

A large, stylized graphic in shades of blue and black. It features a silhouette of a building with several rectangular sections of varying heights on the left. To the right of the building are several horizontal, wavy bands of different shades of blue, suggesting water or a landscape. A large, thin, dark blue arc is positioned behind the building, resembling a rising sun or a stylized 'C' shape.

**BENTLEY TECHNOLOGY PARK**  
**Engineering Servicing Report**

**November 2025**

A decorative footer graphic at the bottom of the page. It consists of a dark blue background with a grid of small, light blue squares. Above the grid is a horizontal band with a gradient from light grey to orange, and a thin orange line at the very bottom.

**November 2025**

**CLIENT: DEVELOPMENTWA**

**PROJECT: BENTLEY TECHNOLOGY PARK**

**TITLE: ENGINEERING SERVICING REPORT**

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## 1 INTRODUCTION

This report has been prepared by TABEC to provide servicing and infrastructure advice for Bentley Technology Park, in relation to opportunities and constraints to the redevelopment proposal.

This report is based on the civil engineering aspects of urban related land uses and assesses the location and capacities of existing services. In addition, future upgrades and extensions are considered in-order to guide and support additional demands based on potential development outcomes within the study area.

The report has been prepared in response to the TBB Planning concept land use plans and is based on information documented from investigations and advice from servicing authorities where appropriate. The report also includes desktop sourced information and experience in similar ground conditions for infill development projects in the Perth metropolitan area. The information contained is therefore subject to update as further detail is resolved through future design phases.

The information is current as of September 2025. Figure 1 illustrates the location of the Site on the aerial image.

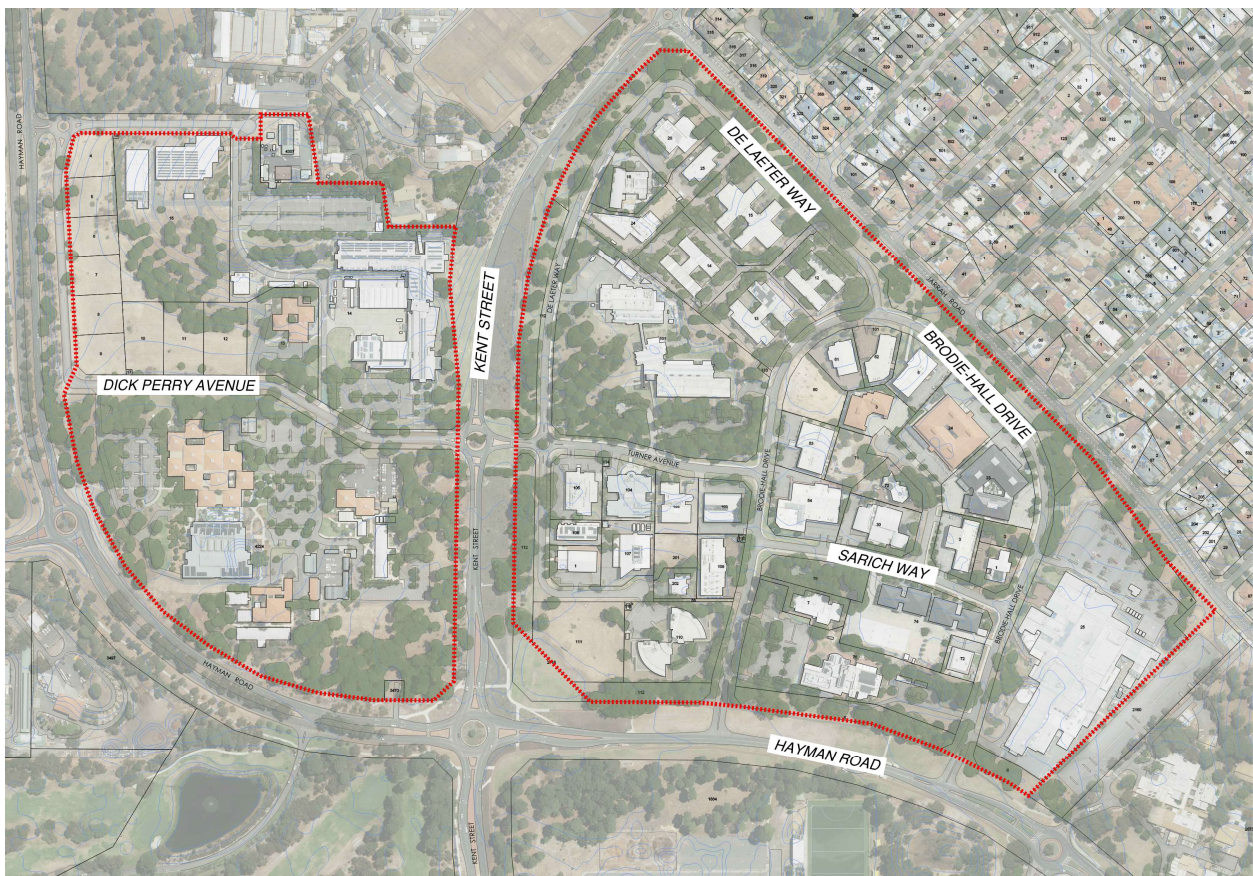


Figure 1 – Site location and aerial image (source: TBB)

## 2 LANDFORM / TOPOGRAPHY

The existing surface elevations shown as contour banding is included in Figure 2, overleaf. Given the overall site dimensions for Technology Park, there is significant level difference (up to approximately 22m) and existing grades which will need to be considered in the proposed built form.

