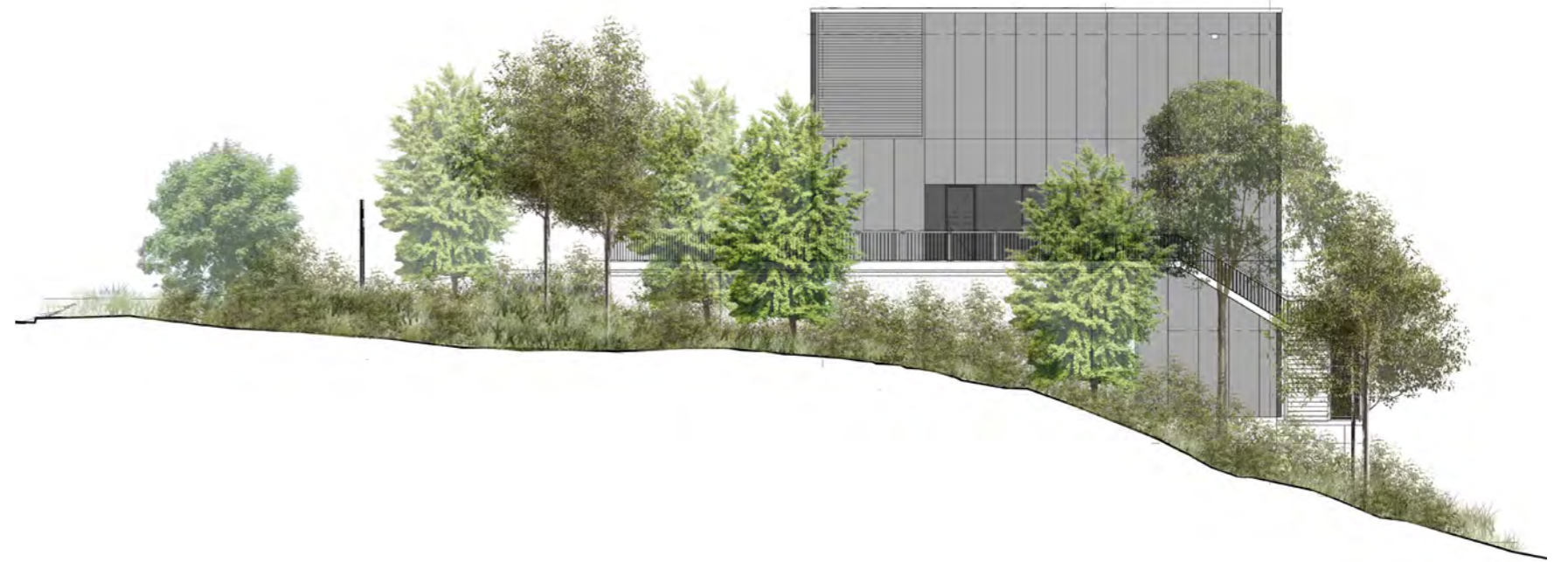


03 Precinct Plans

Epping Services Facility



Epping Services Facility Elevation. Source: HASSELL.

3.1 Precinct Context

Epping Services Facility is located above the rail alignment between Epping Station and the Cheltenham Services Facility. The building is oriented to face Beecroft Road with the Epping Traction Substation constructed adjacent to the service building within the same fenced enclosure. The purpose of the substation is to address existing ventilation issues at Epping Station and ventilate the 6 kilometres of tunnel from Epping to Cherrybrook Stations. There will be no exhaust stacks in this facility.

3.1.1 Purpose and Scope

This section of the Urban Design and Landscape Corridor Plan (UDCLP) provides an overall description of the built elements, their context and the design drivers for the precinct at Epping Services Facility. This section should be read in conjunction with other sections of the UDCLP to gain an appreciation of the strategic context, design vision and system wide componentry of the project.

This section describes the following for Epping Service Facility:

- Project context and vision
- Describes the local context
- Describes the urban design, landscaping and architectural design approach
- Describes and details the proposed buildings within the precinct site

The proposed facility include:

- Access and egress from up and down tunnels
- Maintenance access and egress stair and a passenger lift serving all levels
- Tunnel ventilation fan equipment providing supply and exhaust ventilation to both tunnels
- Two transformer substations and low voltage switchroom
- Uninterruptible power supplies (UPS) rooms
- Communication rooms
- Maintenance staff facilities (toilet, tea point and cleaners cupboard)
- Supply, exhaust and stair pressurisation fan rooms
- Heat rejection equipment.

