



8 April 2026

STP Consultants  
Level 3, 382 Sturt Street  
Townsville QLD 4810  
Attention: Aaron Shuttleworth

Dear Aaron

**WESTSTATE PRIVATE HOSPITAL TOWNSVILLE  
UPDATED WATER & SEWER ASSESSMENT – ADDITIONAL HOSPITAL BEDS**

DPM Water Pty Ltd undertook the water supply and sewage system hydraulic assessment of the existing Townsville City Council infrastructure to cater for the proposed Weststate Private Hospital at 37 Ingham Rd in West End. This previous assessment was undertaken in 2022 and detailed in the “Townsville Weststate Private Hospital (Ingham Rd, West End) – Updated Water Supply & Sewerage Planning Report – Revised Water Upgrade Works (3 Feb 2022)”.

The previous assessment included the planned upgrades to the existing water and sewer infrastructure which have now been constructed. The previous assessment was also based on there being 22 hospital beds on the fourth floor of the new hospital.

The hospital now intends to have 28 beds on the fourth floor (being an increase of 6 beds).

To assess the capacity of the existing Townsville City Council water and sewer network to cater for the additional 6 hospital beds on the fourth floor, a revised hydraulic assessment has been undertaken.

The revised assessment is detailed in the “Townsville Weststate Private Hospital (Ingham Rd, West End) – Updated Water Supply & Sewerage Planning Report – Revised Water Upgrade Works (8 April 2026)” report. The revised hydraulic assessment has shown that the existing water and sewer network (including the upgrades that have already been constructed for this project) are able to cater for the additional water demands and sewage flows from the additional 6 hospital beds. No additional upgrades are required to service the additional proposed hospital beds on the fourth floor of the new hospital building.

Reference should be made to the April 2026 hydraulic assessment report for specific details of the assessment and capacity of the existing water and sewer infrastructure.

Yours faithfully

**Desmond Moseley**  
**Manager/Senior Engineer**  
**DPM Water Pty Ltd**



# **TOWNSVILLE WESTSTATE PRIVATE HOSPITAL (INGHAM RD, WEST END)**

## **UPDATED WATER SUPPLY & SEWERAGE PLANNING REPORT REVISED WATER UPGRADE WORKS**




**Date: 8 April 2026  
(Revision C)**

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## APPENDICES

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| <b>REPORT AUTHORISATION</b> |                      |   |                                |   |
|-----------------------------|----------------------|---|--------------------------------|---|
| <b>Revision</b>             | <b>Revision Date</b> | <b>Details</b>  | <b>Prepared by</b>             | <b>Signature</b>  |
| A                           | 23/11/2021           | Original Report   | Desmond Moseley<br>(RPEQ 7565) |  |
| B                           | 3/02/2022            | Updated report with revised fire hydrant testing and water modelling assessment | Desmond Moseley<br>(RPEQ 7565) |  |
| C                           | 08/04/2026           | Updated Report (Increased number of hospital beds)                              | Desmond Moseley<br>(RPEQ 7565) |  |

## 1 INTRODUCTION

The former West End state school site at the intersection of Inghan Rd and Sturt St is to be redeveloped into a private hospital. The hospital site will include the refurbishment of the existing heritage school building along with a new hospital and medical services building. The proposed development will involve the following:

- A new hospital facility that will be a four story building that will include:
  - Ground floor ancillary medical services such as medical imaging, pathology, pharmacy, café etc.
  - First floor that will have a day theatre and two operating theatres with a total of 19 medical bays/beds.
  - Second floor that will have 5 operating theatres with a total of 13 medical bays/beds.
  - Third floor that will have 22 hospital beds and 4 intensive care beds.
  - The fourth floor with 28 hospital beds.
- The conversion of the heritage school to be a teaching facility containing:
  - Ground floor having amenities and children play areas.
  - First floor having 9 classrooms and associated amenities.
  - Second floor having 12 classrooms and associated amenities.
  - It is estimated that a maximum of 200 students.

The latest versions of the development plans are included in Appendix A. There are likely to be minor adjustments to the plans as part of the detailed design/refurbishment assessment but will be similar to the plans and usages provided in Appendix A.

To ensure the private hospital facility can be serviced by with a potable water supply and sewage system, an assessment of the system capacities have been undertaken. This report summarises the assessment of the existing water and sewerage network with this illustrating:

- The private hospital is able to be serviced with peak hour water demands and 30 l/s commercial fire flows from the existing DN150 and DN100 water mains that service the site. The water service connection and fire system connection will be from the existing DN100 PVC water main along the Inghan Rd frontage of the site. The fire system for the site will include storage tanks and a fire booster pump assemble generally as per the services drawing provided in Appendix A.
- A new DN150 water main will be required along O'Brien St to connect to the existing DN100 AC water main on Wilson St. This new water main works also includes a short section of replacement DN150 water main under the O'Brien St/Sturt St/Greenslade St intersection to connect back to the existing DN150 main on Sturt St. This new DN150 water main is required as the development will have a section of existing DN100 AC main that currently services Wilson St removed.

- The water capacity assessment has been performed against Council standards and has not assessed the specific building code fire system requirements for the hospital site. The building code fire system requirements will need to be confirmed as part of the building detailed design and hydraulic approvals, which will require the site to have its own fire storage tank and booster pump system.
- The existing site is serviced with two separate sewer lines that are both DN150 sewers that run through the site. As agreed with Council, one of the sewer lines is to be re-aligned along O'Brien St to divert it around the new hospital building. The DN150 diversion sewer along with the existing DN150/225/300 sewers to MH 2/6B on Parks St (PS 6B site) have capacity for the additional sewage loads from the proposed private hospital. The existing DN150 sewer from MH 3/6B5 to MH 12/6B has capacity to service the redevelopment of the heritage school building.

The water network modelling and sewer system capacity assessment undertaken for this development is summarised in the following report sections.

The previous versions of this report (Revision A dated 23<sup>rd</sup> November 2021 and Revision B dated 3<sup>rd</sup> March 2022) and the has been updated based on the inclusion of the water demands and sewage loads from the future development of Level 4 of the hospital building, being 28 hospital beds.

Figure 1.1 below illustrates that location of the private hospital which shows that the new hospital building is almost completed.



**Figure 1.1 – Private Hospital Site**

## 2 POPULATION ASSESSMENT

The following section provides the population assessment for the proposed private hospital site on Ingham Rd. The equivalent population assessment has been developed based on the unit rates detailed in “Table 8.1 – Infrastructure Demand Unit Rates” of the Local Government Infrastructure Plan – DSS, Definitions & Demands (April 2017) that is extrinsic referenced material to the Townsville CityPlan.

The population assessment includes the extent of the current hospital development works along with the future planned hospital beds that will be provided on Level 4 of the new hospital building.

**Table 2.1 – Water Equivalent Population Assessment**

|   | Area/Number              | Rate                      | EP       |
|---|--------------------------|---------------------------|----------|
| <b>Ground Floor Ancillary Medical Services</b> (Note 1)     | 750 m <sup>2</sup> (GFA) | 1.35 EP/100m <sup>2</sup> | 10.1 EP  |
| <b>First &amp; Second Floor Medical Bays</b>                | 32                       | 2.5 EP/bed                | 80 EP    |
| <b>Third Floor Hospital Beds (22 beds &amp; 4 ICU beds)</b> | 26                       | 2.5 EP/bed                | 65 EP    |
| <b>Future Fourth Floor Hospital Beds</b>                    | 28                       | 2.5 EP/bed                | 70 EP    |
| <b>Heritage Building Students</b>                           | 200                      | 0.28 EP/student           | 56 EP    |
| <b>Adopted Equivalent Population</b>                        |                          |                           | 281.1 EP |

**Table 2.2 – Sewage Equivalent Population Assessment**

|   | Area/Number              | Rate                      | EP       |
|---|--------------------------|---------------------------|----------|
| <b>Ground Floor Ancillary Medical Services</b> (Note 1)     | 750 m <sup>2</sup> (GFA) | 1.88 EP/100m <sup>2</sup> | 14.1 EP  |
| <b>First &amp; Second Floor Medical Bays</b>                | 32                       | 2.5 EP/bed                | 80 EP    |
| <b>Third Floor Hospital Beds (22 beds &amp; 4 ICU beds)</b> | 26                       | 2.5 EP/bed                | 55 EP    |
| <b>Future Fourth Floor Hospital Beds</b>                    | 28                       | 2.5 EP/bed                | 70 EP    |
| <b>Heritage Building Students</b>                           | 200                      | 0.43 EP/student           | 86 EP    |
| <b>Adopted Equivalent Population</b>                        |                          |                           | 315.1 EP |

Note 1 – The equivalent population for the laundry and kitchen areas on the ground floor are included in the 2.5 EP/bed for the hospital. The GFA includes the public lobby along with the ancillary medical services on the ground floor.

2 – The 2.5 EP/bed is consistent with the water demand and sewage generation detailed in Table A of “Planning Guidelines for Water Supply and Sewerage (Department of Energy & Water Supply)” and what has been adopted for other hospitals in Townsville.

The above equivalent population assessment has been used in the water supply and sewer system capacity assessment for the proposed private hospital.

### 3 WATER SUPPLY PLANNING

#### 3.1 Water Demand

Water demands have been calculated in accordance with Townsville City Council planning scheme and CTM Code. The following table provides the “commercial” water demands per equivalent population which are applicable to the various uses and functions of the private hospital. This peak hour demand is based on the “commercial” demand diurnal pattern included in the CTM Code that has a peaking factor of 1.5.

**Table 3.1 - Commercial Water Demands (per EP)**

| Parameter                 | Unit Demand   | Peaking Factor |
|---------------------------|---------------|----------------|
| Average Day (AD)          | 600 L/day/EP  |                |
| Mean Day Max Month (MDMM) | 900 L/day/EP  | 1.5 AD         |
| Peak Day (PD)             | 1125 L/day/EP | 1.25 MDMM      |
| Peak Hour (PH)            | 0.0195 L/s/EP | 1.50 PD        |

The above peak hour water demands for the private hospital facilities are therefore 281.1 EP x 0.0195 l/s/EP = 5.48 l/s.

In addition to the above, as the development is commercial use a 30 l/s fire flow is applicable in accordance with Council’s planning and design guidelines. The TCC standards is for the 30 l/s to be provided from up to three hydrants concurrently.

It is noted that the Building Code may require a different fire flow requirement depending on the actual building classification. This assessment has not specifically assessed the performance against the building code requirements, however it is noted that the facility will have a fire storage tank and booster pump assemble off the existing Ingham Rd water main. The proposed location and general arrangement of the fire tanks and booster pump assemble is illustrated on the hydraulics drawing that is provided in Appendix A.

#### 3.2 Water Supply Assessment & Network Modelling

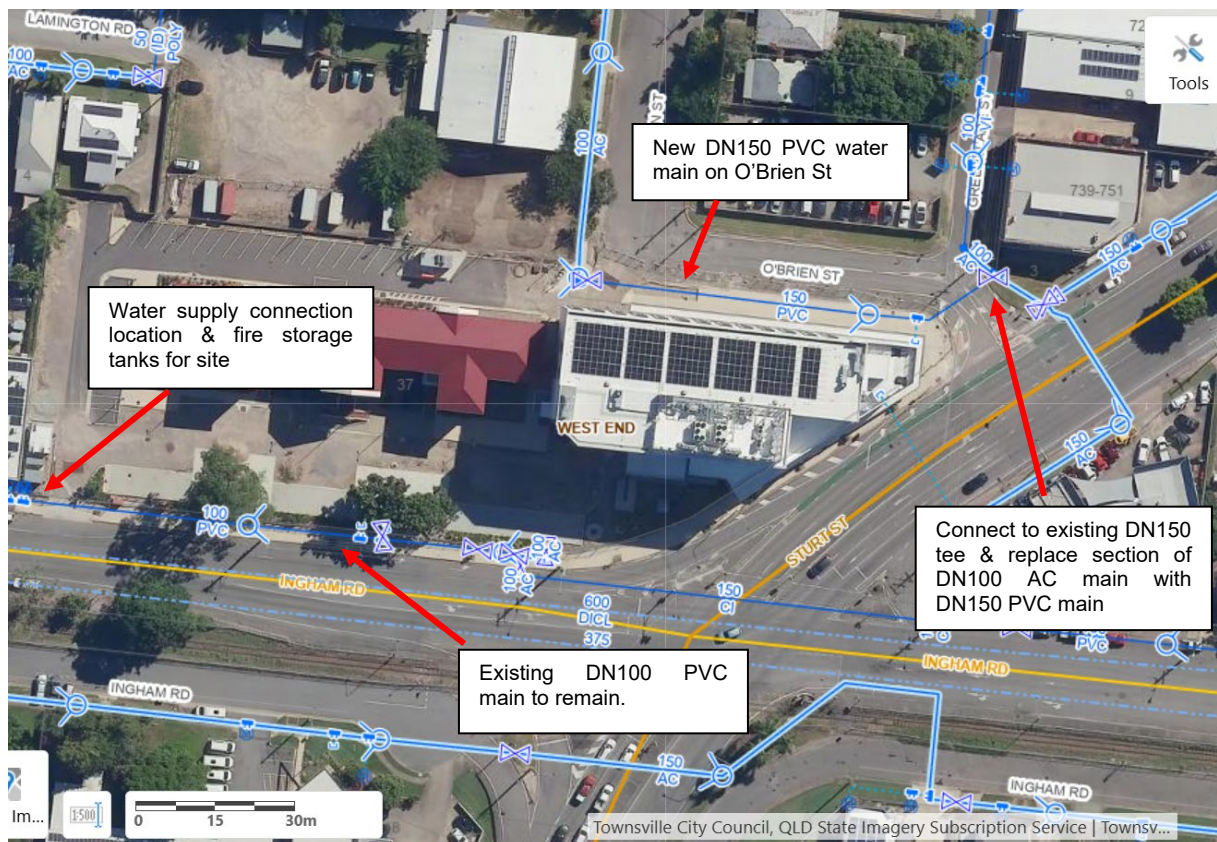
The existing site for the private hospital is at the intersection if Ingham Rd and Sturt St in West End. This area is serviced with a water network as follows:

- Water is generally supplied from the Bottom City Reservoir that is located to the north east of the site on Walker St, near the intersection with Jones St.
- Water is delivered from the reservoir to the south via a DN400 Cast Iron outlet main to Sturt St. The DN400 CI main extends to the south west along Sturt St to the intersection with Fletcher St where the main splits into a DN400 CI and DN375 AC/CI pipe that both then continue to the south west along Sturt St to the intersection with Morris St. The parallel DN400 CI and DN375 AC mains then extend along Morris St to the intersection with Flinders St where they connect into the reticulation network. A new DN600 DICL main that was constructed along Ingham Rd and Flinders St as part

of the CBD Utilities Upgrade project and also connects into the reticulation network at the Flinders St/Ingham Rd intersection.

- The CBD Utilities Upgrade project was undertaken from 2016 to 2018 and involved the replacement of much of the old cast iron and AC reticulation water mains in the CBD area with DN150 PVC pipes. These replacement water mains extended along Flinders St and Sturt St to Morris St which is only one block away from the proposed private hospital site.
- A DN150 AC main is located along the northern side of Sturt St from the Morris St intersection to the Greenslade St intersection, with a final short section of DN100 AC main crossing under Greenslade St to the eastern corner of the private hospital site.
- A DN100 PVC main runs along Ingham Rd from the intersection with Church St to the east to the intersection of Ingham Rd (and the former intersection with Wilson St, now part of the hospital site). This main briefly becomes a DN150 CI pipe under the Sturt St intersection and then continues as a DN100 PVC main to the east to the Flinders St intersection where it connects into the new DN150 PVC reticulation network as part of the CBD utilities project.

The extract from the Council GIS below illustrates the existing water infrastructure that services the private hospital site.



**Figure 3.1 – Existing Water Infrastructure Plot**

To enable the private hospital site to be serviced with a reticulated water supply and fire flows the following water infrastructure works were undertaken in 2022:

- New DN150 water main along Greenslade St & O'Brien St:



upgrade project water mains) for both the peak hour demands and fire flows. The WaterGems figure and results table are provided in Appendix B.

The WaterGems network modelling results with the inclusion of the private hospital commercial water demands shows:

- The existing reticulation network that feeds water to the private hospital site including the existing DN100 PVC water main along Ingham Rd is adequately sized to service the development with peak hour and fire flows.
- The peak hour water pressures at 12 noon (ie the peak commercial water demand period for the private hospital site) are reduced to 530 kPa. This meets the minimum water pressure requirement of 220 kPa. This water pressure value is consistent with the original fire hydrant testing results that showed a static pressure of 550 kPa (test done at 11am).
- The peak hour pressures at 7 pm (ie the peak residential demand period) are reduced to 508 kPa. This also meets the minimum pressure requirement of 220 kPa. This is consistent with the latest fire hydrant testing that showed a static pressure of 500 kPa (test done at 6pm).
- The headloss gradient along the existing DN100 PVC water main along Ingham Rd and the proposed replacement DN150 PVC water mains on O'Brien St are all below 0.005 m/m and have a velocity of less than 0.52 m/s during the peak commercial water demands to the hospital site. This meets Council standards of 0.005 m/m and 2.5 m/s respectively.
- With the inclusion of the 30 l/s fire flow on the existing DN100 PVC water main on Ingham Rd (ie at the western end of the site where the planned fire offtake to fire tank will be located) the water pressures are reduced to 389 kPa within the water main. This is the pressure at 7pm and is concurrent with the peak residential demand period and meets the minimum pressure requirement of 120 kPa. This modelled fire flow pressure is consistent with the hydrant testing that showed a residual pressure of 370 kPa.
- The velocity along the existing DN100 PVC water main along Ingham Rd with the current peak hospital water demands and the 30 l/s fire flow is 2.63 m/s. This is below the CTM code standard of a maximum of 4.0 m/s velocity during fire flows.

The above water network modelling shows that the proposed private hospital development is able to be serviced with a reticulated water supply that meets Council's standards. The water modelling results are provided in Appendix B.

Fire hydrant testing was previously conducted at 7pm on 1<sup>st</sup> February 2022 are provided in Appendix C. These results illustrate the existing water network on Ingham Rd is able to provide the 30 l/s fire flow from two hydrants running concurrently with the residual pressure being 370 kPa.

Previous fire hydrant testing was conducted in 2020 for this project was only based on a single hydrant running and was undertaken at 11am. The previous testing showed the

system was able to provide 25 l/s @ 300 kPa. The fire hydrant test results from the 2020 testing are also provided in Appendix C.

The historical fire hydrant testing of the existing hydrant on Wilson St only showed a fire flow performance of 15 l/s @ 70 kPa. This is due to the hydrant being on an old DN100 AC pipe. A new DN150 PVC main has subsequently been constructed along O'Brien St to connect to the existing DN100 AC main in Wilson St and will therefore improve its fire system performance to meet Council standards.

The above water capacity assessment has been performed against Council standards and has not assessed the specific building code fire system requirements for the hospital site. The building code fire system requirements will need to be confirmed as part of the building detailed design and hydraulic approvals and will require a fire tank and booster pump assemble as illustrated on the services drawing provided in Appendix A.

