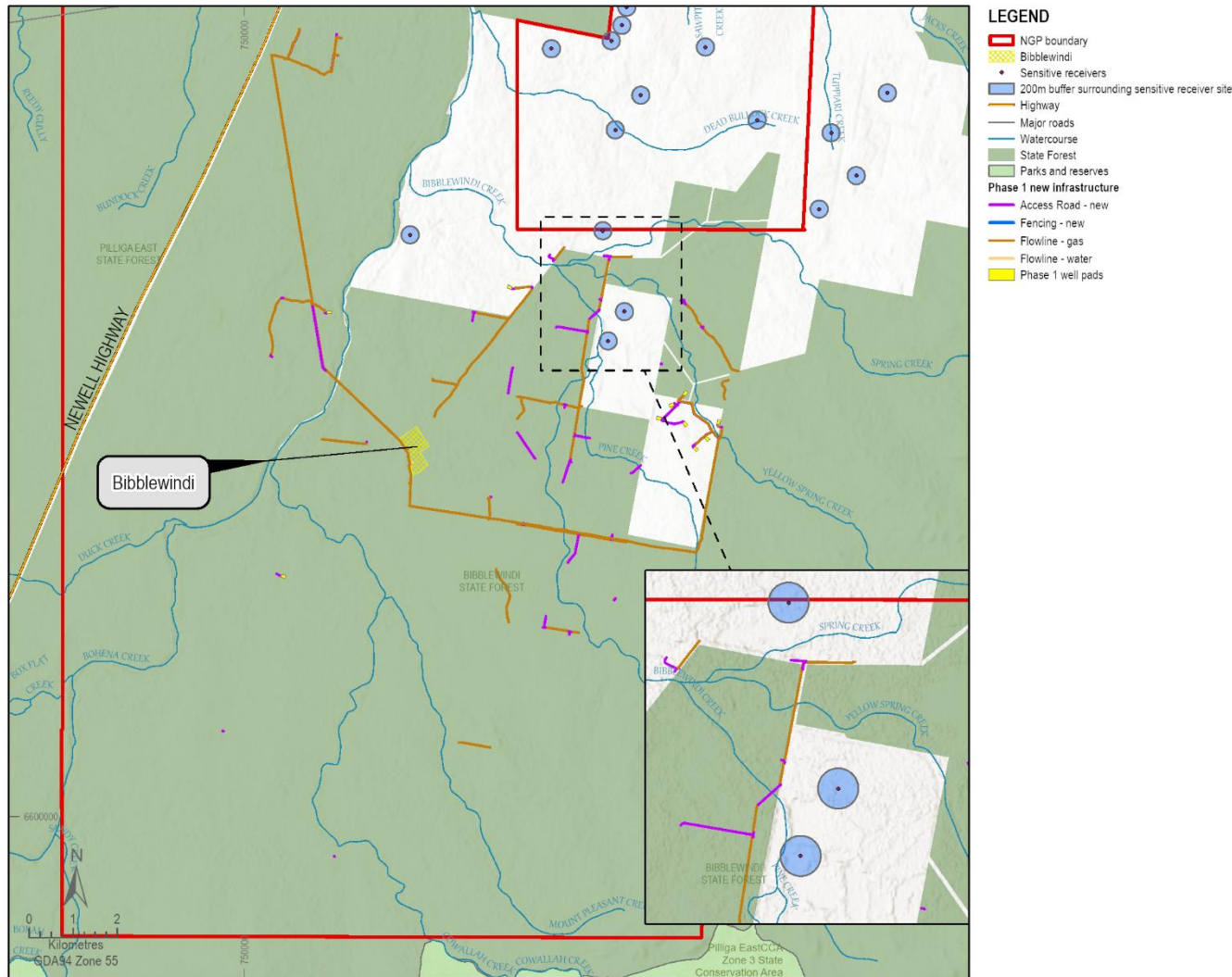
Fully compliant - the closest Phase 1 infrastructure is located more than 10km away