3.1.2 Overview of Precinct Project

The following are the key components of the Services Facility:

1. Traction Substation
2. Services Facility Building
3. Fire Hydrant
4. Landscape Screen Planting
5. Maintenance Access Driveway

Refer Figure 3.1_Plan View of Epping Service Facility.

The key precinct principles developed for Epping Services Facility are summarised below:

- Minimise the above ground building scale
- Facilitate the integration of the adjacent traction substation
- Create a neutral building expression to minimise the visual impact of the building on existing and future neighbours
- Facilitate safe and efficient operation and maintenance of the services facility
- Screen the bulk of the services facility through tree planting while considering natural surveillance at street level



Figure 3.1 ESF_Plan View of Epping Services Facility. Source: HASSELL.



3.1.3 Location

Regional Location

The Epping Services Facility is located on the new tunnel alignment, between Epping Station and Cheltenham Service Facility. It is located on Beecroft Road adjacent to Epping Station.

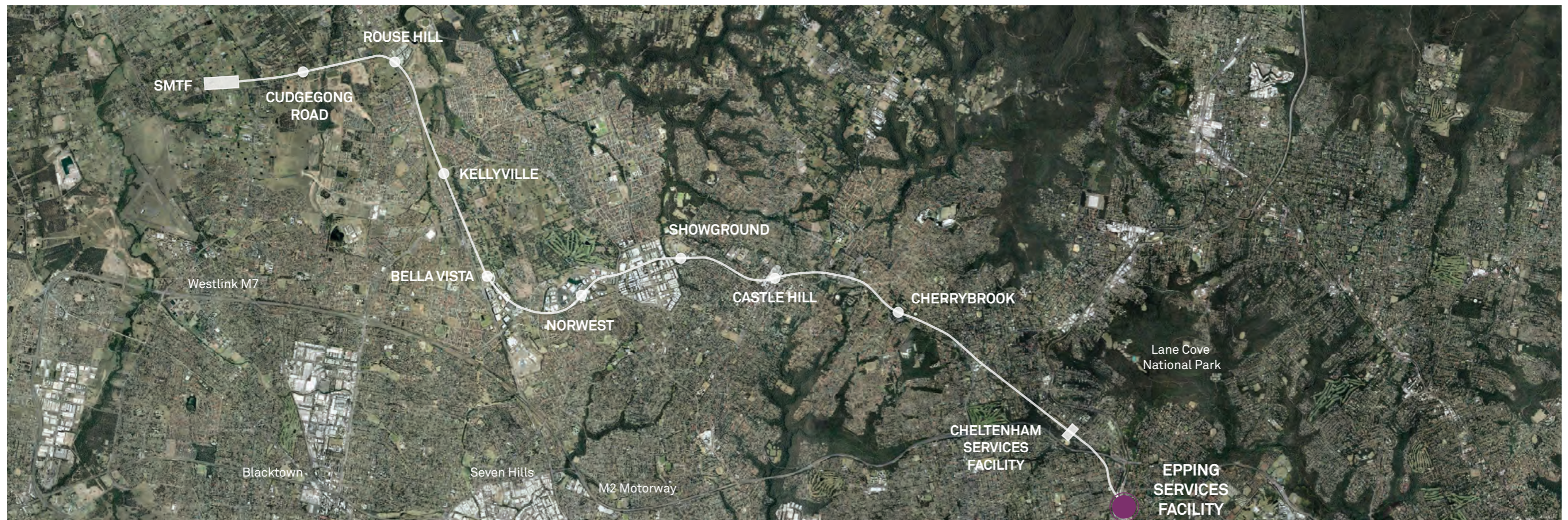


Figure 3.2 ESF_Location of Epping Services Facility. Source: Google Maps.

Local Context

The Epping service facility is located within an existing commercial development site, between Beecroft Road and Devlins Creek. The site is adjacent to residential and commercial uses with a distinctly low key, suburban street address.

Access to the proposed facility is from Beecroft Road; however, the facility will not be accessible to the public. The site design should mitigate the visual impact of the services facility from the adjacent unit blocks on Edensor Street and Beecroft Road with a dense re-establishment of Sydney Turpentine Ironbark Forest planting. The existing stand of vegetation to the north of the site will be protected from disturbance and retained.

