Pinnacle Risk Management Pty Limited
ABN 83 098 666 703

PO Box 5024
Elanora Heights NSW 2101

Telephone: (61 2) 9913 7284
Facsimile: (61 2) 9913 7930
Email: deanshewring@optusnet.com.au

29 March 2021

Health Infrastructure
1 Reserve Road
St Leonards, NSW, 2065

**Subject: John Hunter Health and Innovation Precinct SEPP 33 Assessment**

In June 2019, the NSW Government announced a significant expansion of the John Hunter and John Hunter Children's Hospitals with the $780 million John Hunter Health and Innovation Precinct (JHHIP) project.

The JHHIP will transform healthcare services for Newcastle, the greater Hunter region and northern NSW communities. The infrastructure will provide additional inpatient capacity to the John Hunter and John Hunter Children's Hospitals and create further opportunities for partnerships with industry and higher education providers.

The JHHIP will deliver an innovative and integrated precinct with industry-leading facilities working in collaboration with health, education and research partners to meet the current and future needs of the Greater Newcastle, Hunter New England and Northern NSW regions.

The John Hunter Health and Innovation Precinct Project is being planned and designed with ongoing communication and engagement with clinical staff, operational staff, the community and other key stakeholders with a strong focus on the following:

- Patient-centered care
- Contemporary models of care
- Future economic, health and innovation development opportunities
- Environmental sustainability

The John Hunter Health Campus (JHHC) is located on Lookout Road, Lambton Heights, within the City of Newcastle Local Government Area (LGA), approximately 8km west of the Newcastle CBD. The hospital campus is located approximately 3.5km north of Kotara railway station.

The JHHC comprises the John Hunter Hospital (JHH), John Hunter Children's Hospital (JHCH), Royal Newcastle Centre (RNC), the Rankin Park Rehabilitation Unit and the Nexus Unit (Children & Adolescent Mental Health). JHHC is a Level 6 Principal Referral and tertiary Hospital, providing the clinical hub for medical, surgical, child and maternity services within the Hunter New England Local Health District (HNELHD) and across northern NSW through established referral networks. Other services at the

campus include the Hunter Medical Research Institute (HMRI), Newcastle Private Hospital and the HNELHD Headquarters.

Approval is being sought for a new Acute Services Building and refurbishment of existing hospital facilities at John Hunter Hospital comprising:

- Construction and operation of a new seven-storey Acute Services Building (plus 4 semi-basement levels) to provide:
  - an expanded and enhanced Emergency Department;
  - expanded and enhanced medical imaging services;
  - expanded and enhanced intensive care services - Adult, Paediatric and Neonatal;
  - expanded and enhanced Operating Theatres including Interventional Suites;
  - an expanded Clinical Sterilising Department;
  - Women's Services including Birthing Unit, Day Assessment Unit and Inpatient Units;
  - integrated flexible education and teaching spaces;
  - expanded support services;
  - associated retail spaces;
  - new rooftop helipads;
  - new semi-basement car parking;
- Refurbishment of existing buildings to provide:
  - additional Inpatient Units;
  - expanded support services;
- A new Hospital entry canopy and works to the existing drop off;
- Link bridge to the Hunter Medical Research Institute (HMRI);
- Campus wayfinding and signage;
- Landscape works;
- Site preparation including bulk earthworks, tree removal, environmental clearing, cut and fill;
- Mines grouting remediation works;
- Construction of internal roads network and construction access roads and works to existing at-grade carparking;
- Connection to the future Newcastle Inner City Bypass; and
- Inground building services works and utility adjustments.

A SEPP (State Environmental Planning Policy) 33 analysis is required as per Item 20 of the SEARs (Secretary's Environmental Assessment Requirements), i.e.:

***20. Hazards and Risk***

- *Provide:*
    - *a preliminary risk screening regarding all dangerous goods and hazardous materials (class, quantity and location) associated with the development.*
    - *a Preliminary Hazard Analysis, if required where the development includes handling or storage of dangerous or hazardous materials.*

*Relevant Policies and Guidelines:*

- *Applying SEPP 33*
- *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-level Risk Assessment.*

Based on the attached information supplied to Pinnacle Risk Management, a Preliminary Hazard Analysis (PHA) is not required for the John Hunter Health and Innovation Precinct project as:

1. The Dangerous Goods transported to and stored on site are within the threshold quantities listed in SEPP 33; or

2. The existing oxygen storage is already approved, will not be modified as part of the project, poses only local credible hazardous events only and poses no cumulative off-site harm or risks with the other Dangerous Good Class 5.1 material (nitrous oxide); and