Locational criteria as per consent condition B1

Sensitive receivers and amenity

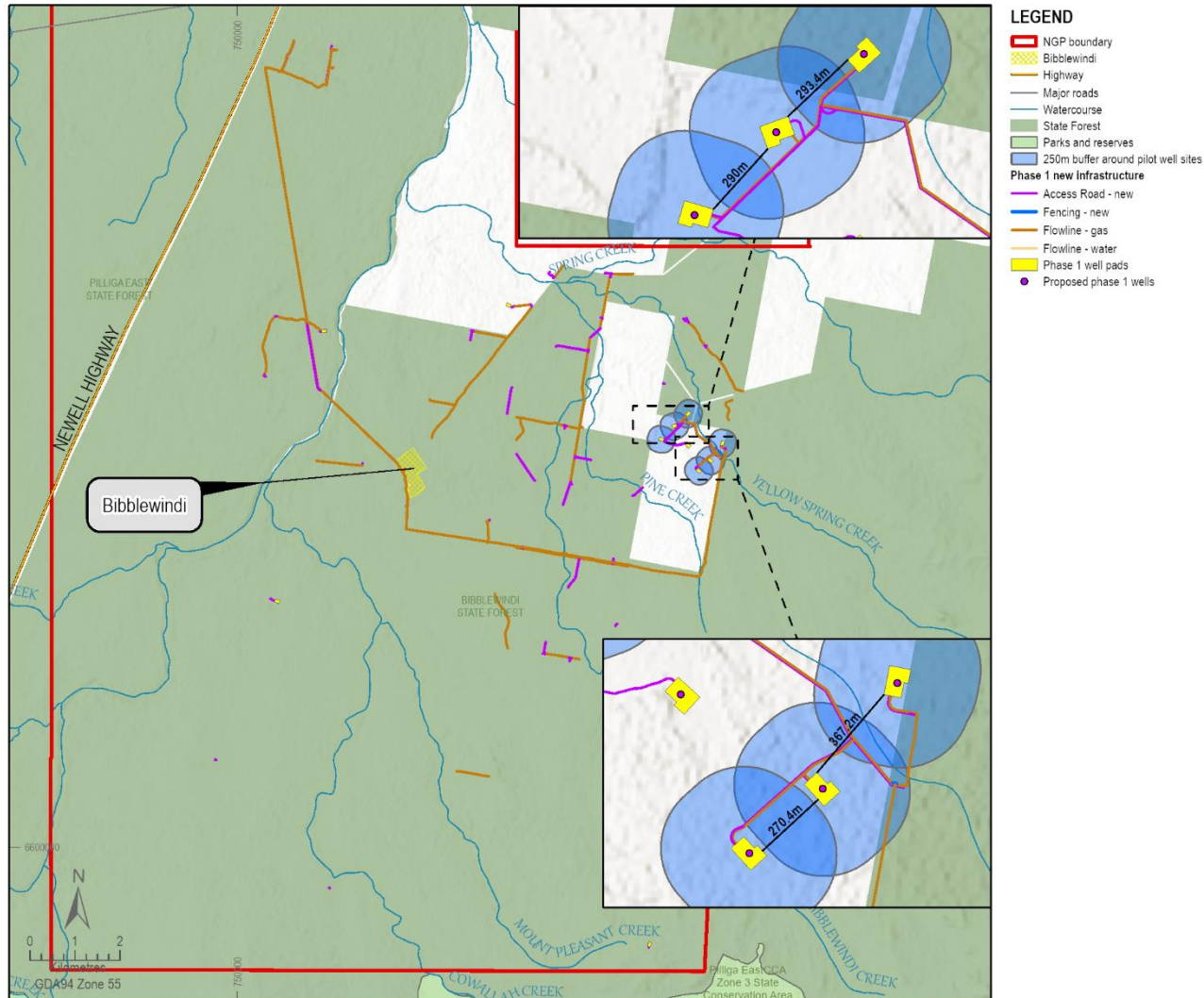
- + Sensitive receivers and amenity (phase 1)
 - + no infrastructure within 200m of any residence (unless agreed with the landholder)
 - + no well pads within 100m of any privately-owned land (unless agreed with the landholder)
 - + pilot wells must be spaced at least 250m apart

Locational criteria as per consent condition B1 - sensitive receivers and amenity