The remainder of the facility construction site will provide a future development site that will contribute to the future development of Epping Town Centre, which has been identified by the Department of Planning & Infrastructure as an Urban Activation Precinct with potential to contribute to Sydney's future urban growth needs.

3.1.4 Key Design Drivers

- The key design drivers informing Epping Service Facility are summarised below:
- Mitigation of the visual impact of the service facility from the adjacent existing unit blocks on Edensor Street, Cheltenham and from Beecroft Road.
 - Integration and protection of the vegetation at the adjacent site to the north.
 - Maximise the opportunity for future development of the remaining site, which is nominated in the Epping Town Centre Study as a proposed high density mixed use/residential development.
 - Ensure the design of the facility does not detract from the amenity of future developments.

- ← - → Existing Rail Tracks / Station
- █ Epping Town Centre
- █ Residential Development
- █ Commercial Development
- █ Site Location
- █ Existing Landscape Buffer

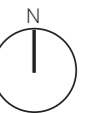
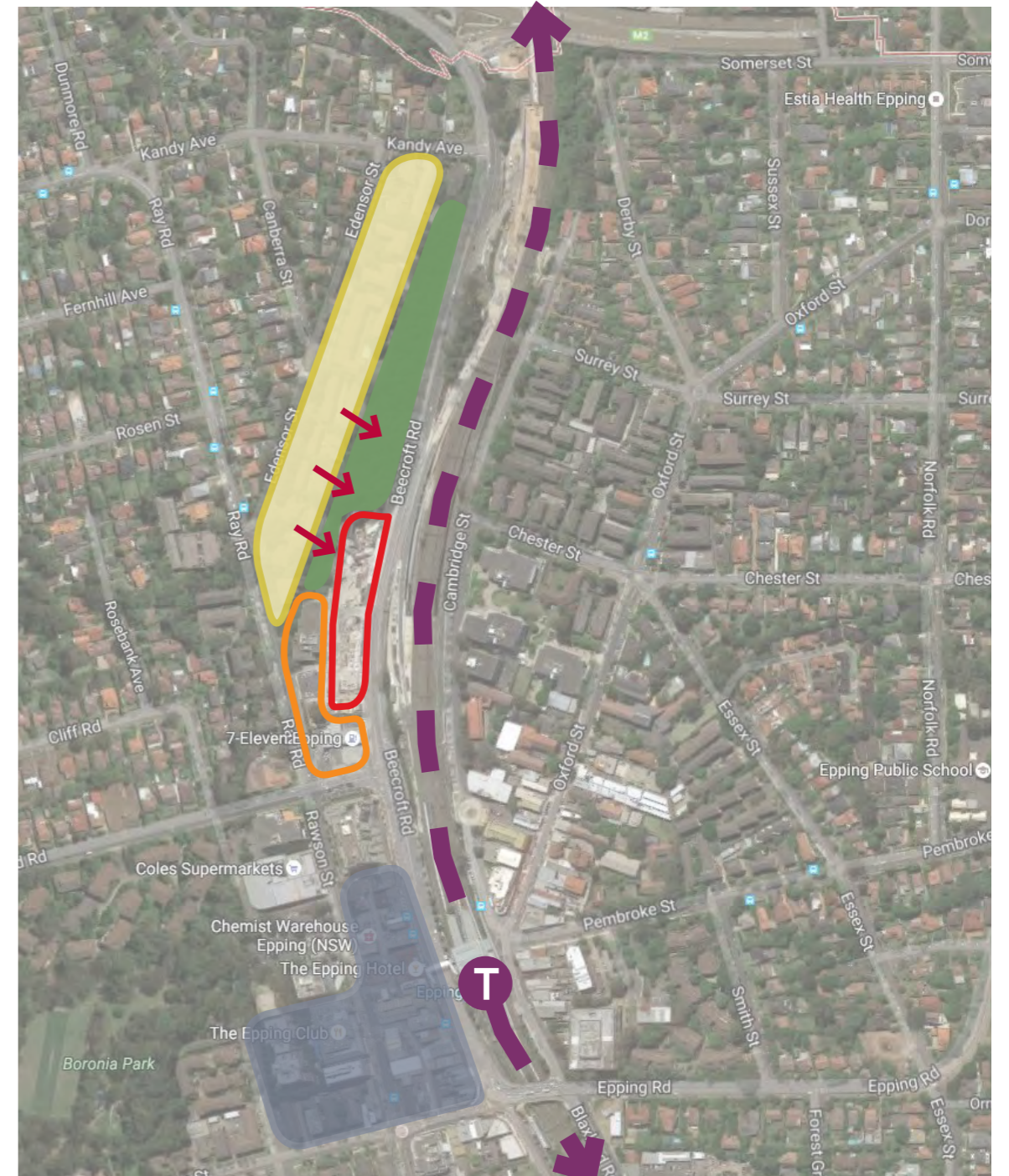


Figure 3.3 ESF_Epping Precinct Context Plan. Source: HASSELL.

