



QGC

CONSTRUCTING GAS WELLS AND GATHERING PIPELINES



OUR CONSTRUCTION ACTIVITIES INCLUDE DRILLING GAS WELLS ACROSS OUR EXISTING OPERATIONAL AREAS AND CONSTRUCTION OF WATER AND GAS GATHERING PIPELINES TO CONNECT EXISTING FACILITIES.

Most of our natural gas construction activities over the next few years will include adding new gas wells to our existing fields and gathering pipelines to feed into existing facilities.

Gas produced will supply both domestic and liquified natural gas (LNG) markets.

We're one of Australia's leading natural gas producers, focused on developing Queensland's world-class onshore gas reserves.

Shell's QGC business has supplied the domestic market since 2006 and international customers since 2014.

WWW.SHELL.COM.AU/QGC

CONSTRUCTION ACTIVITIES

Construction typically includes three types of activities:



HEAVY VEHICLES AND ROADS



Moving drill rigs, water tankers and gravel trucks

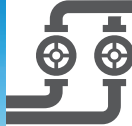


Road upgrades



Constructing access tracks

As construction activities progress, there may be an increase in vehicles on the roads. Where traffic impacts existing local roads, we may undertake upgrades to amend the impacts. If we need to construct new access tracks on private property to access our infrastructure, we will consult directly with landholders.



WELLS AND WELL PADS



Constructing well pads



Drilling and completing



Constructing well pad surface facilities

To remove natural gas from underground, a gas well and surface infrastructure to extract the gas is constructed. Surface facilities to separate gas and water are installed around the well to ensure the safe and controlled production of gas.



GATHERING LINES



Trenching for gathering lines



Welding gathering lines



Laying gathering lines

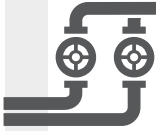


Constructing above ground infrastructure

Wells are connected to below ground pipe systems, known as gathering lines, which transport the gas and water to gas processing and water treatment facilities. Above ground infrastructure including high point vents (to safely vent gas to prevent blockages in the produced water line), low point drains (to safely remove water which may collect in the gas gathering line), isolation valves and Right of Way (ROW) marker-posts are visible above ground.

CONSTRUCTION ACTIVITIES

What will I see?



WELLS AND WELL PADS



A well pad of up to 100m x 100m is cleared to make room for construction equipment and drill rigs to drill the well.

Drilling occurs in sections, with each section lined with steel casing, cemented into place. Once the well is drilled, a wellhead is installed at surface and the drill rig departs. A smaller drill rig cleans out the well bore and installs a pump at the bottom of the well.



Above-ground or surface facilities are installed, and surrounded by a fence. The well pad is reduced to around 60 x 40m and the remaining area is rehabilitated.



Workover rigs replace the internal steel piping, test the pressure seals and take measurements of gas flow rates and temperatures.

At the end of a well's life, all surface infrastructure is removed, the well hole is securely plugged with cement and a small plaque is left to mark the site. The land around the well site is rehabilitated.



GATHERING LINES



The pipeline right of way (ROW) is cleared of vegetation and topsoil is removed and stored. Trenches are excavated, and high density polyethylene (HDPE) pipe sections are placed next to the trench.



The sections of pipe are fused together and lowered into the trench at a depth to allow for a minimum of 750mm coverage. The trench is back-filled, the topsoil replaced and reseeded. Along the route, high point vents, low point drains, isolation valves and ROW signs are visible above ground.



Routine maintenance and inspections are conducted, with ongoing monitoring of the pipeline pressure, temperature and easement. After decommissioning, gas or water is removed from the gathering line, all above ground infrastructure is removed and the pipe remains underground.

WHEN DO CONSTRUCTION ACTIVITIES OCCUR?

Construction activities can occur during daylight hours, and at night time. Where our activities may have an impact on the local community, we work hard to ensure we manage our impacts as much as possible.



Day time



Night time

Drilling



Drilling



Drilling operations are 24/7. We engage with residents potentially impacted by 24 hour operations, and take steps to minimise impacts wherever possible.

Construction of well pad surface facilities



Construction of well pad surface facilities: (on rare occasions)



Construction of well pad surface facilities typically occurs during daylight hours and on rare occasions, at night time.

Pipeline construction



Construction of gas and water gathering pipelines typically occurs during daylight hours.

Road upgrades



Any road upgrades required to amend project traffic impacts typically occur during daylight hours.

NOISE MANAGEMENT

Whilst certain levels of noise are expected during construction, we try and minimise noise associated with our activities. The types of noise you may hear during construction are:



TRAFFIC

WHAT YOU MAY HEAR



Heavy vehicle movements

WHEN YOU MAY HEAR IT



Shell's QGC business will minimise night time vehicle movements on rural residential properties. Shell's QGC business has set speed limits for travel on rural residential properties: 20 km/hr within 200 m of dwellings and 40 km/hr elsewhere.



WELLS AND WELL PADS

WHAT YOU MAY HEAR



Construction of well pads



Drilling, completion and well surface facilities

WHEN YOU MAY HEAR IT



The initial drill rig takes 2-4 days, and then a second smaller rig completes the well.



GATHERING LINES

WHAT YOU MAY HEAR



Earthworks and trenching for gathering lines



Laying gathering lines and constructing above ground infrastructure

WHEN YOU MAY HEAR IT



Construction may be intensive at times, but short term.

TRAFFIC MANAGEMENT

Increased traffic is expected when we undertake construction activities.

To manage increased traffic, we prepare detailed transport management plans, fit our vehicles with In-vehicle Monitoring System tracking to promote safe driving, and locate traffic controls in affected areas.

For any concerns please phone the QGC Community Information Line on 1800 030 443.

WORKING ON LANDHOLDER PROPERTY

Our staff and contractors must abide by all Land Access rules negotiated with landholders.

If you have concerns about our conduct, please contact your Land Access Advisor so we can address your issue promptly.



COMMUNITY UPDATES

Planning is currently underway for future development in our tenements.

We will keep you informed about our existing and planned activities through:

- Community engagement forums
- Our Operations Bulletin or regional activity email updates – subscribe at www.shell.com.au/qgc-opsbulletin
- The Community Information Centre's in Chinchilla and Wandoan.

CONTACT DETAILS

Please contact your Land Access Advisor or a member of the community engagement team for more information.

QGC Community
Information Centre,
18-20 Bell St, Chinchilla

QGC Office
27 Royd St, Wandoan
1800 030 443 (toll-free)
email: community@shell.com.au