Technology Park is irregular in shape, though up to approximately 1.1km in east-west dimension, and 660m at the longest north-south dimension.

Figure 2 below, shows there is a high point in the north-western portion of Technology Park, at Lot 4307 Burvill Court where the surface elevation is approximately 29m AHD. Along the northern boundary of the eastern portion of Technology Park, surface elevations are at approximately 24m AHD, near the intersection of Jarrah Road and Kent Street. Jarrah Road falls towards the east.

Generally, the Technology Park precinct grades toward the south, where there is an existing low point near the intersection of Hayman Road and Kent Street. The existing levels at that point are about 7m AHD.

Grades on the natural landform between Burvill Court and Dick Perry Avenue are up to 11% which is considered steep. Lot 15 grades both to the west and south, and therefore would require substantial retaining or split-level development proposals to adequately manage the fall in these areas.

In the eastern portion of Technology Park, again there are level differences that should be considered in a redevelopment form, with natural landform falling up to 6m from Turner Avenue to Watts Place. The grades through Lot 101 are up 8%, with 9m of fall. Also, between Brodie Hall Drive and Hayman Road there is approximately 10m of fall at an average grade of 2%.

The large lots with significant building setbacks provide opportunity for the level differences to be managed effectively through battering or tiered retaining. Any increase in density and greater lot build-out should be given particular focus in the areas with steeper grades, to ensure management of level changes across the site. Modifying levels through bulk earthworks would create challenges in tree retention, and therefore minimising recontouring with a development proposal that addressed the varying level changes should be sought.

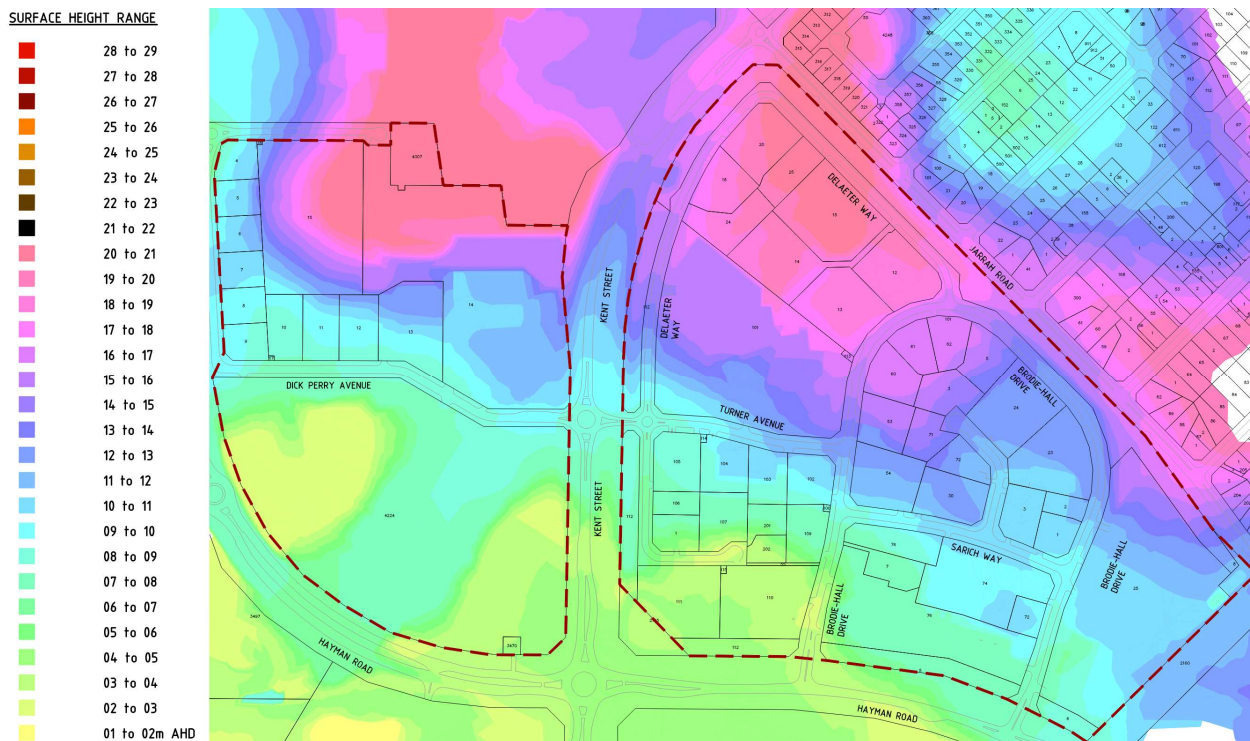


Figure 2 – Existing surface levels and contour banding (TABEC)

## **3 SITEWORKS**

### **3.1 Ground Conditions**

A desktop review of the geological mapping indicates Technology Park is expected to contain Bassendean Sand (quartz sand), however the Spearwood sand system may encroach into the western boundary of the site.

