# STATION ROAD DATA CENTRE EXPANSION (SYD08)

## 57 STATION ROAD, SEVEN HILLS

## SSDA DESIGN REPORT

**April 2022**
**Project no. 4591-00**

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# CONTENTS

# 1.0 INTRODUCTION

## 1.1. PURPOSE

This Design Report has been prepared on behalf of Lehr Consultants International (Australia) Pty Ltd (LCI) in support of a State Significant Development Application (SSDA) submitted to the Department of Planning and Environment (DPE) under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979).

LCI is seeking to secure approval for the construction of a new data storage centre development on the site known as 57 Station Road, Seven Hills, located within the Blacktown City Council local government area (LGA). The proposed development will comprise the erection of a new two-storey data centre at the rear of the site, associated plant and equipment, car parking areas, landscaping, and civil works.

This report provides a Built Form and Urban Design assessment and responds to the Industry Specific Secretary's Environmental Assessment Requirements (SEARs) issued by DPE on 23 December 2021. An outline of the SEARs relevant to this Built Form and Urban Design assessment, and how they have been responded to, is summarised in the following table.

| Issue and Assessment Requirements | Documentation | Response |
|---|---|---|
| 4. Built Form and Urban Design<br>• Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.<br>• Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.<br>• Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, materials, finishes, colours, any signage and integration of services.<br>• Assess how the development complies with the relevant accessibility requirements. | • Architectural drawings<br>• Design Report<br>• Survey Plan<br>• Building Code of Australia<br>• Compliance Report<br>• Accessibility Report | *Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.*<br>• Refer to Section 4 - Site Analysis and Section 5 – Opportunities and Constraints in this Design Report<br>*Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.*<br>• Refer to Section 6.1 - The Proposal and 6.2 - Floor Plans in this Design Report.<br>*Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, materials, finishes, colours, any signage and integration of services.*<br>• Refer to Section 6.1 - The Proposal and 6.5 Materials and Finishes in this Design Report<br>*Assess how the development complies with the relevant accessibility requirements.*<br>• Refer to the Accessibility Report prepared by Lehr Consultants International 24th February 2022. |

# INTRODUCTION

## 1.2. SITE LOCATION

- The site is within the Blacktown local government area (LGA), however is also on the boundary of the Parramatta LGA. The site is in the Seven Hills Industrial Area, approximately 3.8km east of the Blacktown CBD and 6.8km west of the Parramatta CBD, and approximately halfway between Toongabbie and Seven Hills railway stations.


Source: SIX Maps

# INTRODUCTION

## 1.3. SITE DESCRIPTION

- The site is located on land known as 57 Station Road, Seven Hills, described legally as Lot B / DP 404669. The site is rectangular in shape with an area of 2.57ha and a northeast-southwest orientation. It is a corner lot with a frontage of around 111m to Station Road to the southwest, and 242m to McCoy Street road reserve to the southeast. The majority of the McCoy Street road reserve is unformed, with a formed 80m long driveway providing access to the adjoining McCoy Park.
- The site is currently occupied by a range of buildings and structures associated with the previous industrial uses. An HV transmission tower is also located on the Site in the south, at the corner of Station Road and McCoy Street. Vehicular access is provided via three separate crossings along Station Road.

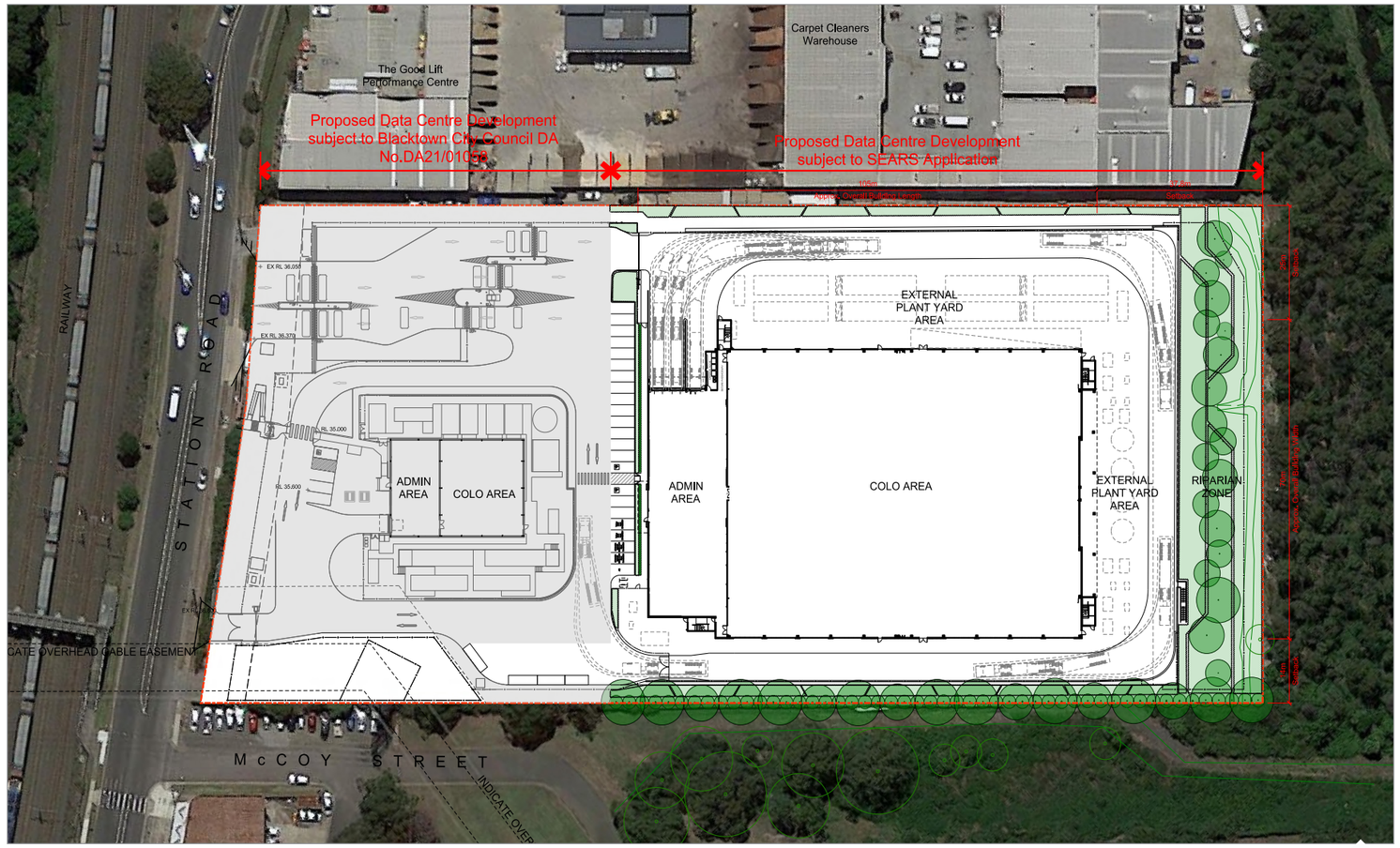
### 1.3.1 OVERVIEW OF APPROVED DEVELOPMENT

- The Site is subject to an existing development approval, issued by Blacktown City Council under DA-21-01058 on 10 January 2022. The development consent permits:

  *Removal of trees, bulk earthworks, stormwater drainage works and construction of a single storey data centre to operate 24 hours a day 7 days a week with ancillary offices, on-site parking and associated landscaping.*
- The existing approval permits tree removal, bulk earthworks, and drainage works across the entirety of the site, with the construction of a data centre on approximately the front third as depicted in the figure opposite. The balance of the site is the location of the proposed SSDA, excluding bulk earthworks.

## 1.4. OVERVIEW OF PROPOSED DEVELOPMENT

- Construction of a new two-storey 19.2MW data centre at the rear of the Site including ancillary office space.
- A total floor area of 8,076sqm.
- Provision of external plant in plant yards to the west, north and south of the proposed data hall, as well as rooftop plant, which will be screened.
- Provision of 9 new generators, for a site total of 12 generators.
- Capacity for up to 289,000L of diesel fuel storage.
- Operation to take place 24 hours a day, 7 days a week.
- New vehicular circulation to provide access to Station Road, connecting into new driveways already approved under DA-21-01058.
- Parking for 31 vehicles.
- Landscaping works.



# 2.0 PLANNING CONTROLS

## 2.1. BLACKTOWN LOCAL ENVIRONMENTAL PLAN 2015

### LAND ZONING

Zone IN1 General Industrial

1 Objectives of zone
- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- To minimise adverse impacts on the natural environment.

2 Permitted without consent
- Nil.

3 Permitted with consent
- Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Heliports; Industrial training facilities; Kiosks; Light industries; Neighbourhood shops; Oyster aquaculture; Places of public worship; Roads; Tank-based aquaculture; Warehouse or distribution centres; Vehicle sales or hire premises.

### HEIGHT OF BUILDINGS

Blacktown LEP 2015 does not include a numerical height control for the site, however, Clause 4.3 sets out the following objectives for height of buildings:

(a) to minimise the visual impact, loss of privacy and loss of solar access to surrounding development and the adjoining public domain from buildings,

(b) to ensure that buildings are compatible with the height, bulk and scale of the surrounding residential localities and commercial centres within the City of Blacktown,

(c) to define focal points for denser development in locations that are well serviced by public transport, retail and commercial activities,

(d) to ensure that sufficient space is available for development for retail, commercial and residential uses,

(e) to establish an appropriate interface between centres, adjoining lower density residential zones and public spaces.

### FLOOR SPACE RATIO

Blacktown LEP 2015 does not include a numerical control for the site.

### RIPARIAN LAND AND WATER COURSES

The provisions of Clause 7.3 of the LEP apply to land that is a watercourse or land that is within 40 metres of the top of the bank of a watercourse.

Blacktown Creek is located to the north of the site at a distance varying from approximately 30 metres in the north-western corner to more than 70 metres in the north-eastern corner. The site is therefore subject to the provisions of the clause.

In deciding whether to grant development consent, the consent authority is required to consider whether or not the development is likely to have any adverse impact on the following:

(i) the water quality and flows within the watercourse,

(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,

(iii) the stability of the bed and banks of the watercourse,

(iv) the free passage of fish and other aquatic organisms within or along the watercourse.

(v) any future rehabilitation of the watercourse and riparian areas.

Clause 7.8 of the LEP applies to any land within an IN1 zone that is within 250 metres of land in a residential zone.

The site is located approximately 70 metres north of existing low density residential dwellings on Edna Avenue, located within the Parramatta LGA, and approximately 160 metres east of residential properties on Carter Street and McCoy Street located on the western side of the rail corridor. Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the following—

(a) whether any proposed buildings are compatible with the height, scale, siting and character of existing residential buildings in the vicinity,

(b) whether goods, plant, equipment and other material resulting from the development are to be stored within a building or will be suitably screened from view from residential buildings and associated land,

(c) whether the elevation of any building facing, or significantly exposed to view from, land on which a dwelling house is situated has been designed to present an attractive appearance,

(d) whether noise generation from fixed sources or motor vehicles associated with the development will be effectively insulated or otherwise minimised,

(e) whether the development will otherwise cause a nuisance to residents, by way of hours of operation, traffic movement, parking, headlight glare, security lighting or the like,

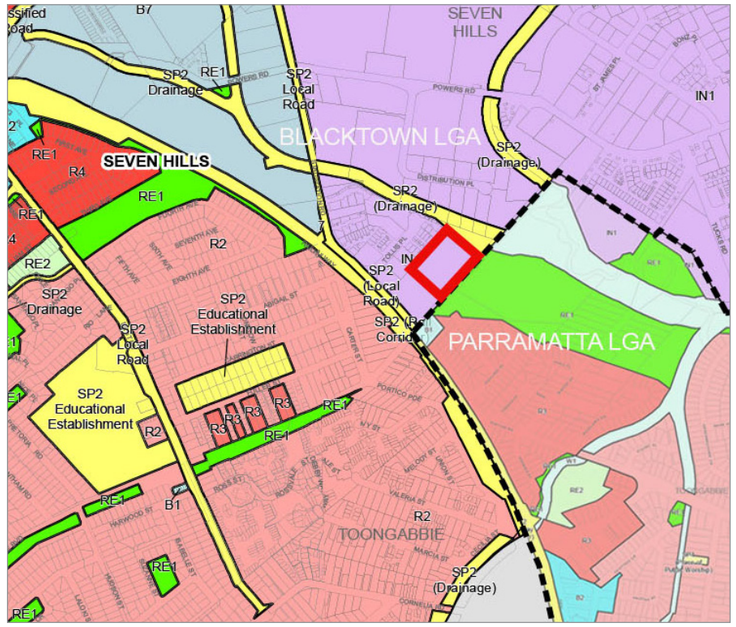
(f) whether the development will provide adequate off-street parking, relative to the demand for parking likely to be generated,

(g) whether the site of the proposed development will be suitably landscaped, particularly between any building and the street alignment.

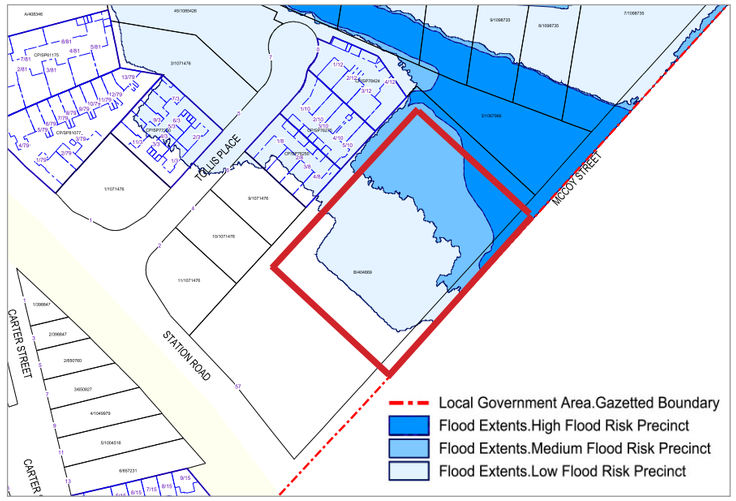
## 2.2. BLACKTOWN CITY COUNCIL MAPPING

### FLOODING PRECINCTS

Blacktown Council interactive mapping (BCC MapsOnline) indicates that the site is subject to flooding, ranging from low risk in the middle of the site to high flood risk adjacent to the north-eastern boundary and in the north-eastern corner of the site.




LAND ZONING




FLOODING PRECINCTS
BLACKTOWN CITY COUNCIL MAPS ONLINE

# PLANNING CONTROLS

## 2.3. CONTROL OF OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING (AS 2482)

Refer to Lighting Engineer's Report

## 2.4. BETTER PLACED (GOVERNMENT ARCHITECT NSW, 2017)

### Objective 1
**Better fit contextual, local and of its place**

Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, heritage and communal aspirations. It also contributes to evolving and future character and setting.

### Objective 2
**Better performance sustainable, adaptable and durable**

Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working.

Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.

### Objective 3
**Better for community inclusive, connected and diverse**

The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments.

Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.

### Objective 4
**Better for people safe, comfortable and liveable**

The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.