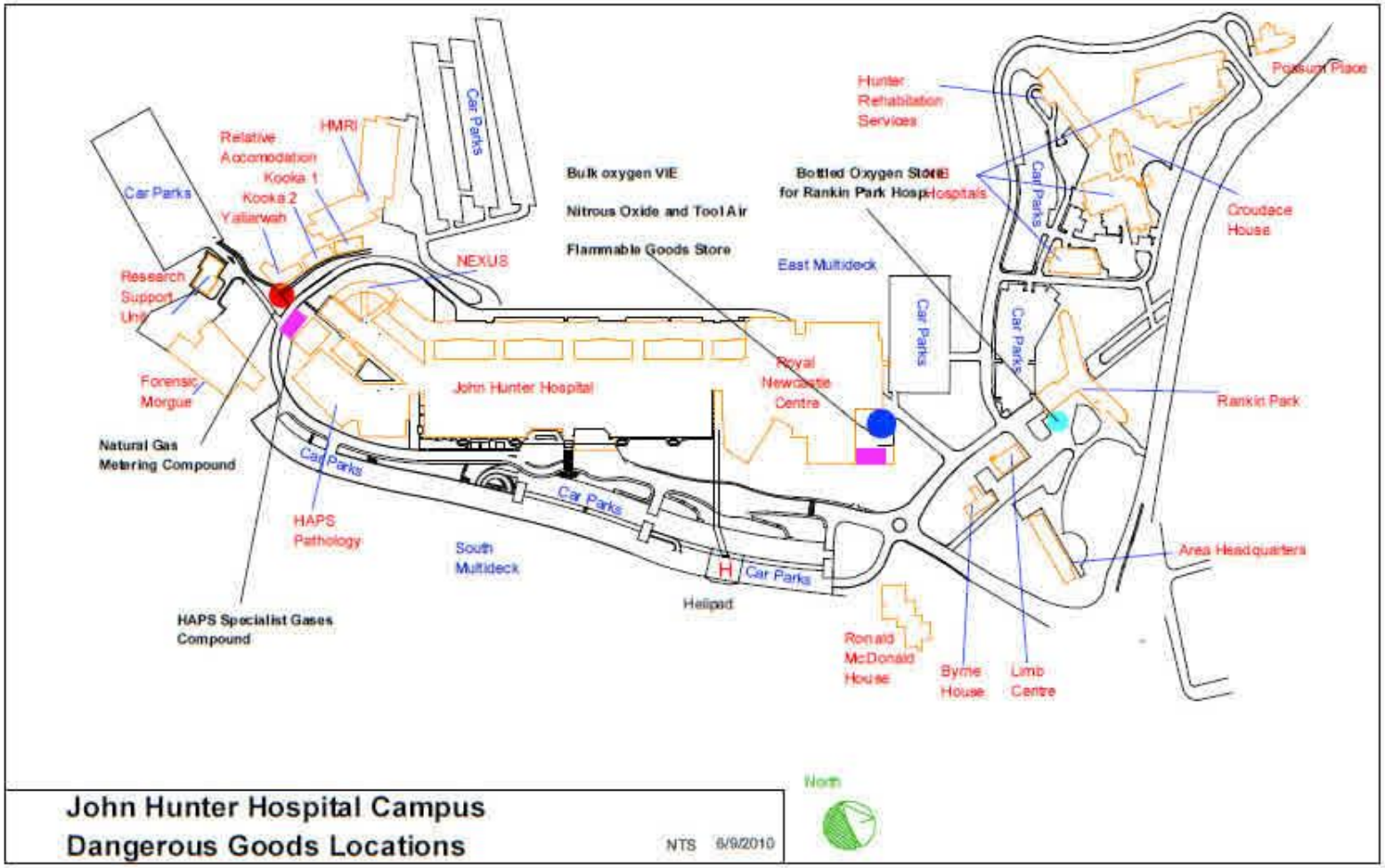
3. There are no other known hazardous materials associated with the project that would deem the hospital to be a potentially hazardous facility, e.g. combustible dust.