Fully compliant - there is no infrastructure within 200m of residences

Locational criteria as per consent condition B1 - sensitive receivers and amenity



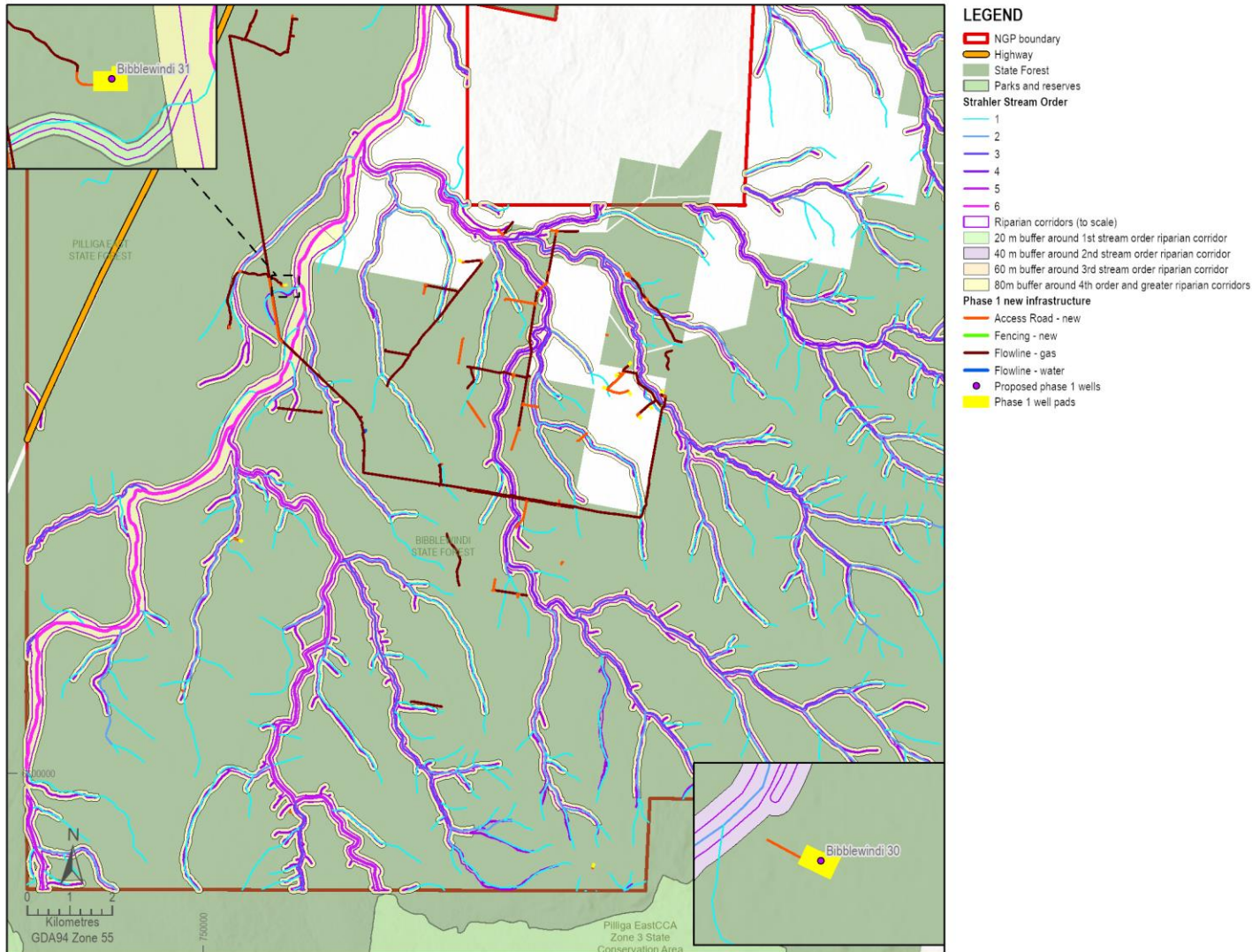
Fully compliant – distances between closest well pads is more than 250m
Note: agreements in place for all well pads on privately-owned land