### Objective 5
**Better working functional, efficient and fit for purpose**

Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.

### Objective 6
**Better value creating and adding value**

Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.

### Objective 7
**Better look and feel engaging, inviting and attractive**

The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.

## 2.5. GREENER PLACES (GOVERNMENT ARCHITECT NSW, 2020)

### Principle 1
**Integration combine green infrastructure with urban development and grey infrastructure**

There is a global transition away from single-purpose grey infrastructure to more multipurpose infrastructure that mimics nature, provides critical ecosystem services, and promotes healthy and active living. The principle of integration proposes to combine green space with urban development and grey infrastructure.

### Principle 2
**Connectivity create an interconnected network of open space**

Greener Places promotes the creation of a network of high-quality open spaces that connect with town centres, public transport hubs, rivers, creeks, and employment and residential areas – creating a network of open space. The network includes physical and functional connections that benefit people and wildlife.

### Principle 3
**Multifunctionality deliver multiple ecosystem services simultaneously**

Multifunctional green spaces should be high-quality and high-performing, producing, social, environmental, and economic benefits. Multifunctionality represents the ability of green infrastructure to deliver multiple ecosystem, environmental, and other services simultaneously.

### Principle 4
**Participation involve stakeholders in development and implementation**

Participation relates to a planning process that is open to all and incorporates the knowledge and needs of diverse parties. It involves stakeholders in the development and implementation of neighbourhood, local, district, and regional green infrastructure policies and actions.

# 3.0 SITE PHOTOGRAPHS

## 3.1. SITE PHOTOGRAPHS


Source: SIX Maps


1 View north-west along Station Road from the McCoy Street intersection.

2 View towards the site from the intersection of Station Road and McCoy Street.

3 Access roadway off Station Road providing a connection to the south-west corner of the site.

4 View north-east across the site from the access roadway.
Buildings on adjoining lots delineate the western boundary.

5 View south-east from the access roadway towards the bank at the southern end of the site.

6 View towards the north-western corner of the site.

7 Vegetated bank at the southern end of the site.

# SITE PHOTOGRAPHS


Source: SIX Maps

8 View north-east across the site.

9 View south-east across the site.

10 Stormwater outlet and swale in the north-west corner of the site.

11 Stormwater outlet and swale in the north-east corner of the site.

12 Casuarina tree within the site and riparian vegetation adjacent to the northern boundary of the site.

13 View south along the eastern boundary of the site.

14 South-eastern corner of the site.

15 View north across the site from the southern boundary at the top of the bank.

# SITE PHOTOGRAPHS


Source: SIX Maps

16 View towards the site from McCoy Street.

17 View north along the eastern boundary of the site from McCoy Park.

18 Children's playground located within McCoy Park.

19 View west towards the site from the children's playground.

20 View of the site from McCoy Park from the western edge of the children's playground.

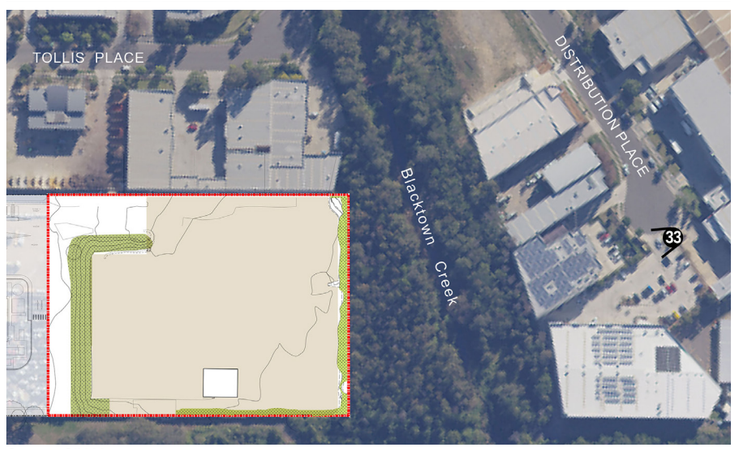
21 View towards the site from the western end of McCoy Park playing field.

22 View towards the site from the eastern end of McCoy Park playing field.

23 Residential dwellings at the northern end of Edna Avenue.

24 Residential dwellings along the southern boundary of McCoy Park.

# SITE PHOTOGRAPHS


Source: SIX Maps

25 View towards the site from the Edna Avenue turning circle and parking area.

26 View across McCoy Park towards the site from the northern end of Edna Avenue.


27 Commercial/retail outlets at the intersection of Station Road and McCoy Street.

28 Pedestrian footbridge across the railway line near the intersection of Station Road and McCoy Street.

29 View towards the site from the McCoy Street turning circle on the western side of the railway line.

30 View north-east along Tollis Place.

31 Commercial buildings located west of the site at 8-10 Tollis Place.

32 Commercial buildings located west of the site at 12 Tollis Place.

33 Commercial buildings located on the northern side of Blacktown Creek at the eastern end of Distribution Place.

# 4.0 SITE ANALYSIS

## 4.1. BUILT FORM

- The site is predominantly an open, relatively level area formerly used as a timber yard.
- A large-scale metal shed is located in the eastern part of the site.
- A data centre development, approved by Blacktown City Council (DA No.DA21/01058) is proposed for the land adjoining the site which fronts Station Road.
- General industrial buildings, predominantly two storeys in height, are located immediately west of the site. Businesses currently operating from the premises include:
  1. Reece Plumbing.
  2. The Good Life gym.
  3. Australian Native Landscapes (ANL) - 4-6 Tollis Place.
  4. Carpet Cleaners Warehouse and Sonar Enterprises paper supplier - 8 Tollis Place.
  5. 2Step dance studio - 10 Tollis Place.
  6. Childcare Developments Group, Keyz car leasing service and InstaCake - 12 Tollis Place.
- Warehouses and commercial businesses are also located west of Tollis Place and opposite the site on the northern side of Blacktown Creek. These include:
  7. Tile wholesalers, food distributors and signwriters.
  8. Indoor Sport's Centre, sportswear distributor and landscape construction company.
- A small group of single and two storey commercial / retail outlets is located to the south of the site at the intersection of Station road and McCoy Street (**9**). Residential units are located on the second floors of the buildings.
- Low-density residential housing is located south-east, south and south-west of the site and includes:
  10. Housing along Edna Avenue and the eastern side of Station Road.
  11. Housing on the western side of the railway line along McCoy Street and Carter Lane.
- McCoy Park (**12**) is located immediately east of the site in the Parramatta LGA and incorporates two sporting fields, a children's playground (**12a**) and an amenities building.


METAL SHED

CLEARED OPEN SPACE (FORMER TIMBER YARD)

ELECTRICITY PYLON

# SITE ANALYSIS

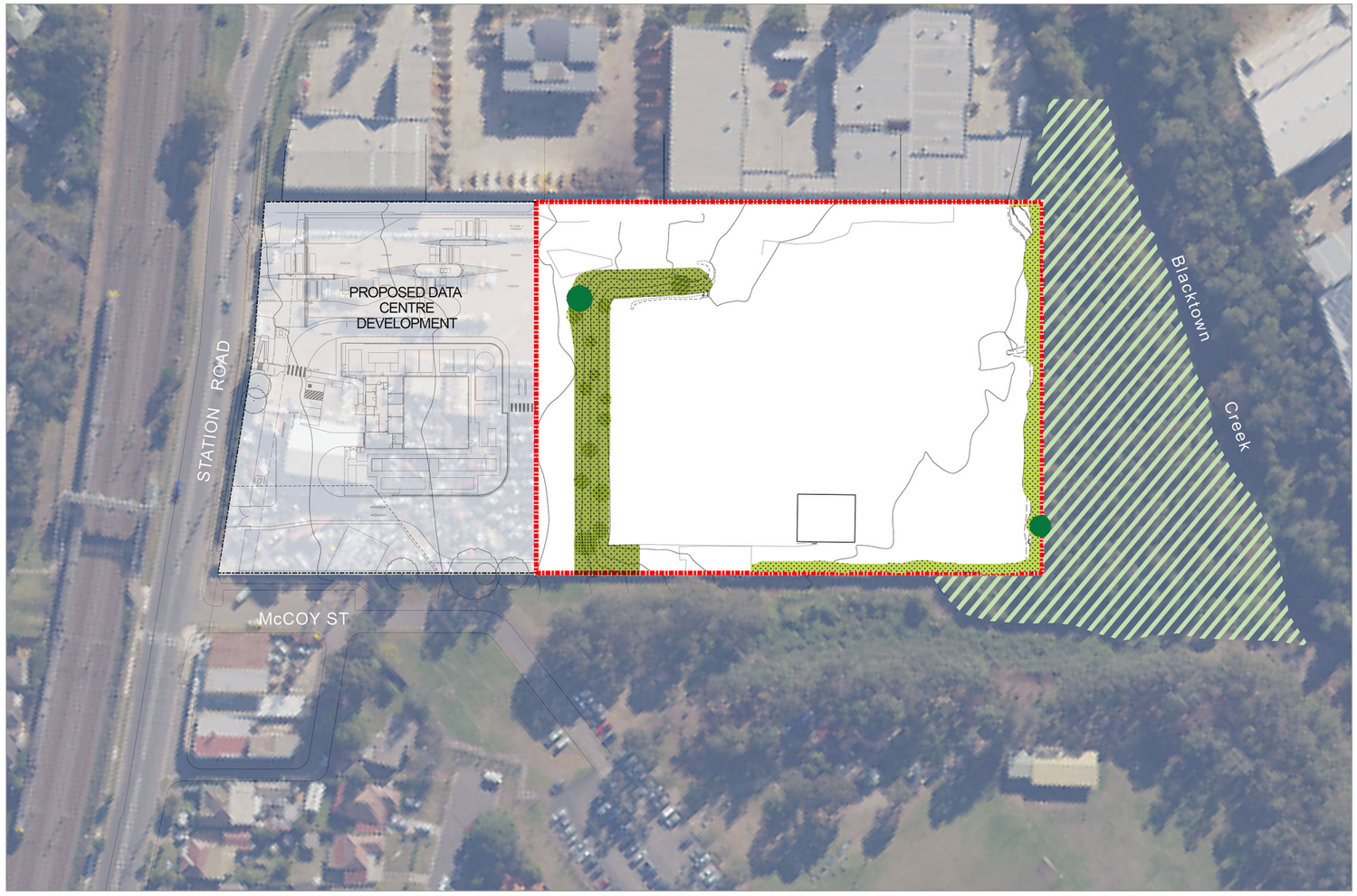
## 4.2. VEHICLE AND PEDESTRIAN CIRCULATION

- The site does not have a street frontage but is accessed from Station Road via an unsealed roadway which extends along the western boundary of the adjoining parcel of land.
- There is internal access between the two parcels of land in the south-west corner of the site.
- Station Road is a two-way, two-lane road which provides a connection to Prospect Highway, Seven Hills Road, and Abbott Road.
- McCoy Street, located within the Parramatta LGA, is located in close proximity to the south-east corner of the site and provides access to the adjacent McCoy Park.
- The site is located approximately 1km from Toongabbie Station and about 1.7km from Seven Hills Station and bus interchange.
- Toongabbie and Seven Hills Stations are serviced by the T1 Western and T5 Richmond lines.
- The bus interchange at Seven Hills station provides connections to suburbs within Blacktown, Parramatta and the Hills local government areas.
- An existing footpath extends along eastern side of Station Road and connects to a pedestrian bridge across the railway line.
- The nearest bus stop to the site is located approximately 400m to the south-west on Carter Street and is serviced by the following routes:
  - 705 Blacktown to Parramatta via Seven Hills
  - 711 Blacktown to Parramatta via Wentworthville

# SITE ANALYSIS

## 4.3. VEGETATION

- There is minimal existing vegetation on the site.
- A band of planting, consisting primarily of scattered shrubs, groundcovers/grasses and weeds is located on a bank in the southern portion of the site.
- Perimeter planting, incorporating groundcovers, grasses and weeds, extends along the northern and eastern boundaries. Similar planting also occurs in pockets across the site.
- An existing Casuarina tree is located in the north-eastern corner.
- Riparian vegetation, associated with Blacktown Creek, adjoins the northern boundary.



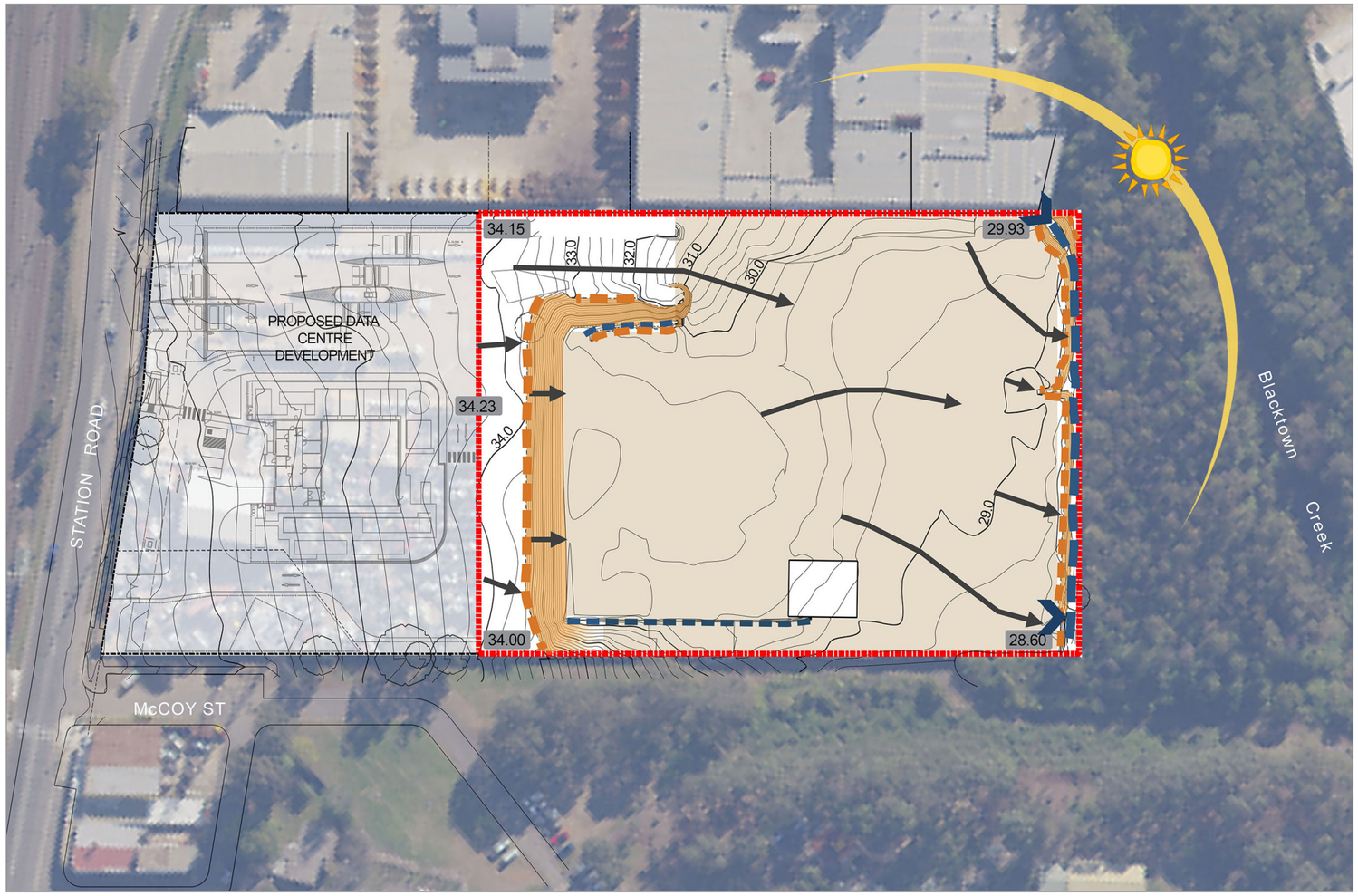
# SITE ANALYSIS

## 4.4. TOPOGRAPHY AND DRAINAGE

- The northern and central sections of the site are dominated by a near level terrace which generally falls gently in a north-easterly direction.
- A 4 metre high bank is located in the southern section of the site separating the terrace from the adjoining proposed data centre development site.
- Site levels vary from a high point of approximately RL 34.23 on the southern boundary to a low point of approximately RL 28.60 in the north-east corner of the site.
- The site drains to an existing swale that extends along the northern boundary.
- A pipe from the adjoining industrial property to the west discharges into the swale in the north-western corner of the site.
- A second pipe discharges stormwater from the site into the swale in north-eastern corner.