Yours sincerely,

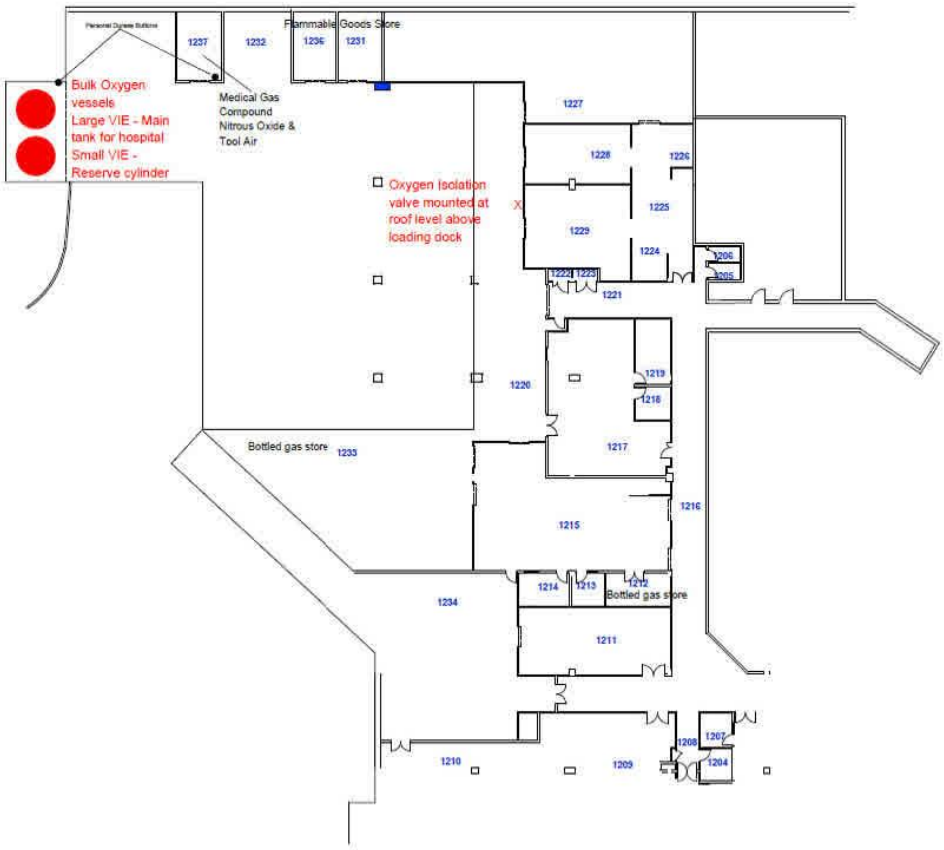
D Shewring

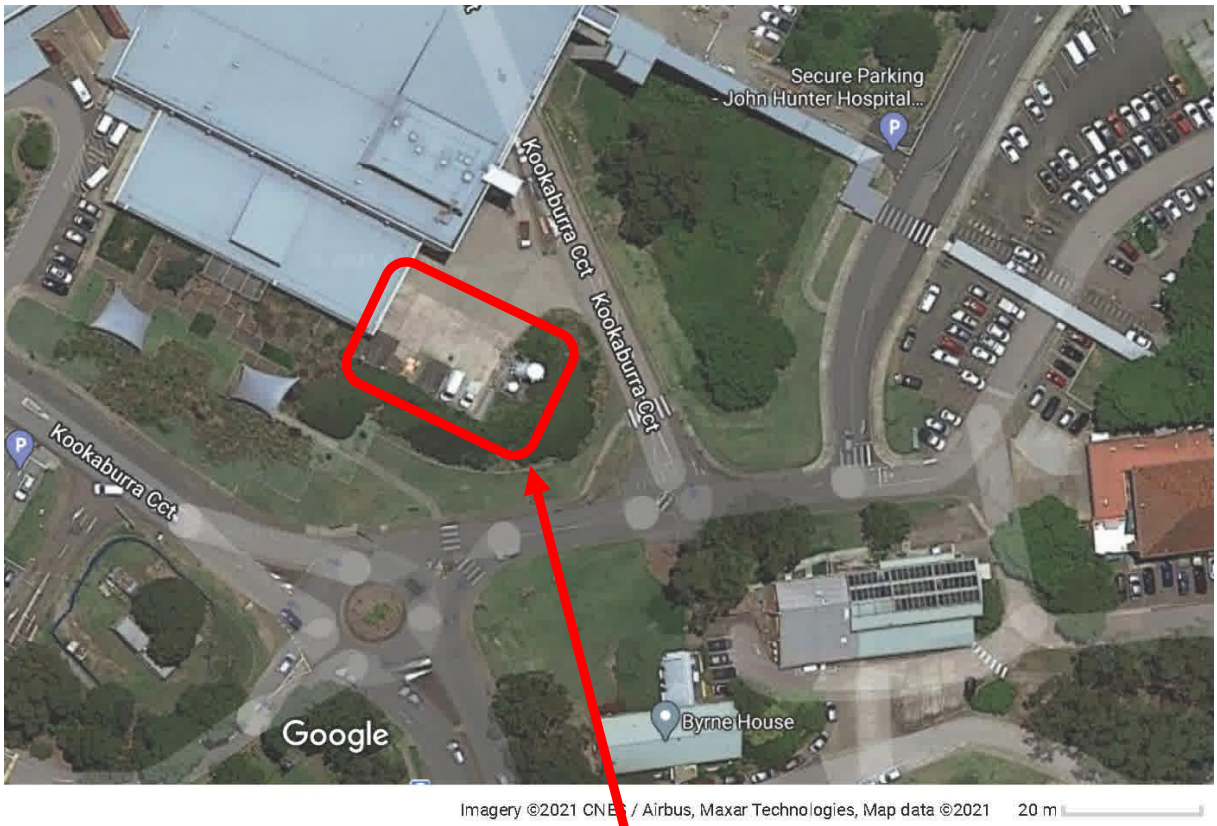
**Dean Shewring**
**Principal Risk Consultant**

