

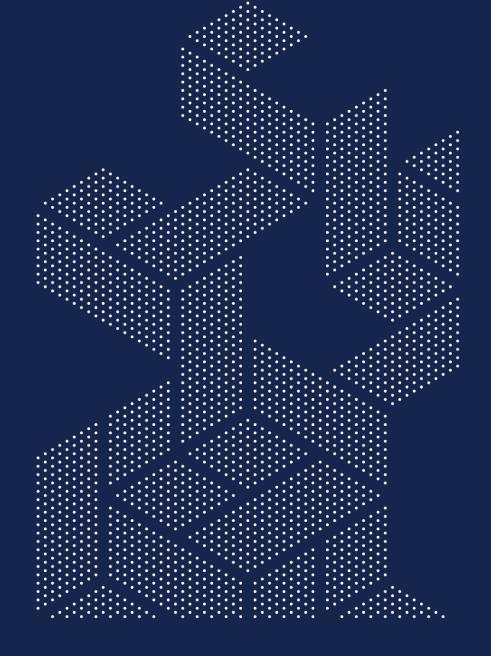
Walker Corporation

## **Adelaide Festival Plaza**

LOADING AND CAR PARKING ASSESSMENT

WGA232086 WGA232086-RP-TT-0002\_B

17 March 2025



#### **Revision History**

REV	DATE	ISSUE	ORIGINATOR	CHECKER	APPROVER
Α	13/03/2025	DRAFT	JM	JM	EK
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## 1 INTRODUCTION

#### 1.1 General

WGA has been engaged by Walker Corporation to undertake a review of the existing Adelaide Festival Plaza basement car park and loading dock layout with consideration of the combined Festival Tower 1 and 2 operations.

#### 1.2 Reviewed Documentation

The following assessment has been informed by a review of the following information, including Development Application plans prepared by Walker Corporation and JPW Architects:

- Basement Level 01 to 05 Layout Plans (Project No. 21011).
  - Overall Plan Basement Level B5 DA-AR-2--1000 (Rev 00).
  - Overall Plan Basement Level B4 DA-AR-2--1001 (Rev 00).
  - Overall Plan Basement Level B3 DA-AR-2--1002 (Rev 00).
  - Overall Plan Basement Level B2 DA-AR-2--1003 (Rev 00).
  - Overall Plan Basement Level B1 DA-AR-2--1004 (Rev 00).
- Recent loading schedules provided by Walker Corporation.
- Preliminary Waste Advice Adelaide Festival Plaza Tower 1 (update) & Tower 2 updated
   6 February 2025 prepared by Rawtec.

#### 1.3 Proposed Development

WGA understands that it is proposed to construct an additional high-rise mixed-use tower within the Adelaide Festival Plaza precinct and is to comprise the following:

- 36 floors of commercial office space.
- Up to 3,000 sqm of public civic space.
- Two (2) floors of food and beverage space.
- Terrace-level dining.

Table 1 summarises the proposed uses and their respective yields across both Tower 1 and Tower 2.

**Table 1: Summary of Adelaide Festival Plaza Development Yield** 

USE	TOWER 1	TOWER 2	TOTAL
Office	48,060 sqm	50,000 sqm	98.060 sqm
Retail	104 sqm	940 sqm	1,044 sqm
Restaurant	310 sqm	-	310 sqm
Rooftop Bar	-	834 sqm	834 sqm
TOTAL	48,474 sqm	51,774 sqm	100,248 sqm

## 2 CAR PARKING CONSIDERATIONS

#### 2.1 General

Plans of the modified parking layout prepared by JPW Architects dated 12 March 2025 indicate that the basement car parking levels within Adelaide Festival Plaza will include 1,354 spaces in total, comprising:

- Basement Level 1: 105 spaces, including:
  - 101 spaces allocated to Parliament House.
  - 1 accessible parking space.
- Basement Level 2: 169 spaces, including:
  - 5 accessible spaces.
- Basement Level 3: 349 spaces, including:
  - 3 accessible spaces.
- Basement Level 4: 371 spaces, including
  - 3 accessible spaces.
- Basement Level 5: 360 spaces, including:
  - 2 accessible spaces.

The proposal seeks to maximise the parking yield within the basement car parking levels, with a review of the proposed modifications undertaken to assess the compliance of the proposal in relation to the following standards:

- Australian Standard for Parking Facilities: Off-street Car Parking (AS2890.1); and
- Australian Standard for Parking Facilities: Off-street Parking for People with Disabilities (AS2890.6).