## 4.5. SOLAR ORIENTATION

- The site is orientated south-west to north-east with longer boundaries facing commercial properties in the west and McCoy Park in the east.
- Due to the open nature of the site, it will be exposed to high levels of sunlight from north-east to north-west.



# SITE ANALYSIS

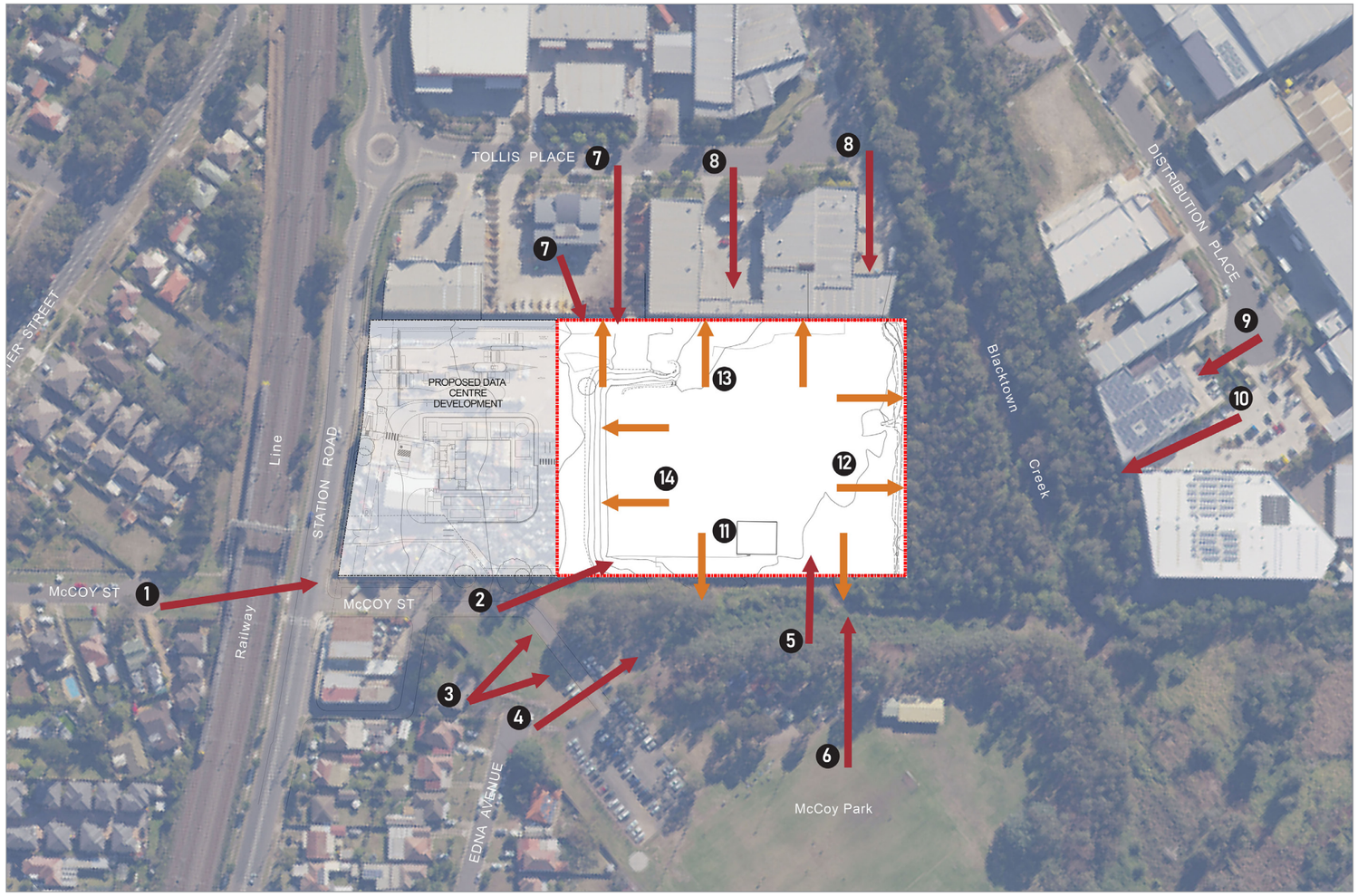
## 4.6. VIEWS

### VIEWS TOWARDS THE SITE

1. Partial middle distance view of the site from McCoy Street on the southern side of the railway line. Views are partially blocked by fencing and the pedestrian bridge.
2. Views from McCoy Street at the entry to McCoy Park. Views are generally screened by vegetation but the site is partially visible in gaps between existing clusters of trees.
3. Partial views from dwellings at the western end of Edna Avenue, screened by vegetation.
4. Partial views from the western end of Edna Avenue, screened by vegetation.
5. Partial to extensive views of the site from the children's playground in McCoy Park.
6. Middle distance views from McCoy Park screened by vegetation.
7. Partial views of the site above boundary wall.
8. Views of the site substantially blocked by commercial buildings.
9. Views to the site blocked by commercial buildings.
10. Views between buildings towards the site blocked by riparian vegetation along Blacktown Creek.

### VIEWS FROM THE SITE

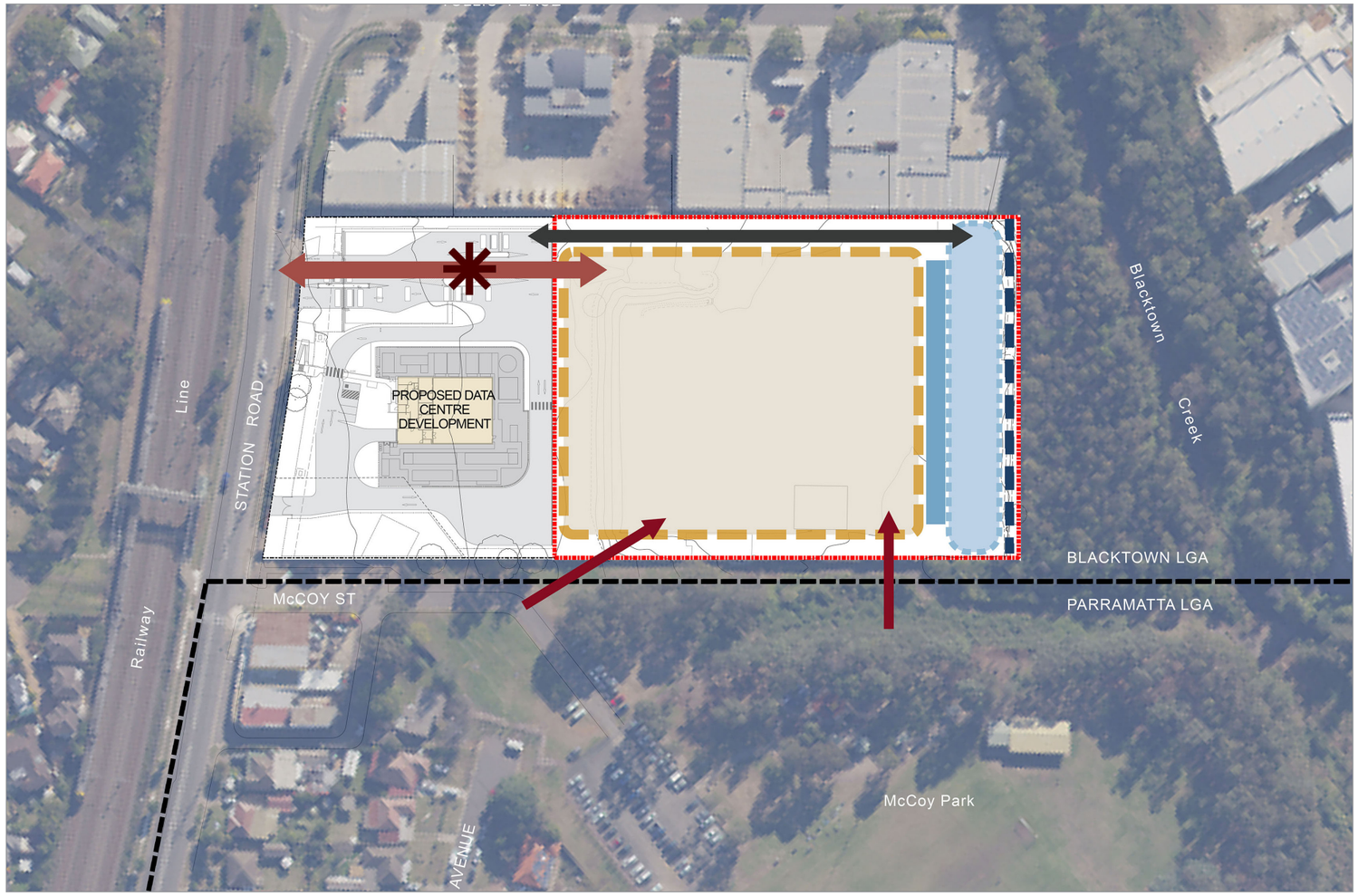
11. Views east to vegetation within McCoy Park and partial view of amenities building.
12. Views north contained by riparian vegetation along Blacktown Creek.
13. Views west contained by tilt-up concrete walls of commercial buildings adjoining the site and boundary wall of Australian Native Landscapes (4-6 Tollis Place).
14. Views south dominated by 4 metre high vegetated bank within the site. Trees and electricity pylon within the proposed data centre site are also visible.



# 5.0 SITE CONSTRAINTS & OPPORTUNITIES

## 5.1. SITE CONSTRAINTS

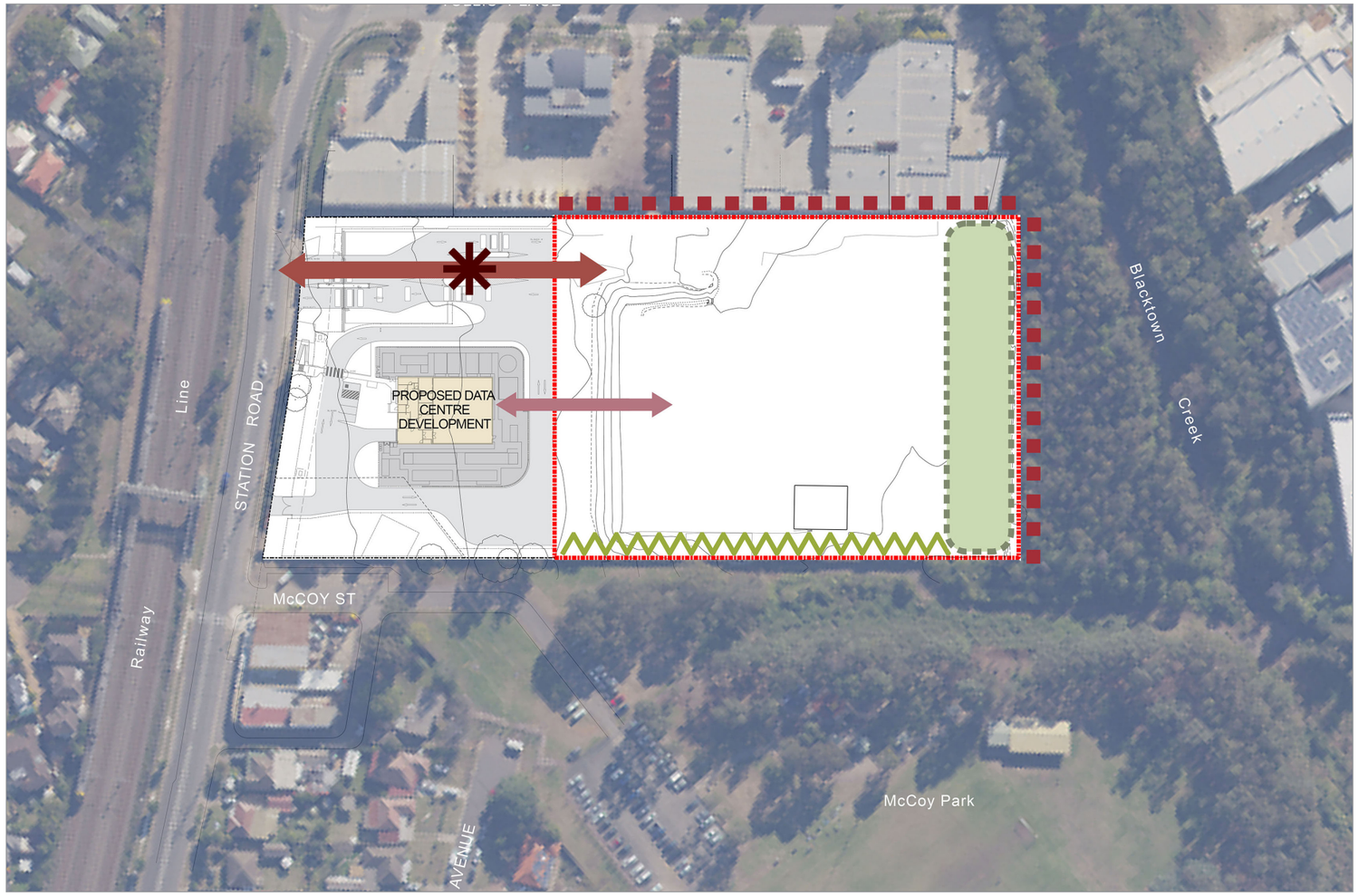
- The main access to the site, from Station Road, is to utilise the entry road and security gate located at the western end of the adjoining data centre development.
- Civil works at the northern end of the site form part of approved DA No.DA21/01058 for the data centre development fronting Station Road. The works include:
  - Retention of the existing swale adjacent to the northern boundary which is to be modified to provide a consistent slope to the north-east corner of the site.
  - Provision of an 18 metre wide vegetated flood storage area adjacent to the swale.
  - Provision of an on-site detention tank.
- Maintenance access to vegetation at the northern end of the site is to be provided.
- The site adjoins McCoy Park to the east from where there are partial and filtered views into the site.
- Levels to be raised across the central portion of the site to provide a building platform consistent with the adjoining data centre development.