## 4 SEWAGE SYSTEM PLANNING

The existing site for the proposed private hospital is currently serviced with a reticulated gravity sewer. Sewage from the private hospital development will be directed to two different sewer lines as follows.

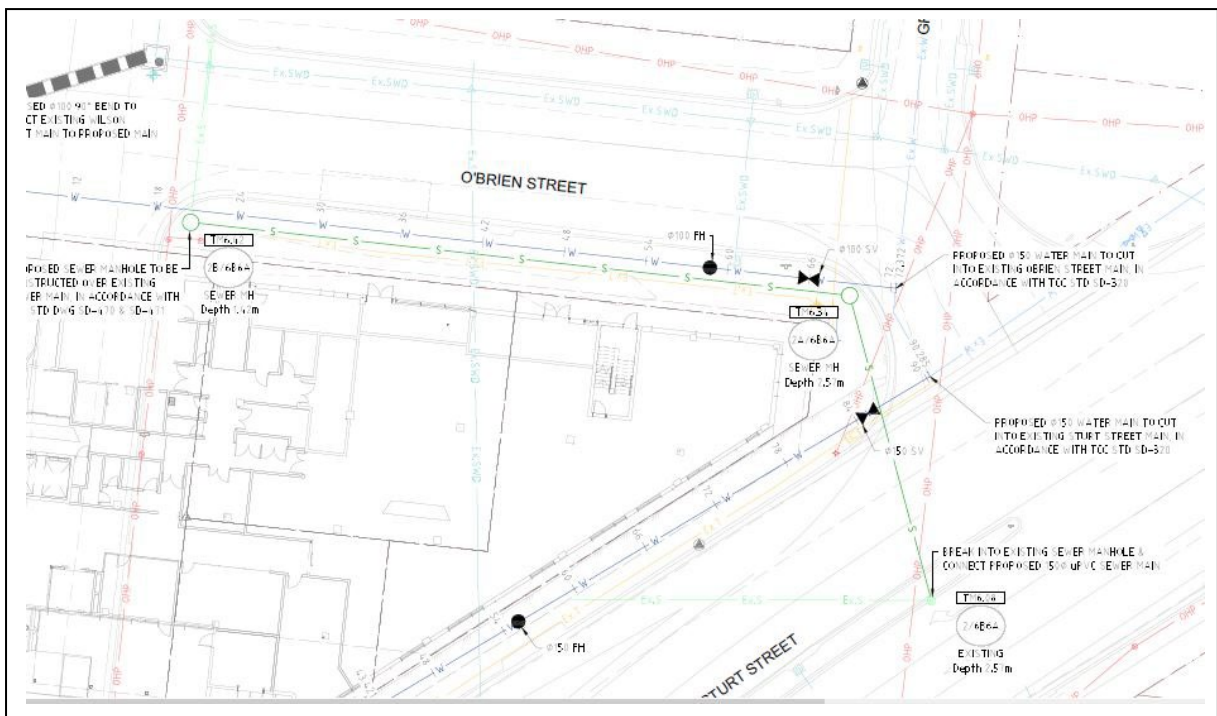
The sewage flows from the re-development of the heritage school building will be directed to the existing DN150 relined sewer to the west of the building. This is where the existing sewer connection from the school building is directed and involves:

- The 86 EP from the refurbishment of the heritage school building will be directed to the existing DN150 relined sewer between existing MH 3/6B5 and MH 2/6B5 that is located on the western side of the heritage building.
- The existing DN150 sewer extends to the south to MH 12/6B that is located on the western side of Sturt St and northern side of Livingstone St. The sewer increases to a DN225 relined pipe at this maintenance hole.

The gravity sewer system that will service the new private hospital site will involve:

- The 229.1 EP from the proposed new private hospital development will be directed to a new MH 2B/6B6A that has been constructed over an existing DN150 sewer that runs to the south along Wilson St.
- This new MH 2B/6B6A is located at the intersection of Wilson St and O'Brien St so that a new DN150 PVC sewer is extend to the east along O'Brien St to divert sewage around the new private hospital site.
- DN150 PVC diversion sewer has been constructed to the east along O'Brien St with a new MH 2A/6B6A constructed at the intersection of O'Brien St, Greenslade St and Sturt St. A new DN150 PVC sewer has been extended to the south east to connect to existing MH 2/6B6A that is located in the central traffic island of Sturt St.
- Existing DN150 relined sewer from MH 2/6B6A to the east and then south to existing MH 17/6B that is located on Charters Towers Rd to the south of the Ingham Rd intersection.
- Existing DN225 relined sewer from MH 17/6B to the west to existing MH 12/6B that is located to the west of Sturt Drv and north of Livingstone St. This MH 12/6B also has an existing DN150 relined sewer connecting from the north which will have the sewage flows from the redevelopment of the heritage school site (as noted above).
- The DN225 relined sewer extends to the west from MH 12/6B to MH 3/6B that is located at the southern end of Church St (near the intersection with Shaw Rd). MH 3/6B is the start of the DN300 trunk sewer that extends to the west and onto PS 6 that is located at the southern end of Parkes St.

The following Figure 4.1 is a plot from the early works design drawings for the private hospital site showing the proposed DN150 diversion sewer along O'Brien St. The full design drawing and sewer long section is provided in Appendix A.



**Figure 4.1 – Extract of the DN150 Diversion Sewer Design**

The capacity of the DN150 diversion sewer and the existing DN150/225/300 gravity sewer system to MH 1/6B (being the DN300 trunk sewer to PS 6) to service the proposed private hospital is provided in the following section.

#### 4.1 Sewage Infrastructure Capacity

The capacity of the existing gravity sewer system to service the private hospital was assessed using the SewerGEMS model of Townsville.

The additional sewer equivalent population loading has been applied to the following maintenance holes:

- The 86 EP from the refurbishment of the heritage school building has been applied to existing MH 3/6B5 that is located on the western side of the heritage building.
- The 229.1 EP from the proposed new private hospital development will be directed to a new MH 2B/6B6A at the intersection of Wilson St and O'Brien St. This is the DN150 sewer diversion around the private hospital site.

The extract from the SewerGEMS model on Figure 4.2 below illustrates the planned diversion sewer and existing gravity sewers that will service the private hospital site.

Figure 4.3 and Figure 4.4 below illustrates the additional equivalent population loading applied to MH 3/6B5 and MH 2B/6B6A.

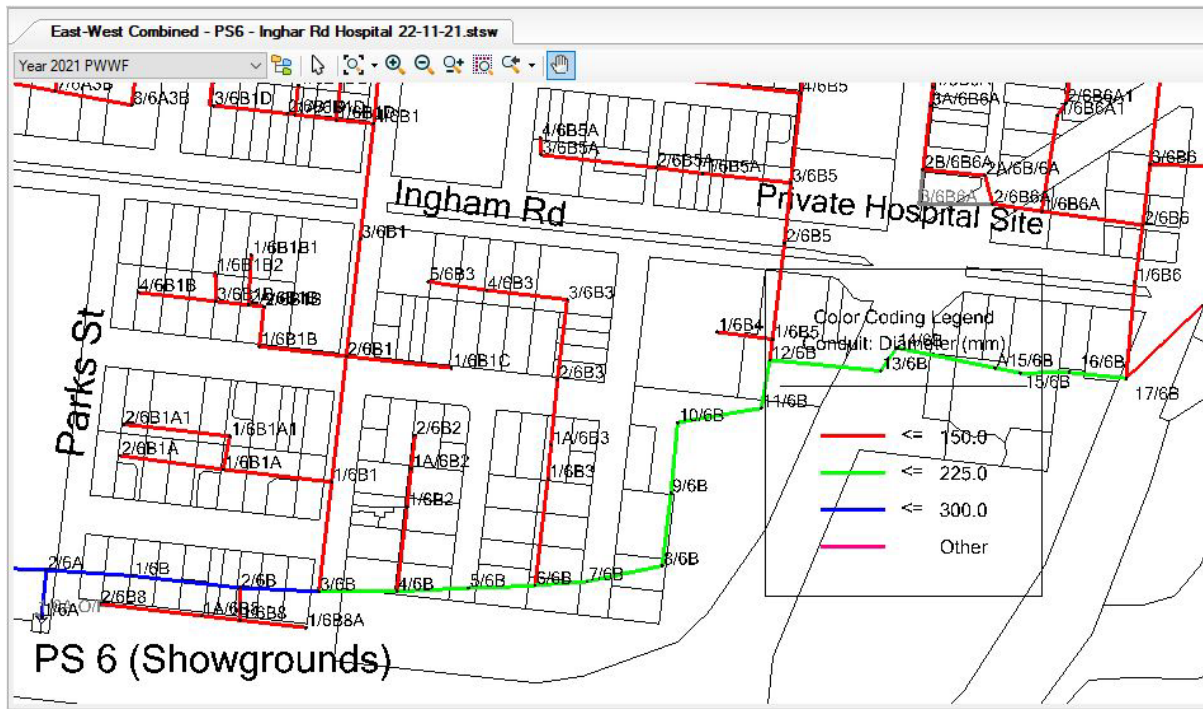


Figure 4.2 – SewerGEMS Model Figure Extract

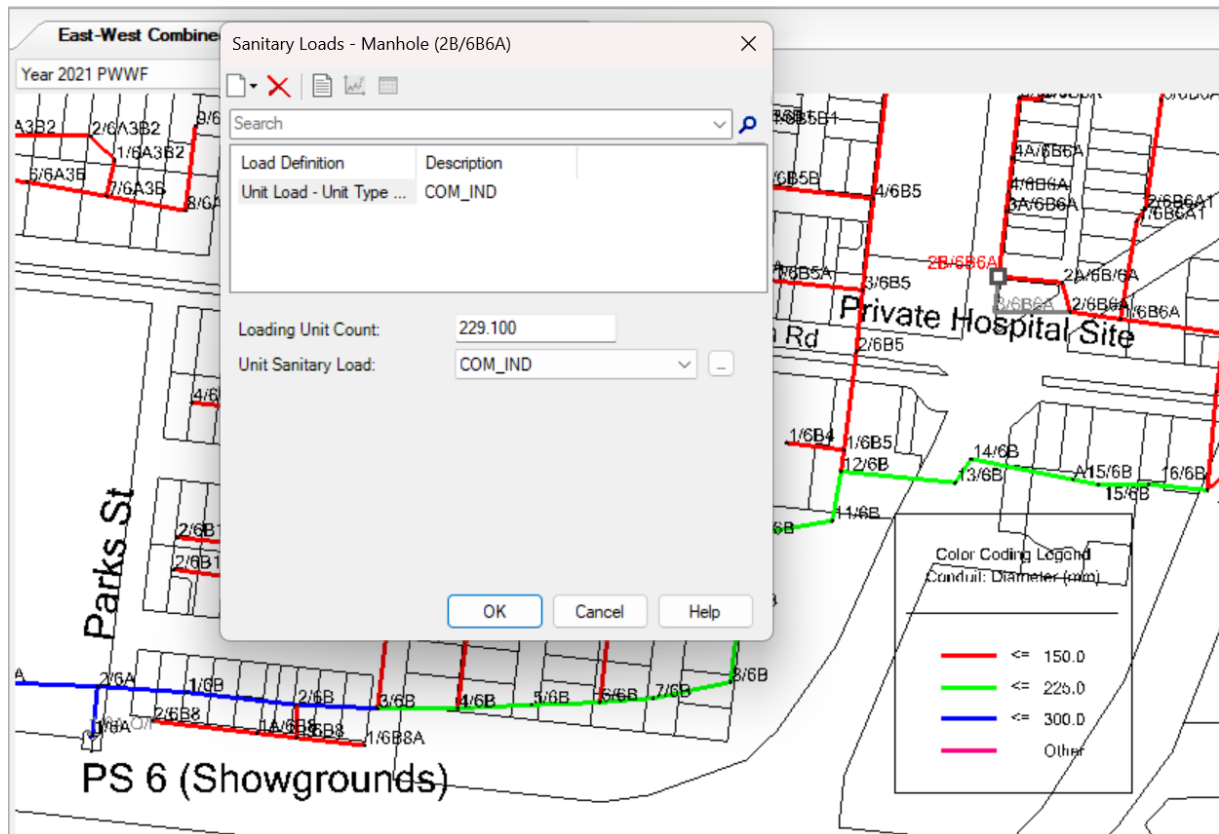
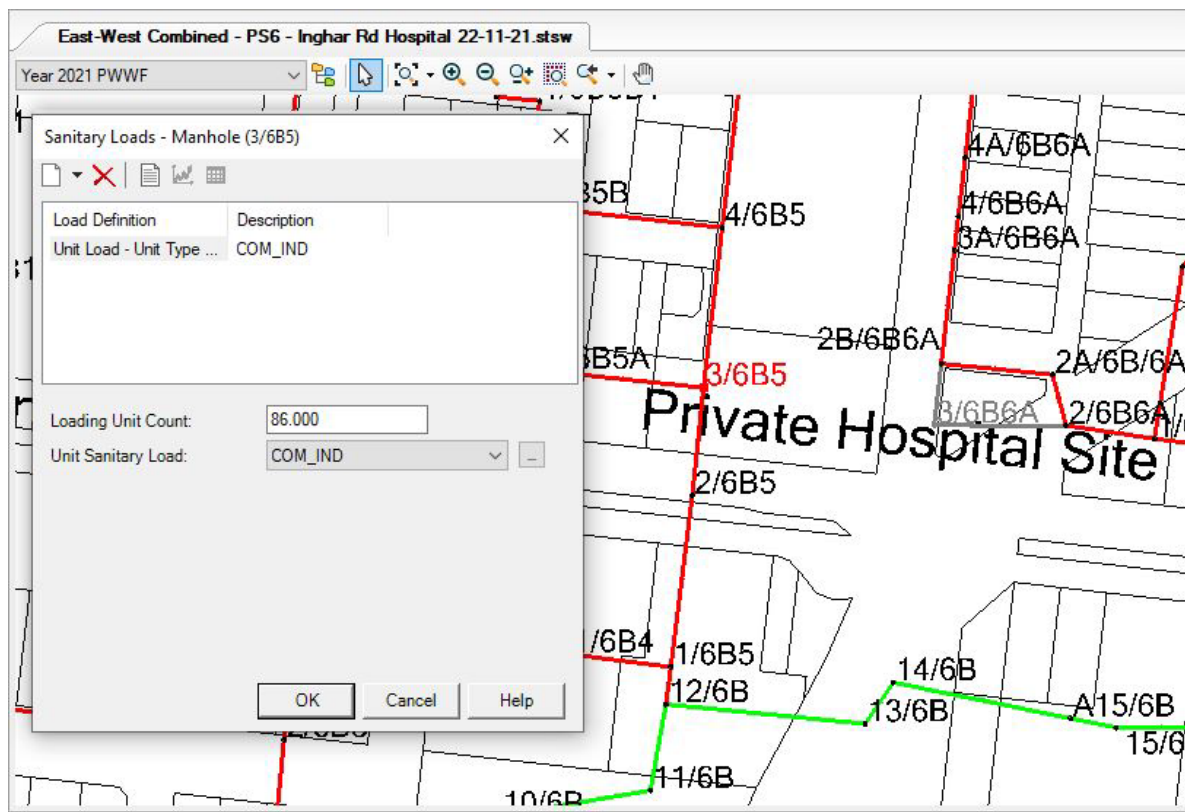


Figure 4.3 – SewerGEMS Model Equivalent Population Loading - Hospital



**Figure 4.4 – SewerGEMS Model Equivalent Population Loading – Heritage Building**

With the inclusion of the additional equivalent population loading on the existing gravity sewer system, the SewerGEMS model has illustrated:

- The planned DN150 diversion sewer from new MH 2B/6B6A to MH 2/6B6A in Sturt St flows up to 44% full for peak wet weather flows.
- The existing DN150 sewer from MH 2/6B6A to MH 17/6B flows up to 71% full for the peak wet weather flows. This is based on the concurrent fully occupied hospital and ancillary medical facilities and peak wet weather flows in the existing sewer system. This is an upper flow assessment and shows the existing DN150 sewer meets TCC standards of flowing up to 75% full.
- The existing DN225 sewer from MH 16/6B to MH 3/6B at the southern end of Church St flows up to 61% full. This sewer includes the flows from both the private hospital and the re-development of the heritage school building.
- The existing DN300 trunk sewer from MH 3/6B to MH 2/6A on Parks St flows up to 47% full. It is noted that TCC has plans for the construction of a replacement PS 6 (Showgrounds) that will pump along a diversion rising main to the Cleveland Bay STP. The timing for the construction of the replacement pump station and diversion rising main is not certain.
- The assessment shows that the existing reticulation sewer system that will service the proposed private hospital site flow within the 75% maximum flow depth design standard for gravity sewers.

The following Figure 4.5 provides the flows and performance of the existing gravity sewer system with the inclusion of the additional loading from the private hospital site. A larger version of the modelling results is provided in Appendix D.

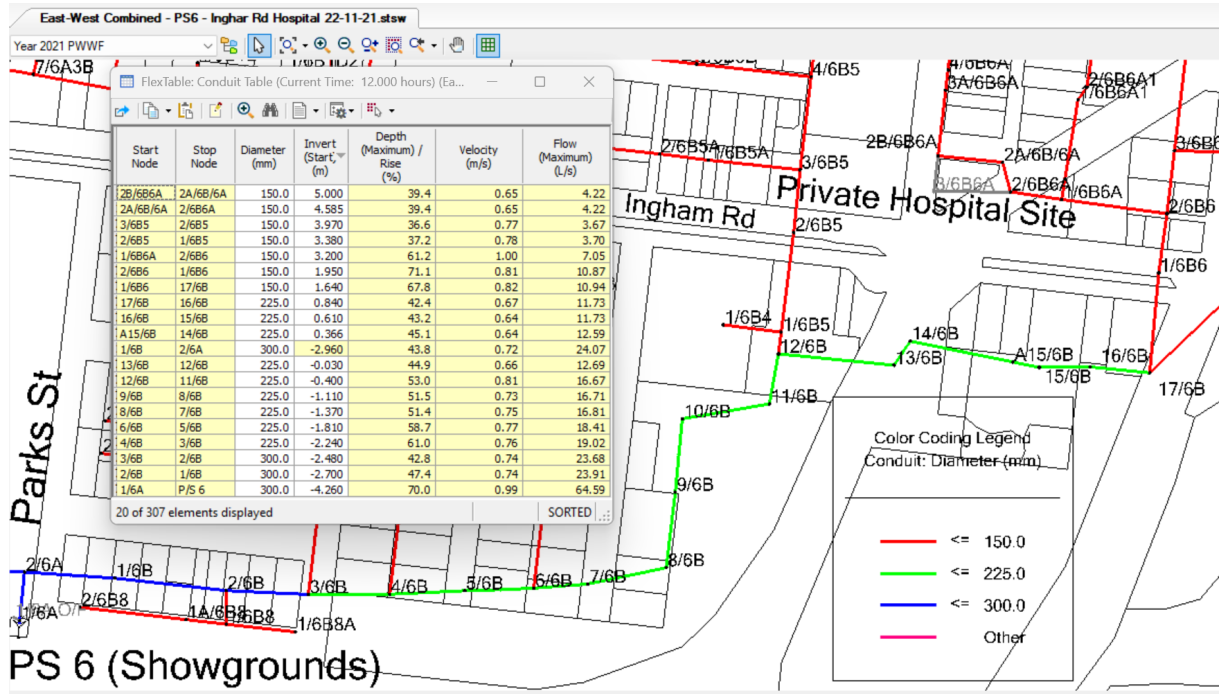


Figure 4.5 – SewerGEMS Modelling Results

The sewer system modelling has illustrated that the existing sewer system is able to service the proposed private hospital site.