Bassendean sands are typically white-grey sands and due to their age, chemicals have long been leached out. As a result, often at depth or near water table, coffee rock is found. These ground conditions are common at this distance between the coastline and the Darling Scarp and therefore commonly built on. The ground conditions are not expected to present any constraints to redevelopment of the site.

Notwithstanding, any redevelopment proposals are recommended to undertake site specific geotechnical testing to confirm the ground conditions, density and suitability of the material to support the intended project. The geotechnical advice would also outline any site preparation requirements.

### **3.2 Groundwater**

Emerge Associates have prepared a Local Water Management Strategy (LWMS) for the Bentley Technology Park. Figure 2 of the LWMS includes the Department of Water and Environmental Regulations (DWER) groundwater contours for the Site. Groundwater is at approximately RL 5m AHD at the western extent of Technology Park (Hayman Road) to RL 7.0m AHD at the eastern extent (Brodie Hall Drive).

Based on DWER's recorded groundwater levels and the surface elevations in Technology Park, groundwater is typically in the range of 5-15m below existing surface. It is not anticipated that groundwater will be encountered during redevelopment activities, with the exception of potentially the southern boundary of the Technology Park (near the Kent Street/ Hayman Road intersection) if deeper underground service (i.e. sewer) installations are required as part of the redevelopment.

### **3.3 Acid Sulphate Soils**

Department of Water and Environmental Regulations (DWER) Acid Sulphate Soil (ASS) mapping indicates that the Technology Park area has a moderate to low risk of encountering potential acid sulphate soils (ASS) within 3m from existing surface. Management of ASS may be required for excavations within 3m of the existing surface should groundwater be intercepted, with any required treatment of ASS undertaken in accordance with an approved ASS management plan.

### **3.4 Demolition**

If the redevelopment proposed amalgamation of lots, or removal and reconstruction of buildings, onsite demolition will be required. There is opportunity for recycling materials, though given the potential scale, it may be more practical to engage a recycler to receive and process the construction and demolition material offsite.

Through demolition and any construction activities, there is opportunity to demonstrate industry leading practice in promoting reuse, which is tracked through detailed material handing records. Overlap with the landscape design and recycling for other purposes and it would therefore be recommended that the sustainability consultant engage and lead the broader initiatives in this space.

Noting the age of many of the existing buildings within the Technology Park, Asbestos Containing Materials (ACM) and potentially other hazardous materials may be present within some of the building

and structures within the Technology Park and it is recommended that HAZMAT Investigations are carried out prior to demolition works.

#### 4 WASTEWATER

The site is currently serviced by the existing Hayman Road Waste Water Pump Station (WWPS) No. 3, located in the south-eastern boundary of Lot 4224, to the west of Kent Street. Burvill Court and Jarrah Road generally form the northern catchment boundary for this pump station. The existing gravity sewer network through Technology Park is illustrated in Figure 3 below.