# SITE CONSTRAINTS & OPPORTUNITIES

## 5.2. SITE OPPORTUNITIES

- The main access to the site, from Station Road, is to utilise the entry road and security gate located at the western end of the adjoining data centre development to provide controlled access to the site.
- Provision of a pedestrian connection between the site and adjoining data centre development.
- Incorporation of riparian vegetation along the northern boundary providing a buffer between the development and existing vegetation along Blacktown Creek.
- Provision of screen planting along the eastern boundary adjacent to McCoy Park.
- Limited visibility of the site from the west and north due to built form and vegetation.



# 6.0 THE PROPOSAL

## 6.1. PROJECT DESCRIPTION

### 6.1.1 SITE MANAGEMENT PROVISIONS

- The site has been planned as a secure mission critical facility for data storage facility. The site will have 24/7/365 secured access off Station Road and will incorporate perimeter security fencing and vehicular / pedestrian monitored entry / exit gates.
- Security fencing is to be set well back from the boundaries to allow for landscape zones and maintenance access without conflicting with the Data Centre Operator's security protocols which require clear sightline zones for surveillance and CCTV coverage.
- The site will be occupied by a small number of the Centre operator employees and a restricted number of transient visitors / customers / part time workers / transient contractors and maintenance personnel who will have supervised access to the site.
- General access to the site will be restricted and monitored / managed via on site operational staff.
- All deliveries , maintenance and waste collection will be arranged via private contractors. All deliveries into the building will be via the building's dedicated secure loading dock.
- The site will be provided with carefully planned security lighting and CCTV monitoring.

### 6.1.2 BUILDING COMPONENTS

- The Administration Office and Data Storage Hall components will both be of a 2 storey configuration.
- The administration office building will have a maximum building height of 13.6m.
- The data hall building will have a maximum building height of 16.9m excluding lift overrun and stairs for roof access .
- The bulk and scale of the proposed building is in line with Blacktown City Council DCP requirements and in keeping with the industrial locality and nature of the site.
- All external plant areas servicing the various components of the building will be set on grade and will be located on the northern and western sides of the Data Hall where there are limited views into the site.
- The development will also include the technical fitout of the Data Storage Hall of 5325.7sqm with associated back up plant and equipment, fire prevention and security services.
- The design of the Administration Office Building is based on the following performance criteria:
  - The Facility is to be designed and set up to facilitate 24hr / 7 days a week continuous uninterrupted operations.
  - A layered security protocol in regards to customer, staff, visitor, vehicular and service vehicle entry and exit to the facility and the site which will be tightly managed and restricted to authorised staff / personnel and authorised visitors only.
  - Logical and simple work flow of customers, staff, visitors and maintenance contractors.
  - Perimeter security fencing to the site perimeter with controlled site /building entries and exits.
  - A self contained Security Control Room with uninterrupted visual surveillance over the site and building entry.
  - Customer / visitor sign-in counter and reception area.
  - Access control and (where appropriate) man traps to sensitive security zones within the Administration Office area.
  - Disabled Access provision throughout the facility in accordance with the Disabled Discrimination Act (DDA) and other relevant Australian Standards.
  - Contemporary, flexible and attractive office and work areas.
  - Safe and easy maintenance and servicing routes to internal / external plant areas.
  - Secure loading / unloading, staging and holding areas.
  - Receiving dock to facilitate heavy good delivery.
  - Where possible design to comply with the 'Deemed to Satisfy' requirements of the BCA. Layout configuration to allow adequate access / egress paths to avoid Fire Engineered solutions where possible.
- The Administrative Office component (519.2m2) will include associated staff / customer / maintenance personnel parking of 20 spaces. This parking provision is in line with the building's specialised Data Centre usage and the restricted nature of external visitor visitations to the site. A detailed Traffic Engineering report has been included in the SSDA package to outline the justifications for reduced parking allowance on the site.

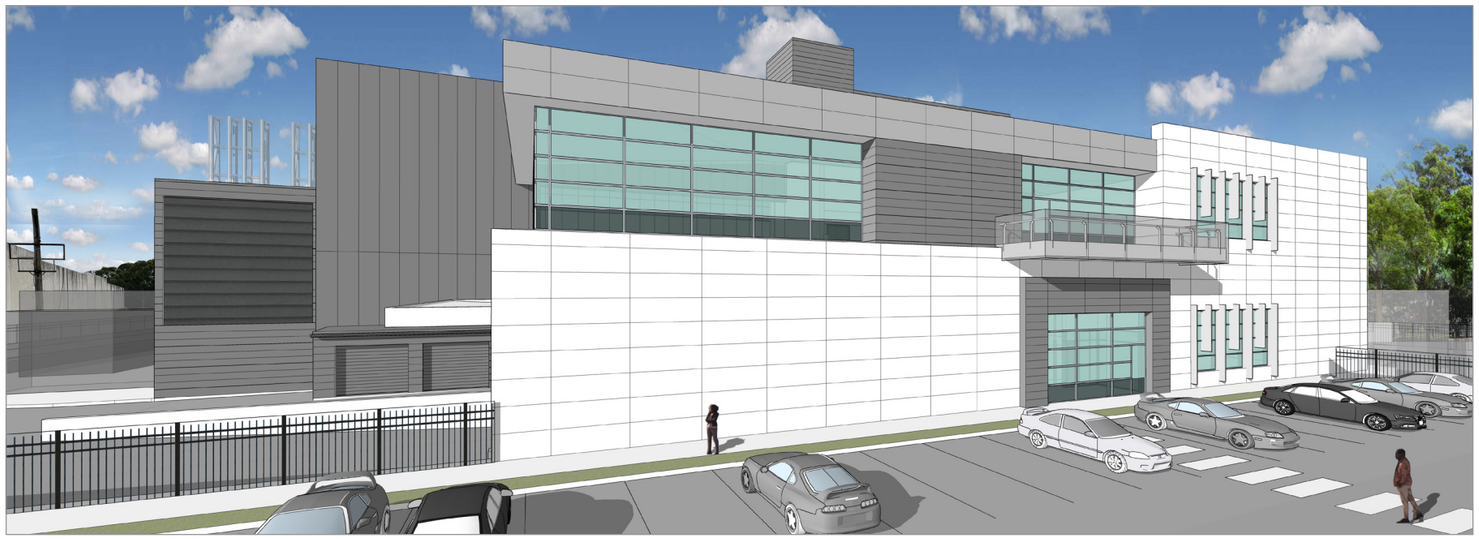
VIEW OF DATA HALL & ADMINISTRATION BUILDING FROM WEST

VIEW OF DATA HALL & ADMINISTRATION BUILDING FROM SOUTH

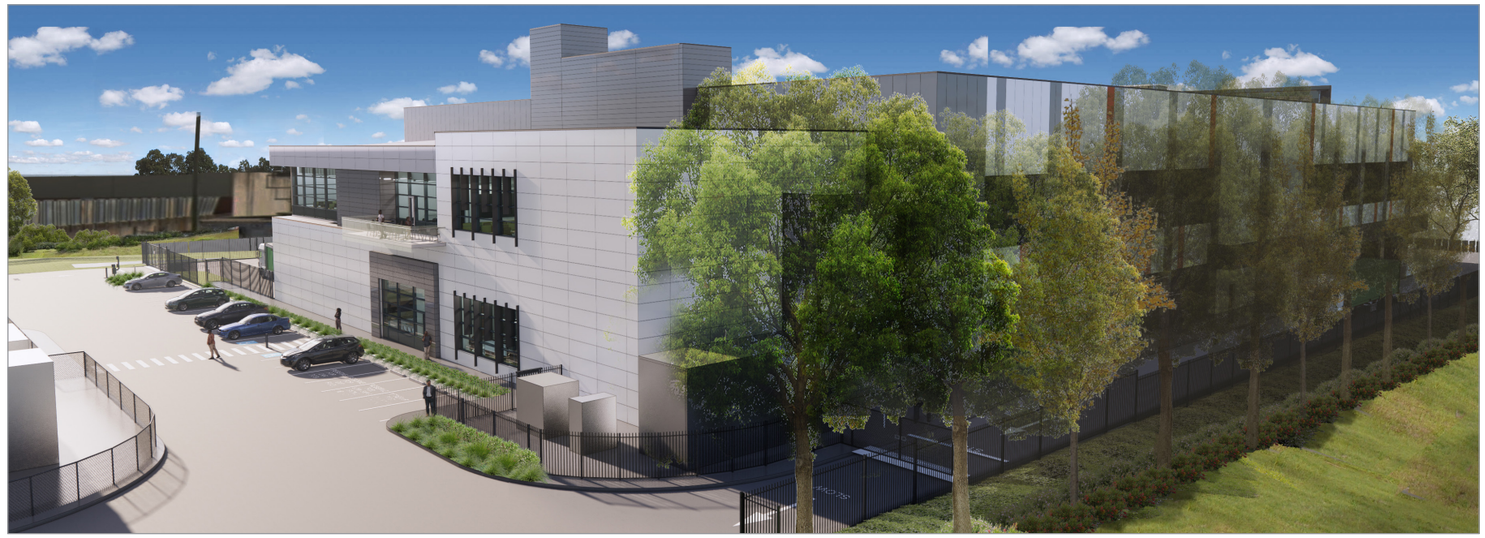
# THE PROPOSAL

### 6.1.3 BUILT FORM & FACADE ARTICULATION

- The building form is derived from the proposed function of the facility as a state-of-the-art data storage centre incorporating administration office space, data storage hall, plant and equipment areas.
- The proposed modular building form responds to the specific functions of the data centre, the extent of plant and equipment required and the high level of security necessary for the facility.
- The proposed building usage and design aesthetic will contribute positively to the future desired character for the this general industrial employment area.
- The proposed building is located centrally within the site providing setbacks for landscape screening, truck manoeuvring and noise attenuation.
- The 2 storey Administration Office Building is to be located at the southern end of the site adjacent to at grade parking.
- Direct sight lines to the building entry will be available when viewed from car park and pedestrian circulation paths.
- The proposed first floor balcony will provide an awning to the building entry for weather protection whilst enhancing a strong sense of entry.
- The administration building façades comprise of a combination of horizontally modulated panels, neutral in colour with integral finish and glazing to provide a simple and efficient building form reflective of the building's internal technical functions.
- The lower scale massing of the administration building provides a human scale to the facade addressing the site entry.
- Data centers are a specific building typology which enables the facilitation and storage of critical applications and data.
- For the data hall to function, a large building massing is required to house substantial mechanical and plant components and large scale areas dedicated for data storage.
- Building height has been driven by the functional requirements of areas dedicated for plant and equipment which require a floor to floor of 7m for the ground floor and a floor to floor of 4.47 for the first floor.
- A 2 storey data storage hall is located centrally within the heart of the building complex connected to the administration block and surrounding plant and equipment.
- Data hall building components are required to have blank solid walls without windows.
- The data hall building façades will comprise of a combination of vertically modulated panels, neutral in colour with some highlight coloured panels for interest.
- Facade panels will have an integral colour and finish to withstand undesirable weather conditions and reduce maintenance.
- The data centre building bulk, massing and height is visually reduced through the modulation of facade materials that defines the two levels of the building.
- This facade modulation assists in presenting a more human scale along the site boundary to McCoy Park.
- External plant equipment is proposed to be located externally at-grade adjacent to the western and northern facades of the data halls where the building massing will screen this equipment from surrounding residential areas,public streets and recreation areas including McCoy Park and Station Road.
- A neutral, dark colour scheme will be applied to plant areas including walls, screens and service elements to reduce visibility.
- Stairs and lifts are expressed as elements on the northern and southern facades.
- A number of penetrations within the building facades will be required to accommodate air intake requirements for plant and services.
- External equipment along the eastern facade addressing McCoy Park will be fully screened using a decorative perforated metal screen.
- Robust access and building maintenance systems shall be incorporated into the facade and roof to allow for future cleaning and maintenance in compliance with all Workplace Health and Safety (WH&S) requirements, local statutory regulations and relevant Australian Standards.