# **APPENDIX A DEVELOPMENT FIGURES**



1 ELEVATION - SOUTH  
Scale 1:100

**GENERAL NOTES:**

- PRE CAST CONCRETE PANELS:
  - ALLOW FOR 'REKL' FORM LINER EMBOSSED PATTERN TYPE 1 (TBC) TO PANELS ABOVE & BELOW WINDOWS.
  - ALLOW FOR 'REKL' FORM LINER EMBOSSED PATTERN TYPE 2 (TBC) TO GENERAL PANELS J.E. ALL PANELS OTHER THAN TYPE 1 PANELS.
  - ALLOW FOR AN APPROVED FINE TEXTURED MINERAL PAINT FINISH EQUAL TO 'KEIM ROYALAN, MINIMUM 2 COATS TO ALL PRECAST PANELS. ALLOW FOR 2 CONTRASTING COLOURS FOR THE DIFFERENT PANEL PATTERN TYPES.
  - ALLOW FOR ALL CLEANING AND PREP OF THE PRECAST PANELS AND MAKING GOOD OF THE ALL SURFACE VOIDS.
  - ALLOW FOR ALL MECHANICAL SERVICES PENETRATIONS IN EXTERNAL WALLS, INCLUDING CYCLONE COMPLIANT LOUVRED GRILLES COLOUR MATCHED TO PANEL COLOURS.

**GENERAL NOTES:**

- WINDOWS & GLAZED DOORS:
  - ALL GLAZING TO COMPLY WITH SECTION J ESD REPORT REQUIREMENTS. TO BE TINTED GLASS IN ACCORDANCE WITH APPROVED DA DOCUMENTS
  - SPANDREL GLAZING TO BE OPAQUE COLOUR BACKED OF SELECTED COLOUR AND COMPLIANT WITH SECTION J ESD REPORT REQUIREMENTS
  - WINDOW FRAMES COLOUR TBC ANODISED ALUMINIUM 150MM SECTION EQUAL TO 'CAPRAL 419 FLUSHLINE SERIES. TRANSOMS TO BE STRUCTURAL GLAZING PROFILE
  - WINDOW FRAMES TO OPERATING THEATRES, ICU BAYS AND RECOVERIES TO BE PROVIDED WITH HINGED INTERNAL JOCKEY SASHES
  - WINDOWS WITH JOCKEY SASHES SHALL BE PROVIDED WITH INTERSTITIAL, DUAL ROLLER BLINDS, IN TRACKS.
  - ALL OTHER WINDOWS TO LEVEL 1, 2 & 3 TO BE PROVIDED WITH MANUALLY OPERATED DUAL ROLLER BLINDS, IN TRACKS. ONE BLIND TO PROVIDE COMPLETE BLOCK OUT AND THE OTHER A PERFORATED SCREEN.
  - FULL HEIGHT GLAZING TO BE PROVIDED WITH DECAL TRANSFER MANIFESTATIONS AT 900MM TO 1000MM ABOVE FLOOR LEVEL.

- BUILDING SIGNAGE:
  - ALLOW FOR ILLUMINATED SIGNAGE TO FAÇADE IN ACCORDANCE WITH DA APPROVALS
- FACE BRICK
  - FACE BRICK TO BE GLAZED PRESSED BRICKS IN A STACK BOND. TO BE SELECTED.
- CEMENT SHEET PANELS:
  - TO BE HARDIES 12MM EXOTEC SYSTEM FOR CYCLONIC CONDITIONS WITH ACRYLIC RENDER FINISH
- IN SITU CONCRETE AND CONCRETE BLOCK FAÇADE ELEMENTS (COLUMNS & SHEAR WALLS)
  - TO BE FINISHED WITH ACRYLIC RENDER EQUAL TO UNITEK 109 ROLL-ON MEDIUM TEXTURED COATING.

- ROOF:
  - ROOF DECK TO BE STRAMIT SPEED DECK ULTRA OR LYSAGHT KLIP-LOK CLASSIC 700, BMT0.48, COLOURBOND ULTRA FINISH. ALL FIXINGS TO BE IN ACCORDANCE WITH CYCLONIC CONDITION REQUIREMENTS.
  - FLASHINGS, GUTTERS, PARAPET CAPPINGS ETC TO MATCH ROOF.
  - MEMBRANE ROOFING TO BE AN APPROVED PROPRIETARY TRAFFICABLE SYSTEM. PATIENT TERRACE TO BE PROVIDED WITH COLOURED CONCRETE PAVERS ON ADJUSTABLE HEIGHT PEDESTALS.
  - ALLOW FOR ROOF WALK WAYS AS REQUIRED TO ACCESS PLANT DECK AND OTHER MECHANICAL PLANT.
  - ALLOW FOR ROOFING ANCHORS FOR ROOF MAINTENANCE AND ROOF SAFETY RAIL ANCHORS FOR WINDOW / FAÇADE CLEANING.

**WINDOW CODES - GLASS CODES**

|     |  |
|-----|--|
| GV1 | VISION GLASS - COLOR TBC                   |
| GM  | MIRROR GLASS - COLOR TBC                   |
| GSM | MIRROR SPANDREL GLASS - COLOR TBC          |
| GS  | SPANDREL PANEL - GLASS - GLAZING COLOR TBC |
| AL1 | ALUMINIUM FRAMED FIXED WINDOWS             |
| AL2 | ALUMINIUM FRAMED CASEMENT WINDOWS          |
| AL3 | ALUMINIUM FRAMED FIXED CURTAIN WINDOWS     |

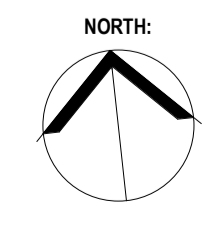
| Tag      | DESCRIPTION                                 |
|----------|---|
| BWK001   | FACE BRICKWORK - 230x110x76mmH              |
| PC001    | PRECAST CONCRETE PANELS( LIGHT BROWN COLOR) |
| PC002    | PRECAST CONCRETE PANELS( BROWN COLOR)       |
| EXL001   | VERTICAL METAL BLADE                        |
| EXL002   | EXTERNAL VERTICAL SHADE                     |
| EXL003   | VERTICAL METAL SCREEN                       |
| RFS001   | FIBRE CEMENT CLADDING(GREY COLOR)           |
| PAINT001 | CHARCOAL                                    |

CONSULTANTS:

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 Sydney Level 6, 61 Market Street Sydney NSW 2000  
 T + 61 3 9223 2333 E info@hspc.com.au

REASON FOR ISSUE  
**PRELIMINARY**  
THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR WORKING OF ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALED DIMENSIONS. ALL SCALED DIMENSIONS MUST BE VERIFIED ON SITE. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

PROJECT No.: 4-19-0012



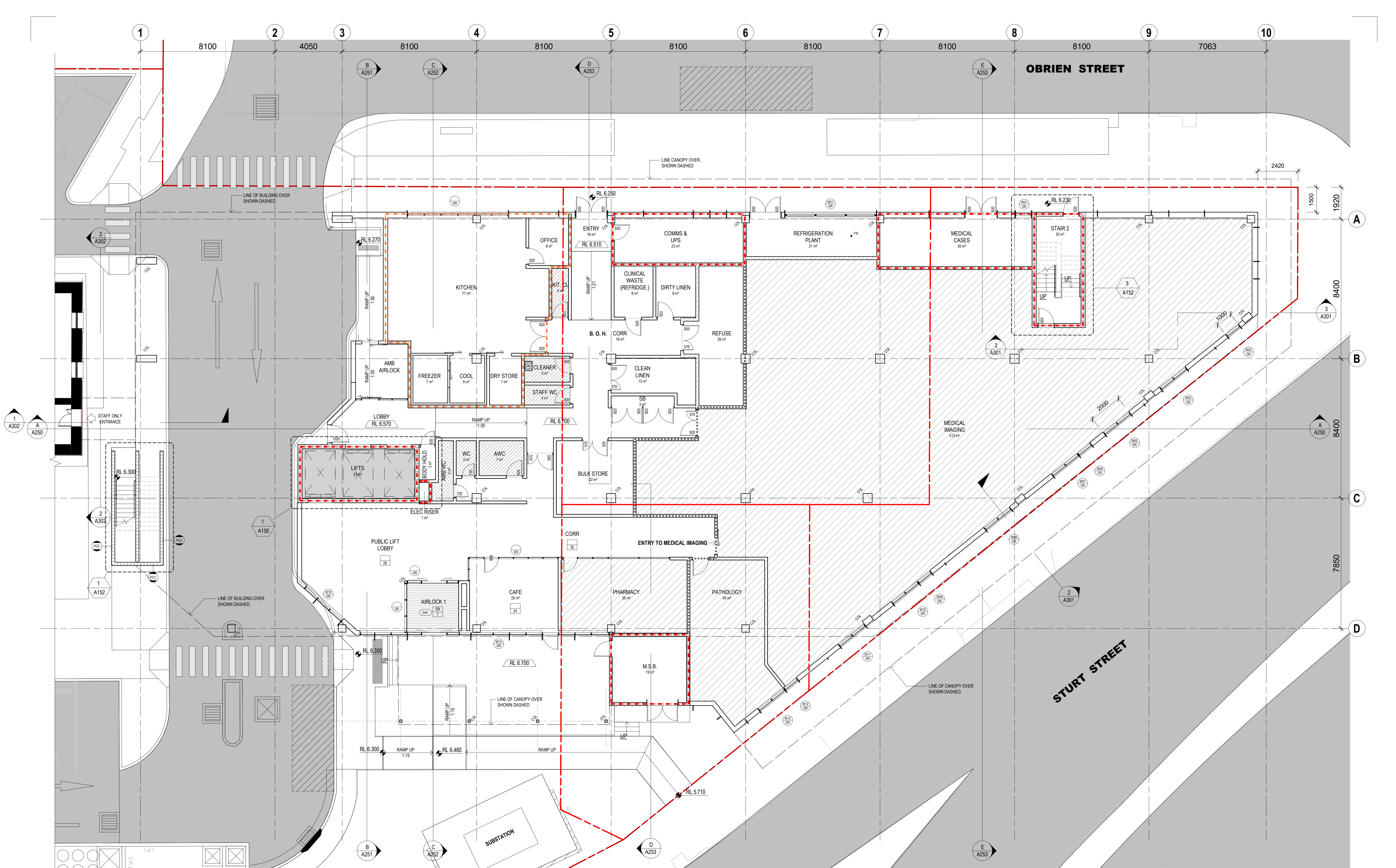
PROJECT: WESTSTATE PRIVATE HOSPITAL  
 PROJECT ADDRESS: 2, 4 Wilson Street, 2A Lainington Road and 763 Stun Street, West End QLD 4810  
 CLIENT: Owner

DRAWING TITLE: PROPOSED ELEVATIONS - SHEET 1

SCALE: As Indicated @ A1  
**A200**

PROJECT DATE: Issue Date  
 REVISION: **2**

| ISSUE | REVISION              | DRN | CHK / APP | DATE       |
|-------|-----------------------|-----|-----------|------------|
| 1     | ISSUE FOR INFORMATION | SA  | SS        | 30/10/2020 |
| 1     | ISSUE                 | SA  | SS        | 30/10/2020 |
| 2     | COORDINATION ISSUE    | SS  | AR        | 21/10/2021 |
|       |                       |     |           |            |
|       |                       |     |           |            |



**1 GROUND FLOOR PLAN**  
Scale 1: 100

| ISSUE | REVISION                          | DRN | CHK / APP | DATE       |
|-------|-----------------------------------|-----|-----------|------------|
| 1     | ISSUE FOR INFORMATION             | SA  | SS        | 30/10/2020 |
| 2     | SPRINK                            | SA  | SS        | 30/10/2020 |
| 3     | WINDOWS NUMBER ADDED              | SA  | SS        | 11/11/2020 |
| 4     | UPDATED COULS & FIRE WALL DELETED | SA  | SS        | 19/11/2020 |
| 5     | COORDINATION ISSUE                | SS  | AR        | 21/10/2021 |

CONSULTANTS:

**HS PC HEALTH ARCHITECTS**

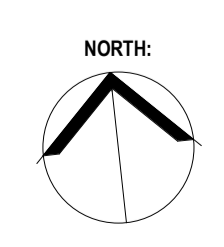
Melbourne  
Level 1, 525 Flinders Street  
Melbourne Victoria 3000  
T + 61 3 9223 2333  
E info@hspc.com.au

Sydney  
Level 6, 61 Market Street  
Sydney NSW 2000  
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W www.hspc.com.au

REASON FOR ISSUE  
**PRELIMINARY**

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MARKING OF ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALED DIMENSIONS. ALL SCALED DIMENSIONS MUST BE VERIFIED ON SITE. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

PROJECT No.:  
4-19-0012



PROJECT:  
WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS:  
2, 4 Wilson Street, 2A Lainington Road and 763 Stun Street, West End QLD 4810

CLIENT:  
Owner

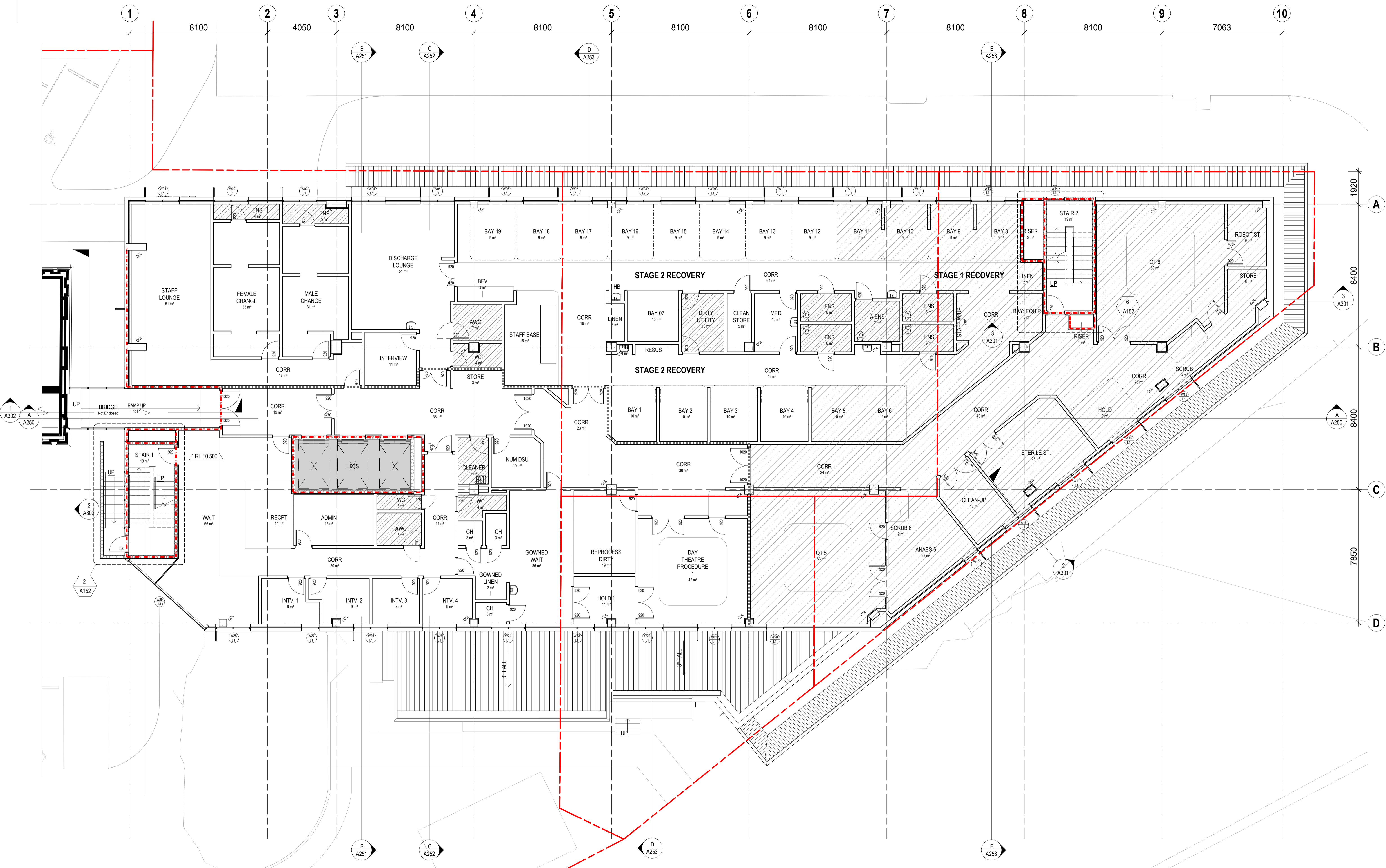
DRAWING TITLE:  
BUILDING A PROPOSED GROUND FLOOR PLAN

SCALE:  
1: 100 @ A1

DRAWING No.:  
**A030**

PROJECT DATE:  
Issue Date

REVISION:  
**4**



**1 FLOOR PLAN - LEVEL 1**  
Scale 1:100

| ISSUE | REVISION              | DRN | CHK / APP | DATE       |
|-------|-----------------------|-----|-----------|------------|
| 1     | ISSUE FOR INFORMATION | SA  | SS        | 30/10/2020 |
| 2     | SPRINK                | SA  | SS        | 06/11/2020 |
| 3     | WINDOWS NUMBER ADDED  | SA  | SS        | 11/11/2020 |
| 4     | DOCS UPDATED          | SA  | SS        | 18/11/2020 |
| 5     | COORDINATION ISSUE    | SS  | AR        | 21/10/2021 |

CONSULTANTS:

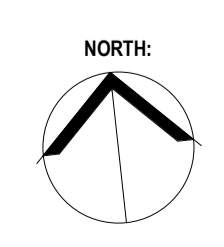
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Sydney  
 Level 6, 61 Market Street  
 Sydney NSW 2000  
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 W www.hspc.com.au

REASON FOR ISSUE  
**PRELIMINARY**

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PROJECT No.:  
4-19-0012



PROJECT:  
WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS:  
2, 4 Wilson Street, 2A Lainington Road and 763 Stun Street, West End QLD 4810