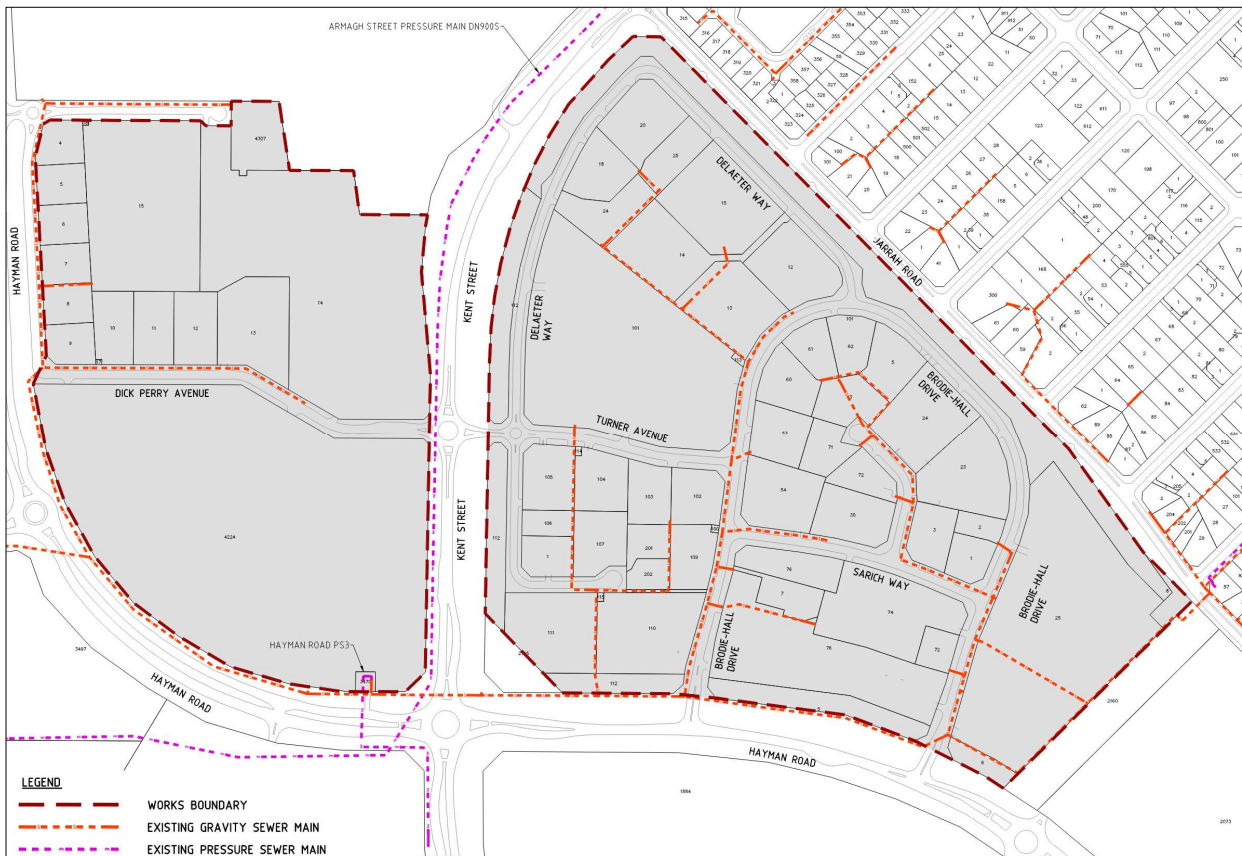


Figure 3 – Existing Waste Water Assets (TABEC)

The Technology Park precinct is generally serviced with reticulation sewers of DN225mm diameter. West of Kent Street, sewers are contained within existing road reserves, however Lot 15 is serviced through an easement to Dick Perry Drive that straddles the boundaries of Lots 17 and 18. This will need to be protected and maintained.

East of Kent Street, in addition to the sewers in road reserves, there are also various additional sewer easements, which, were installed to provide efficient servicing due to the fall across lots. These sewer mains were generally constructed in the late 1980s to early 1990s, and current Water Corporation policy is to avoid easements wherever possible. The location of the sewers contained inside lots are visible in Figure 3, which may not currently be protected with formal easements. This is particularly relevant for lots around Watt Place, land north of Lot 101 on De Laeter Way, and within lots at the cul-de-sac head of Parker Place. If lot configuration were to remain, these sewers shall be identified and protected.

The existing Hayman Road WWPS has an existing pump rate of 14L/s, with a long-term design pump rate of 15.4L/s, so there is not significant spare capacity in the current arrangement. The location of the

existing Hayman Road WWPS is shown on Figure 4 overleaf. With potential for significant additional demand, an upgrade to the WWPS is a likely requirement. In addition, the pressure main conveying flows from the Hayman Road PS, is a DN150AC main, and is therefore also restricted in capacity. The discharge location for the pressure main is at Jackson Road, approximately 750m south of the site. The collection sewer at Jackson Road grades to the Manning Road West Pump Station, located near the intersection of Gillon Street, which services a large area including the whole of the Curtin University. The existing pump rate at Manning Road West Pump Station is 112.9L/s with a long-term pump rate of 125L/s.

The capacity of the Hayman Road WWPS and downstream infrastructure will need further infrastructure and land-use planning input by Water Corporation, which is currently ongoing and shall be refined, when the redevelopment proposals for Technology Park are assessed.