3.2 Urban Design and Landscape Plan

3.2.1 Landscape Plan

The main landscape precinct elements below are located on the adjacent plan of Epping Services Facility.

1. Proposed Footpath
2. Landscape Screen Planting

Refer Figure 3.4_Landscape Elements Plan.

3.2.2 Planting Design

The landscape response is to provide maximum landscape screening of the Services Facility from all sides especially screening from the residential properties on the rear boundary and Beecroft Road. This planting includes trees and understorey planting.

The tree and planting species have been selected to match in with the endemic species of the local area, which has been identified through an arboriculture assessment. Understorey planting has also been selected to not require irrigation beyond establishment period, and require minimal maintenance.

3.3.3 Fencing

High security fencing extends around the boundary of the Services Facility. The fencing is set back from the street edge on Beecroft Road with buffer planting in front to minimise visual impact.

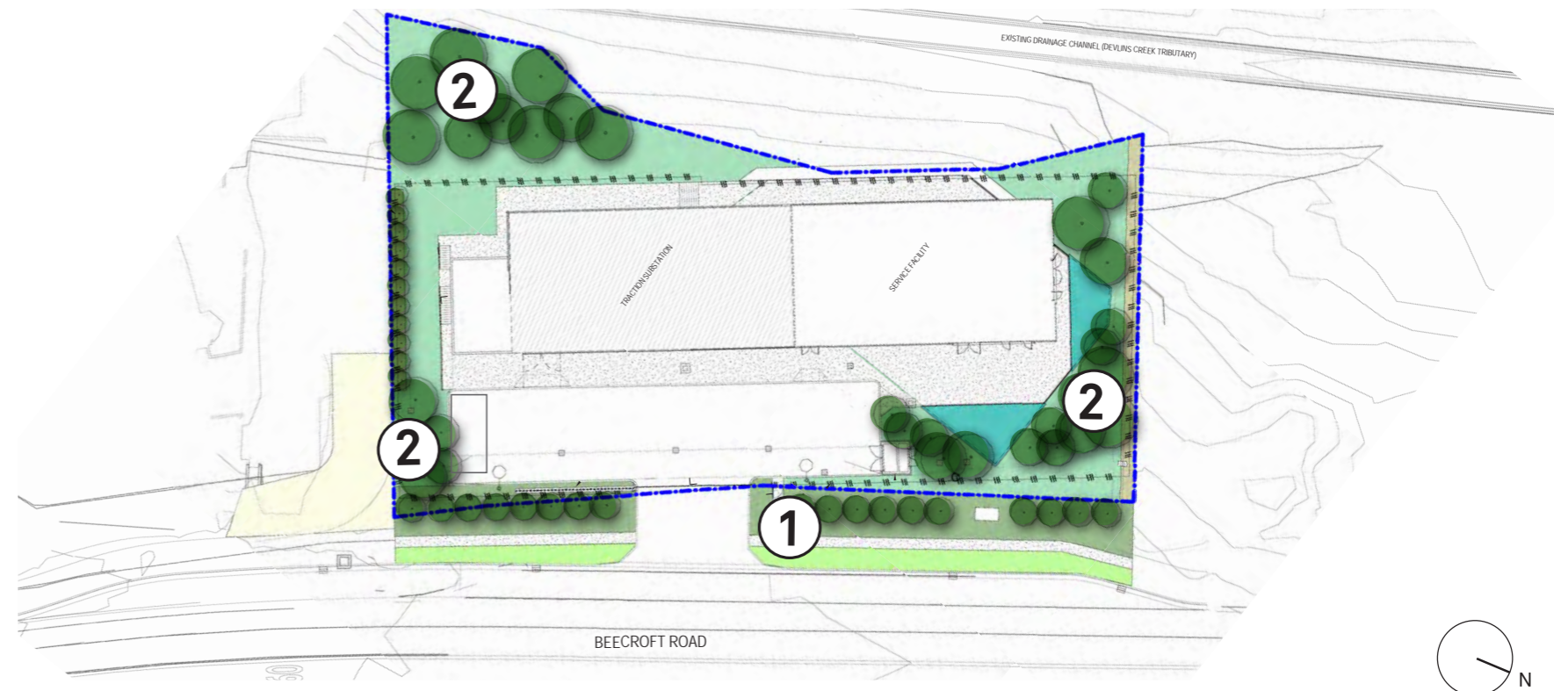


Figure 3.4 ESF_Landscape Elements Plan. Source: HASSELL.