**Attachment 1**
**Site Layout Drawing Showing Dangerous Goods Location**



## Layout Drawing Showing Dangerous Goods Location






Ref: Google Maps

Oxygen, nitrous oxide, medical gases and flammable goods storage area

## Attachment 2
## SEPP 33 Assessment

| Dangerous Good / Materials | DG Class | DG Subsidiary Risk | Storage Quantity | SEPP 33 Threshold Quantity | Transport Frequency | Mode of Transport | SEPP 33 Threshold Transport Frequency | Is a PHA Required: | Comments |
|---|---|---|---|---|---|---|---|---|---|
| **Oxygen** | 2.2 | 5.1 | 85,000 L (97 te) | 5 te (DG 5.1) | One delivery every 7 to 10 days | Road Tanker | 30/week | No (see the Comments) | There are three existing, approved tanks, i.e. 30, 45 and 10 m3 = 85 m3 total. Using a density of 1,140 kgs per m3 = 96,900 kg. If the tanks were a new addition to the site then a PHA is required as the threshold limit for a 5.1 DG is exceeded. However, the tanks are existing and approved, therefore no further assessment and approval is warranted. Whilst the road tanker transfer quantity is greater than 2 te per fill, the number of road tankers is less than 30 per week. Oxygen incidents only pose local hazards, e.g. enhanced oxygen fires involving metals or seals. There are no credible off-site risk impacts from the existing bulk oxygen storage tanks. There are also no credible off-site cumulative risks between the oxygen and nitrous oxide systems |
| **Nitrous Oxide** | 2.2 | 5.1 | 3.8 te | 5 te (DG 5.1) | Deliveries are less than 30 per week and also less than 5 te per delivery | Truck | 30/week | No | There are up to three existing F8 packs of nitrous oxide (763 kg per F8 pack). The project will add an additional two F8 packs. Therefore, the total mass stored at site is 763 x 5 = 3,815 kgs, i.e. less than the SEPP 33 criterion of 5 te. Whilst nitrous oxide is the same Dangerous Goods class as oxygen, the individual storage quantities are not summated as oxygen only poses local risks and there are no credible increased off-site cumulative risks if oxygen were to be released at the same time as nitrous oxide |
| **Natural Gas** | 2.1 | - | 2.2 kg | 100 kg (Figure 6 from SEPP 33) | | | | No | There is no natural gas stored at the site. The natural gas is piped to various users. The pressure is approximately 100 kPag. The piping system is approximately 350 m in length (75 mm diameter). Using a density of 1.42 kg/m3, the mass of natural gas in the piping system = 2.2 kgs |
| **Diesel** | - | | | | | | | No | As the diesel is not stored with flammable liquids then it does not trigger the need for a PHA as combustible liquids are not deemed to be potentially hazardous by SEPP 33 |
| **Flammable Goods** | 3 | - | Less than 400 te | 400 te (from Figure 9 for 20 m separation) | | | | No | Flammables Goods are stored in relatively small quantities within a storage area ('bunker'). This area is approximately 20 m from the site boundary |
| **Medical Gases** | - | | | | | | | No | Non-flammable, non-toxic compressed gases, e.g. medical air. These are stored in cylinders at three locations across the site |