Locational criteria as per consent condition B1

Water resources

- + No non-linear infrastructure within any watercourse or watercourse buffer zone as determined by Strahler stream order:
 - + 1st order stream – 20 metre corridor plus channel width
 - + 2nd order stream – 40 metre corridor plus channel width
 - + 3rd order stream – 60 metre corridor plus channel width
 - + 4th order and greater stream – 80 metre corridor plus channel width

Locational criteria as per consent condition B1 – water resources



Fully compliant – all well pads located outside of watercourse buffer zones

Locational criteria as per consent condition B1

Biodiversity constraints

- + No disturbance of more than 988.8 hectares of native vegetation (including derived native grassland) - approx. 30ha clearing
- + No disturbance beyond the consent limits by vegetation (plant community types - PCTs)
- + No disturbance beyond the consent limits by threatened flora species
- + No disturbance beyond the consent limits by threatened fauna species

Locational criteria as per consent condition B1 - biodiversity

Avoidance hierarchy

Priority	Ecological feature of attribute	
1	Endangered Ecological Communities (EEC) by listing status	
	Ranking (highest to lowest)	Status
	1	EPBC Act Endangered
	2	BC Act Endangered
2	Threatened flora species prioritised by listing status	
	Ranking (highest to lowest)	Status
	1	EPBC Act Critically Endangered
	2	BC Act Critically Endangered
	3	EPBC Act Endangered
	4	BC Act Endangered
	5	EPBC Act Vulnerable
6	BC Act Vulnerable	
3	Hollow-bearing trees prioritised by size class	
	Ranking (highest to lowest)	Size class (hollow)
	1	> 300 millimetres (mm)
	2	> 200 mm < 300 mm
3	< 200 mm	
4	Significant fauna habitat (e.g. Pilliga Mouse habitat, nests including stick nests for raptors, mistletoe, termite mounds, hollow logs and rock piles)	

Locational criteria as per consent condition B1 – biodiversity

+ No disturbance beyond the consent limits by vegetation (plant community types - PCTs)

PCT	Consent limit (ha)	Phase 1 (ha)
141 - Broombush - wattle very tall shrubland of the Pilliga to Goonoo regions, Brigalow Belt South Bioregion	13.65	0.6
404 - Red Ironbark - White Bloodwood +/- Burrows Wattle heathy woodland on sandy soil in the Pilliga forests	60.6	1.20
405 - White Bloodwood - Red Ironbark - cypress pine shrubby sandstone woodland of the Pilliga Scrub and surrounding regions	173	0.97
408 - Dirty Gum (Baradine Gum) - Black Cypress Pine - White Bloodwood shrubby woodland of the Pilliga forests and surrounding region	23.3	3.52
40X - White Bloodwood – Dirty Gum – Rough Barked Apple heathy open woodland on deep sand in the Pilliga forests		3.55
202 - Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South-western Slopes Bioregion	4.1	0.47
88 - Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion	6.2	0.05
399 - Red gum - Rough-barked Apple +/- tea tree sandy creek woodland (wetland) in the Pilliga - Goonoo sandstone forests, BBS Bioregion	0.14	0.03
401 - Rough-barked Apple - red gum - cypress pine woodland on sandy flats, mainly in the Pilliga Scrub region	12.7	1.98
398 - Narrow-leaved Ironbark - White Cypress Pine - Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north BBS Bioregion	226.4	12.32
	Total	24.7

Fully compliant - Phase 1 disturbance well below total approved disturbance for each PCT

Locational criteria as per consent condition B1 - biodiversity

+ No disturbance beyond the consent limits by threatened flora species - fully compliant

Flora species	Direct impact limit (individuals)	Phase 1 impact (individuals)
<i>Bertya opposens</i> (Coolabah Bertya)	10,309	0
<i>Diuris tricolor</i> (Painted Diuris)	52	2
<i>Lepidium aschersonii</i> (Spiny Peppercross)	77,691	0
<i>Lepidium monoplacoides</i> (Winged Peppercross)	1,116	0
<i>Polygala linariifolia</i> (Native Milkwort)	252	6
<i>Pomaderris queenslandica</i> (Scant Pomaderris)	467	0
<i>Pterostylis cobarensis</i> (Cobar Greenhood Orchid)	6,658	178
<i>Commersonia procumbens</i> (<i>Commersonia procumbens</i>)	3,716	86
<i>Tylophora linearis</i> (<i>Tylophora linearis</i>)	513	14

