

Relocation of the gas gathering line between MP03 and MP05

- The currently approved route is subject to a number of engineering constraints. A newly-proposed gas gathering route falls outside the 50 m envelope of the existing approval.
- The proposed gas gathering system would involve underboring Menangle Park Road and the Hume Highway (ie the South Western or F5 Freeway, see Figures 2 and 4 below), which would generally occur 2 to 3 m below the surface of the road. The proposed gas gathering route would be located adjacent to Mount Annan Botanic Gardens.

Construction and operation of a new access road to MP03

- The proposed access road would travel approximately 1.6 kilometres from the University of Western Sydney (UWS) playing field car park in the east to MP03 well in the west, across cleared land owned by UWS and Landcom (see Figure 5 below).
- Current access to MP03 well requires vehicles to traverse land owned by UWS, Australian Rail Track Corporation (ARTC) and Landcom. This places restrictions on ongoing access as the ARTC land is subject to ongoing maintenance by ARTC and the Landcom land may be subject to future residential development.

Change in well type of KP06 from a directional well to a surface to in-seam (SIS) well

- *Directional* wells are drilled vertically for approximately 150 m and then diverted at an angle until they intersect the coal seam at a depth of approximately 700 m.
- *SIS* wells are drilled vertically to intersect the targeted coal seam, and then drilling continues horizontally across the seam for up to 1,500 m. The benefit of an SIS well is that it can be drilled horizontally for a longer distance, which allows the well's surface infrastructure to be positioned to avoid any environmental constraints.
- The currently approved directional well would require a drilling duration of approximately one week, while an SIS well would require a drilling duration of approximately four weeks.
- The proposed SIS well would not involve hydraulic fracturing (or "fracking").
- The KP06 well site has already been established. Consequently, only minor earthworks are required prior to the start of drilling (see location of KP06 in Figure 6 below).

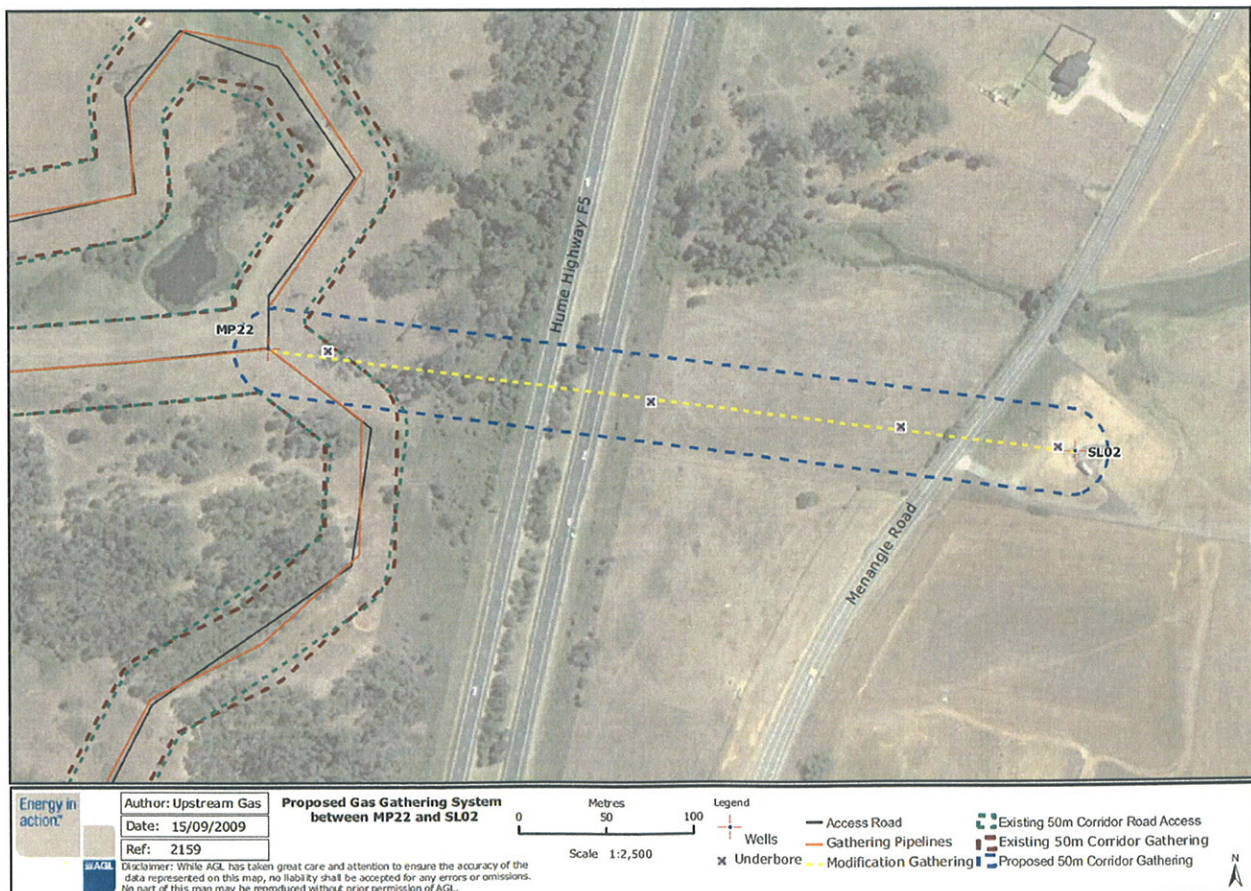


Figure 3: Proposed gas gathering system between MP22 well and SL02 well



Figure 4: Proposed relocation of gas gathering line between MP03 well and MP 05 well



Figure 5: Proposed construction and operation of an access road to MP03 well.