CLIENT:  
Owner

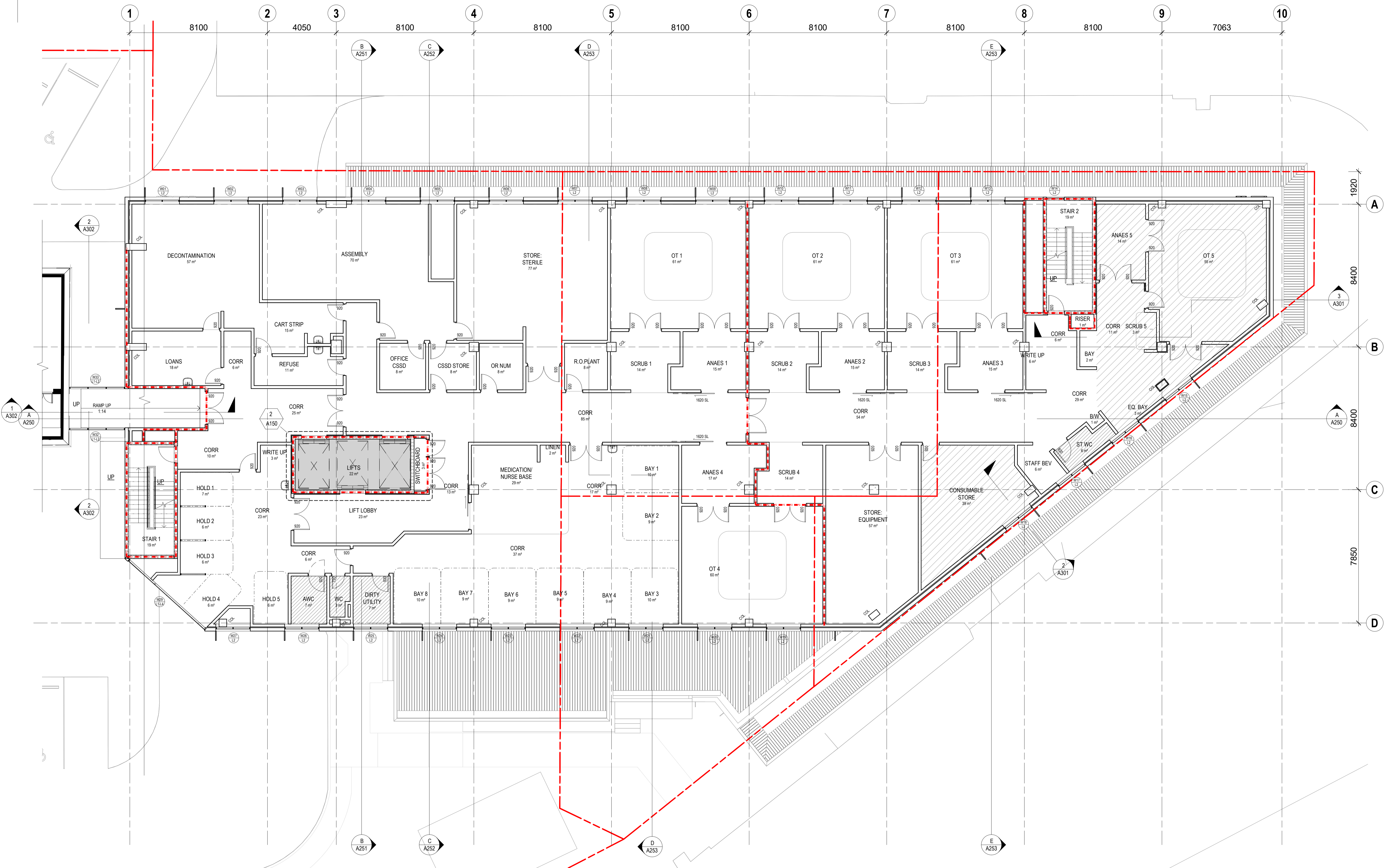
DRAWING TITLE:  
BUILDING A PROPOSED LEVEL 1 FLOOR PLAN

SCALE:  
1:100 @ A1

DRAWING No.:  
**A031**

PROJECT DATE:  
Issue Date

REVISION:  
**4**



| ISSUE | REVISION              | DRN | CHK / APP | DATE       |
|-------|-----------------------|-----|-----------|------------|
| 1     | ISSUE FOR INFORMATION | SA  | SS        | 30/10/2020 |
| 1     | SPRINK                | SA  | SS        | 30/10/2020 |
| 2     | WINDOWS NUMBER ADDED  | SA  | SS        | 11/11/2020 |
| 3     | DOCS UPDATED          | SA  | SS        | 19/11/2020 |
| 4     | COORDINATION ISSUE    | SS  | AR        | 21/10/2021 |

CONSULTANTS:

**HS PC HEALTH ARCHITECTS**

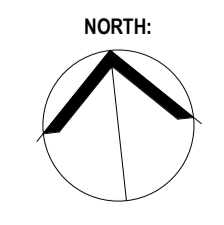
Melbourne  
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Sydney  
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REASON FOR ISSUE  
**PRELIMINARY**

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PROJECT No.:  
4-19-0012



PROJECT:  
WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS:  
2, 4 Wilson Street, 2A Lainington Road and 763 Stun Street, West End QLD 4810

CLIENT:  
Owner

DRAWING TITLE:  
BUILDING A PROPOSED LEVEL 2 FLOOR PLAN

SCALE:  
1 : 100 @ A1

DRAWING No.:  
**A032**

PROJECT DATE:  
Issue Date

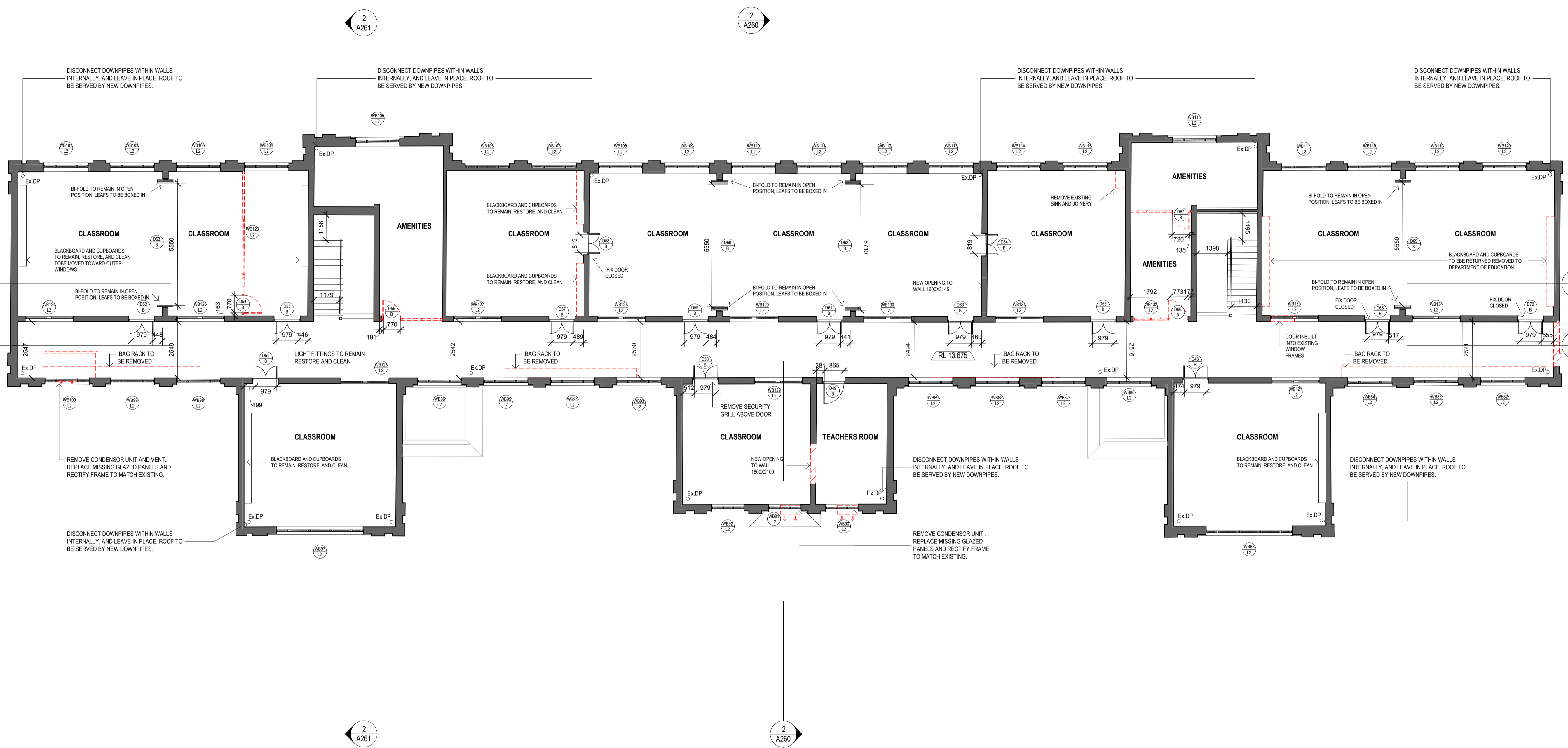
REVISION:  
**4**

20/10/2021 4:33:31 PM



DEMOLITION NOTES

- COMPLETE FULLY DILAPIDATION REPORT OF SITE, SURROUNDING BUILDINGS, KERBS, CROSS OVERS, FOOTPATHS, IMMEDIATE ROAD SURFACES SURROUNDING THE SITE, VEGETATION, MULCH LEVELS, IRRIGATION SYSTEMS, ALL EXTERNAL SERVICES, ALL BUILDING SERVICES, ALL BUILDING INTERFACES, ALL WALLS, CEILINGS, FLOORING, ROOF SHEETING, FLASHINGS, DOWN PIPES, GUTTERS AND SIMPS ROOF ACCESS, PAVING AND SURROUNDING BUILDING SURFACES. REPORT TO BE CIRCULATED TO CLIENT, PROJECT MANAGER AND CONSULTANT TEAM FOR ANY REQUIRED COMMENTS PRIOR TO ANY WORKS COMMENCING ON SITE.
- EXTENT OF BUILDING / STRUCTURE TO BE DEMOLISHED SHOWN IN RED.
- ALLOW FOR STRIPPING BACK EXISTING STRUCTURE TO FACILITATE NEW BUILDING CONNECTIONS.
- ALL DEMOLITION WORKS SUBJECT TO OPENING UP WORKS. ALLOWANCE TO BE MADE FOR DISCOVERY OF UNFORESEEN STRUCTURE.
- ALL WORKS SUBJECT TO STRUCTURAL ENGINEER DESIGN & DETAIL AND SPECIALIST SUB-CONTRACTOR METHOD STATEMENT.
- ALLOW FOR BREAKING UP AND REMOVAL FROM SITE ANY CONCRETE FOOTINGS OR STRUCTURE NO LONGER REQUIRED. EXTENT OF EXISTING ROOF & STRUCTURE TO BE CUT BACK TO BE CONFIRMED ON SITE.
- THE BUILDER IS TO DEMOLISH EXISTING STRUCTURE TO EXTENT SHOWN ON THE DOCUMENTS. REMOVE ALL MATERIALS NOT TO BE RE-USED UNLESS NOTED OTHERWISE. THE BUILDER SHALL ALSO REFER TO OTHER CONTRACT DOCUMENTS, STAGING PROGRAM, REGULATIONS, CODES OF PRACTICE, ETC. IN REGARD TO THE EXTENT AND MANNER IN WHICH THE DEMOLITION IS TO BE CARRIED OUT.
- REFER TO RELEVANT ENGINEERS DRAWINGS FOR CAPPING & SEALING OF REDUNDANT EXISTING SERVICES. SERVICES TO BE CUT AND SEALED IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
- UNLESS NOTED OTHERWISE ALL EXISTING CONCRETE SLABS TO BE PROTECTED AND TO REMAIN.
- MAKE GOOD TO ALL SURFACES AFTER DEMOLITION HAS TAKEN PLACE IN PREPARATION FOR NEW FINISHES TO BE APPLIED.
- CONTRACTORS TO INSPECT & CHECK ON SITE PRIOR TO DEMOLITION.
- WATERPROOFING OF BUILDING TO BE MAINTAINED DURING ALL PHASES OF WORK INCLUDING THE REMOVAL OF THE FACADE FOR INFORMATION ON OR ABOUT EXISTING SERVICES REFER RELEVANT CONSULTANTS DWGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH SITE, SEAF, STRUCTURAL, CIVIL AND SERVICES ENGINEERS DOCUMENTATION.
- MAKE GOOD OR PROVIDE NEW AS REQUIRED TO ALL EXISTING ADJOINING SURFACES TO BE RETAINED, THAT ARE AFFECTED BY THE WORKS.
- PROVIDE TEMPORARY PROPPING WHERE REQUIRED TO STABILISE EXISTING STRUCTURE. SERVICES AND INFRASTRUCTURE PROPPING TO BE TO STRUCTURAL ENGINEERS APPROVAL.
- WHERE EXISTING BUILDING FABRIC BEING INTERRUPTED PROVIDE TEMPORARY SECURE AND WEATHER RESISTANT HOARDING INFILL WHERE VISIBLE FROM PUBLICLY ACCESSIBLE AREAS HOARDING TO BE HIGH QUALITY SOLID LINED.
- ALL DEMOLITION UNDERTAKEN TO COMPLY WITH AS 2601.
- EXISTING WINDOWS AND FRAMES TO BE RETAINED, REPAIRED, REGLAZED AND CLEANED AS NECESSARY.
- CEILING TO BE REPLACED & PATTERNAESTHETIC TO BE REPRODUCED TO MATCH EXISTING.
- CLEAN & MAKEGOOD EXISTING SKIRTING, REMOVE AND REPLACE WHERE WATER DAMAGED.
- MASONRY WALLS TO BE CLEANED, PATCHED & REPAIR CRACKS IN BRICKWORK, SEVERELY CRACKED BRICKS TO BE REPLACED WITH BRICKS REMOVED FROM THE EASTERN FACADE DEMOLITION WORKS.
- PATCH AND REPAIR ALL CRACKS IN RENDER, REMOVE ANY "DRUMMY" RENDER AND REPLACE TO MATCH.
- PATCH AND REPAIR ALL CRACKS TO CONCRETE INCLUDING STAIRS. ADDRESS ANY SPALLING CONCRETE, AND/OR CORRODED REINFORCEMENT FIXINGS.
- PATCH AND REPAIR ALL DAMAGED TIMBER WORK.
- RE-PAINT ALL PAINTED AREAS. LEAD PAINT IS OBSERVED IN NUMEROUS LOCATIONS. ENCAPSULATE IF SOUND, REMOVE IF FLAKY.
- DISCONNECT DOWNPIPES WITHIN WALLS INTERNALLY, AND LEAVE IN PLACE. THE ROOF WILL BE SERVED BY NEW DOWNPIPES LOCATED EXTERNAL TO THE BUILDING.
- RETAIN LOOSE FURNITURE BY CLIENT, AND PLACE IN STORAGE OFF-SITE.
- RETAIN LOOSE FURNITURE BY CLIENT, AND PLACE IN STORAGE OFF-SITE.
- CLEAN, MUST TREAT AND REPAINT STEEL GRILLES.
- REVIEW ALL AREAS FOR TERMITE DAMAGE AND SEEK STRUCTURAL ADVICE FOR LOAD BEARING MEMBERS. REPAIR/ REPLACE NON LOAD BEARING ITEMS TO MATCH ORIGINAL.
- REVIEW INSTANCES OF RISING DAMP. INVESTIGATE CAUSES. RECTIFY CAUSES AND ANY DAMAGE AND REINSTATE TO ORIGINAL CONDITION.
- INSTALLATION OF LININGS MUST ENABLE FUTURE REMOVAL WITHOUT DAMAGE TO EXISTING TIMBER AND CONCRETE FLOORS.
- BRICKS TO BE REMOVED FROM EXISTING WINDOWS & GLAZING TO BE INSTALLED.
- REMOVE ALL RETROFITTED WINDOW FURNISHINGS.
- REMOVE SPLIT AIRCON SYSTEMS & MAKE GOOD EXTERNAL WALLS.
- DRAWINGS TO BE READ IN CONJUNCTION WITH CONSERVATION MANAGEMENT PLAN.
- ANY SIGNIFICANT ITEMS (AS OUTLINED IN CONSERVATION STRATEGY) REMOVED TO BE RETAINED AND RETURNED TO DEPARTMENT OF EDUCATION.



1 FLOOR PLAN - LEVEL2 - HERITAGE BUILDING  
Scale 1:100

| ISSUE | REVISION      | DRN | CHK / APP | DATE       |
|-------|---------------|-----|-----------|------------|
| 1     | ISSUED        | SA  | SS        | 16/11/2020 |
| 2     | FOR REVIEW    | SS  | AK        | 15/11/2021 |
| 3     | NOTES UPDATED | SA  | SS        | 16/11/2020 |
|       |               |     |           |            |
|       |               |     |           |            |
|       |               |     |           |            |

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W ww.pta.com.au  
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**HS PC HEALTH ARCHITECTS**

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Level 1, 525 Flinders Street  
Melbourne Victoria 3000

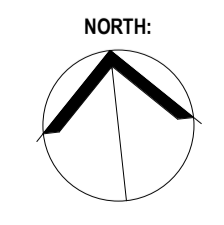
Sydney  
Level 6, 61 Market Street  
Sydney NSW 2000

T + 61 3 9923 2333  
E info@hspc.com.au

REASON FOR ISSUE FOR REVIEW

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING OF ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALED DIMENSIONS. ALL SCALED DIMENSIONS MUST BE VERIFIED ON SITE. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

PROJECT No.: 4-19-0012



PROJECT: WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS: 2, 4 Wilson Street, 2A Lainington Road and 763 Stun Street, West End QLD 4810

CLIENT: Owner

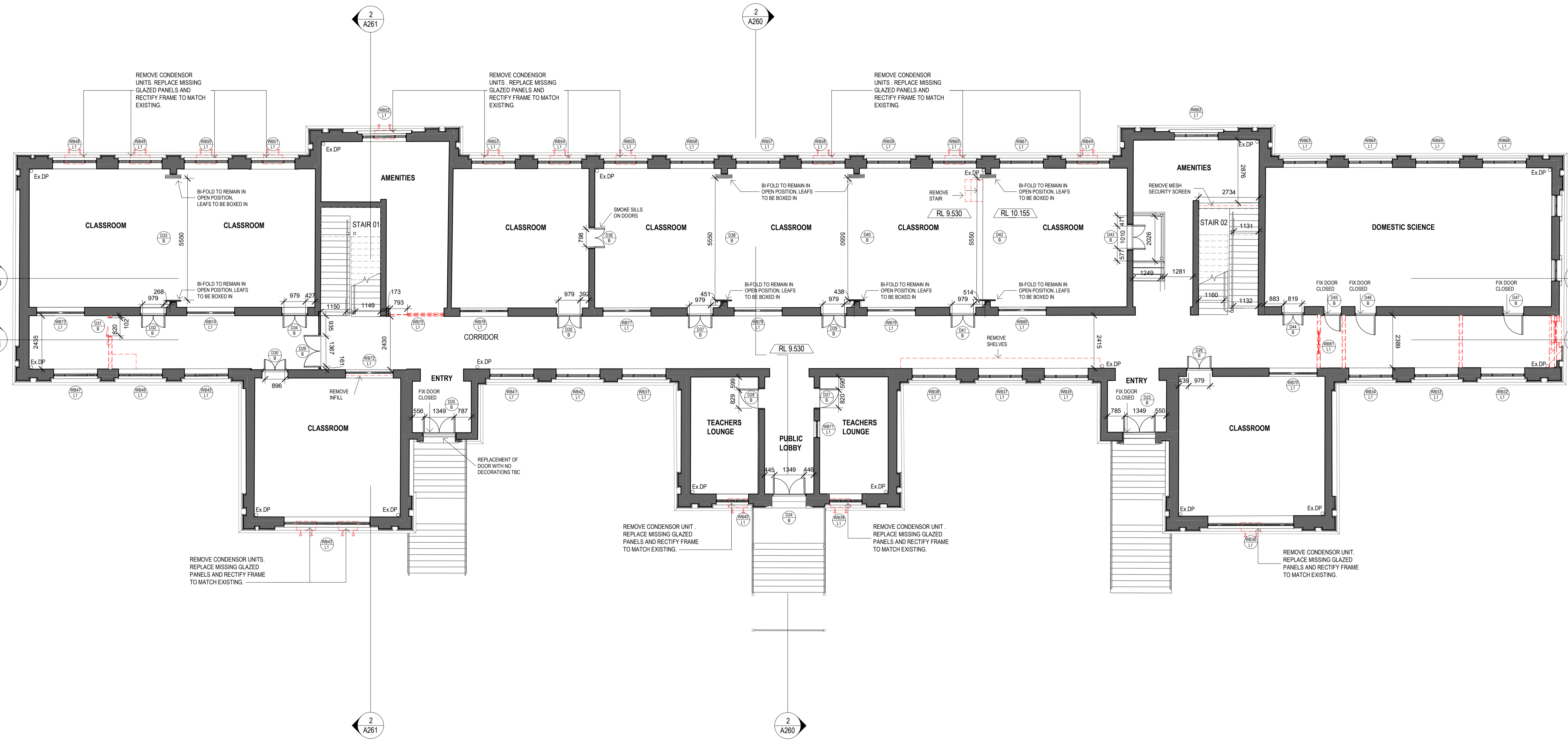
DRAWING TITLE: LEVEL 2 DEMOLITION PLAN - BUILDING B