Fully compliant - Phase 1 disturbance well below total approved disturbance for each flora species

Locational criteria as per consent condition B1 – biodiversity

- + No disturbance beyond the consent limits by threatened fauna species habitat

Fauna species	Direct impact limit (ha)	Phase 1 impact (ha)
Eastern Pygmy-possum (<i>Cercartetus nanus</i>)	775	23.5
Pale-headed Snake (<i>Hoplocephalus bitorquatus</i>)	885	24.1
Squirrel Glider (<i>Petaurus norfolcensis</i>)	862	24.1
Koala (<i>Phascolarctos cinereus</i>)	989	24.7

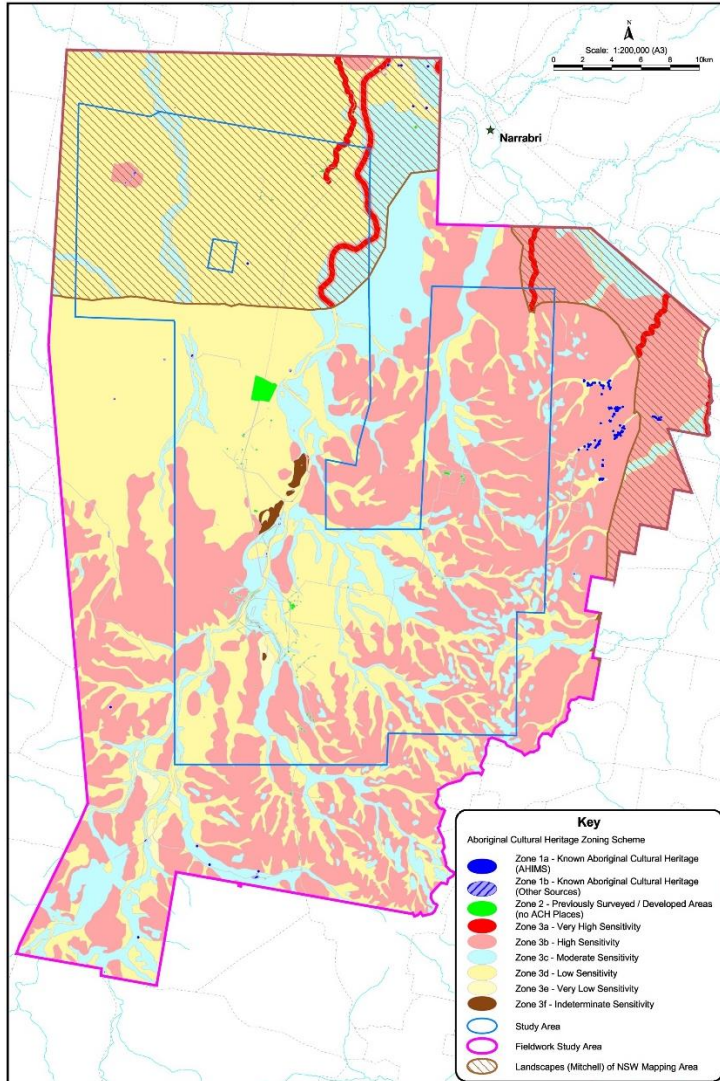
Fully compliant - Phase 1 disturbance well below total approved fauna species habitat disturbance