Figure 3.5 ESF_Northern Facade of Epping Services Facility. Source: HASSELL.

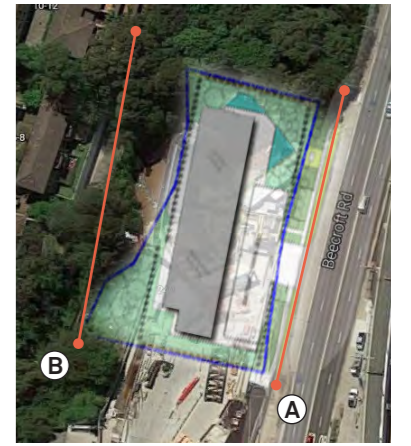


Figure 3.6 ESF_Section A. East Facade of Epping Services Facility (Beecroft Road). Source: HASSELL.



Figure 3.7 ESF_Section B. Western Facade of Epping Services Facility looking from adjacent Residential Development Source: HASSELL.
Indicative existing vegetation of drainage culvert/ creek line shown in foreground

3.3 Architectural Design

The Epping Services Facility design is based on a suite of components and systems that form part of the system wide approach to design, as well as site specific responses to the precinct.

3.3.1 Key Design Drivers

The main function of Epping Services Facility is to:

- House the ventilation fans that assist with the air movement through the tunnel;
- Contain rail systems rooms supporting the operation of the railway.

The design drivers for the facility include:

- Provide a quiet and unobtrusive building that is sympathetic to its surroundings
- Create a functional platform for all service and maintenance requirements within the service facility compound
- Provide a durable, low maintenance building within the service facility compound
- Be grounded and integrated into its landscape setting.

3.3.2 Built Elements Design

The Epping Services Building provides housing for the impulse fans. The building contains rail systems rooms supporting the operation of the railway and the facility itself. The building consists of a small above ground structure sitting over a significant underground structure.

The service facility will read as a single rectangular form clad in grey metallic panels, similar to the finish of the existing ECRL service buildings at Epping Station. A single large louvre panel on the east elevation provides ventilation to the tunnel vent shaft and exhaust ducts. On the west elevation, louvre panels serve the substations and supply air intakes and the stair pressurisation intake. The traction substation will sit adjacent to the service facility with both the east and west facades aligning with the Services Facility facades.

Generous hard stand areas accessible from Beecroft Road provide maintenance access to both the service facility and traction substation and emergency vehicle access. A free-standing hydrant booster station enclosure is located adjacent to the hard stand, ensuring the required separation distance from the openings in the building façade.