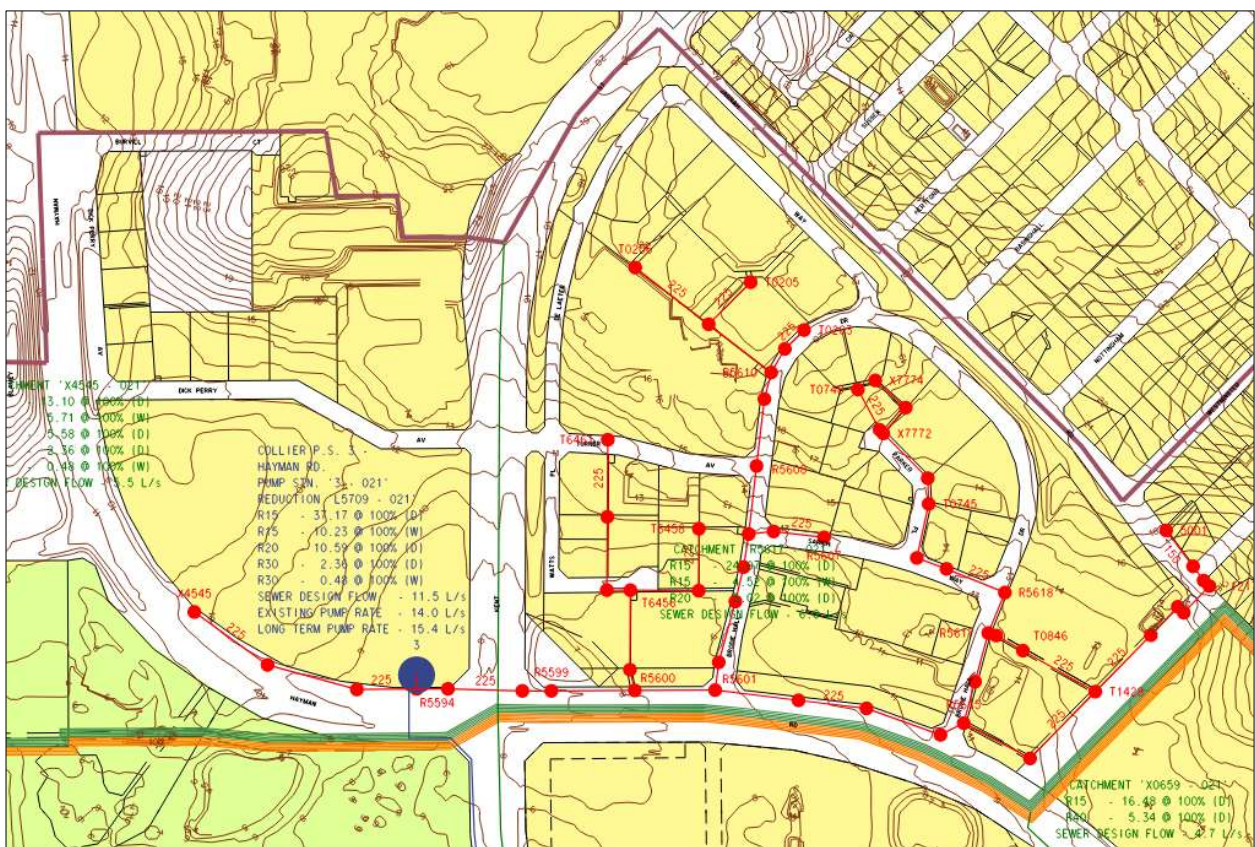


Figure 4 – Waste Water Scheme Mapping (Water Corporation)

In the existing western verge of Kent Street is a significant DN900 steel Amagh Street sewer pressure main. This is a significant asset and conveys waste water flows from South Perth, to southern suburbs, crossing Canning River at the Mt Henry Bridge. Water Corporation has future project planned to duplicate the Amagh Street DN900 sewer pressure main (project number CS03154) with a tentatively planned start for 2028. Planning for Technology Park, including works within the existing Kent Street road reserve should accommodate both the construction and ongoing protection of this future asset.

Water Corporation will provide further detail on the proposed alignment within the Kent Street road reserve and offset to the existing DN900 steel main.

Extensions of the existing gravity sewer network to service the proposed development may be required, if further subdivision is proposed. All works considered reticulation will be developer funded and infrastructure contributions would apply, based on an assessment of current demands and any increased changes.

## 5 WATER SUPPLY

The area is well serviced with existing Water Corporation water reticulation mains on all boundaries of the site. In addition, along both the northern and eastern boundaries of Technology Park, are major Water Corporation trunk assets, which are a significant asset in terms of the metropolitan area’s water supply. Figure 5 below sets out the location of the water reticulation and water trunk mains within the Technology Park precinct.

Most of the water mains east of Kent Street are of significant age and were generally constructed more than 40 years ago. The water mains west of Kent Street, located in Hayman Road and Dick Perry Avenue road-reserves were generally constructed in the late 1990s.

East of Kent Street, there is a DN300 AC (asbestos cement) and DN200 CI (cast iron) water main in Hayman Road. The DN300 pipe provides a connection from the larger DN610 distribution pipe in Manning Road. Within Brodie-Hall Drive, Sarich Way, Turner Avenue and De Laeter Way there are smaller reticulation pipes of varying size and type, though generally DN150 and DN200 of ductile and cast iron.

There is an existing water main connection through Lot 101 which extends through to Brodie-Hall Drive, along the Basinghall Street alignment. It is recommended this existing DN200 water main connection be protected and maintained.

Depending on the scale of redevelopment proposals, Water Corporation has advised the smaller water mains throughout Technology Park may need to be upgraded from a capacity perspective. Other than these reticulation mains being live services in existing road reserves and would require ongoing protection, it is not considered a development constraint.



Figure 5 – Existing Water Reticulation Assets (TABEC)

To the immediate east of the Technology Park boundary, in Lot 2160, is the existing DN1370 steel Serpentine Trunk Main which also extends along Jarrah Road at the northern boundary of the precinct. The majority of this trunk main was constructed in 1959 and is a critical water asset. The Serpentine Trunk Main conveys water from the Serpentine Dam, crosses the Swan River at the Narrows Bridge and ultimately to the Bold Park Reservoir in City Beach.

Any redevelopment works along the eastern boundary of Technology Park, in Lot 25, or along the northern boundary adjacent to Jarrah Road will need to adequately demonstrate ongoing protection of the trunk main, through Water Corporation’s Asset Protection Risk Assessment (APRA) process.

To the west of Kent Street, there is a DN200 PVC water reticulation main in both Hayman Road and Dick Perry Avenue. There is also a DN150 PVC main in Burvill Court. These are considered standard water mains and are contained in existing road reserves. Whilst they require ongoing protection as they serve existing land use in the area, there are no major constraints presented, west of Kent Street. Depending on the ultimate demand, upgrade or extensions of water reticulation pipes may be required to support the redevelopment. There are no current or future upgrades of Water Corporation assets within the Technology Park, planned at present.