Locational criteria as per consent condition B1

Heritage constraints

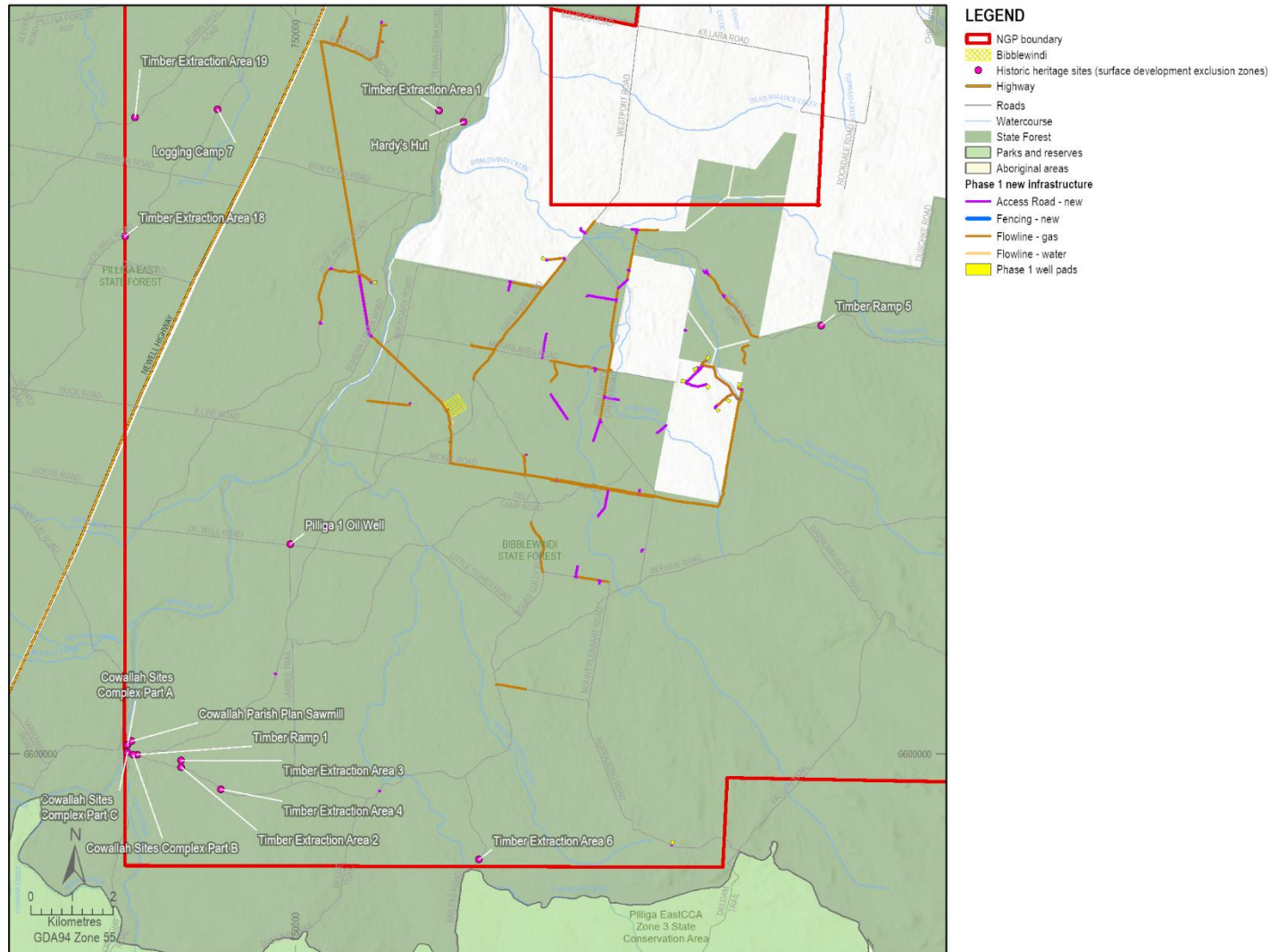
- + No disturbance of identified Aboriginal cultural heritage items as identified in the consent
- + No disturbance of identified historic heritage items, as identified in the consent
- + No disturbance of other Aboriginal cultural heritage items identified during the development, if assessed in a Field Development Plan to be of high significance
- + No disturbance of other Aboriginal cultural heritage items and historic heritage items identified during the development, unless otherwise approved in a Field Development Plan