The key findings of the assessment are outlined as follows:

#### 2.1.1 Car Parking Arrangements

A number of additional car parking spaces have been proposed within the basement car parking levels where appropriate. The proposal has been reviewed against the requirements outlined within Australian Standard for Parking Facilities Part 1: Off-street Parking (AS2890.1) and are deemed to be appropriate noting the following key considerations:

- All proposed spaces are typically dimensioned with a width of 2.5m, a length of 5.4m and accessed from a 5.8m wide aisle in accordance with Section 2.4 of AS2890.1 (for User Class 2 parking facilities).
- The proposed columns located proximate to existing car parking spaces are located outside of the design envelope illustrated within Figure 5.2 of AS2890.1 and are not expected to increase the difficulty of manoeuvring into the adjacent car parking spaces.
- All small car parking spaces have been dimensioned 2.3m wide and 5.0m long in accordance with Section 2.4.1 of AS2890.1.

#### 2.1.2 Car Park Accessway Widths

Section 2.5 of AS2890.1 states that a minimum two-way circulation roadway width of 5.5m is required, with a further 0.3m clearance required to obstructions higher than 150mm.

Accessways circulating the basement ramp are dimensioned with a minimum width of 6.4m between columns and/or building core, exceeding the minimum width of 6.1m required in accordance with Figure 2.8 of AS2890.1 and are therefore considered appropriate.

#### 2.1.3 Accessible Parking

#### 2.1.3.1 Provision of Accessible Parking

The National Construction Code (NCC) outlines requirements for the provision of accessible parking spaces. Part D4 of the NCC states that accessible parking is to be provided at a rate of one (1) space for every 100 car parking spaces, or part thereof.

Additionally, all accessible spaces are located within 50m of an accessible entrance in accordance with Section 2.2 of AS2890.6.

Therefore, the provision of 14 accessible spaces across the total parking supply of 1,354 spaces as specified within Section 2.1 is considered compliant, with the suitability of the design and layout further discussed in Section 2.1.3.2.

#### 2.1.3.2 Layout of Accessible Parking Spaces

All accessible spaces are provided in accordance with AS2890.6 and are typically dimensioned with a minimum width of 2.4m and a length of 5.4m, with an associated shared area located adjacent to the space.

It is noted that a structural column is proposed within the shared space associated with two (2) DDA spaces located within Basement Level 1 and has been reviewed against the requirements set out in AS2890.6.

Specifically, Section 1.3.10 of AS2890.1 states that "shared areas may be shared with any other purpose that does not involve transitory obstruction of the area". Figure 2.2 of AS2890.6 goes on to state that bollards and columns shall be located to provide a minimum 1.0m accessible path to/from the shared area on at least one side.

The position of the column provides an accessible path of 1.2m on one side and 0.9m on the other. Importantly it is noted that a width of 1.2m is provided to the driver's side of the adjacent accessible space, with 0.9m afforded to the pedestrian side of the other space.

The proposed column location is therefore considered appropriate in this instance and is not expected to adversely affect the accessibility of the adjacent spaces.

#### 2.1.4 SA Power Networks (SAPN) Ramp Access

A ramp is proposed to intersect with the existing Basement Level 1 ramp to provide direct access to a SAPN substation to facilitate maintenance works for Tower 2.

The proposed ramp grades have been reviewed against the guidance provided within Section 2.5.3 of AS2890.1, which states that for changes of grade, the following changes of grade be achieved:

- 12.5% for summit grade changes; or
- 15% for sag grade changes.

The proposed SAPN ramp grade of 1 in 8 (12.5%) meets the requirements for grade changes and is less than the prescribed maximum grade for private ramps less than 20m in length (4%) and is therefore considered appropriate.

## 3 LOADING CONSIDERATIONS

#### 3.1 General

In the course of the following assessment, the existing Tower 1 loading activities and arrangements have been reviewed to determine the appropriateness of current arrangement.

The subsequent assessment seeks to determine the likely number of loading movements expected to be generated by the expected Tower 2 operations, including recommendations to improve the overall efficiency of the Festival Plaza loading dock.