SCALE: 1:100 @ A1  
DRAWING No.: **A013**

PROJECT DATE: Issue Date  
REVISION: **3**

DEMOLITION NOTES

- COMPLETE FULLY DILAPITATION REPORT OF SITE, SURROUNDING BUILDINGS, KERBS, CROSS OVERS, FOOTPATHS, IMMEDIATE ROAD SURFACES SURROUNDING THE SITE, VEGETATION, MULCH LEVELS, IRRIGATION SYSTEMS, ALL EXTERNAL SERVICES, ALL BUILDING SERVICES, ALL BUILDING INTERFACES, ALL WALLS, CEILINGS, FLOORING, ROOF SHEETING, FLASHINGS, DOWN PIPES, GUTTERS AND SUMPS, ROOF ACCESS, PAVING AND SURROUNDING BUILDING SURFACES. REPORT TO BE CIRCULATED TO CLIENT, PROJECT MANAGER AND CONSULTANT TEAM FOR ANY REQUIRED COMMENTS PRIOR TO ANY WORKS COMMENCING ON SITE.
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- CONTRACTORS TO INSPECT & CHECK ON SITE PRIOR TO DEMOLITION.
- WATERPROOFING OF BUILDING TO BE MAINTAINED DURING ALL PHASES OF WORK INCLUDING THE REMOVAL OF THE FACADE FOR INFORMATION ON OR ABOVE EXISTING SERVICES REFER RELEVANT CONSULTANTS DWGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH SITE SURVEY, STRUCTURAL, CIVIL AND SERVICES ENGINEERS DOCUMENTATION.
- MAKE GOOD OR PROVIDE NEW AS REQUIRED TO ALL EXISTING FINISHING SURFACES TO BE RETAINED, THAT ARE AFFECTED BY THE WORKS.
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- WHERE EXISTING BUILDING FABRIC BEING INTERRUPTED PROVIDE TEMPORARY SECURE AND WEATHER RESISTANT HOARDING INFLU WHERE VISIBLE FROM PUBLICLY ACCESSIBLE AREAS HOARDING TO BE HIGH QUALITY SOLID LINED.
- ALL DEMOLITION UNDERTAKEN TO COMPLY WITH AS 2601.
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- REVIEW ALL AREAS FOR TERMITE DAMAGE AND SEEK STRUCTURAL ADVICE FOR LOAD BEARING MEMBERS. REPAIR/ REPLACE NON LOAD BEARING ITEMS TO MATCH ORIGINAL.
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1 FLOOR PLAN - LEVEL 1 - HERITAGE BUILDING  
Scale 1:100

| ISSUE | REVISION      | DRN | CHK / APP | DATE       |
|-------|---------------|-----|-----------|------------|
| 1     | ISSUED        | SA  | SS        | 16/11/2020 |
| 2     | FOR REVIEW    | SS  | AK        | 15/11/2021 |
| 3     | NOTES UPDATED | SA  | SS        | 16/11/2020 |
|       |               |     |           |            |
|       |               |     |           |            |
|       |               |     |           |            |

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ACN: 006 975 668



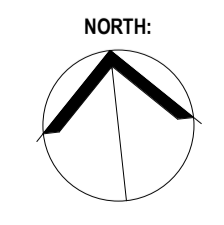
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REASON FOR ISSUE  
FOR REVIEW

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING UP ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALED DIMENSIONS. ALL SCALED DIMENSIONS MUST BE VERIFIED ON SITE. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

PROJECT No.:  
4-19-0012



PROJECT:  
WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS:  
2, 4 Wilson Street, 2A Lainington Road and 763  
Stun Street, West End QLD 4810

CLIENT:  
Owner

DRAWING TITLE:  
LEVEL 1 DEMOLITION PLAN - BUILDING B

SCALE:  
1:100 @ A1

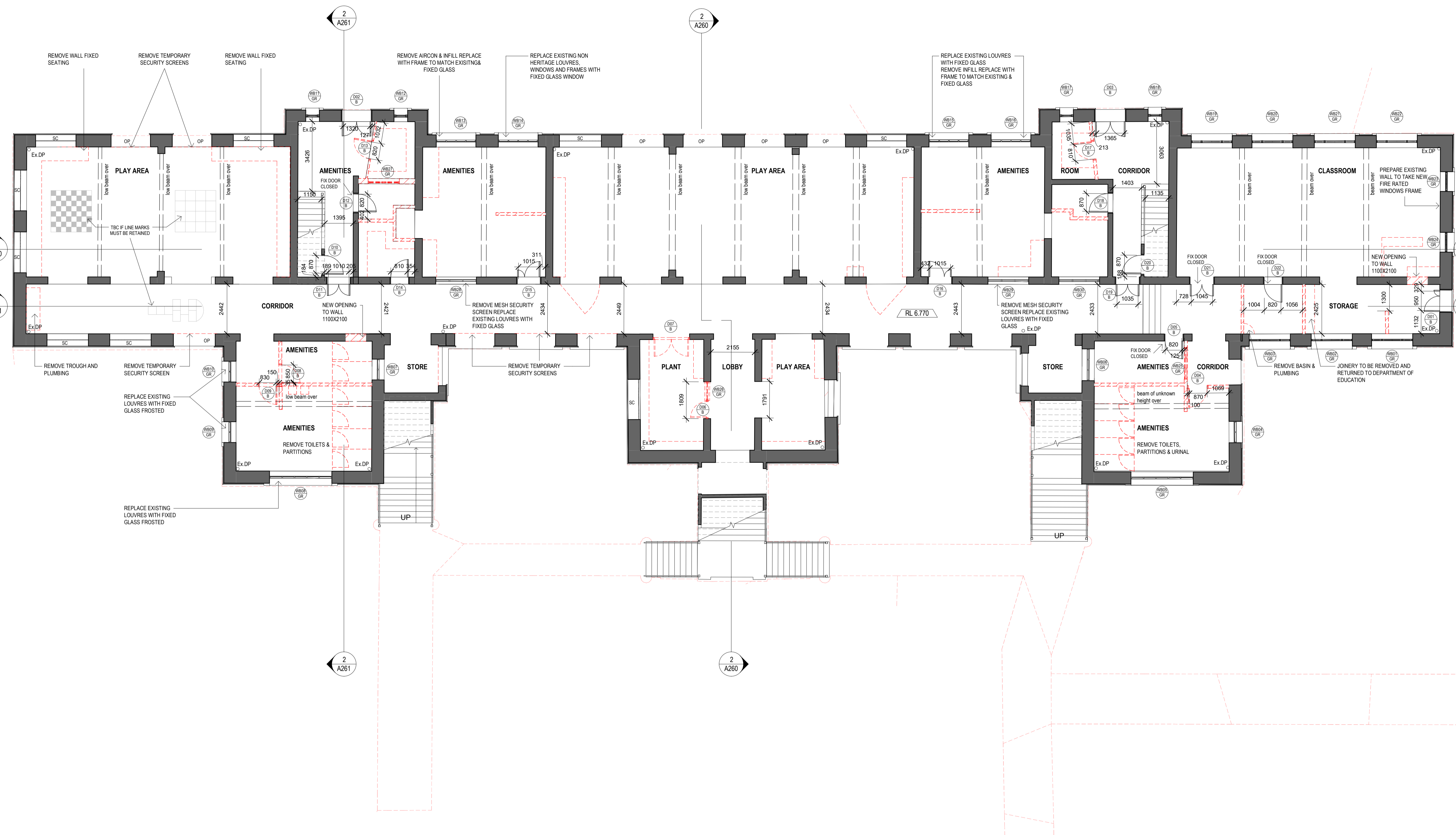
DRAWING No.:  
**A012**

PROJECT DATE:  
Issue Date

REVISION:  
**3**

DEMOLITION NOTES

- COMPLETE FULLY DILATATION REPORT OF SITE, SURROUNDING BUILDINGS, KERBS, CROSS OVERS, FOOTPATHS, IMMEDIATE ROAD SURFACES SURROUNDING THE SITE, VEGETATION, MULCH LEVELS, IRRIGATION SYSTEMS, ALL EXTERNAL SERVICES, ALL BUILDING SERVICES, ALL BUILDING INTERFACES, ALL WALLS, CEILING, FLOORING, ROOF SHEETING, FLASHINGS, DOWN PIPES, GUTTERS AND SUMP ROOF ACCESS, PAVING AND SURROUNDING BUILDING SURFACES. REPORT TO BE CIRCULATED TO CLIENT. PROJECT MANAGER AND CONSULTANT TEAM FOR ANY REQUIRED COMMENTS PRIOR TO ANY WORKS COMMENCING ON SITE.
- EXTENT OF BUILDING / STRUCTURE TO BE DEMOLISHED SHOWN IN RED.
- ALLOW FOR STRIPPING BACK EXISTING STRUCTURE TOP/LATELITE NEW BUILDING CONNECTIONS.
- ALL DEMOLITION WORKS SUBJECT TO OPENING UP WORKS. ALLOWANCE TO BE MADE FOR DISCOVERY OF UNFORESEEN STRUCTURE.
- ALL WORKS SUBJECT TO STRUCTURAL ENGINEER DESIGN & DETAIL AND SPECIALIST SUB-CONTRACTOR METHOD STATEMENT.
- ALLOW FOR BREAKING UP AND REMOVAL FROM SITE ANY CONCRETE FOOTINGS OR STRUCTURE NO LONGER REQUIRED.
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- MAKE GOOD TO ALL SURFACES AFTER DEMOLITION HAS TAKEN PLACE IN PREPARATION FOR NEW FINISHES TO BE APPLIED.
- CONTRACTORS TO INSPECT & CHECK ON SITE PRIOR TO DEMOLITION.
- WATERPROOFING OF BUILDING TO BE MAINTAINED DURING ALL PHASES OF WORK INCLUDING THE REMOVAL OF THE FACADE.
- FOR INFORMATION ON OR ABOUT EXISTING SERVICES REFER RELEVANT CONSULTANTS DWGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH SITE SURVEY, STRUCTURAL, CIVIL AND SERVICES ENGINEERS DOCUMENTATION.
- MAKE GOOD OR PROVIDE NEW AS REQUIRED TO ALL EXISTING SURFACES TO BE RETAINED, THAT ARE AFFECTED BY THE WORKS.
- PROVIDE TEMPORARY PROPPING WHERE REQUIRED TO STABILISE EXISTING STRUCTURE. SERVICES AND INFRASTRUCTURE. ALL PROPPING TO BE TO STRUCTURAL ENGINEER'S APPROVAL.
- WHERE EXISTING BUILDING FABRIC BEING INTERRUPTED PROVIDE TEMPORARY SECURE AND WEATHER RESISTANT HOARDING INFILL WHERE VISIBLE FROM PUBLICLY ACCESSIBLE AREAS HOARDING TO BE HIGH QUALITY SOLID LINED.
- ALL DEMOLITION UNDERTAKEN TO COMPLY WITH AS 2601.
- EXISTING WINDOWS AND FRAMES TO BE RETAINED, REPAIRED, GLAZED AND CLEANED AS NECESSARY.
- REGLAZED AND CLEANED AS NECESSARY.
- REMOVE TOILETS & PARTITIONS.
- CLEAN & MAKEGOOD EXISTING SKIRTING, REMOVE AND REPLACE WHERE WATER DAMAGED.
- MASONRY WALLS TO BE CLEANED, PATCHED & REPAIR CRACKS IN BRICKWORK, SEVERELY CRACKED BRICKS TO BE REPLACED WITH BRICKS REMOVED FROM THE EASTERN FACADE.
- NEW OPENING TO WALL 1100X2100.
- PATCH AND REPAIR ALL DAMAGED TIMBER WORK.
- RE-PAINT ALL PAINTED AREAS. LEAD PAINT IS OBSERVED IN NUMEROUS LOCATIONS. ENCAPSULATE IF SOUND, REMOVE IF FLAKY.
- DISCONNECT DOWNPIPES WITHIN WALLS INTERNALLY, AND LEAVE IN PLACE. THE ROOF WILL BE SERVED BY NEW DOWNPIPES LOCATED EXTERNAL TO THE BUILDING.
- RETAIN LOOSE FURNITURE BY CLIENT, AND PLACE IN STORAGE OFF-SITE.
- RETAIN LOOSE FURNITURE BY CLIENT, AND PLACE IN STORAGE OFF-SITE.
- CLEAN, RUST TREAT AND REPAINT STEEL GRILLES.
- REVIEW ALL AREAS FOR TERMITES DAMAGE AND SEEK STRUCTURAL ADVICE FOR LOAD BEARING MEMBERS. REPAIR/ REPLACE NON LOAD BEARING ITEMS TO MATCH ORIGINAL.
- REVIEW INSTANCES OF RISING DAMP, INVESTIGATE CAUSES, RECTIFY CAUSES AND ANY DAMAGE AND REINSTATE TO ORIGINAL CONDITION.
- INSTALLATION OF LININGS MUST ENABLE FUTURE REMOVAL WITHOUT DAMAGE TO EXISTING TIMBER AND CONCRETE FLOORS.
- ARCONS TO BE REMOVED FROM EXISTING WINDOWS & GLAZING TO BE INSTALLED.
- REMOVE ALL RETROFITTED WINDOW FURNISHINGS.
- REMOVE SPLIT AIRCON SYSTEMS & MAKE GOOD EXTERNAL WALLS.
- DRAWINGS TO BE READ IN CONJUNCTION WITH CONSERVATION STRATEGY REMOVED TO BE RETAINED AND RETURNED TO DEPARTMENT OF EDUCATION.
- ANY SIGNIFICANT ITEMS (AS OUTLINED IN CONSERVATION STRATEGY) REMOVED TO BE RETAINED AND RETURNED TO DEPARTMENT OF EDUCATION.



1 GROUND FLOOR PLAN - HERITAGE BUILDING  
Scale 1:100

| ISSUE | REVISION      | DRN | CHK / APP | DATE       |
|-------|---------------|-----|-----------|------------|
| 1     | ISSUED        | SA  | SS        | 16/11/2020 |
| 2     | FOR REVIEW    | SS  | AK        | 15/11/2021 |
| 3     | NOTES UPDATED | SA  | SS        | 16/11/2020 |
|       |               |     |           |            |
|       |               |     |           |            |

CONSULTANTS:

**PEDDLE THORP**

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Australia 3000

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F + 61 3 9923 2223  
E info@pta.com.au  
W www.pta.com.au  
ACN: 006 975 668

**HS PC HEALTH ARCHITECTS**

Melbourne  
Level 1, 525 Flinders Street  
Melbourne Victoria 3000

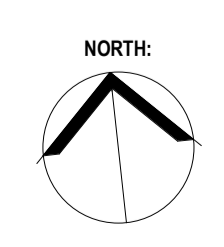
Sydney  
Level 6, 61 Market Street  
Sydney NSW 2000

T + 61 3 9923 2333  
E info@hspc.com.au

REASON FOR ISSUE  
FOR REVIEW

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING UP ANY SHOP DRAWINGS. FIGURED DIMENSIONS MUST BE USED IN PREFERENCE TO SCALED DIMENSIONS. ALL SCALED DIMENSIONS MUST BE VERIFIED ON SITE. THIS DRAWING IS COPYRIGHT AND REMAINS THE PROPERTY OF THE ARCHITECT.