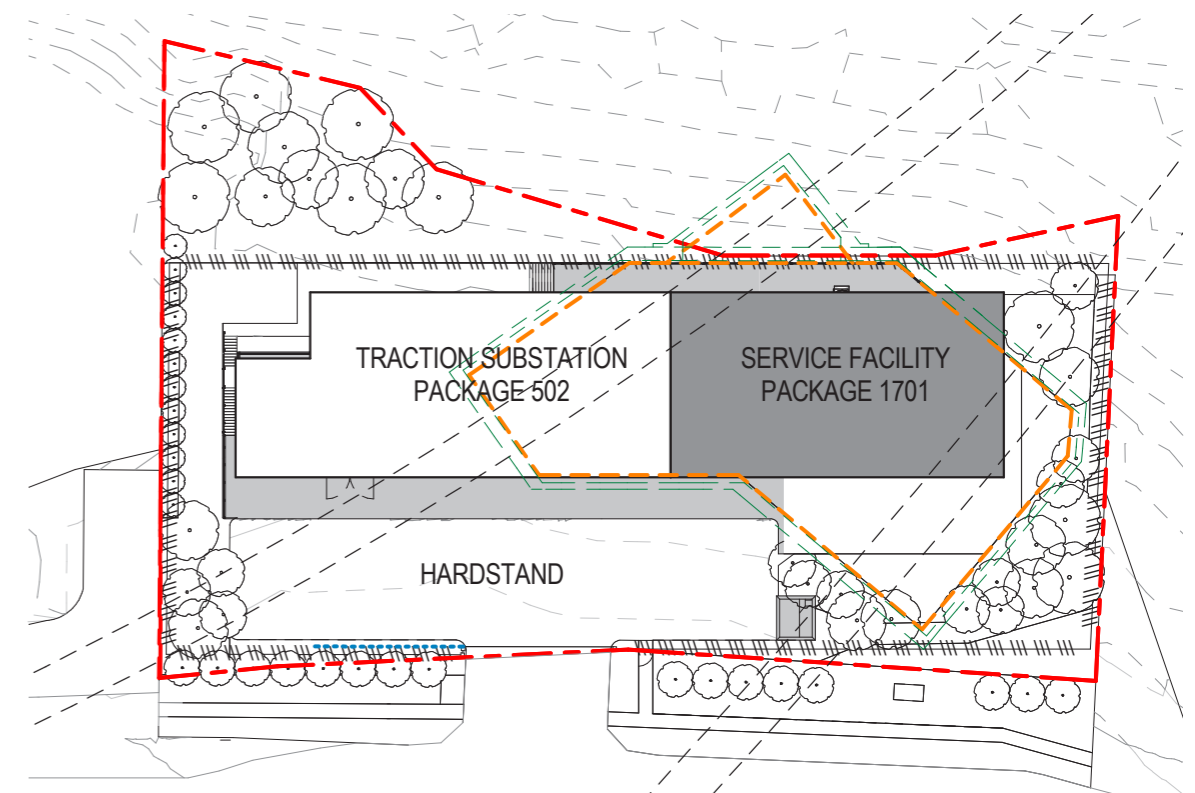


Figure 3.8 ESF_Epping Services Facility Plan. Source: HASSELL.

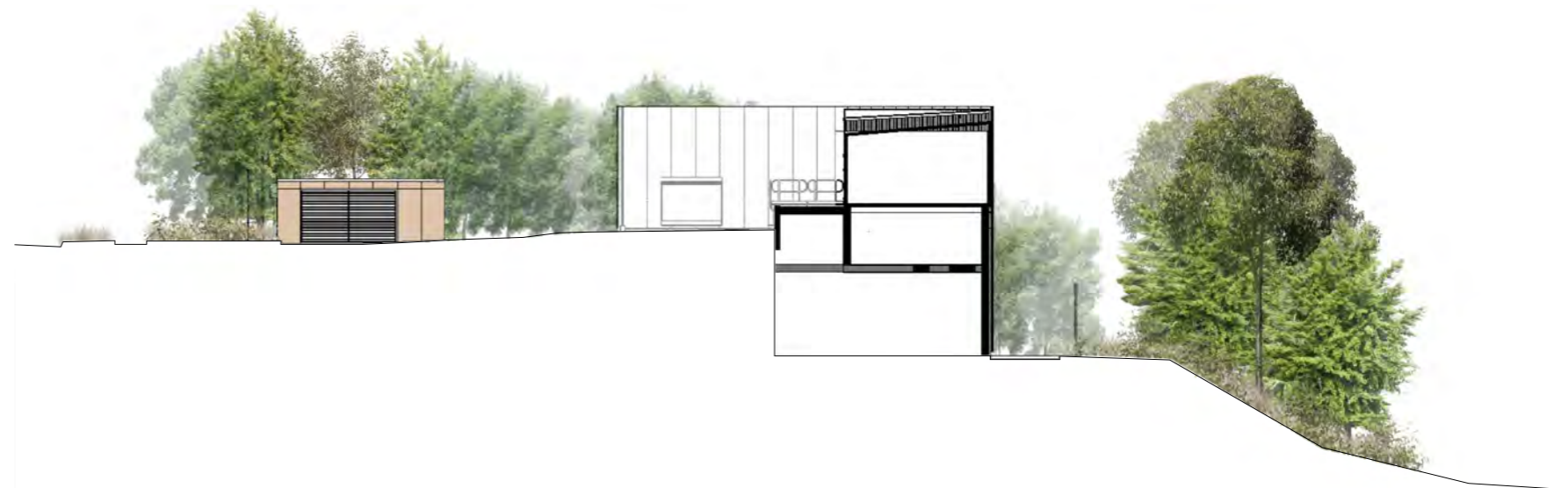


Figure 3.9 ESF_Section through Epping Service Facility. Source: HASSELL.