#### 3.2 Assumptions and Limitations

In the course of preparing the following assessment the followings assumptions and limitations are noted:

- The following assessment relies on information provided by Walker Corporation and has not accounted for unscheduled arrivals in the loading dock.
- The provided scheduling details loading dock bookings in increments of 30 minutes, therefore
  detailed information regarding actual duration of stay is not available (e.g. two 15-minute
  bookings within a 30-minute window).
- Waste collection activities (waste, recycling, organics, etc.) are assumed to have been accounted for within the scheduling of Tower 1 loading movements provided by Walker Corporation.
- Data outlining the specific types of loading vehicles was not available to inform the assessment, therefore it has been assumed that all vehicle arrivals will be able to be accommodated within a suitable loading bay.
- Scheduled loading activities within the loading dock have not been associated with a specific
  use and/or tenant within Tower 1. Therefore, the calculated rate of loading has been broadly
  based on the overall Tower 1 development.
- A site inspection or surveys of the existing Tower 1 loading and waste collection activities have not been undertaken.

#### 3.3 Existing Loading Operations

#### 3.3.1 Existing Loading Dock Arrangement

The existing loading dock within the Festival Plaza basement comprises the following loading bay configuration:

- Two (2) bays capable of accommodating Small Rigid Vehicles (SRV) up to 6.4m in length.
- Two (2) bays capable of accommodating Medium Rigid Vehicles (MRV) up to 8.8m in length.
- Accessed via an 8.9m wide accessway from Festival Drive.

#### 3.3.2 Typical Weekday Loading Movements

WGA understands that loading activities within the loading dock are scheduled in prior to being undertaken in order to distribute demand for loading bays across the loading dock hours of operation.

Therefore, in order to inform the assessment, WGA have reviewed current loading schedules provided by Walker Corporation to determine the frequency of loading movements and the subsequent peak periods of loading activities.

A review of the provided scheduling suggests the Festival Plaza loading dock exhibits the following operational characteristics:

- Peak loading activities generally occur between 9:00am and 10:00am each weekday.
- On average, the loading dock accommodates a maximum of six (6) vehicles during peak periods.
- The highest occupancy recorded within the loading dock was ten (10) vehicles.
- Outside of the peak morning periods, the loading dock is generally underutilised with an average of two (2) vehicles within the dock at any given time after 11:00am.
- The loading dock accommodates up to 22 loading and waste collection vehicles a day, on average.

A typical weekday profile of loading bay occupation within the Festival Plaza loading dock is shown in Figure 1.

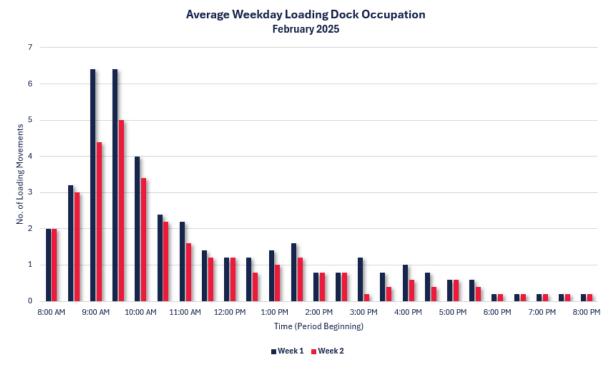


Figure 1: Average Weekday Festival Plaza Loading Activity

For the purposes of this assessment it has been assumed that the provided loading dock scheduling incorporates waste collection activities and is representative of loading operations across a typical week.

Application of the above loading activity to the Tower 1 development yield detailed within Table 1 equates to the following loading movement generation rate associated with Tower 1 operations:

- Tower 1 Gross Floor Area (GFA): 48,474 sqm.
- Total Daily Loading / Collection Movements: 22 deliveries.
- Calculated Rate of Loading / Collection Movements: 0.45 deliveries per 1,000 sqm GFA.

#### 3.3.3 Average Duration of Stay

A review of the loading schedule provided by Walker Corporation suggests that the majority of bookings are made within one (1) hour windows. Therefore, it is difficult to differentiate between short-term bookings (such as courier deliveries) and activities such as maintenance works which are generally longer in duration.

Furthermore, a review of the provided information suggests that loading dock bookings during standard business hours are typically either 30 minutes or one (1) hour. Therefore, for the purposes of this assessment, the average loading time across all vehicles has been calculated to be **45 minutes**.

It is noted that afternoon bookings are generally longer in duration and are likely to be associated with maintenance works and the like being completed outside of typical office operating hours.