For the proposed subdivision, water mains would connect to existing water reticulation mains and be extended internally. The water mains shall be designed and constructed according to the Water Corporation specifications. Installation would occur based on staging as it progresses and fully funded by the developer. Standard infrastructure contributions would also apply.

## 6 POWER SUPPLY

The Bentley Technology Park falls within Western Power’s (WP) Collier substation, located to the east of the Site, refer Figure 6 below for the location. Western Power’s network mapping tool indicates that as of 2025, there is 10 to 15 MVA of capacity within the Collier substation catchment. Western Power forecast this reducing to less than 5MVA of capacity by 2033, which would indicate that at this stage, there is currently no planned upgrades to the Collier substation catchment between 2025 and 2033.

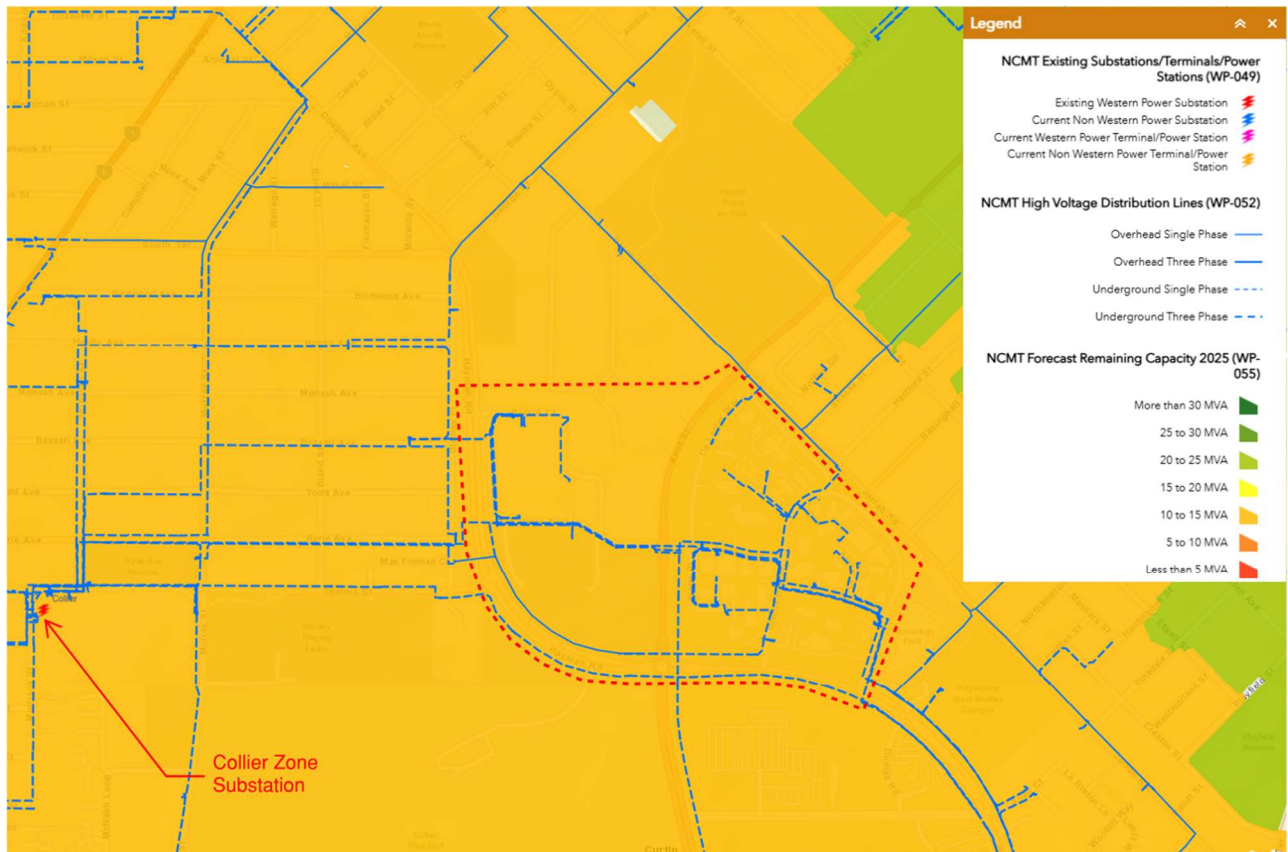


Figure 6 – Western Power network mapping tool. September 2025 (Western Power)

### 6.1 Existing Overhead Power Infrastructure

Most of Western Power’s power infrastructure within the Bentley Technology Park is underground infrastructure however there are some overhead distribution power infrastructure at the locations summarised below and identified in Figure 7 on the following page:

- 11kV Overhead Distribution lines in northern verge of Hayman Road, from north of Thelma Street intersection and terminating at the northwestern truncation of the Hayman/ Kent Street intersection;
- 11kV Overhead Distribution lines in southern verge of Jarrah Road, from the intersection of Hertford Street, heading northwest through to the intersection with George Street; and
- Thelma Street intersection and terminating at the northwestern truncation of the Hayman/ Kent Street intersection; and
- 11kV Overhead Distribution lines in Jarrah Road at intersection with Riverview Road, traversing south through Lot 2160 Jarrah Road to Hayman Road, and then running in the northern verge of Hayman Road.