Locational criteria as per consent condition B1 - Aboriginal heritage



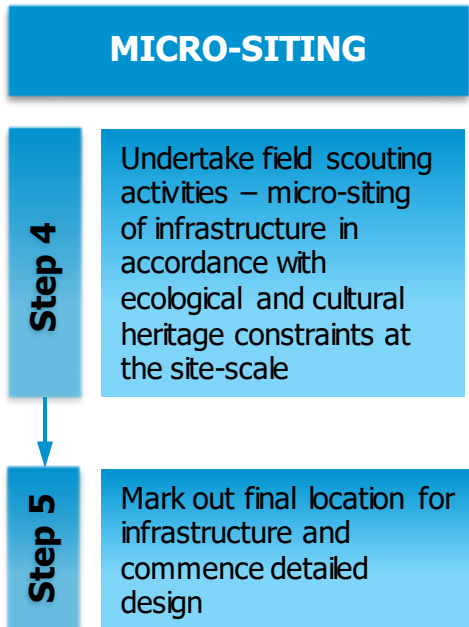
Fully compliant - no infrastructure located within most sensitive site types

Locational criteria as per consent condition B1 - historical heritage



Fully compliant - all infrastructure located away from historical heritage sites

Steps 4 and 5 - micrositing



Micrositing - ecological field scouting



- LEGEND**
- NGP boundary
 - Consolidated survey area
 - Phase 1 new infrastructure**
 - Access Road - New
 - Proposed infrastructure footprint adjustments
 - Proposed phase 1 wells
 - Phase 1 Well Pads
- ESF Ranked Features**
- HBT**
- Priority 1
 - Priority 2
 - Priority 3
- Logs**
- Priority 1
 - Priority 2
 - Priority 3
- Fauna habitat**
- Priority 6
 - Priority 8
- Threatened species**
- Priority 1
 - Priority 2
 - Priority 3
 - Priority 6
 - Phase 1 Well Pads

Micrositing - Aboriginal cultural heritage clearance survey

- + No Aboriginal cultural heritage finds within the proposed infrastructure locations
- + Fully compliant with the approved ACHMP and the Field Development Protocol

Construction requirements - noise constraints

- + Standard construction hours (unless agreed with the landholder):
 - + Monday to Friday - 7am to 6pm
 - + Saturday - 8am to 1pm
 - + No work on Sundays and public holidays

Noise Assessment Location	During standard construction hours
All privately owned residences	40 L _{Aeq} (15 min)
Yarrie Lake, Brigalow State Conservation Area, Brigalow Nature Reserve	50 L _{Aeq} (period)

Construction requirements - noise constraints (cont'd)

+ Outside of standard construction hours (unless agreed with the landholder):

Noise Assessment Location	Day	Evening	Night	Night
	L_{Aeq} (15 min)	L_{Aeq} (15 min)	L_{Aeq} (15 min)	L_{A1} (1 min)
All privately owned residences	35	35	35	45
Yarrie Lake, Brigalow State Conservation Area, Brigalow Nature Reserve	50 L_{Aeq} (period)			-

+ Outside of standard construction hours (unless agreed with the landholder):

Implementation – air quality constraints

- + Apply at all private residences (unless agreed with the landholder):

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³
	24 hour	^b 50 µg/m ³
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24 hour	^b 25 µg/m ³
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³
Nitrogen dioxide (NO ₂)	1 hour	^a 246 µg/m ³
	Annual	^a 62 µg/m ³
Ozone (O ₃)	1 hour	^a 214 µg/m ³
	4 hour	^a 171 µg/m ³

- + Landholder agreements being finalised
- + Dust deposition monitoring is set up to capture background readings

FDP performance criteria

The FDP is to:

- + describe the performance criteria to be implemented to ensure compliance with the water performance measures of the consent, and to meet the rehabilitation objectives of the consent, including a:
 - + trigger action response plan to identify risks and actions to avoid exceedances of the performance criteria, including tiered triggers to provide for early detection of impacts; and
 - + contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of the performance criteria, or where an exceedance appears likely

The performance criteria and the contingency plans will reflect those within the suite of water management plans and the Rehabilitation Management Plan

FDP – timeframes for release of draft for consultation and review

- + FDP surveys being finalised
- + Ecological micrositeing being finalised
- + Engineering review and pad access being completed by the contractor

- + Website – www.narrabrigasproject.com.au
- + Email – Energy.NSW@santos.com
- + Visit – 6/125 Maitland St Narrabri
- + Call – 02 6792 9035



- + Advisory Group Updates
- + Member updates



- + Next CCC Meeting
- + General Business



- + Review actions items

Thank you / Questions?