#### 3.3.4 Type of Typical Loading Vehicles

Based on the information provided by Walker Corporation, it is understood that the Festival Plaza loading dock currently generally accommodates the following vehicles:

- Vans.
- Small Rigid Vehicles (SRV).
- Medium Rigid Vehicles (MRV).

Given the uses contained within Tower 2 are largely consistent with those in Tower 1, it is expected that the combination of vehicles outlined above would also service the loading requirements generated by tenants within Tower 2.

#### 3.4 Anticipated Loading Operations

#### 3.4.1.1 Tower 2 Loading Movements

It is understood that the existing Festival Plaza loading dock arrangement is intended to be largely retained following the construction of Tower 2, with the inclusion of one (1) bay capable of accommodating vehicles up to 6.4m Small Rigid Vehicles (SRV) in size.

Therefore, to determine the likely operation of the loading dock when accounting for the additional loading activity associated with the Tower 2 operations, the rate of loading movements calculated in Section 3.3.2 has been applied to the Tower 2 development yield shown in Table 1.

The calculation of the total number of loading movements expected to be generated by Tower 2 is shown below:

- Tower 2 Gross Floor Area (GFA): 54,037 sqm.
- Expected Rate of Loading Movements: 0.45 deliveries per 1,000 sqm GFA.
- Total Daily Loading / Collection Movements: 25 deliveries.

Application of the above results in the Festival Plaza loading dock being required to accommodate an additional 25 deliveries and/or waste collections per day.

#### 3.4.2 Combined Loading Vehicle Movements

#### **Peak Period Loading Capacity**

With consideration of the projected Tower 2 deliveries, the Festival Plaza loading dock would be expected to accommodate up to 13 vehicles per hour, with an overview of the expected loading demand (arrivals) shown in Figure 2.

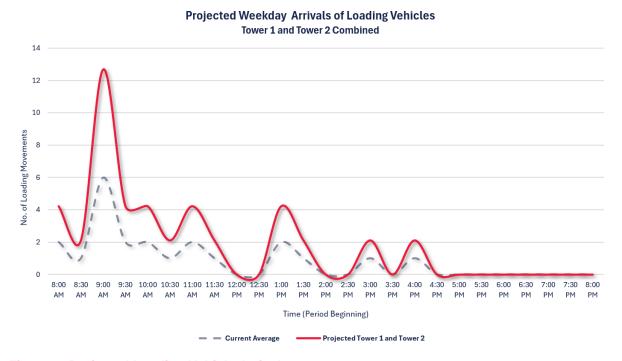


Figure 2: Projected Loading Vehicle Arrivals

A review of the loading demand profile illustrated in Figure 2, suggests that during periods of high loading activity (e.g. 9:00am – 10:00am), the capacity of the loading dock is expected to be temporarily exceeded, with loading vehicles required to wait for a loading bay to become vacant.

Therefore, any deliveries and/or loading activities will be required to be coordinated to ensure that queues and delays do not form within the loading dock due to excessive loading vehicles arriving at any one time.

#### **Daily Loading Capacity**

Each loading bay within the dock is considered to have a capacity to accommodate 12 vehicles per day based on the following calculations:

- Average Duration of Stay: 45 mins (as outlined in Section 3.3.3).
- Preferred Loading Dock Operating Hours: 8:00am 5:00pm (assumed).

Application of the above results in a capacity to accommodate up to 60 loading vehicles per day across the four (4) existing bays and one (1) additional bay within the Festival Plaza loading dock.

Therefore, with consideration of the projected Tower 2 deliveries, the Festival Plaza loading dock would be expected to accommodate the post development loading activities, calculated to be up to 47 deliveries / collections per day, on average.

An overview of the total number of loading vehicles expected to access the loading dock against the calculated capacity is shown in Figure 3.

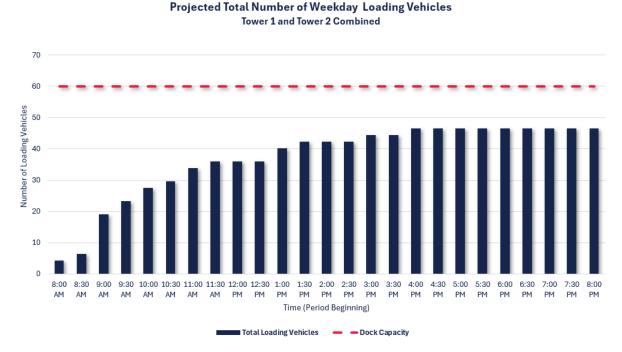


Figure 3: Total Number of Weekday Loading Vehicles

As shown in Figure 3, the existing loading dock arrangement is considered suitable to accommodate the total number of **daily** loading and waste collection vehicles expected to be generated by both the Tower 1 and Tower 2 operations.