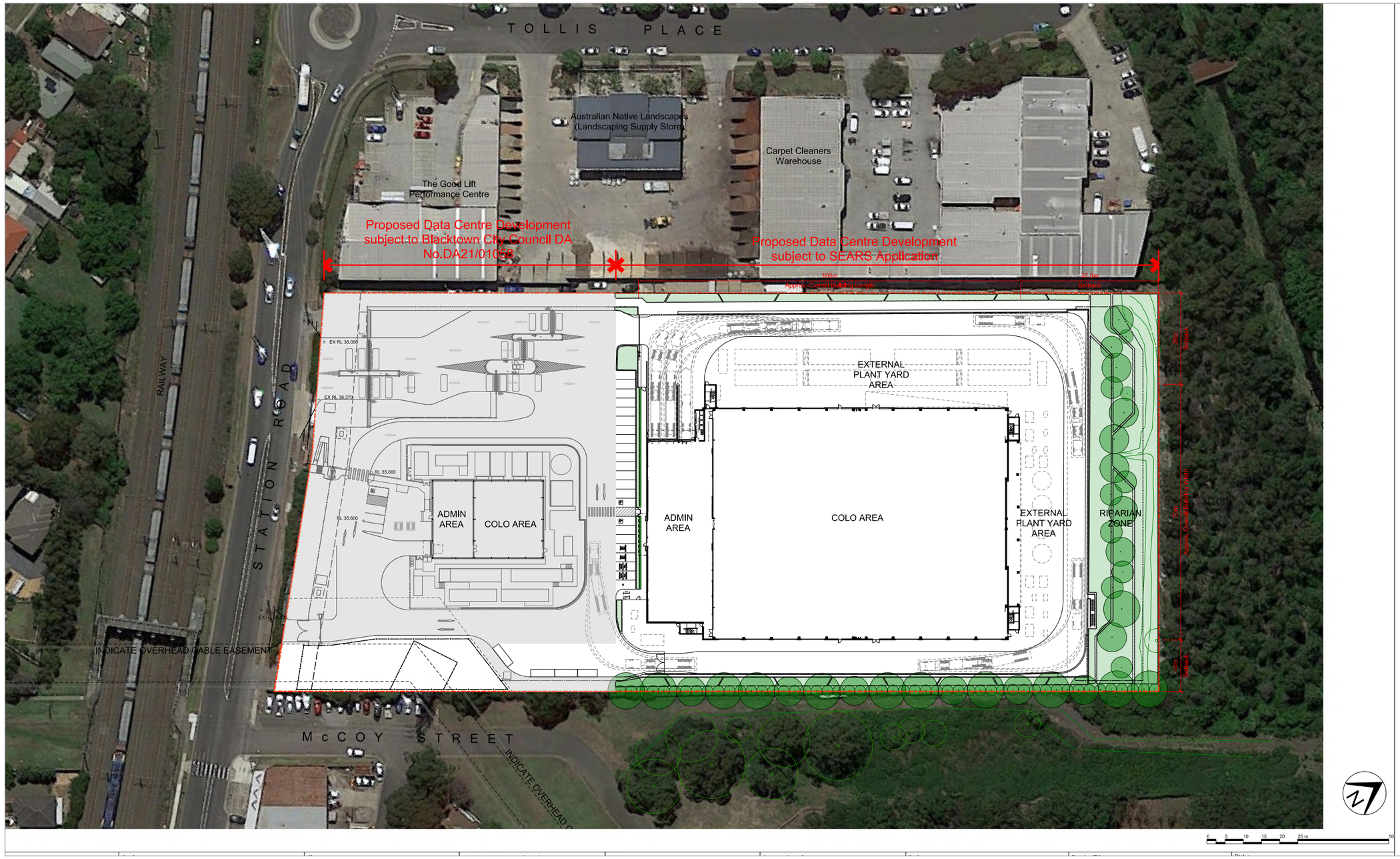
VIEW OF ADMINISTRATION BUILDING FRONT FACADE AND ENTRY FROM SOUTH WEST



VIEW OF DATA HALL BUILDING FROM SOUTH

# THE PROPOSAL

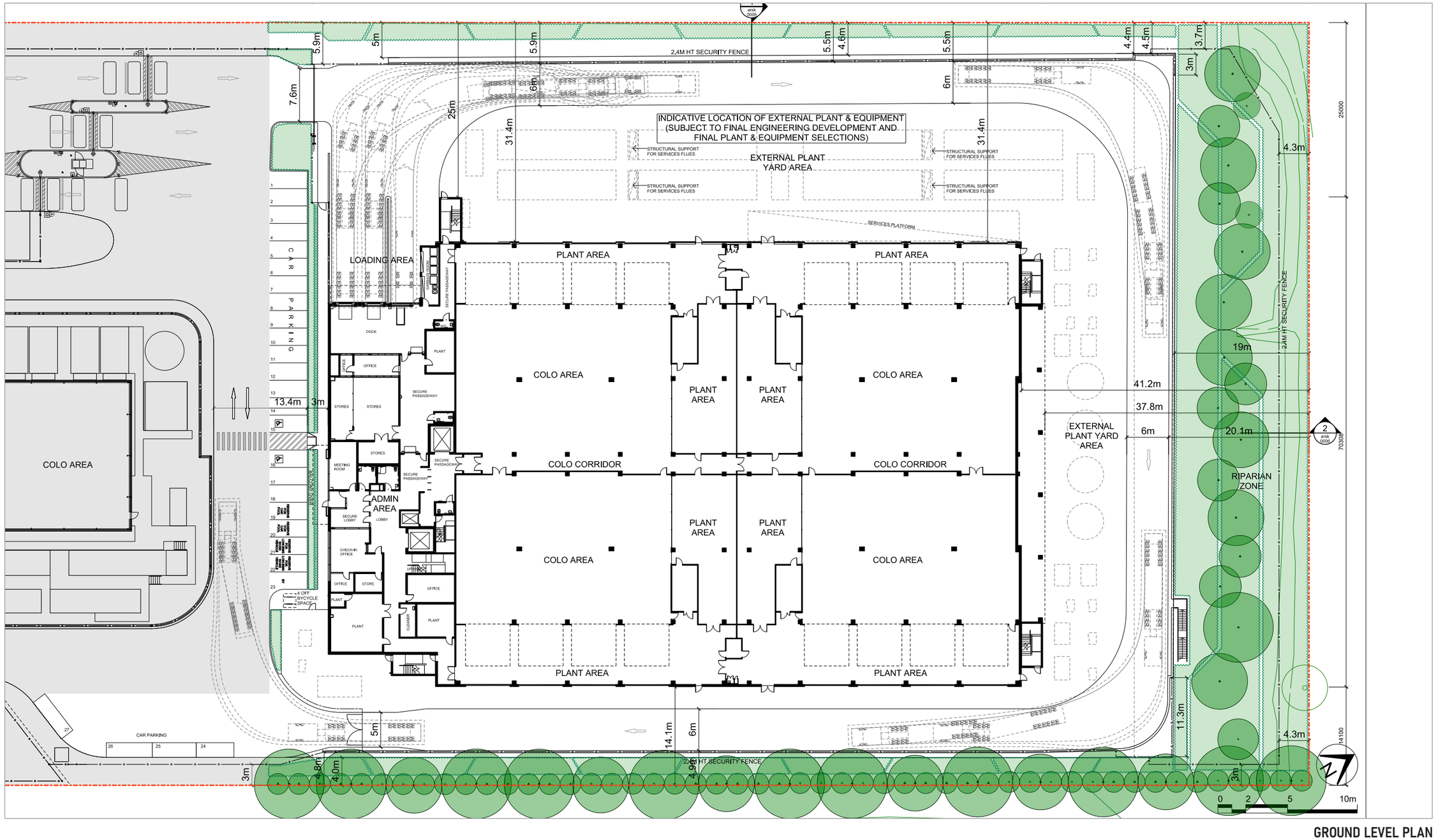
## 6.2. FLOOR PLANS




SITE PLAN

# THE PROPOSAL

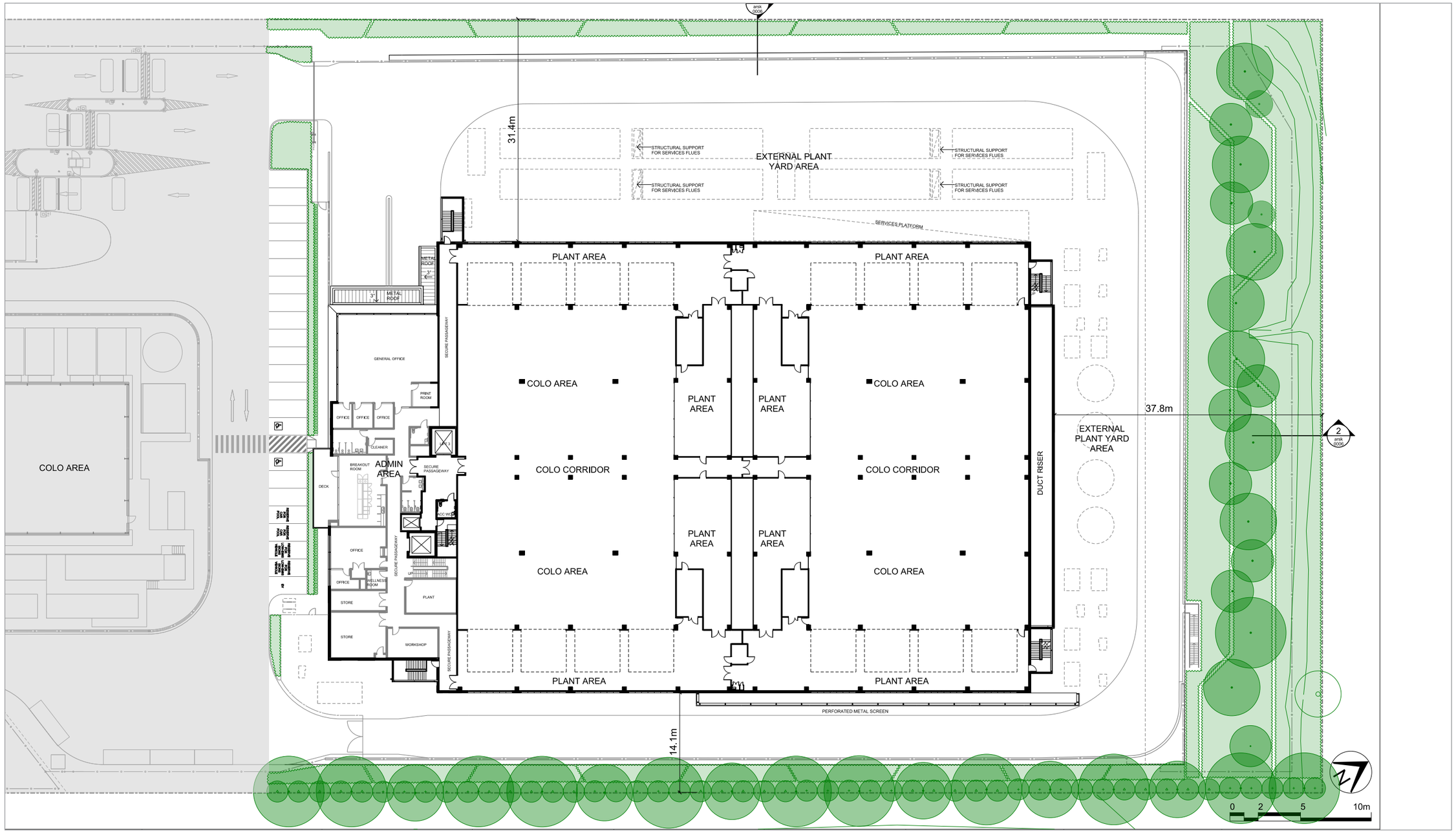
## FLOOR PLANS




GROUND LEVEL PLAN

# THE PROPOSAL

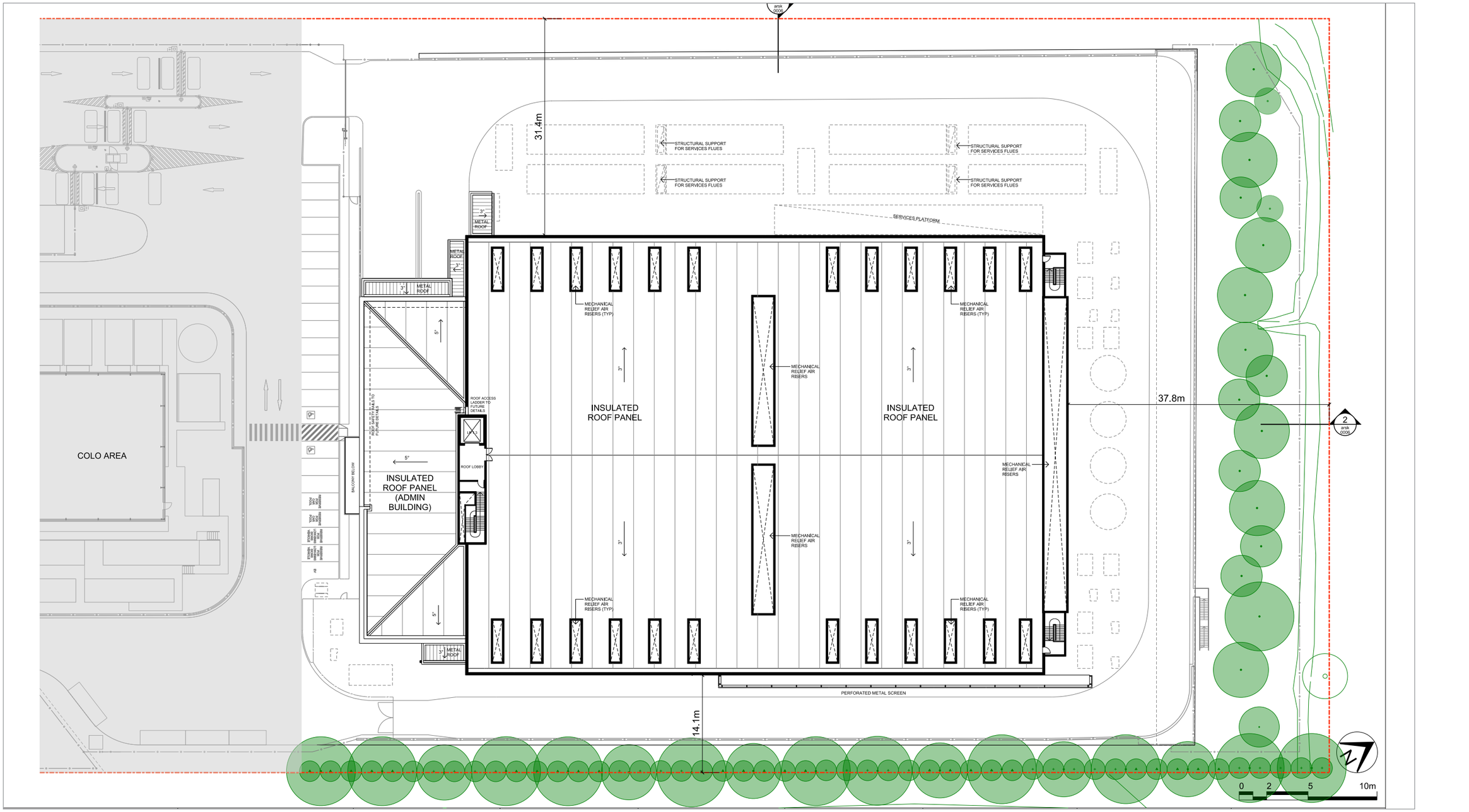
## FLOOR PLANS




FIRST FLOOR PLAN

# THE PROPOSAL

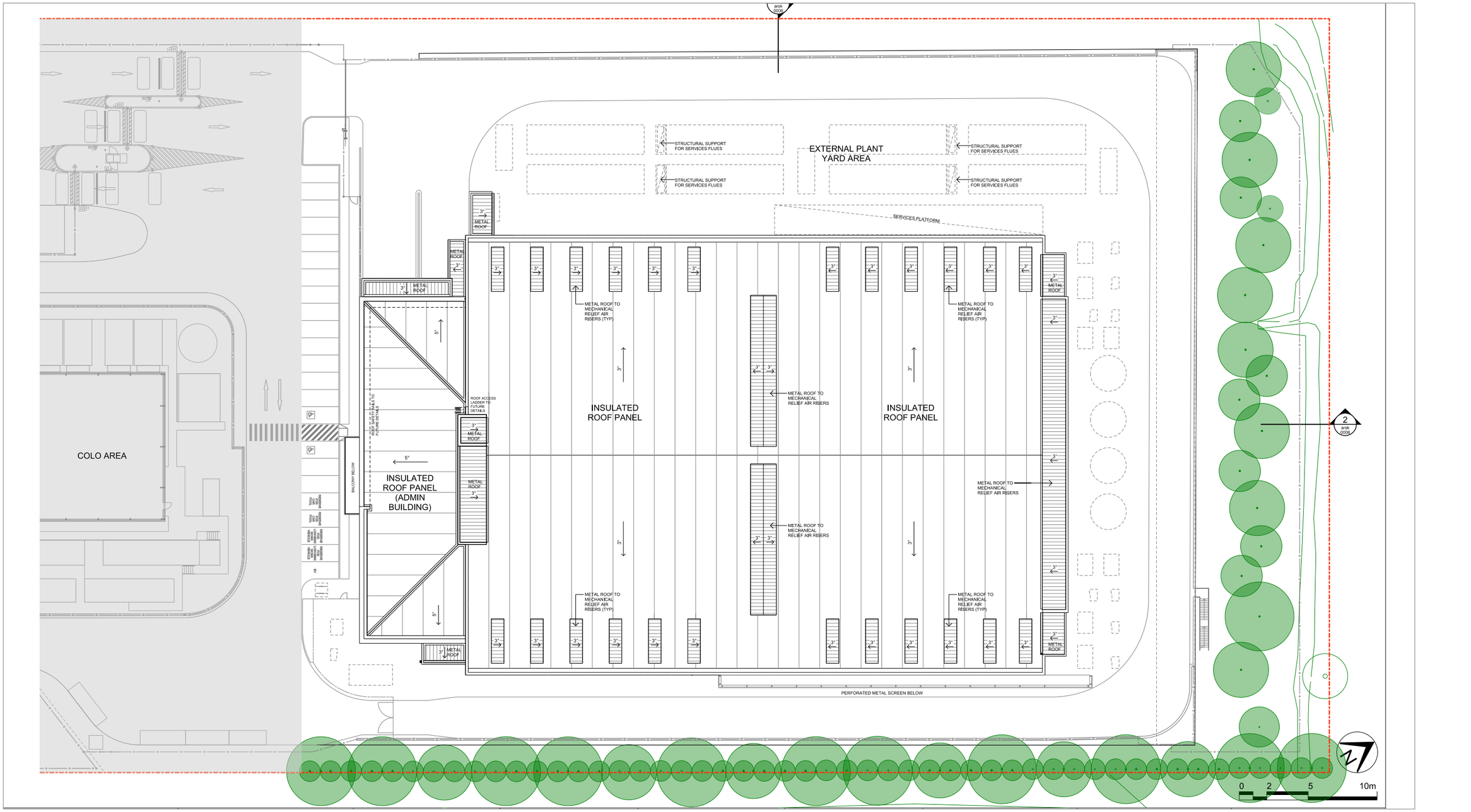
## FLOOR PLANS




ROOF LOBBY PLAN

# THE PROPOSAL

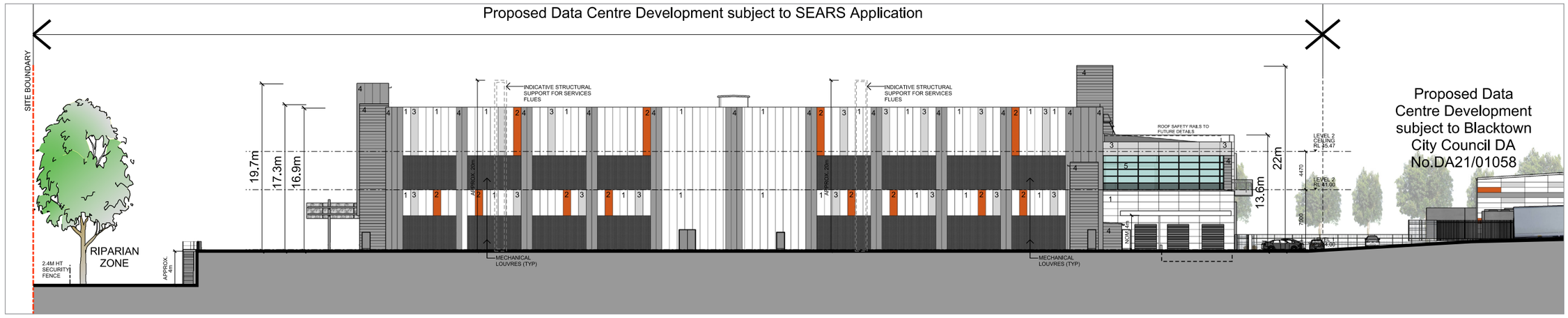
## FLOOR PLANS



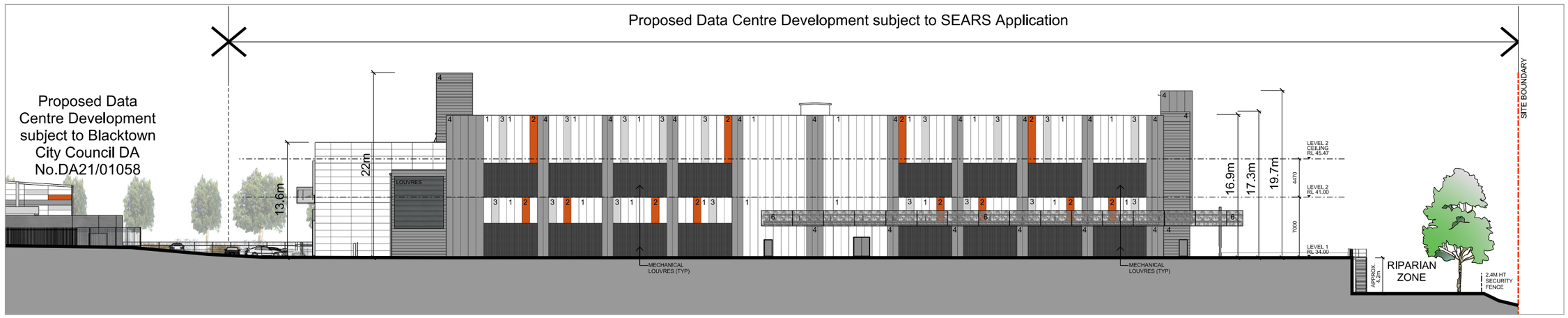

ROOF PLAN

# THE PROPOSAL

## 6.3. ELEVATIONS



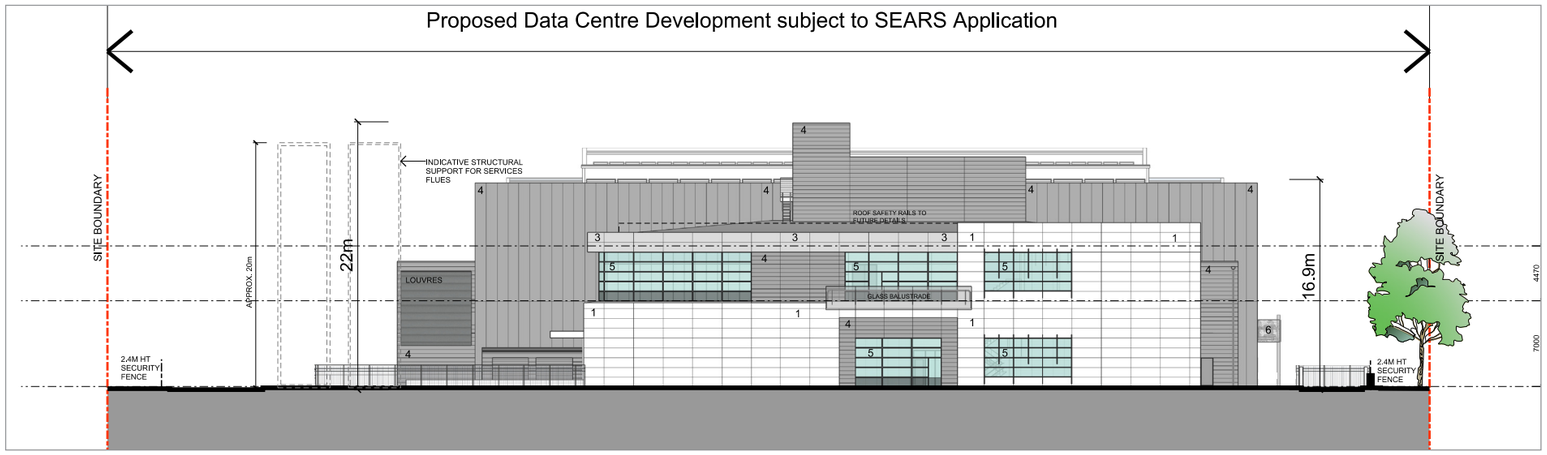

NORTH-WEST ELEVATION



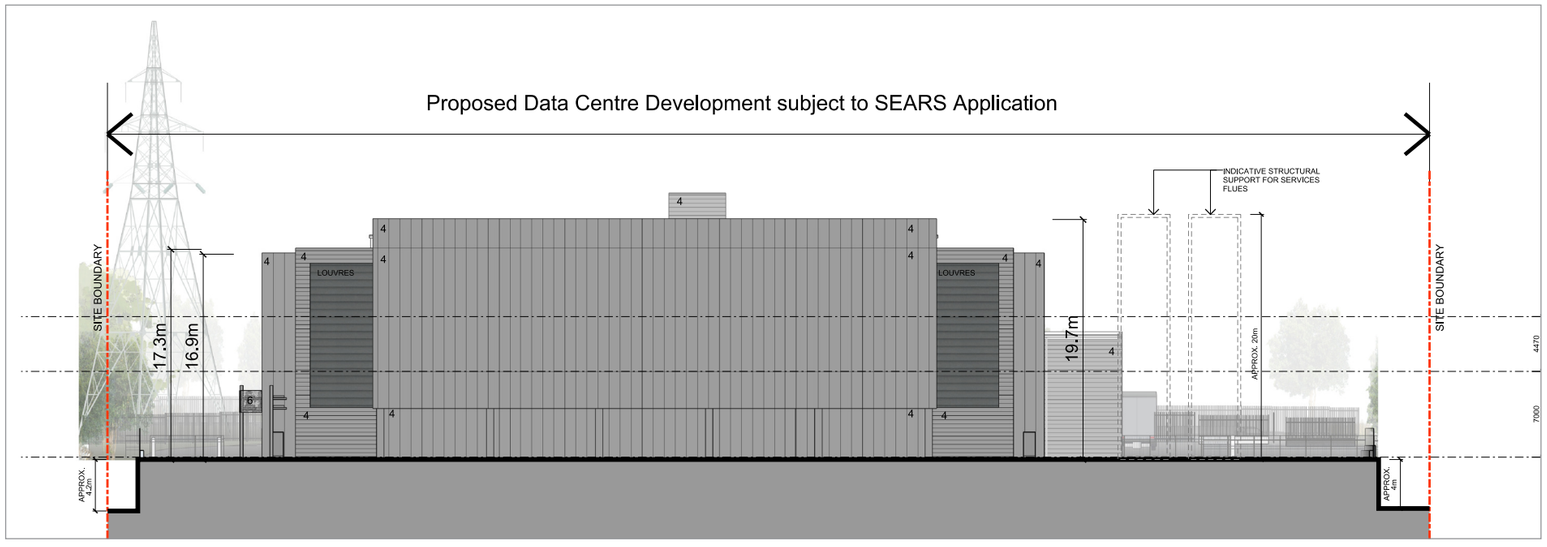

SOUTH-EAST ELEVATION

# THE PROPOSAL

## ELEVATIONS

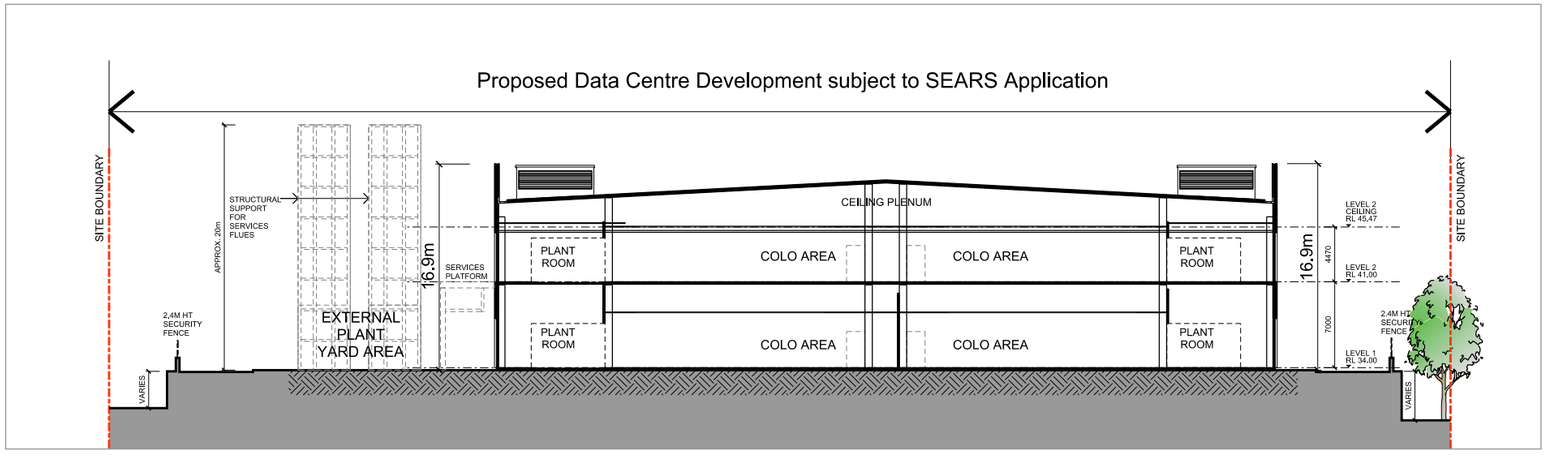



SOUTH-WEST ELEVATION

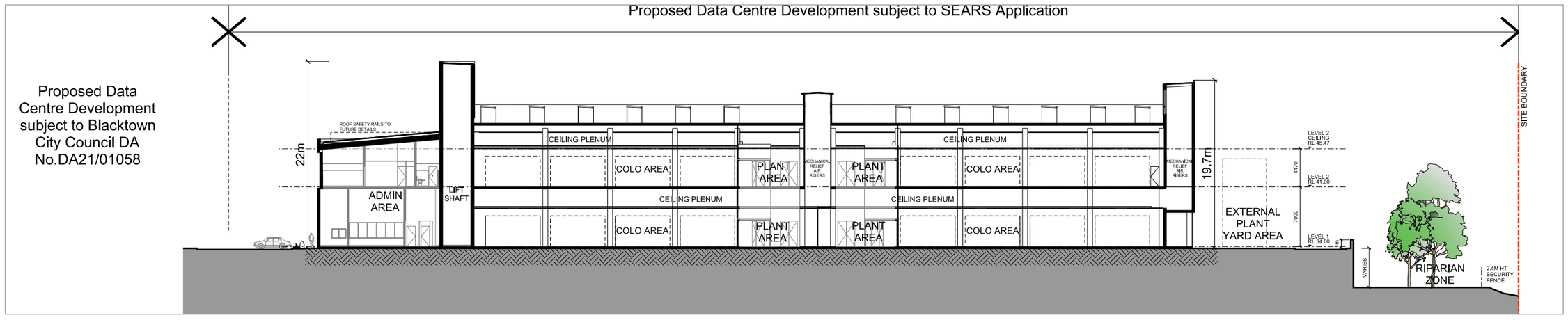



NORTH-EAST ELEVATION

## 6.4. SECTIONS




SECTION 1-1




SECTION 2-2

# THE PROPOSAL

## 6.5. MATERIALS AND FINISHES


NORTH-WEST ELEVATION

1. Colorbond Thredbo White

2. Colorbond Copper Penny

3. Colorbond Shale Grey

4. Colorbond Woodland Grey

5. Green Glass
   Natural Anodised Frames

# THE PROPOSAL

## MATERIALS AND FINISHES


SOUTH-EAST ELEVATION

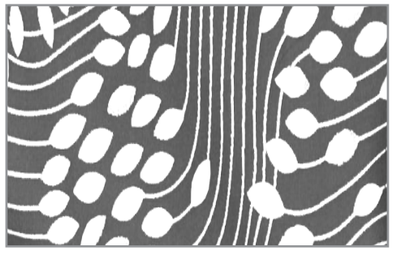