Subject to the redevelopment proposals for the Bentley Technology Proposal, Western Power may request the replacement of this overhead infrastructure with underground infrastructure as part of the subdivision process.



Figure 7 – Western Power Overhead Power Distribution. September 2025 (MNG Access)

## 6.2 Existing Underground Power Infrastructure

With the exception of the overhead distribution lines noted in Section 6.1, Western Power’s network within the existing road reserves in Bentley Technology Park is predominantly underground power. Western Power have a number of transformer and switchgear sites located with the precinct, in both road reserve and in private lots, that supply power for the current land uses within the Technology Park.

Depending on the scale of redevelopment proposal(s) within the Technology Park, additional HV infrastructure (transformers, switchgears, installation of HV/LV cable) may be required to cater for any additional power demand required to support the redevelopment.

Any additional electrical infrastructure required to support the redevelopment proposal(s) will be designed in accordance with Western Power standards, with all internal connections and associated works to be undertaken by the developer as part of the subdivision, or alternatively, by Western Power as a design and construct MP project (Metro Project).

A Western Power design information package (DIP) will be submitted to WP by the Developer identifying the power requirements for the redevelopment proposal. Western Power will then assess the DIP to determine the capacity of the existing HV network and potential network upgrade requirements to service the proposed development.

When reviewing the location of Western Power’s infrastructure within the Technology Park, several of the existing transformer and/or switchgear sites appear to be located within private lot rather than road reserve (not uncommon for older areas). Western Power may request, as part of a subdivision application, that these assets be contained within road reserve as part of the redevelopment proposal. Western Power has also made significant changes to their fire and noise requirements for lots adjoining HV sites that could potentially result in the inclusion of restricted covenants being added to affected lots, to ensure the redevelopment address Western Power’s fire and noise mitigation requirements.

## 7 GAS SUPPLY

ATCO Gas have existing gas reticulation mains within the existing road reserves with maximum allowable operating pressure of between >7kPa and <100kPa. These are shown in brown in Figure 8 below.

ATCO Gas also have a significant 150mm diameter steel gas pipeline located in the southern verge of Hayman Road, in the opposing verge to the Bentley Technology Park. This main is show in red in Figure 8 below. This gas pipeline is a critical ATCO Gas asset with a maximum allowable operating pressure of between >500kPa and <1900kPa. Any design and/or works proposed within 15 metres of this existing asset will require prior consultation and approval from ATCO Gas.

As part of any redevelopment proposal(s) in the Technology Park the Developer will need to discuss their gas requirements for the Site, however based on ATCO Gas’s existing network within the Technology Park we don’t foresee any gas servicing constraints associated with the Site.