It is however noted that the ability for the loading dock to accommodate the expected loading and waste collection activity generated by both the Tower 1 and Tower 2 operations is contingent on the effective operation and management of loading activities.

#### 3.5 Operational Considerations

The preliminary assessments outlined in Section 3.4 suggest that the existing Festival Plaza loading dock would be nearing its theoretical capacity when accommodating the expected increase in loading and waste collection activity following the completion of Tower 2.

Therefore, in order to satisfactorily accommodate the post development loading and waste collection activities, it would be recommended to adopt the following operational measures to mitigate any delays and congestion within the dock:

- Implement a dock management system (e.g. Veyor or similar) which provides a consolidated booking system and allows the building / dock manager to specify which vehicles can access specific loading bays, as required.
- The implementation of a dock management system would enable the peak loading and waste collection activity to be distributed evenly throughout the day and will minimise queuing and delays within the dock.
- Coordinate longer durations, such as maintenance or fit-out works, to occur outside of peak loading periods such as 9:00am to ensure sufficient turnover of loading bays.
- Employ a dock manager or dock hand to ensure compliance with the dock management system and limit the occurrence of overstay.
- Request that visitors conduct a site induction prior to accessing the loading dock so that they
  are aware of the necessary procedures and expectations.

#### 3.6 Adequacy of Loading Dock Arrangement

Based on the preceding assessment the existing loading dock would be expected to be sufficient to accommodate the daily loading and waste collection demands generated by both Tower 1 and Tower 2 of the Festival Plaza Precinct.

It is however noted that in order to accommodate the expected peak period loading activities, the arrival of loading and waste collection vehicles will be required to be actively managed to ensure that correct procedures and scheduling is adhered to.

The efficient operation of the loading dock is considered to be dependent of the effective management of the dock, particularly during peak periods, where it is recommended to actively schedule deliveries and waste collections so that they a distributed evenly throughout the day.

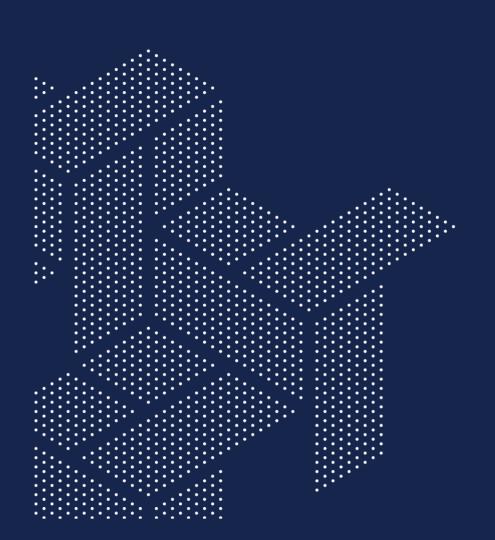
Subject to the implementation of these practices, it would be expected that the existing loading dock arrangement would be able to adequately accommodate the additional loading and waste collection activities generated by Tower 2.