1. Colorbond Thredbo White

2. Colorbond Copper Penny

3. Colorbond Shale Grey

4. Colorbond Woodland Grey

5 Green Glass
Natural Anodised Frames



6. Perforated metal screen
Colour : Natural Anodised

# THE PROPOSAL

## MATERIALS AND FINISHES


SOUTH-WEST ELEVATION

1. Colorbond Thredbo White

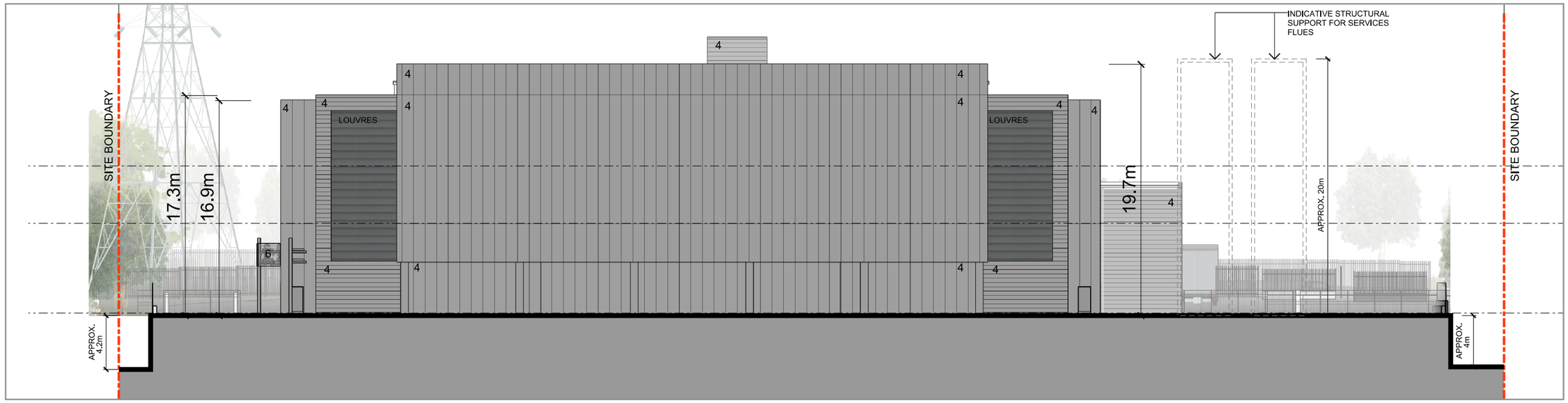
3. Colorbond Shale Grey

4. Colorbond Woodland Grey

5. Green Glass
   Natural Anodised Frames

# THE PROPOSAL

## MATERIALS AND FINISHES




NORTH-EAST ELEVATION

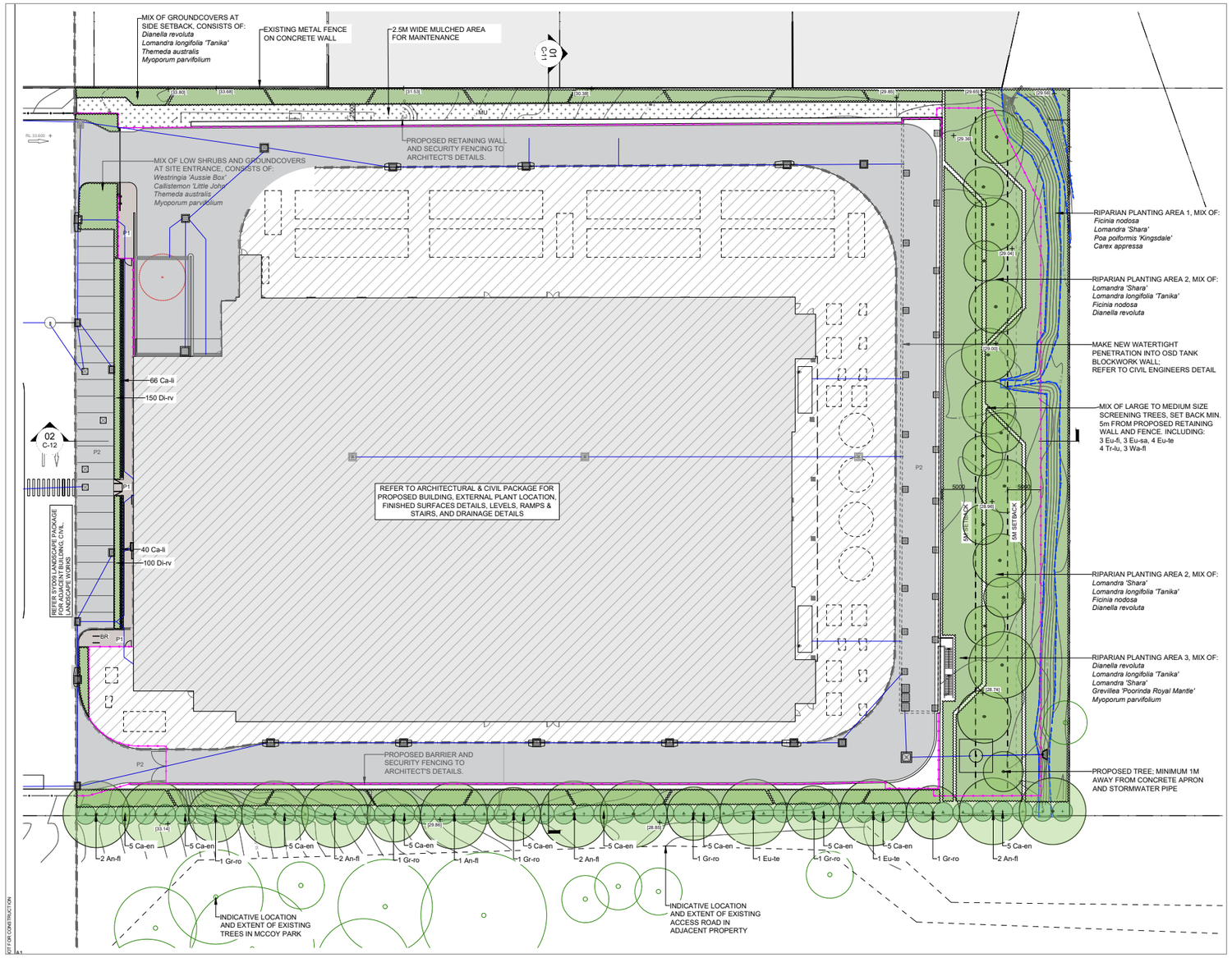
3. Colorbond Shale Grey

4. Colorbond Woodland Grey

# THE PROPOSAL

## 6.6. LANDSCAPE DESIGN

- The Landscape Design Concept is to create a unified landscape treatment that enhances visual amenity, contributes to biodiversity and addresses security requirements.
- Whilst the operation of the facility requires the provision of visual access and clear sight lines across the site, planting has been incorporated along boundaries to provide attractive and practical landscape screening and buffer planting. In particular, the planted areas will provide visual softening of the proposed building from McCoy Park.
- The existing site is currently of a low visual / environmental quality and is generally cleared of existing vegetation.
- The landscape treatment gives priority to the main emphasis of design, which is to maintain visual access and clear sight lines for security and correct operation of the premises. At the same time, the design explores the opportunity to complement the proposed architectural external finishes, to soften hardstand areas, and to provide landscape buffer to the general set back and perimeter fencing with an attractive palette of indigenous / native plants.
- The key Landscape design principles include:
  - Incorporation of indigenous and native plant species with low water requirements.
  - A mix of plant species mainly selected from the Blacktown City Council DCP 2015 recommended plant list.
  - Separation of all landscape areas from vehicular areas by means of a kerb to civil engineer's design.
  - Landscape buffers including a combination of tall canopy trees, shrubs and groundcovers within site set back areas.
  - Riparian planting adjacent to the northern boundary along the swale and within the flood storage area.
  - All proposed trees to have a minimum 2m high trunk clearance at installation. It is highly recommended to allow for min. 18-24 months of lead time at local nurseries.
  - All proposed shrubs and groundcovers to be max.1m high for visual surveillance.
  - Utilisation of water collected on-site for irrigation.
  - Wood bark mulching to all planting areas.