PROJECT No.:  
4-19-0012



PROJECT:  
WESTSTATE PRIVATE HOSPITAL

PROJECT ADDRESS:  
2, 4 Wilson Street, 2A Lainington Road and 763  
Stun Street, West End QLD 4810

CLIENT:  
Owner

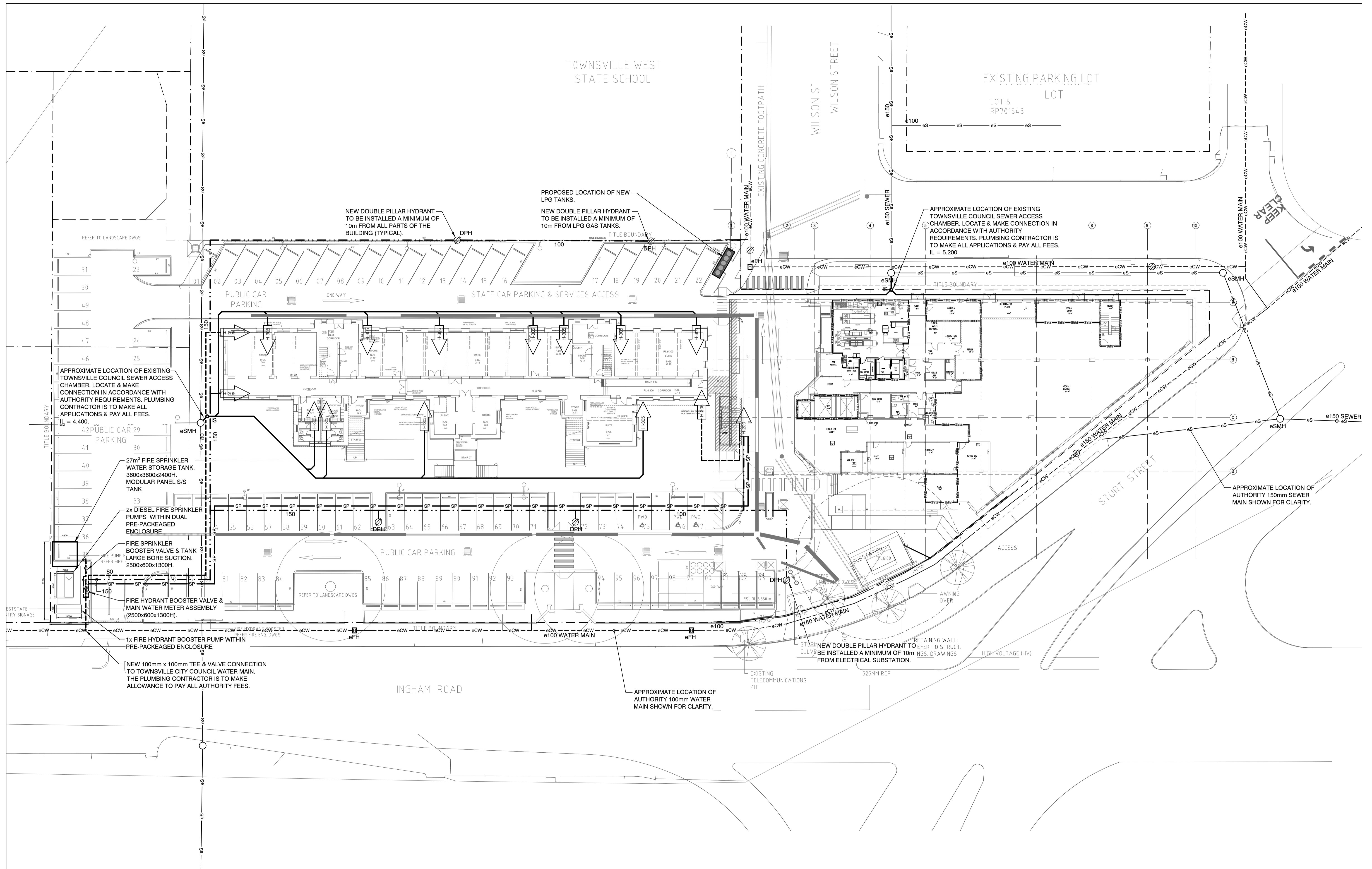
DRAWING TITLE:  
GROUND FLOOR DEMOLITION PLAN -  
BUILDING B

SCALE:  
1:100 @ A1

DRAWING No.:  
**A011**

PROJECT DATE:  
Issue Date

REVISION:  
**3**



DRAWINGS HAVE BEEN PRODUCED BASED ON THE FOLLOWING ARCHITECTURAL PLAN(S):  
**A101 [1]**

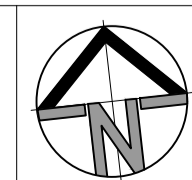
**DRAWINGS PROVIDED ARE TO ASSIST WITH DESIGN & CONSTRUCT PRICING ONLY. CONTRACTOR TO ALLOW FOR ALL WORKS REQUIRED TO MEET THE CLIENT BRIEF.**

**NOT FOR CONSTRUCTION**

| Date     | Issue | Reason for Issue             |
|----------|-------|------------------------------|
| 10.12.21 | 8     | 95% ISSUE - GROUND FLOOR     |
| 01.12.21 | 7     | FOR APPROVAL                 |
| 24.11.21 | 6     | FOR APPROVAL                 |
| 18.11.21 | 5     | REVISED FIRE SERVICES LAYOUT |
| 16.11.21 | 4     | 80% DD ISSUE                 |
| 03.11.20 | 3     | 50% DD ISSUE                 |
| 23.10.20 | 2     | 30% FOR REVIEW               |
| 16.10.20 | 1     | FOR REVIEW                   |

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**marline**  
 BUILDING SERVICES ENGINEERS  
 MECHANICAL ELECTRICAL HYDRAULIC FIRE ENERGY

**P (02) 4925 9300**  
 mail@marline.com.au  
 www.marline.com.au  
 ABN 49 612 456 381

**MARLINE NEWCASTLE PTY LTD**  
 Unit F 56 Clyde Street  
 Hamilton North NSW 2292  
 ACN 612 456 381

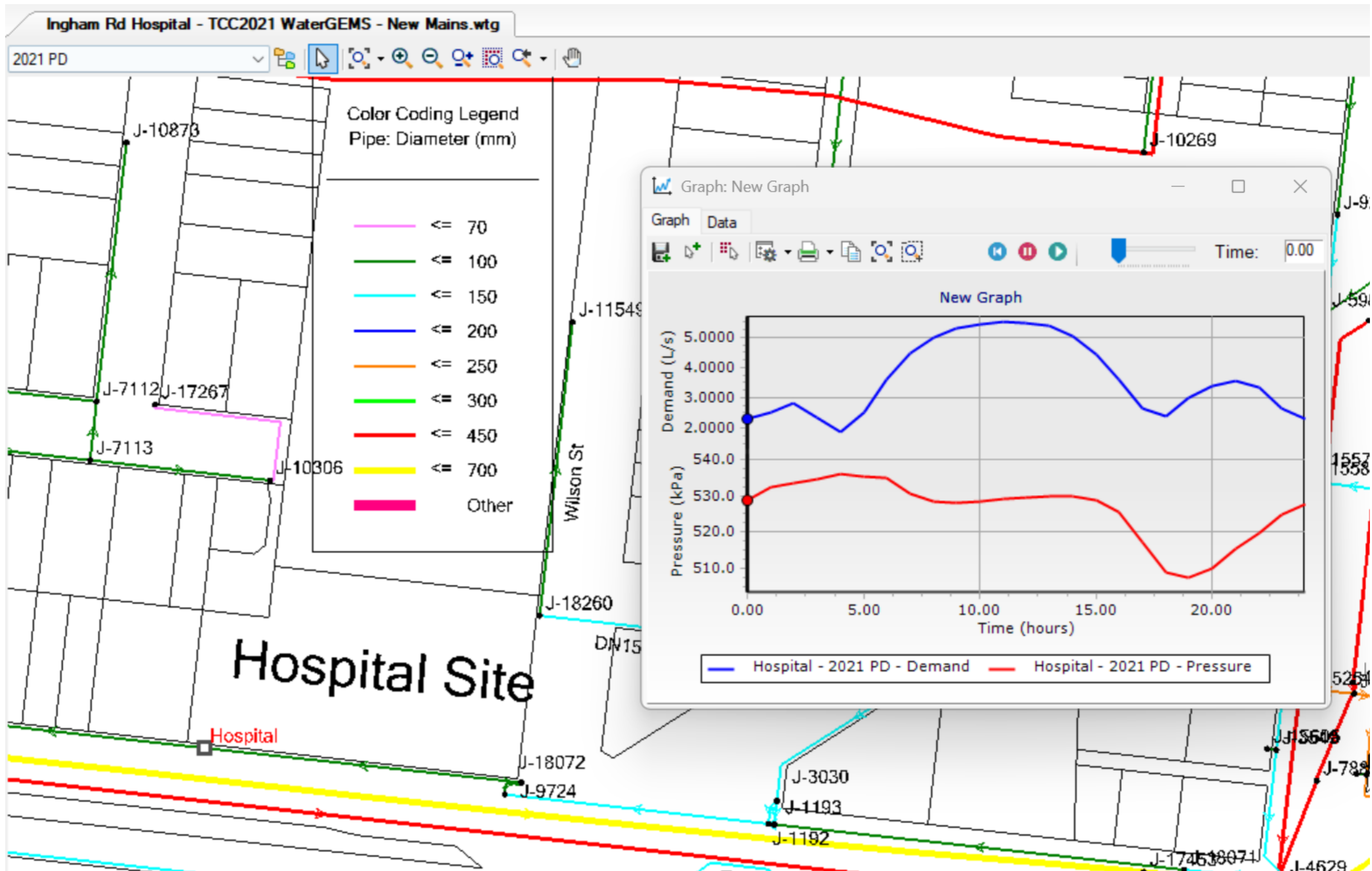
Client: **WOOLLAM CONSTRUCTIONS**

Architect: **HSPC HEALTH ARCHITECTS**

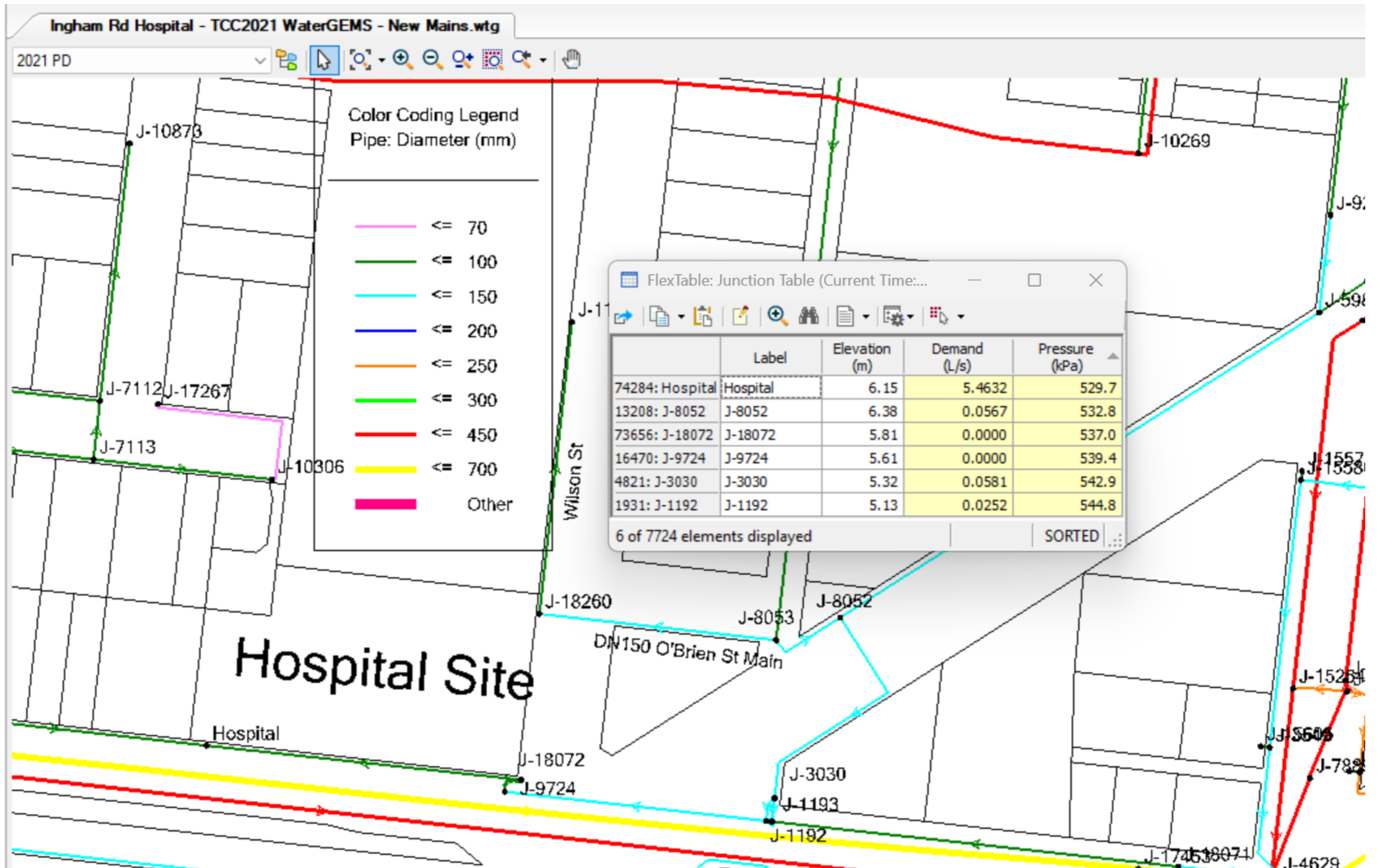
Project: **WESTSTATE PRIVATE HOSPITAL  
 CNR INGHAM RD & STURT ST, WEST END,  
 QLD, 4810**

|               |                           |                           |
|---------------|---------------------------|---------------------------|
| Drawn: S.H    | Design: C.BAILLIE         | Verify: B.MAHER           |
| Scale @ A1:   | 1:250                     | Date: <b>OCTOBER 2020</b> |
| Discipline    | <b>HYDRAULIC SERVICES</b> | Job No. <b>11547</b>      |
| Drawing Title | <b>SITE SERVICES</b>      | Issue <b>8</b>            |
|               |                           | Drawing No. <b>H-100</b>  |

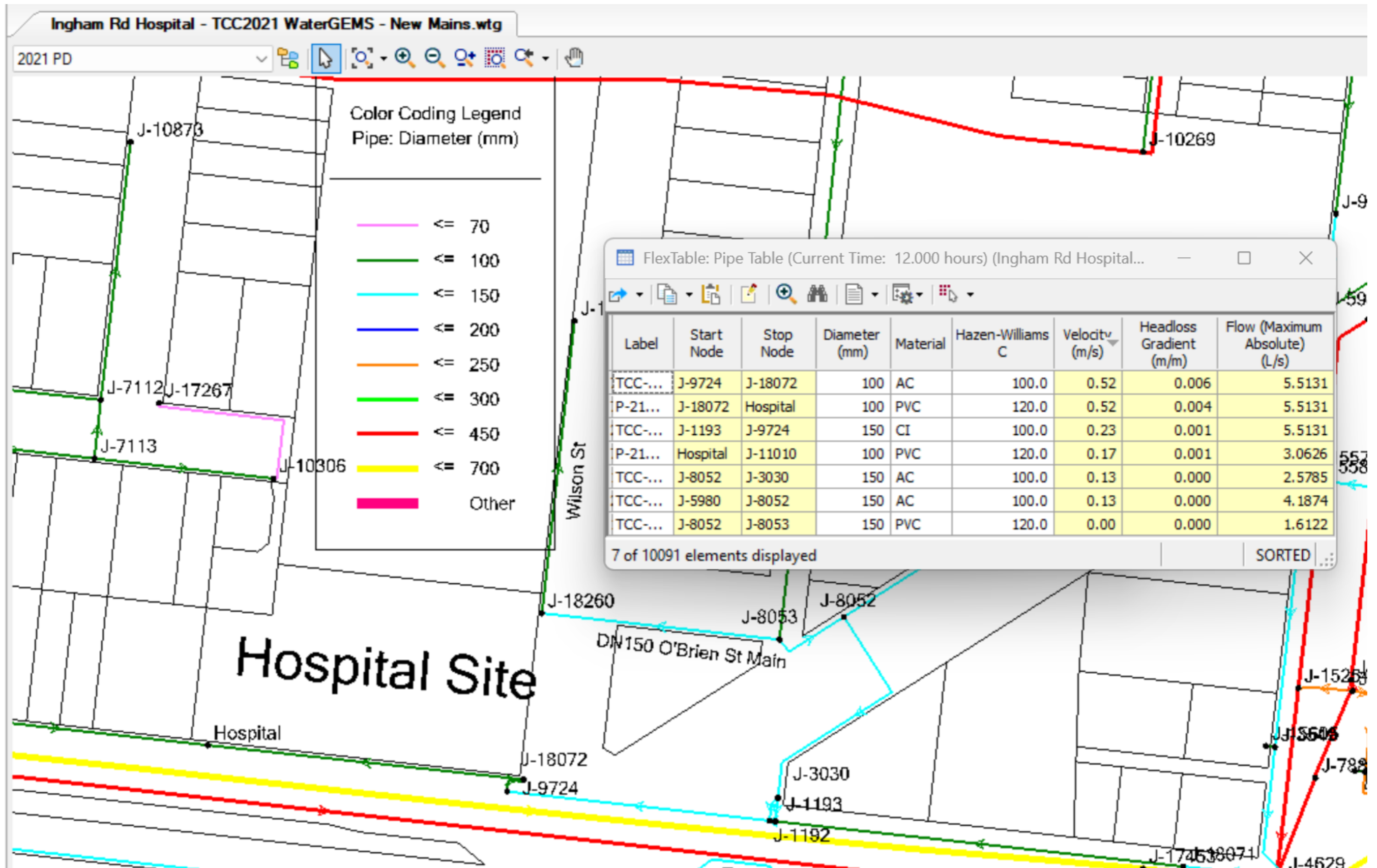
**APPENDIX B**  
**WATERGEMS MODEL FIGURES & RESULTS TABLE**



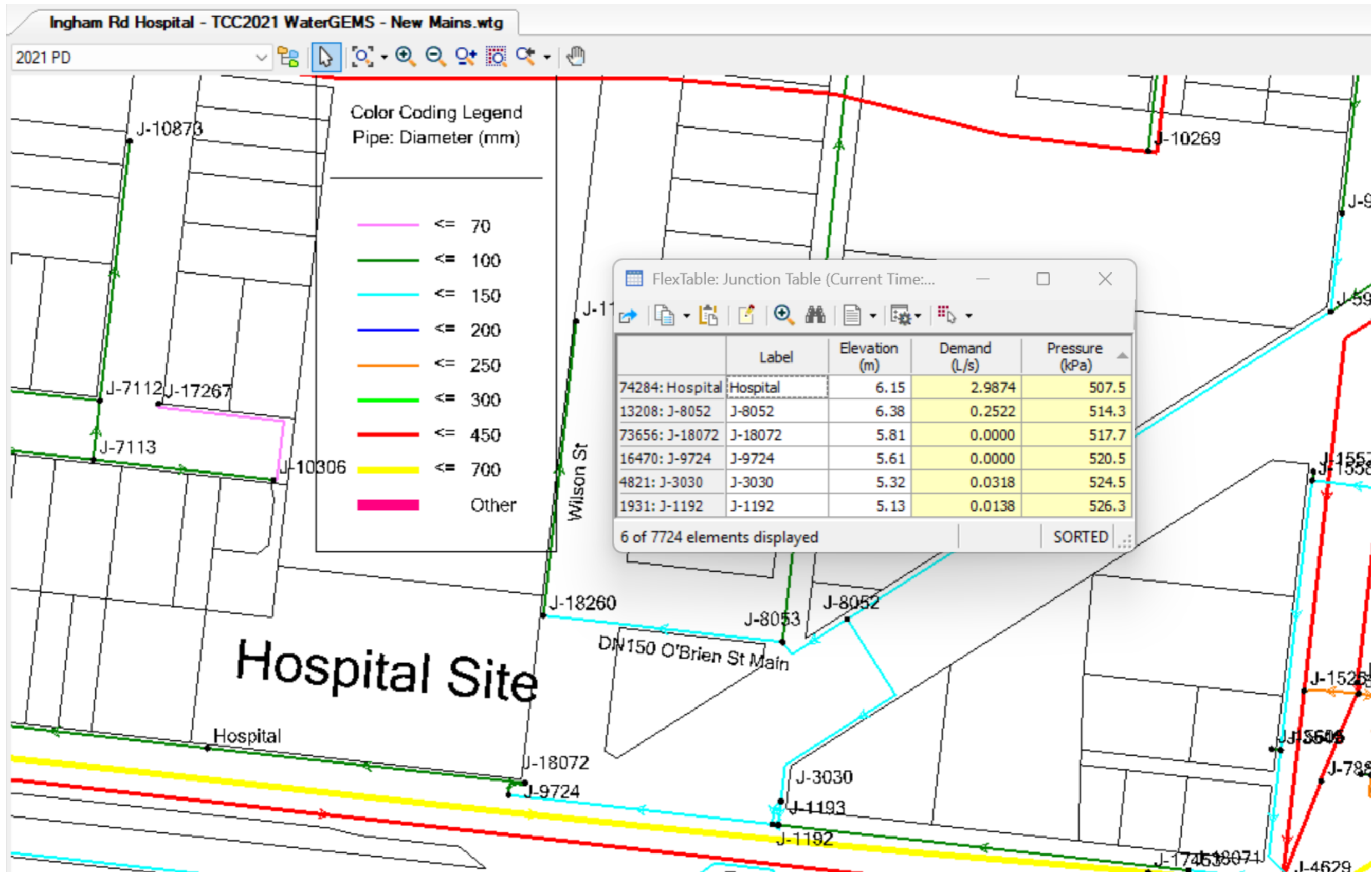
**WaterGEMS Network Modelling Figure & Peak Hr Pressure Chart**