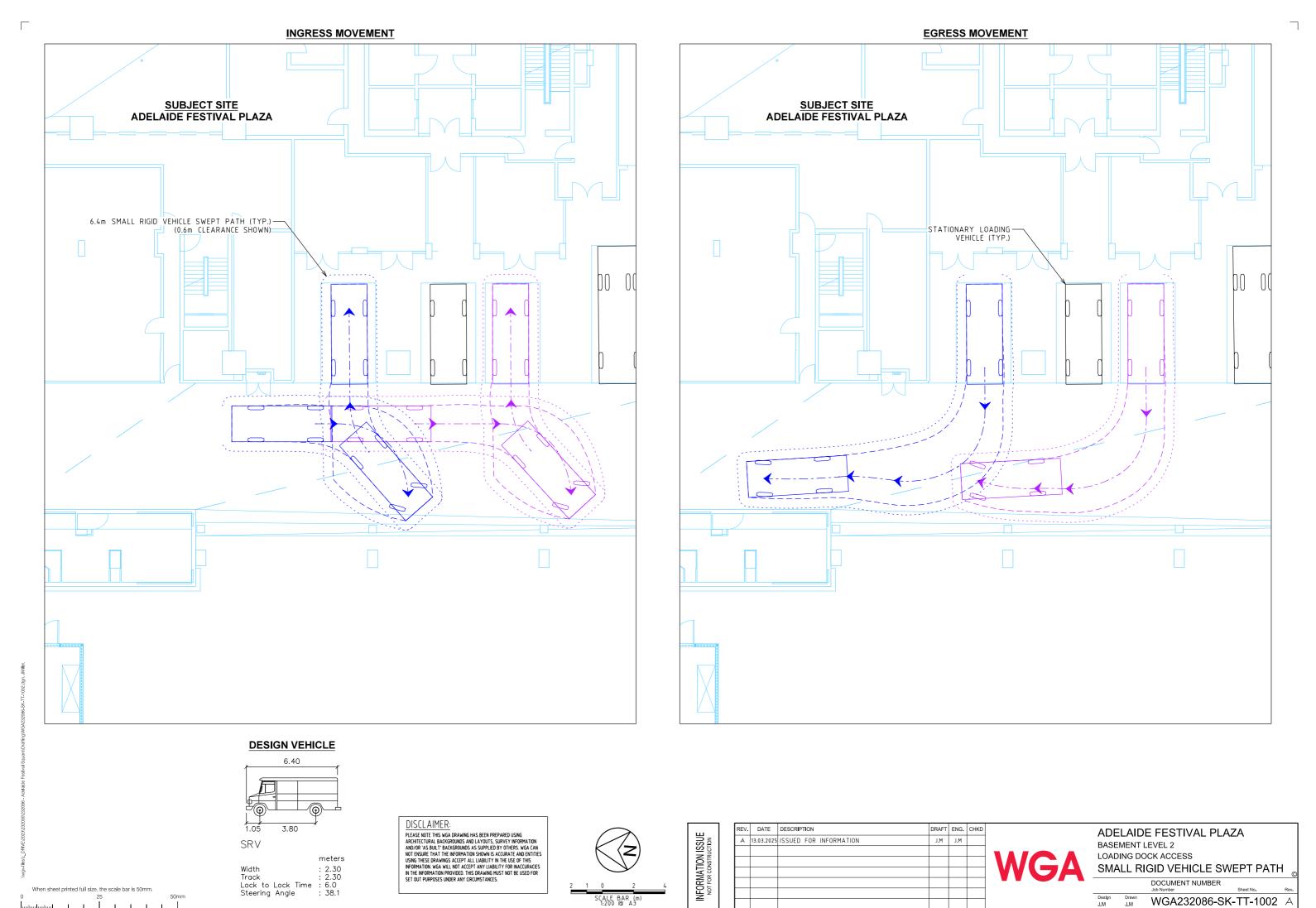
## 4 SUMMARY AND CONCLUSIONS

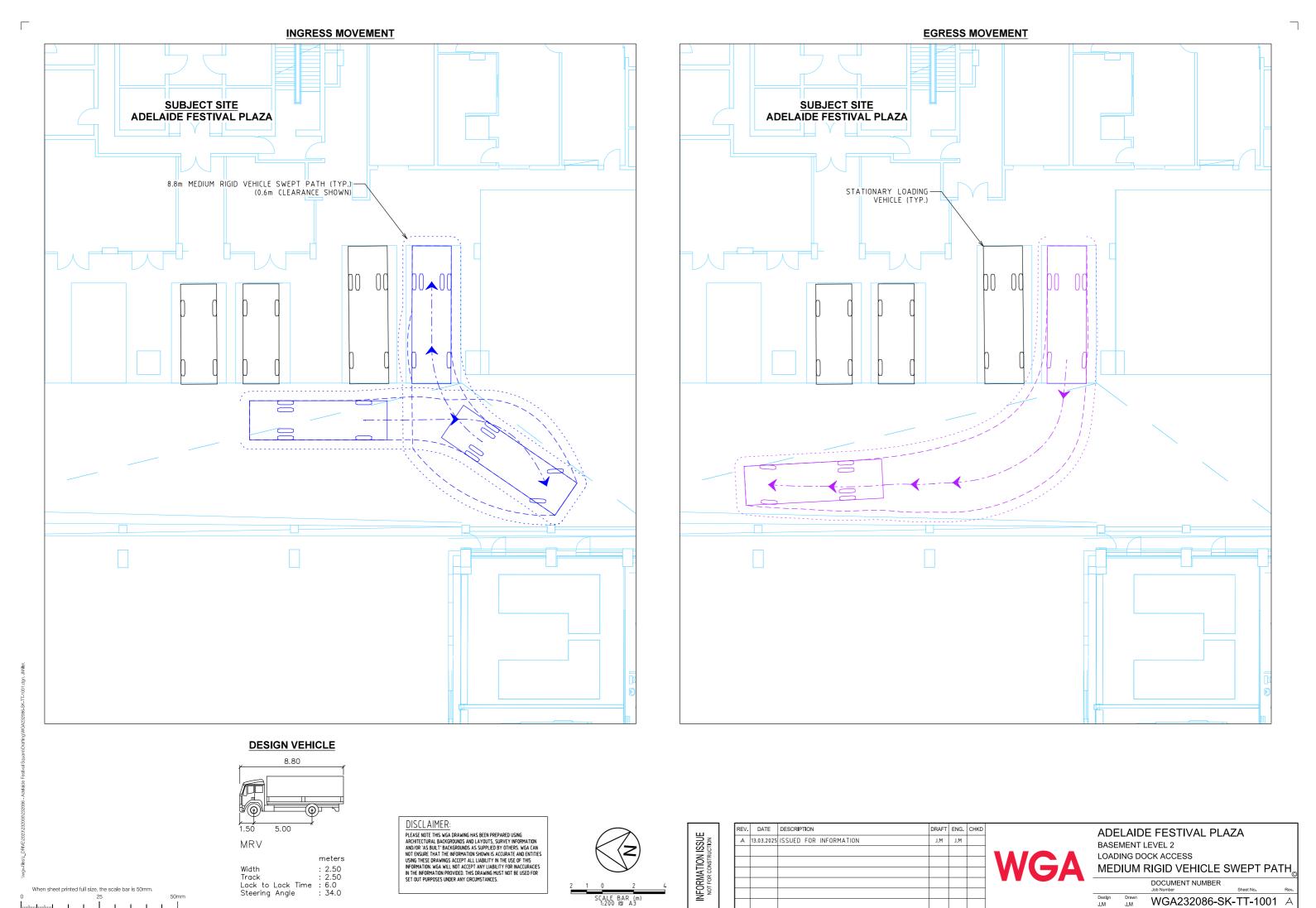
The preceding assessment has been prepared for the proposed construction of Adelaide Festival Tower 2 within the Festival Plaza precinct. Based on the discussions and analysis outlined within this report the following key conclusions are derived:

- All proposed spaces are typically dimensioned with a width of 2.5m, a length of 5.4m and accessed from a 5.8m wide aisle in accordance with Section 2.4 of AS2890.1 (for User Class 2 parking facilities).
- All small car parking spaces have been dimensioned 2.3m wide and 5.0m long in accordance with Section 2.4.1 of AS2890.1.
- The proposed columns located proximate to existing car parking spaces are located outside of the design envelope illustrated within Figure 5.2 of AS2890.1.
- All accessible spaces are provided in accordance with AS2890.6 and are located within 50m of an accessible entrance.
- The loading assessment has utilised recent scheduling data provided by Walker Corporation to determine the loading and waste collection activity generation rate associated with the existing Tower 1 development.
- Application of the calculated rate to the proposed development yield of Tower 2 is expected to result in an additional 25 deliveries and/or collections per day.
- A review of the combined loading activities (both existing and anticipated) suggests that the
  proposed loading dock configuration, comprising of five (5) loading bays, would be able to
  accommodate the expected loading activity.