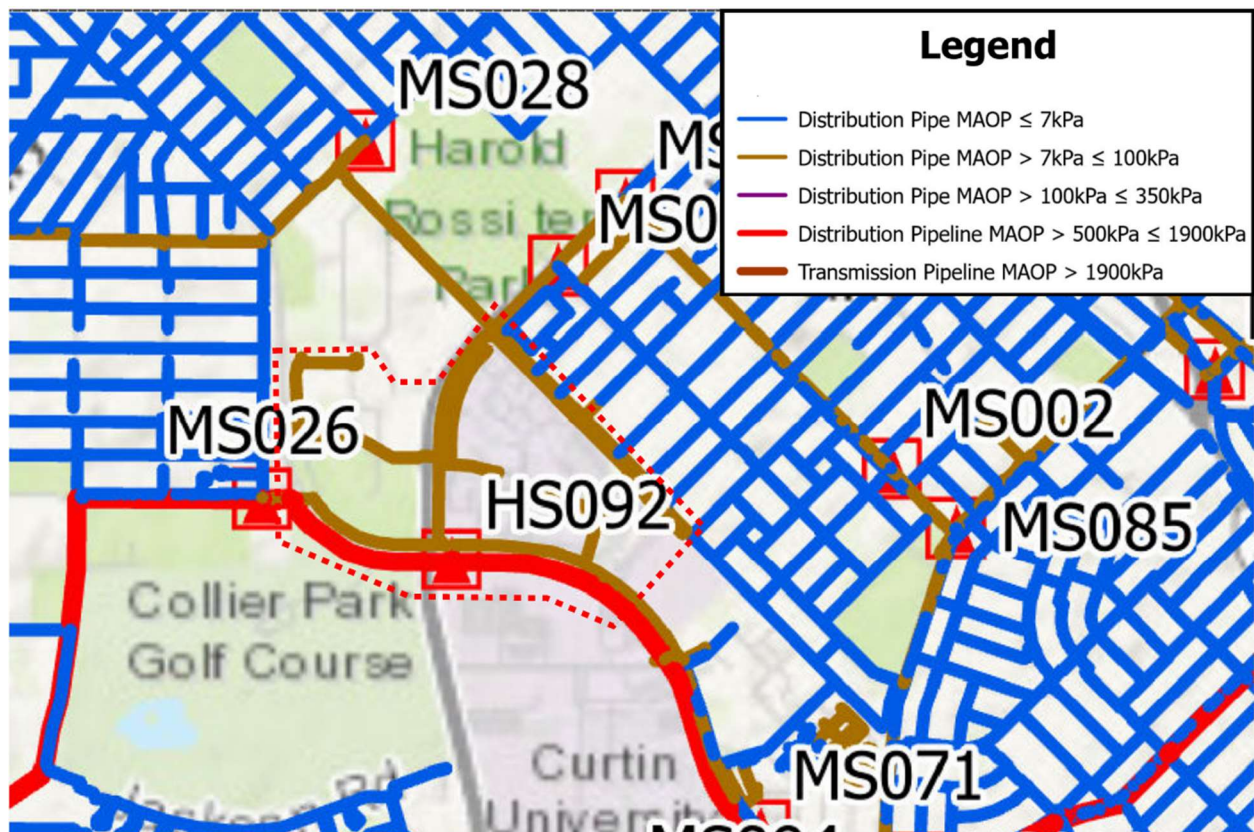


Figure 8 – Existing ATCO Gas Network map (ATCO Gas)

## 8 COMMUNICATIONS

### 8.1 Communications Summary

There are several communications providers with existing assets in the immediate vicinity of the Site, including Telstra and NBN Co infrastructure.

NBN Co have confirmed that the Site is split between two Field Service Areas (FSA's), 6SPT and 6VIC, with Kent Street dividing the two FSA's as shown in Figure 8 below.



Figure 8 – NBN Co Field Servicing Areas

NBN Co. have provided a summary of the current servicing of the two Field Service Areas (FSA's) and any planned upgrades, as outlined below.

#### **Field Service Area 6VIC:**

- The FSA area uses Fibre to the Premises (FTTP) Type 2 Technology. The Technology Park is already fed with fibre connections servicing many of the Multi Dwelling Units within the Precinct.
- NBN Co have confirmed they have spare capacity if we need to cater for further development with new FTTP Type 3 deployment.

**Field Service Area 6SPT:**

- This area uses Fibre to the Node (FTTN) Technology however a new Flexible Joint Location (FJL) has recently been planned to address the requirements of one of the existing customers within the Technology Park who has ordered a new direct fibre service.
- Once installed, the FJL will be in place to cater for some if not all the sections of development within the 6SPT FSA which means fibre should be readily available.

NBN Co have not flagged any real capacity constraints to servicing within the Technology Park Precinct. No reservation for communication infrastructure needs to be factored into planning at this stage, however NBN Co have flagged this could change if large volumes of additional connections (>300) are planned as part of the redevelopment proposal.

Relocation costs would also be a factor if the redevelopment proposal plans to modify existing roads or service alignments that impact existing communications infrastructure. We note that Vocus, TPG and NextGen also have existing infrastructure assets within the Technology Park precinct and these would also need to be protected/ considered as part of any redevelopment proposal.

## **8.2 Innovation Opportunities**

Noting this is a Technology Precinct there is an opportunity as part of the redevelopment proposal to incorporate and showcase new communications technologies, including:

- Public Wi-Fi;
- Smart Poles;
- Energy Monitoring Systems;
- Security and CCTV; and
- Building Management systems (i.e. smart metering)

The redevelopment can look to integrate these new technologies or alternatively allow for future integration by including conduit and fibre provision as part of the redevelopment, including in the below locations:

- Central locations in POS Reserves and other public areas;
- Along any main boulevards and streets to accommodate smart poles; and
- At any major intersections that could potentially have traffic lights for Main Roads future use.

Communication providers such as NBN Co and Opticomm now incorporate some of these technologies in their proposals for new developments. We would recommend engaging with these providers on these opportunities for the Technology Precinct.

## **9 CONCLUSION**

Based on the Bentley Technology Park's location, accessibility to the existing road network and a preliminary engineering servicing review, no engineering or servicing constraints to the development of the site have been identified.

## **10 REFERENCES**

- ATCO Gas, Metro North Gas Distribution Network Map. August 2025
- Department of Water and Environmental Regulation, Perth Groundwater Map. August 2025.
- Dial Before You Dig (BYDA) Enquiry. August 2025
- Emerge Associates, Local Water Management Strategy (LWMS), September 2025
- MNG Access, online map viewer, September 2025
- TABEC, Existing Utilities Sewer Plan. 2551-SK001 Rev A. May 2024
- TABEC, Existing Utilities Water Reticulation Plan. 2551-SK002 Rev A. May 2024
- TABEC, Surface Elevation Plan. May 2024
- TBB, Base Plan Bentley Technology Park. 20/054/014. 10 May 2024
- TBB, Built Form Characteristics
- Water Corporation, emails: RE: SF0010011 - Technology Park, Bentley - Potential Redevelopment - DevWA. 24 May 2024
- Water Corporation, ESInet mapping. September 2025
- Western Power, Network Capacity Mapping Tool. September 2025