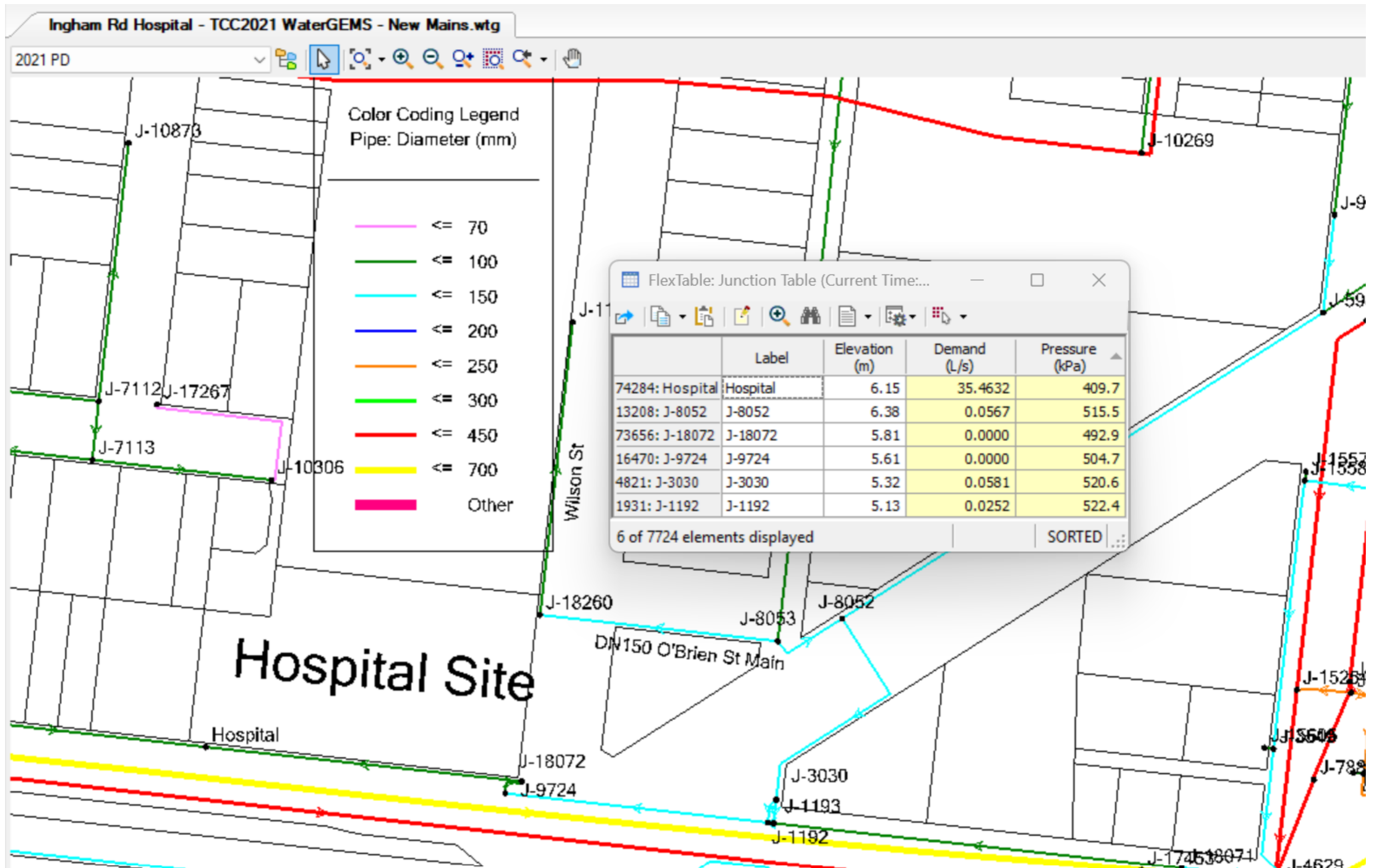


**Peak Hour Node Modelling Results – 12 noon**

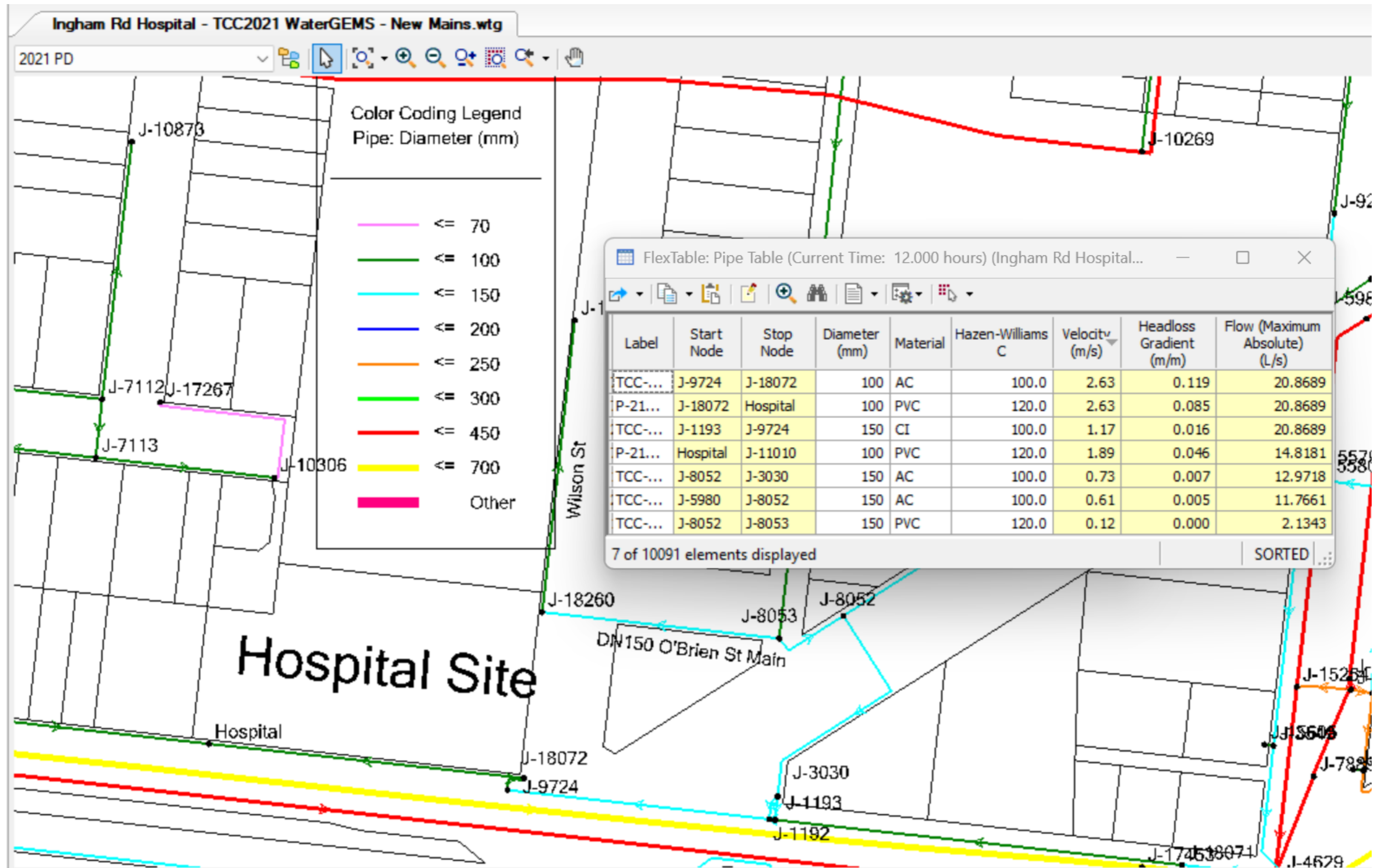


**Peak Hour Pipes Modelling Results – 12 noon**

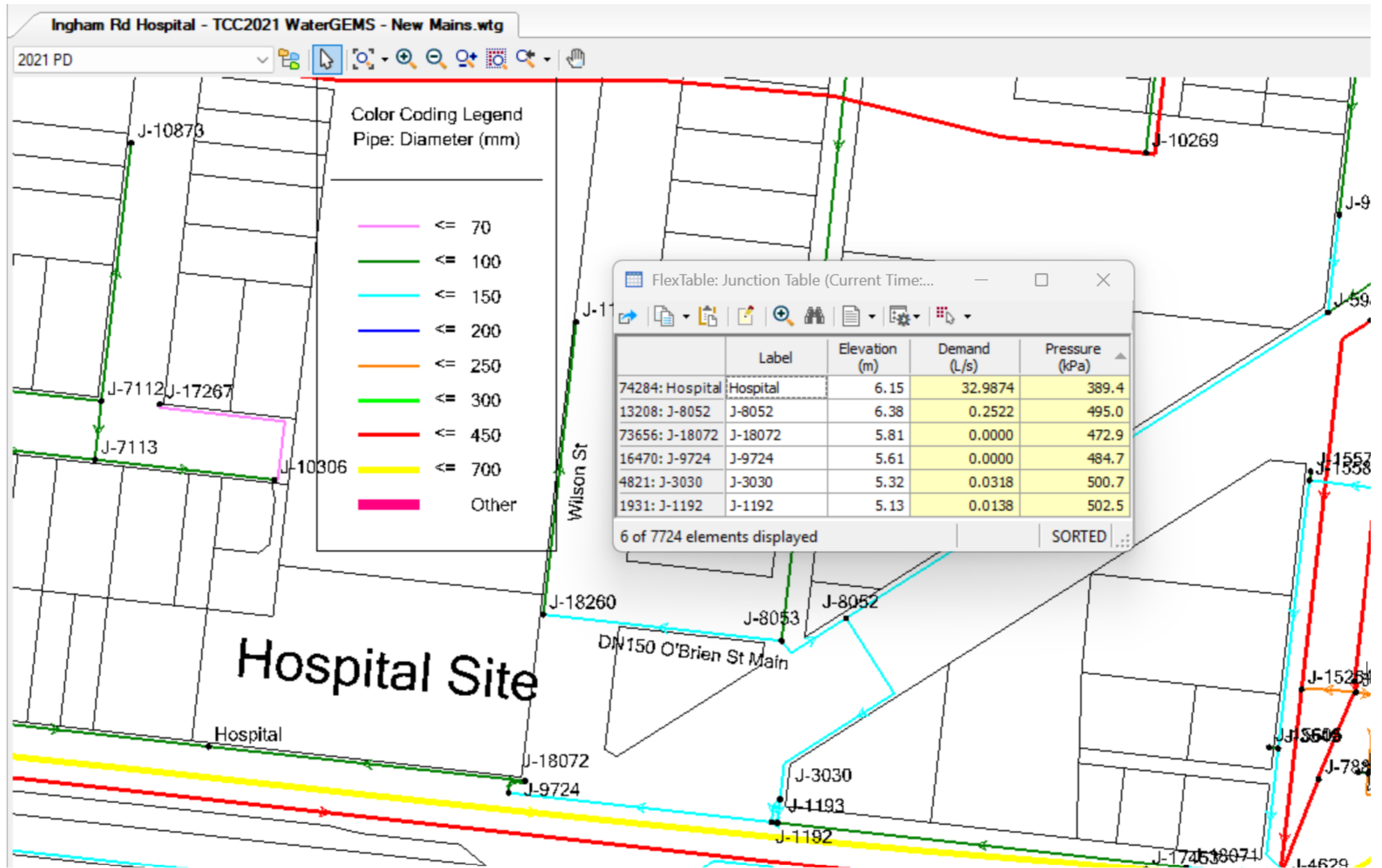




**30 l/s Commercial Fire Flow Node Modelling Results – 12 noon**



30 l/s Commercial Fire Flow Pipe Modelling Results – 12 noon



**30 l/s Commercial Fire Flow Node Modelling Results – 7pm**

# **APPENDIX C FIRE HYDRANT TESTING RESULTS**



**PREMIER FIRE PTY LTD**

A.C.N 085 589 591  
A.B.N. 61 085 589 591  
QBCC. 745580

44 LEYLAND STREET GARBUTT 4810  
P.O. BOX 7013 GARBUTT BC 4810  
Phone: (07) 47756627

**Street Hydrant Flow Testing**

**Hydrant Mains . Data Sheet.**

Site Name: Westate Private Hospital location. Date:01/02/2022

Address: 37 Ingham Road.

Location of Booster: N/A

Installed information: Combined Onsite pump assistance 1 x Electric & 1 x Diesel.

|                           |                      |                  |
|---------------------------|----------------------|------------------|
| Size of Hydrant Booster:: | Duty                 |                  |
| Street Mains.             | Minimum Requirements | 20 L/s @ 200 kPa |

|                     |            |
|---------------------|------------|
| Locations of Flows. |            |
| Test Point 1        | As per Map |
| Test Point 2        | As per Map |

**Hydrant Testing performed from two locations individually tested and simultaneously tested to full flow achievements.**

| Hydrant Location FH1<br>Single Flow.        | Residual Pressure recorded at Location FH2<br>No Flow |
|---|---|
| FH1   | FH2   |
| <b>Static Pressure 500 kPa</b>              | <b>Static Pressure 500 kPa</b>                        |
| 5 L/s @ 490 kpa                             | 500 kPa   |
| 10 L/s @ 450 kpa                            | 500 kPa   |
| 15 L/s @ 400 kpa                            | 485 kPa   |
| 20 L/s @ 340 kpa                            | 475 kPa   |
| 25 L/s @ 200 kpa                            | 455 kPa   |
| 27 L/s @ 200 kpa                            | 450 kPa Residual @ 30 L/s 450 kPa                     |
| 30 L/s @ 150 kPa Max Flow 31.5 L/s @ 75 kPa | 430 kPa   |

| Hydrant Location FH2<br>Single Flow. | Residual Pressure recorded at Location FH1<br>No Flow |
|--------------------------------------|---|
| FH1                                  | FH2   |
| <b>Static Pressure 500 kPa</b>       | <b>Static Pressure 500 kPa</b>                        |
| 5 L/s @ 490 kpa                      | 500 kPa   |
| 10 L/s @ 450 kpa                     | 500 kPa   |
| 15 L/s @ 400 kpa                     | 485 kPa   |
| 20 L/s @ 350 kpa                     | 475 kPa   |
| 25 L/s @ 250 kpa                     | 455 kPa   |
| 27 L/s @ 200 kpa                     | 450 kPa   |
| 30 L/s @ 150 kPa                     | 450 kPa   |

## Street Hydrant Flow Testing

**Hydrant Testing performed from two locations simultaneously tested.**

**Hydrant Location FH1**

**Residual Pressure recorded at Location FH2**

← Simultaneously Flowed. →

| <b>FH1</b>                     | <b>FH2</b>                     |
|--------------------------------|--------------------------------|
| <b>Static Pressure 500 kPa</b> | <b>Static Pressure 500 kPa</b> |
| <b>05 L/s @ 500 kpa</b>        | <b>0 @ 500 kPa</b>             |
| <b>05 L/s @ 490 kpa</b>        | <b>05 L/s @ 475 kPa</b>        |
| <b>10 L/s @ 450 kpa</b>        | <b>05 L/s @ 460 kPa</b>        |
| <b>10 L/s @ 450 kpa</b>        | <b>10 L/s @ 450 kPa</b>        |
| <b>15 L/s @ 400 kpa</b>        | <b>10 L/s @ 425 kPa</b>        |
| <b>15 L/s @ 390 kpa</b>        | <b>15 L/s @ 370 kPa</b>        |
| <b>20 L/s @ 300 kPa</b>        | <b>15 L/s @ 340 Kpa</b>        |

**Total demand flowed from two locations on the Hydrant Street Mains 35 L/s**

11/01/2022  
Equipment Used for testing.  
Hydrant flow Micrometer 1 Serial # 19-1240  
Hydrant flow Micrometer 2 Serial # 12-08622  
Gauges 1 T1-5402LN7C  
Gauges 2 T2-5402LN7c

Tester: Nicholas Cooper.  
QBCC 1212943

Signed:





**PREMIER FIRE PTY LTD**

A.C.N 085 589 591

A.B.N. 61 085 589 591

QBCC. 745580

44 LEYLAND STREET GARBUTT 4810

P.O. BOX 7013 GARBUTT BC 4810

Phone: (07) 47756627

## Street Hydrant Location Map.


37 Ingham Road.



## Form 71—fire hydrant and sprinkler system commissioning

This form is to be used for the purposes of commissioning water based fire safety installations, as required by the Queensland Development Code – Mandatory Part (MP) 6.1, which is a building assessment provision under the *Building Act 1975*, section 30. This form is also to be used in accordance with the 'Fire hydrant and sprinkler system commissioning and periodic maintenance procedure', defined in MP 6.1 as the 'Relevant procedure'. Please note that this form does not comprise all testing requirements for commissioning—this form is only for collecting results of testing for some sections of the Australian Standards referred to and in each case, further testing is required.