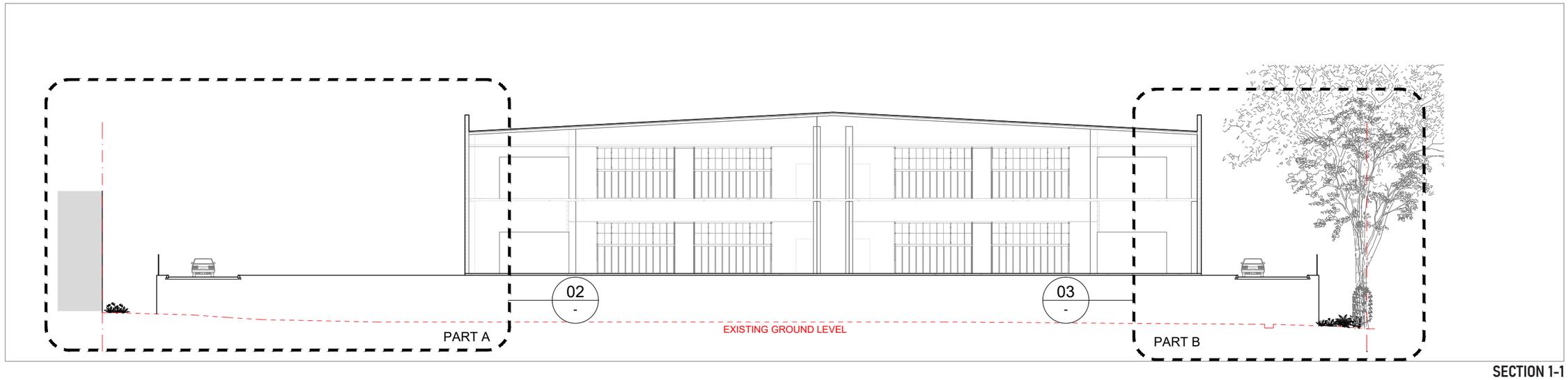



LANDSCAPE PLAN

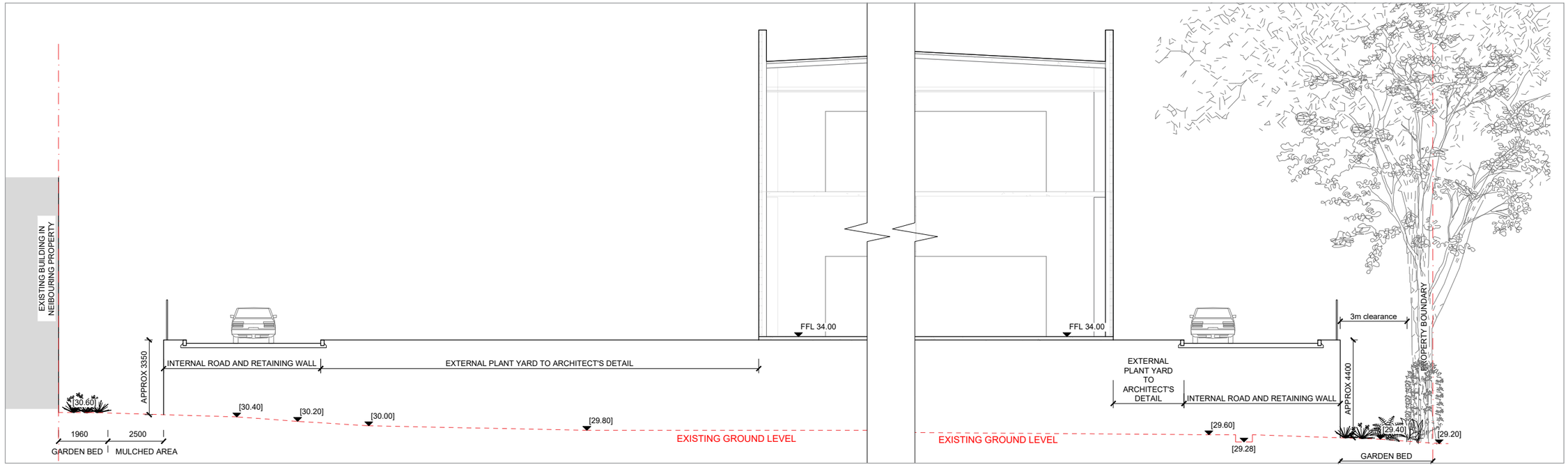
STUDIO 17

# THE PROPOSAL

### 6.6.1 LANDSCAPE SECTIONS




SECTION 1-1

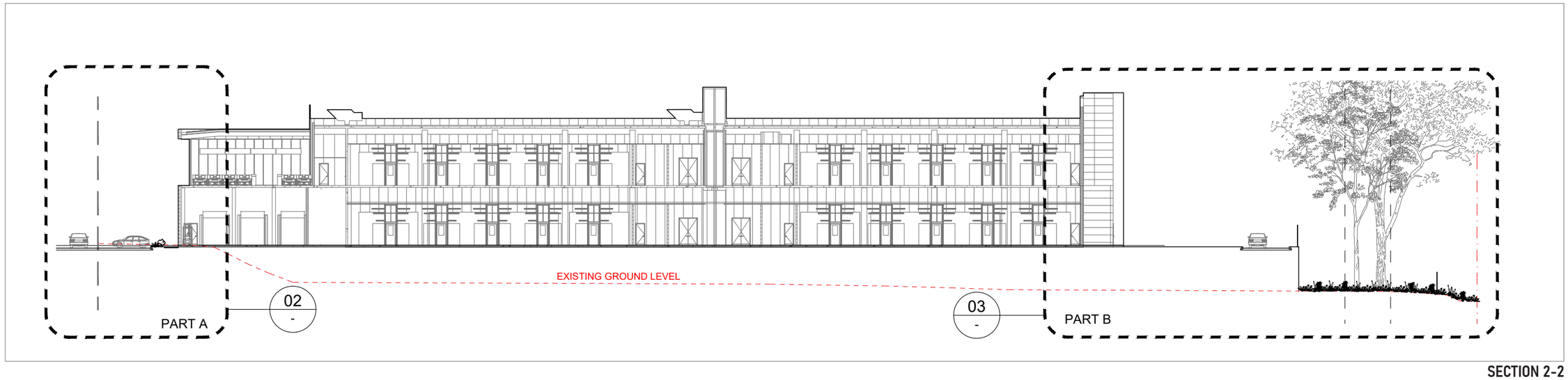



SECTION 1-1 PART A

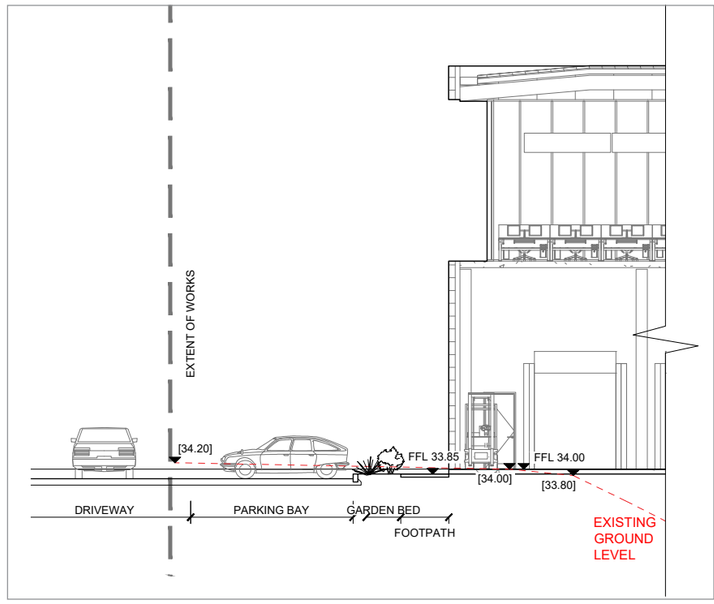
SECTION 1-1 PART B

STUDIO 12

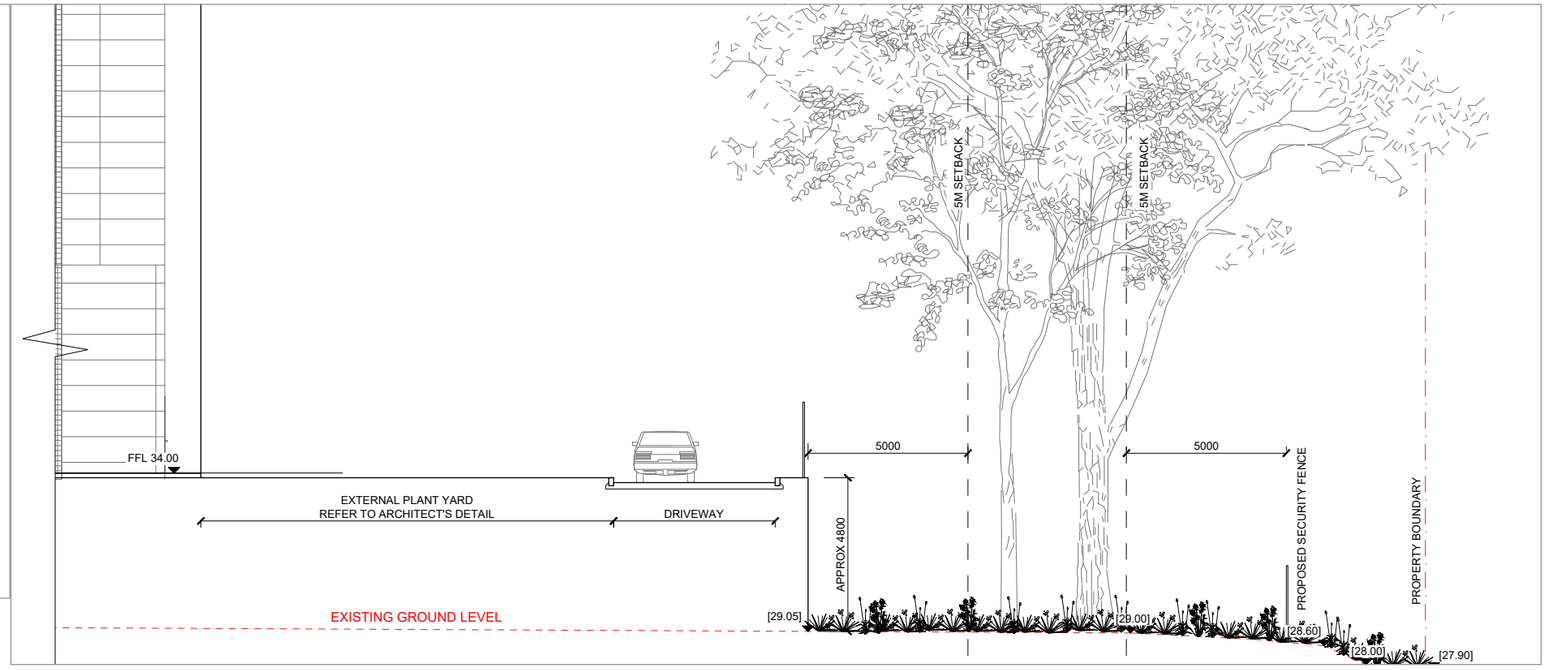
### 6.6.2 LANDSCAPE SECTIONS




SECTION 2-2




SECTION 2-2 PART A




SECTION 2-2 PART B

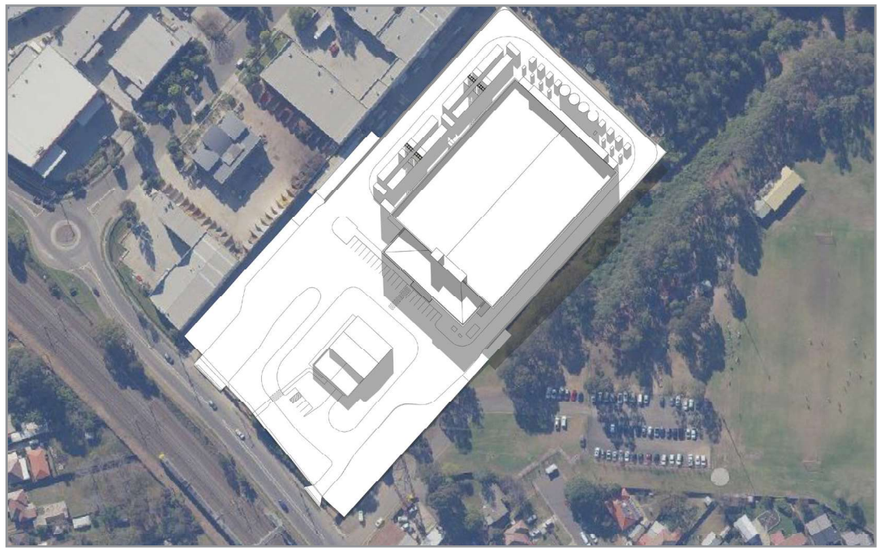
STUDIO 17

# 7.0 AMENITY

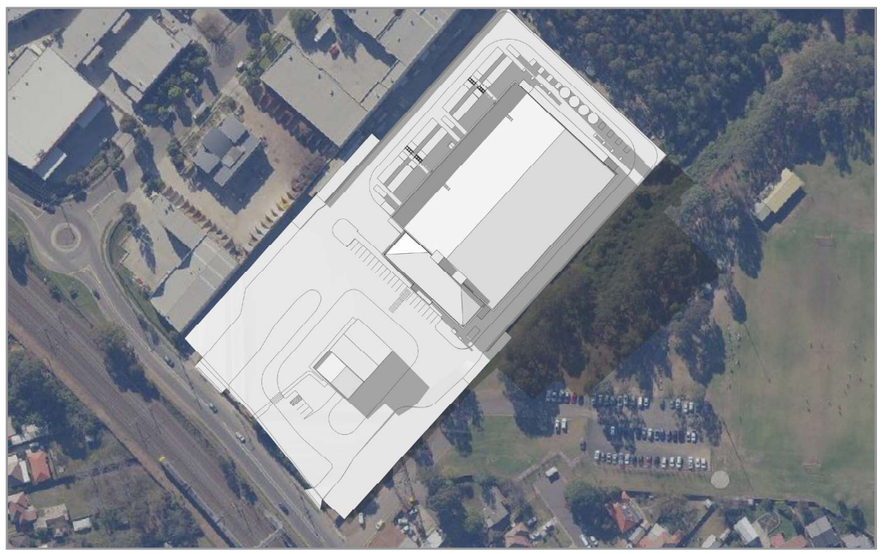
## 7.1. SOLAR ACCESS

- The proposed administration and data hall building massing have been located on the site to ensure that there will be no overshadowing of McCoy Park public recreation area adjacent to the south eastern boundary.
- The following shadow diagrams illustrate the over shadowing on21st June Mid winter Solace at 9am, 12 noon and 3pm.

21st June 9.00 am



21st June noon



21st June 3.00 pm

# 8.0 BETTER PLACED (GOVERNMENT ARCHITECT NSW, 2017) ASSESSMENT

## OBJECTIVE 1

**Better fit contextual, local and of its place**

*Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, heritage and communal aspirations. It also contributes to evolving and future character and setting.*

- The data centre use will be compatible with the light industrial uses located to the west and north of the site and as a place of employment.
- The SYD08 data centre development has been designed to fully integrate with the recently approved SYD09 data centre located to the south of the site.
- The masterplan has been arranged to provide a planted buffer to the vegetated edge of McCoy Park and the Blacktown Creek riparian corridor.
- Landscape screen planting will be provided along the eastern boundary to mitigate visual impact to the residential communities located on the eastern side of McCoy Park.

## OBJECTIVE 2

**Better performance sustainable, adaptable and durable**

*Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.*

- The SYD08 data centre development aims to achieve a LEED Gold rating to ensure a high performance, sustainable outcome for the project. For further information refer to the ESD report prepared by LCI data 31January 2022 submitted as part of the DA submission.
- Proposed sustainability initiatives will include:
  - Continuous roof and external wall insulation.
  - Optimised window to wall ratio.
  - High performance glazing systems.
  - Provision of high efficiency cooling systems.
  - Building Management control system.
  - Energy efficient IT Equipment.
  - High efficient water fixtures and appliances.
  - Rainwater capture and reuse.
  - Low irrigation demand plant selection.
  - Strategic water metering.
  - Stormwater management.
  - Low emissions vehicles.
  - Electric vehicle chargers.
  - Construction and demolition waste reduction.
  - Recyclable collection and storage facilities.

## OBJECTIVE 3

**Better for community inclusive, connected and diverse**

*The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.*

- The provision of a secure mission critical data centre in this location will add to the diversity of light industrial development types and employment opportunities within Blacktown LGA.

## OBJECTIVE 4

**Better for people safe, comfortable and liveable**

*The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.*

- Although the requirement is for a secured site, safe and equitable pedestrian and vehicle access will be provided from Station Road.
- Access for All is provided throughout the development.
- Outdoor seating and open space will be provided as part of the approved SYD09 DA and will be available for use as part of the SYD08 development.
- The SYD08 development will be located within 400 metres of McCoy Park which will provide recreational facilities for employees.
- As part of the LEED Gold rating, the following initiatives will be provided to ensure that a comfortable environment is provided within the building:
  - Continuous roof and external wall insulation.
  - Optimised window to wall ratio.
  - High performance glazing systems.
  - Provision of high efficiency cooling systems.
  - Building Management control system.
  - Energy efficient IT Equipment.
  - High efficient water fixtures and appliances.
  - Rainwater capture and reuse.
  - Low irrigation demand plant selection.
  - Strategic water metering.
  - Stormwater management.
  - Low emissions vehicles.
  - Electric vehicle chargers.
  - Construction and demolition waste reduction.
  - Recyclable collection and storage facilities.

## OBJECTIVE 5

**Better working functional, efficient and fit for purpose**

*Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.*

- The development is designed as a state-of-the-art data storage centre facility incorporating administration office space, data storage hall, plant and equipment areas.
- The proposed modular building form responds to the specific functions of the data centre, the extent of plant and equipment required and the high level of security necessary for the facility.

## OBJECTIVE 6

**Better value creating and adding value**

*Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.*

- The building has been designed to perform as a data storage centre but if in the future the use was to change, the building could be adapted and reconfigured to accommodate warehouse or other light industrial uses.
- Materials selected are robust with integral colours and finishes to provide high quality, durability and low maintenance.

## OBJECTIVE 7

**Better look and feel engaging, inviting and attractive**

*The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.*

- The functionality of a mission critical data centre facility requires high level security and extensive areas of plant.
- The proposed architectural design will deliver a high quality facade treatment to enhance visual amenity.
- In addition to high quality building facade treatments, landscape screening located along the eastern boundary will visually enhance the development when viewed from McCoy Park and the neighbouring residential community.

# 9.0 GREENER PLACES (GOVERNMENT ARCHITECT NSW, 2020) ASSESSMENT

## PRINCIPLE 1

**Integration: combine green infrastructure with urban development and grey infrastructure**

*There is a global transition away from single-purpose grey infrastructure to more multipurpose infrastructure that mimics nature, provides critical ecosystem services, and promotes healthy and active living. The principle of integration proposes to combine green space with urban development and grey infrastructure.*

- External areas within the development are to incorporate a unified landscape treatment that enhances visual amenity, contributes to biodiversity and addresses security requirements.
- The existing site is currently of a low visual / environmental quality and is generally cleared of existing vegetation.
- Whilst the operation of the proposed facility requires the provision of visual access and clear sight lines across the site, vegetation has been incorporated along boundaries to provide attractive and practical landscape screening and buffer planting with a palette of indigenous / native plants.
- Planting including tall canopy trees and shrubs provide a green edge along the eastern boundary to provide visual softening of the proposed building from McCoy Park.
- The swale, flood storage area and associated riparian planting adjacent to the northern boundary, will minimise impacts to the water quality, flows and ecosystem of Blacktown Creek.

## PRINCIPLE 2

**Connectivity: create an interconnected network of open space**

*Greener Places promotes the creation of a network of high-quality open spaces that connect with town centres, public transport hubs, rivers, creeks, and employment and residential areas – creating a network of open space. The network includes physical and functional connections that benefit people and wildlife.*

- While the natural environment surrounding the site has been significantly altered by construction of light industrial and commercial developments, riparian vegetation provides a green corridor along Blacktown Creek.
- The Landscape Design incorporates an 18m wide vegetated zone along the northern boundary, associated with the swale and flood storage area, which will provide a planted buffer between the development and Blacktown Creek. This will assist in maintaining water quality and flows within the watercourse.

## PRINCIPLE 3

**Multifunctionality: deliver multiple ecosystem services simultaneously**

*Multifunctional green spaces should be high-quality and high-performing, producing, social, environmental, and economic benefits. Multifunctionality represents the ability of green infrastructure to deliver multiple ecosystem, environmental, and other services simultaneously.*

- Whilst the operation of the facility requires the provision of visual access and clear sight lines across the site, planting has been incorporated along boundaries to provide attractive and practical landscape screening and buffer planting.
- Tall canopy trees and shrubs have been incorporated along the eastern boundary to provide screening and visual softening of the proposed building from McCoy Park.
- Riparian planting and the flood mitigation zone along the northern boundary is to provide a buffer between the development and Blacktown Creek which will assist in maintaining water quality and flows along the watercourse.
- Additional planting within the site is to contribute to the visual amenity of the development.

## PRINCIPLE 4

**Participation: involve stakeholders in development and implementation**

*Participation relates to a planning process that is open to all and incorporates the knowledge and needs of diverse parties. It involves stakeholders in the development and implementation of neighbourhood, local, district, and regional green infrastructure policies and actions.*

- The site has been designed as a secure mission critical facility and does not provide community gathering areas or community facilities.
- Input from government agencies at State and local levels will form part of the ongoing design and documentation process.
- A community consultation session was held on the 15th February , however there was no attendees.