| Part A—Test details  |   |   |  |                |           |           |
|--|---|---|--|----------------|-----------|-----------|
| Site name  | Westgate Hospital   |   |  |                |           |           |
| Site address   | Ingham Road   |   |  |                |           |           |
| Contractor   | Tacoma Plumbing (Nth Qld) Pty Ltd   |   |  |                |           |           |
| Testing details  | Test date: 07/07/2020   | Commissioning test:<br>fire hydrant <input checked="" type="checkbox"/><br>fire sprinkler <input type="checkbox"/><br>combined <input type="checkbox"/> |  |                |           |           |
|  | Time: 11:20am   |   |  |                |           |           |
| Part B—Hydrant hydrostatic test  |   |   |  |                |           |           |
| Refer to the required pressure specification for commissioning as per AS2419.1.  |   |   |  |                |           |           |
| Boost pressure   | kPa   | Test pressure   | 1700 kPa   |                |           |           |
| Duration of test   | mins  | End of test pressure  | kPa  | Loss (if any): | L/min     |           |
| Comments:  |   |   |  |                |           |           |
| Part C—Hydrant test equipment/pressure gauges  |   |   |  |                |           |           |
| If using more devices, provide details in the Notes section below or complete another form. The correction factor must be kPa or a percentage.   |   |   |  |                |           |           |
| Flow measuring device  | Orifice <input type="checkbox"/><br>Part C not required for orifice testing | Mechanical x<br>Calibrated: 15/06/19  | Electro magnetic <input type="checkbox"/><br>Calibrated: / / |                |           |           |
|  | Gauge 1   | Gauge 2   | Device 1   | Device 2       |           |           |
| Serial number  | GI3422  | G13771  | 15-08174   | 14-02156       |           |           |
| Date calibrated  | 07/06/20  | 07/06/20  | 07/06/20   | 07/06/20       |           |           |
| Correction certificate   | B6844/TPT   | B6843/TP  | B6858/TP   | B6859/TP       |           |           |
| 65/100/150 mm face   | 100mm   | 100mm   |  |                |           |           |
| Digital reader   |   |   |  |                |           |           |
| Increments (kPa)   | 20 Kpa  | 20 Kpa  |  |                |           |           |
| Part D—Hydrant system flow test  |   |   |  |                |           |           |
| This part relates to section 10.3 of AS2419.1. If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the hydrant system flow test. |   |   |  |                |           |           |
| Hydrant 1 location   | SEE ATTACHED PLAN   |   | Hydrant 3 location   |                |           |           |
| Hydrant 2 location   |   |   | Hydrant 4 location   |                |           |           |
| System requirements  | L/s   | at kPa  | Static pressure  | 550 kPa        |           |           |
| On-site pump set installed   | Yes <input type="checkbox"/>  |   | No <input checked="" type="checkbox"/>                       |                |           |           |
| Pressure zone number:  | Size/flow rate  | Device/gauge no. (Part C)   | Hydrant  | Hydrant 2      | Hydrant 3 | Hydrant 4 |
| Nozzles  | 19 mm   |   | kPa  | kPa            | kPa       | kPa       |
|  | 22 mm   |   | kPa  | kPa            | kPa       | kPa       |
|  | 25 mm   |   | kPa  | kPa            | kPa       | kPa       |
| Other portable testing devices   | 5 L/s   |   | 550 kPa  | kPa            | kPa       | kPa       |
|  | 10 L/s  |   | 500 kPa  | kPa            | kPa       | kPa       |
|  | 15 L/s  |   | 450 kPa  | kPa            | kPa       | kPa       |
|  | 20 L/s  |   | 400 kPa  | kPa            | kPa       | kPa       |
|  | 25 L/s  |   | 300 kPa  | kPa            | kPa       | kPa       |
| System achieved: 25 L/s at 300 kPa   |   |   |  |                |           |           |

|   |                              |                                      |   |   |  |
|---|------------------------------|--------------------------------------|---|---|--|
| <b>Part E—Pump appliance booster test</b>   |                              | <b>PASS</b> <input type="checkbox"/> |   | <b>FAIL</b> <input type="checkbox"/>  |  |
| This part relates to sections 10.4 and 10.5 of AS2419.1. If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the pump appliance booster test.   |                              |                                      |   |   |  |
| Hydrant locations   |                              |                                      | Height of highest hydrant above booster                                       |   |  |
| System requirements   | @kPa                         | Static pressure                      |   | kPa   |  |
| Pump inlet pressure   | kPa                          | Pump discharge pressure              |   | kPa   |  |
| Boost pressure  | kPa                          | Calculated frictional loss           |   | kPa   |  |
| Comments:   |                              |                                      |   |   |  |
| <b>Part F—Sprinkler hydrostatic test</b>  |                              | <b>PASS</b> <input type="checkbox"/> |   | <b>FAIL</b> <input type="checkbox"/>  |  |
| Relevant required pressure specification in AS2118.1, AS2118.4 and AS2118.6.  |                              |                                      |   |   |  |
| Pressure  | kPa                          | Time held                            |   | mins  |  |
| Comments:   |                              |                                      |   |   |  |
| <b>Part G—Sprinkler system flow test</b>  |                              |                                      |   |   |  |
| This section is to be used for sections 4.14 of AS2118.1-1999, 4 of AS2118.6-2012 and 6.2 of AS2118.4-2012. Notes: (1) For AS2118.1 and AS2118.6 systems, multiple testing points may be required. (2) For AS2118.4, a simulated running test may be required for systems without a flow measuring device, in which the test involves opening a valve to discharge a volume of water that is accepted as being in excess of the design flow. System test points shall be noted for each different system and its location and descriptor. |                              |                                      |   |   |  |
| <b>System specifications (block plan):</b>  |                              |                                      | <b>Test results:</b>  |   |  |
| Test point 1  | Location                     |                                      |   |   |  |
|   | Required flow rate           | L/min                                | Pass <input type="checkbox"/>   | L/min   |  |
|   | Required pressure            | kPa                                  | Fail <input type="checkbox"/>   | kPa   |  |
| Test point 2  | Location                     |                                      |   |   |  |
|   | Required flow rate           | L/min                                | Pass <input type="checkbox"/>   | L/min   |  |
|   | Required pressure            | kPa                                  | Fail <input type="checkbox"/>   | kPa   |  |
| Running test  | Installation gauge pressure: |                                      | kPa   |   |  |
| Comments:   |                              |                                      |   |   |  |
| <b>Part H—Compliance</b>  |                              |                                      |   |   |  |
| <b>Critical defects identified</b>  | Yes                          | <input type="checkbox"/>             | Give owner/occupier a critical defect notice                                  |   |  |
|   | No                           | <input checked="" type="checkbox"/>  | No action required in relation to critical defects at this time               |   |  |
| <b>Repairs/corrective actions taken</b>   | Yes                          | <input type="checkbox"/>             | Attach details (including action and date taken) as part of Licensee's report |   |  |
|   | No                           | <input checked="" type="checkbox"/>  | No action required in relation to repairs/corrective actions at this time     |   |  |
| <b>System</b>   | Pass                         | <input checked="" type="checkbox"/>  |   |   |  |
|   | Fail                         | <input type="checkbox"/>             |   |   |  |
| <b>Part I—Signature</b>   |                              |                                      |   |   |  |
| By signing this Form 71, I confirm that the information contained herein is correct to the best of my knowledge given the information available and that this Form 71 has been completed in accordance with the relevant standards, codes and regulations.  |                              |                                      |   |   |  |
| <b>Licensee name</b>  | Stephen Conaghan             |                                      | <b>Licensee signature</b>   |  |  |
| <b>Licence no. (QBCC/PIC)</b>   | 20790                        |                                      | <b>Licensee report no.</b>  |   |  |

**Note:** Building owners/occupiers are responsible for ensuring their buildings continuously meet fire safety standards. Where a building owner/occupier becomes aware that their building does not meet the minimum requirements for water pressure required by any standard applicable under the Queensland Development Code Mandatory Part 6.1 (Maintenance of fire safety installations) the building owner/occupier should contact the Queensland Fire and Emergency Service.

**Definitions** "Commissioning test" is a test that is required upon completion of a new system or an extension to an existing system. "Running test" means a two inch waste test installed at the sprinkler control valve on older systems.


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**RTI:** The information collected on this form will be retained as required by the *Public Records Act 2002* and other relevant Acts and regulations, and is subject to the Right to Information regime established by the *Right to Information Act 2009*. If you have any further questions regarding your privacy, please email Building Codes Queensland on [buildingcodes@qld.gov.au](mailto:buildingcodes@qld.gov.au) © The State of Queensland (Department of Housing and Public Works) July 2014. Published by the Queensland Government July 2014, 41 George Street, Brisbane QLD 4000.

## Form 71—fire hydrant and sprinkler system commissioning

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| Part A—Test details  |   |                           |  |   |                          |           |
|--|---|---------------------------|--|---|--------------------------|-----------|
| Site name  | Westgate Hospital                       |                           |  |   |                          |           |
| Site address   | Wilson Street                           |                           |  |   |                          |           |
| Contractor   | Tacoma Plumbing (Nth Qld) Pty Ltd       |                           |  |   |                          |           |
| Testing details  | Test date:                              | 07/07/2020                |  | Commissioning test:                       |                          |           |
|  | Time:                                   | 11:00am                   |  |   |                          |           |
|  |   |                           |  | fire sprinkler                            | <input type="checkbox"/> |           |
|  |   |                           |  | combined                                  | <input type="checkbox"/> |           |
| Part B—Hydrant hydrostatic test  |   |                           |  |   |                          |           |
|  |   |                           | PASS <input type="checkbox"/>            | FAIL <input type="checkbox"/>             |                          |           |
| Refer to the required pressure specification for commissioning as per AS2419.1.  |   |                           |  |   |                          |           |
| Boost pressure   | kPa                                     | Test pressure             | 1700 kPa                                 |   |                          |           |
| Duration of test   | mins                                    | End of test pressure      | kPa                                      | Loss (if any):                            | L/min                    |           |
| Comments:  |   |                           |  |   |                          |           |
| Part C—Hydrant test equipment/pressure gauges  |   |                           |  |   |                          |           |
| If using more devices, provide details in the Notes section below or complete another form. The correction factor must be kPa or a percentage.   |   |                           |  |   |                          |           |
| Flow measuring device  | Orifice <input type="checkbox"/>        | Mechanical x              |  | Electro magnetic <input type="checkbox"/> |                          |           |
|  | Part C not required for orifice testing | Calibrated: 15/06/19      |  | Calibrated: / /                           |                          |           |
|  | Gauge 1                                 | Gauge 2                   | Device 1                                 | Device 2                                  |                          |           |
| Serial number  | GI3422                                  | G13771                    | 15-08174                                 | 14-02156                                  |                          |           |
| Date calibrated  | 07/06/20                                | 07/06/20                  | 07/06/20                                 | 07/06/20                                  |                          |           |
| Correction certificate   | B6844/TPT                               | B6843/TP                  | B6858/TP                                 | B6859/TP                                  |                          |           |
| 65/100/150 mm face   | 100mm                                   | 100mm                     |  |   |                          |           |
| Digital reader   |   |                           |  |   |                          |           |
| Increments (kPa)   | 20 Kpa                                  | 20 Kpa                    |  |   |                          |           |
| Part D—Hydrant system flow test  |   |                           |  |   |                          |           |
|  |   |                           | PASS <input checked="" type="checkbox"/> | FAIL <input type="checkbox"/>             |                          |           |
| This part relates to section 10.3 of AS2419.1. If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the hydrant system flow test. |   |                           |  |   |                          |           |
| Hydrant 1 location   | SEE ATTACHED PLANS                      |                           | Hydrant 3 location                       |   |                          |           |
| Hydrant 2 location   |   |                           | Hydrant 4 location                       |   |                          |           |
| System requirements  | L/s                                     | at kPa                    | Static pressure                          | 520 kPa                                   |                          |           |
| On-site pump set installed   | Yes <input type="checkbox"/>            |                           |  | No <input checked="" type="checkbox"/>    |                          |           |
| Pressure zone number:  | Size/flow rate                          | Device/gauge no. (Part C) | Hydrant                                  | Hydrant 2                                 | Hydrant 3                | Hydrant 4 |
| Nozzles  | 19 mm                                   |                           | kPa                                      | kPa                                       | kPa                      | kPa       |
|  | 22 mm                                   |                           | kPa                                      | kPa                                       | kPa                      | kPa       |
|  | 25 mm                                   |                           | kPa                                      | kPa                                       | kPa                      | kPa       |
| Other portable testing devices   | 5 L/s                                   |                           | 500 kPa                                  | kPa                                       | kPa                      | kPa       |
|  | 10 L/s                                  |                           | 320 kPa                                  | kPa                                       | kPa                      | kPa       |
|  | 15 L/s                                  |                           | 70 kPa                                   | kPa                                       | kPa                      | kPa       |
|  | 17 L/s                                  |                           | 0 kPa                                    | kPa                                       | kPa                      | kPa       |
|  |   |                           |  | kPa                                       | kPa                      | kPa       |
| System achieved: 10 L/s at 320 kPa   |   |                           |  |   |                          |           |

| Part E—Pump appliance booster test  |  | PASS <input type="checkbox"/>   | FAIL <input type="checkbox"/>   |
|---|--|---|---|
| This part relates to sections 10.4 and 10.5 of AS2419.1. If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the pump appliance booster test.   |  |   |   |
| Hydrant locations   |  | Height of highest hydrant above booster                                       |   |
| System requirements   | @kPa                                     | Static pressure   | kPa   |
| Pump inlet pressure   | kPa                                      | Pump discharge pressure   | kPa   |
| Boost pressure  | kPa                                      | Calculated frictional loss  | kPa   |
| Comments:   |  |   |   |
| Part F—Sprinkler hydrostatic test   |  | PASS <input type="checkbox"/>   | FAIL <input type="checkbox"/>   |
| Relevant required pressure specification in AS2118.1, AS2118.4 and AS2118.6.  |  |   |   |
| Pressure  | kPa                                      | Time held   | mins  |
| Comments:   |  |   |   |
| Part G—Sprinkler system flow test   |  |   |   |
| This section is to be used for sections 4.14 of AS2118.1-1999, 4 of AS2118.6-2012 and 6.2 of AS2118.4-2012. Notes: (1) For AS2118.1 and AS2118.6 systems, multiple testing points may be required. (2) For AS2118.4, a simulated running test may be required for systems without a flow measuring device, in which the test involves opening a valve to discharge a volume of water that is accepted as being in excess of the design flow. System test points shall be noted for each different system and its location and descriptor. |  |   |   |
|   | System specifications (block plan):      |   | Test results:   |
| Test point 1  | Location                                 |   |   |
|   | Required flow rate                       | L/min   | Pass <input type="checkbox"/><br>Fail <input type="checkbox"/> L/min                  |
|   | Required pressure                        | kPa   | Pass <input type="checkbox"/><br>Fail <input type="checkbox"/> kPa                    |
| Test point 2  | Location                                 |   |   |
|   | Required flow rate                       | L/min   | Pass <input type="checkbox"/><br>Fail <input type="checkbox"/> L/min                  |
|   | Required pressure                        | kPa   | Pass <input type="checkbox"/><br>Fail <input type="checkbox"/> kPa                    |
| Running test  | Installation gauge pressure: kPa         |   |   |
| Comments:   |  |   |   |
| Part H—Compliance   |  |   |   |
| Critical defects identified   | Yes <input type="checkbox"/>             | Give owner/occupier a critical defect notice                                  |   |
|   | No <input checked="" type="checkbox"/>   | No action required in relation to critical defects at this time               |   |
| Repairs/corrective actions taken  | Yes <input type="checkbox"/>             | Attach details (including action and date taken) as part of Licensee's report |   |
|   | No <input checked="" type="checkbox"/>   | No action required in relation to repairs/corrective actions at this time     |   |
| System  | Pass <input checked="" type="checkbox"/> |   |   |
|   | Fail <input type="checkbox"/>            |   |   |
| Part I—Signature  |  |   |   |
| By signing this Form 71, I confirm that the information contained herein is correct to the best of my knowledge given the information available and that this Form 71 has been completed in accordance with the relevant standards, codes and regulations.  |  |   |   |
| Licensee name   | Stephen Conaghan                         | Licensee signature  |  |
| Licence no. (QBCC/PIC)  | 20790                                    | Licensee report no.   |   |

Note: Building owners/occupiers are responsible for ensuring their buildings continuously meet fire safety standards. Where a building owner/occupier becomes aware that their building does not meet the minimum requirements for water pressure required by any standard applicable under the Queensland Development Code Mandatory Part 6.1 (Maintenance of fire safety installations) the building owner/occupier should contact the Queensland Fire and Emergency Service.

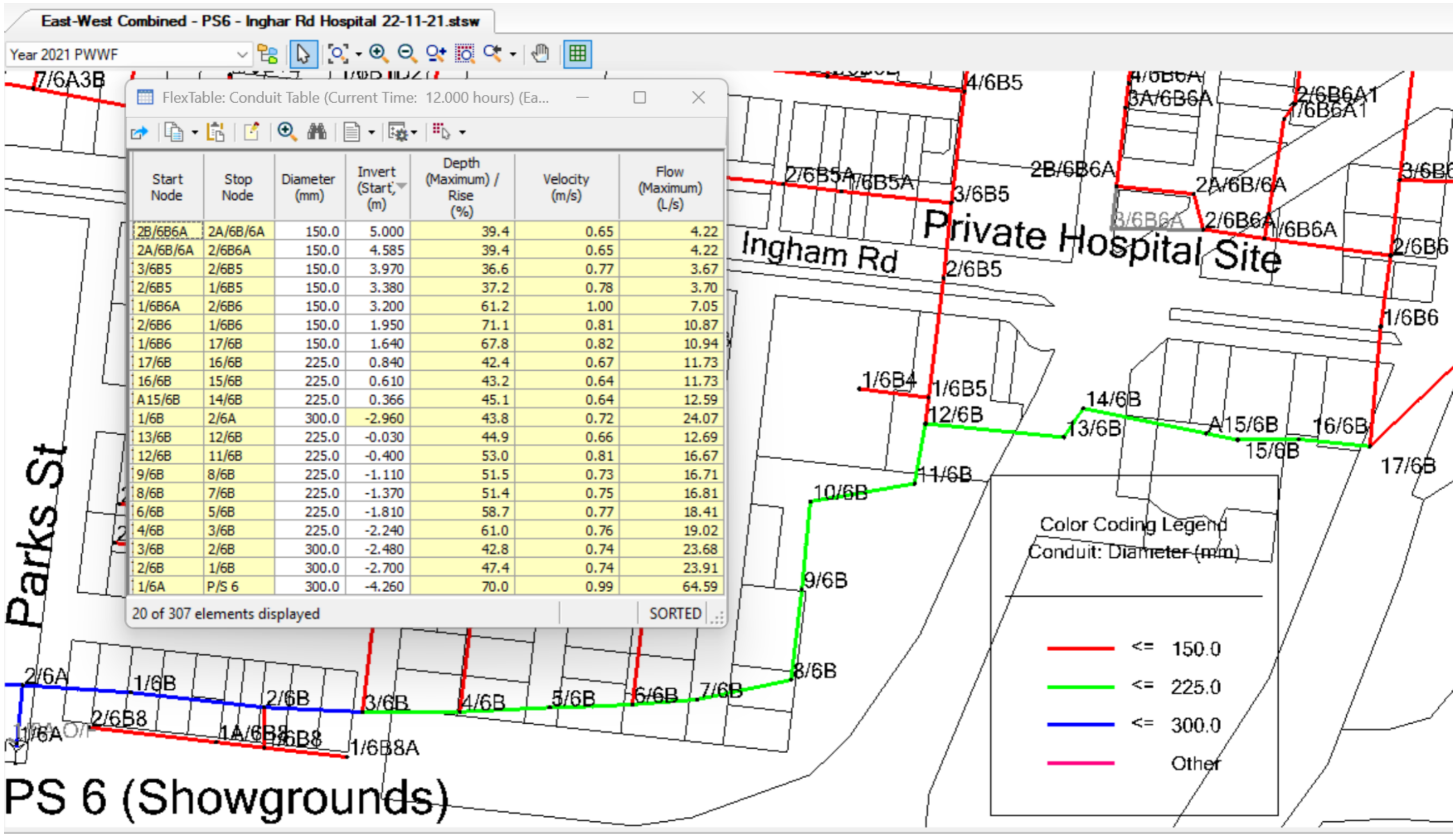
Definitions "Commissioning test" is a test that is required upon completion of a new system or an extension to an existing system. "Running test" means a two inch waste test installed at the sprinkler control valve on older systems.

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# **APPENDIX D SEWERGEMS MODELLING RESULTS**





PWWF Sewer Capacity Assessment Results