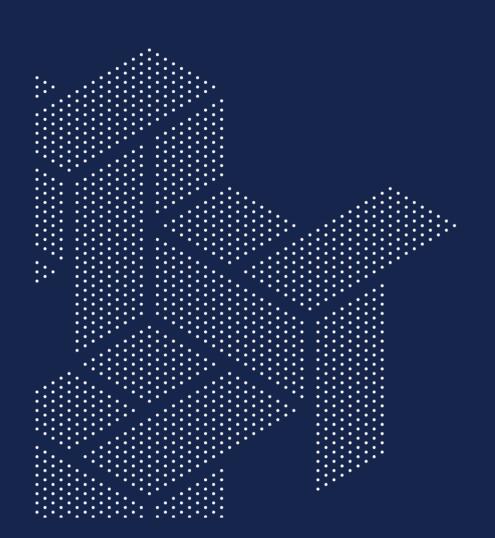
## APPENDIX A SWEPT PATH ASSESSMENTS

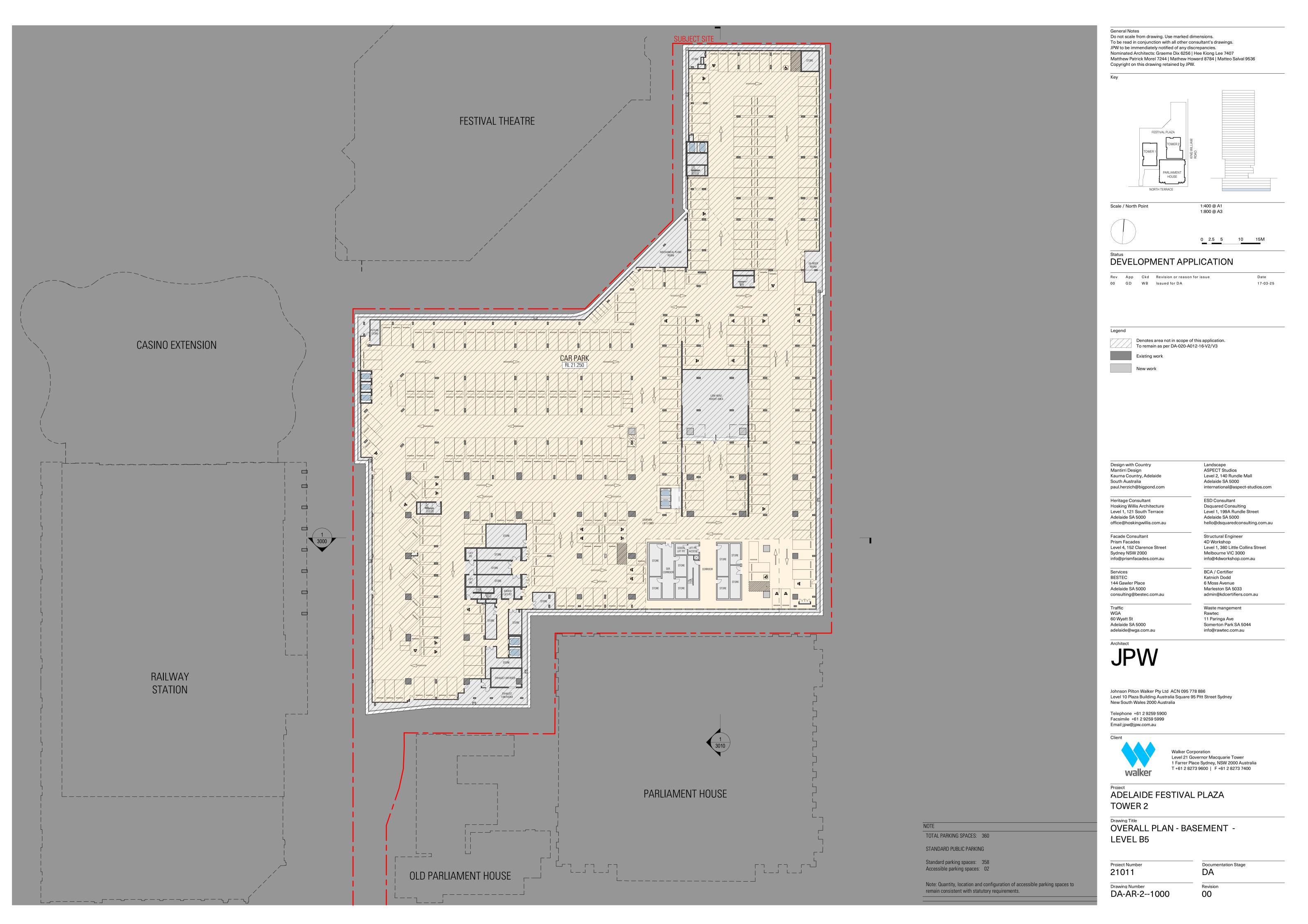


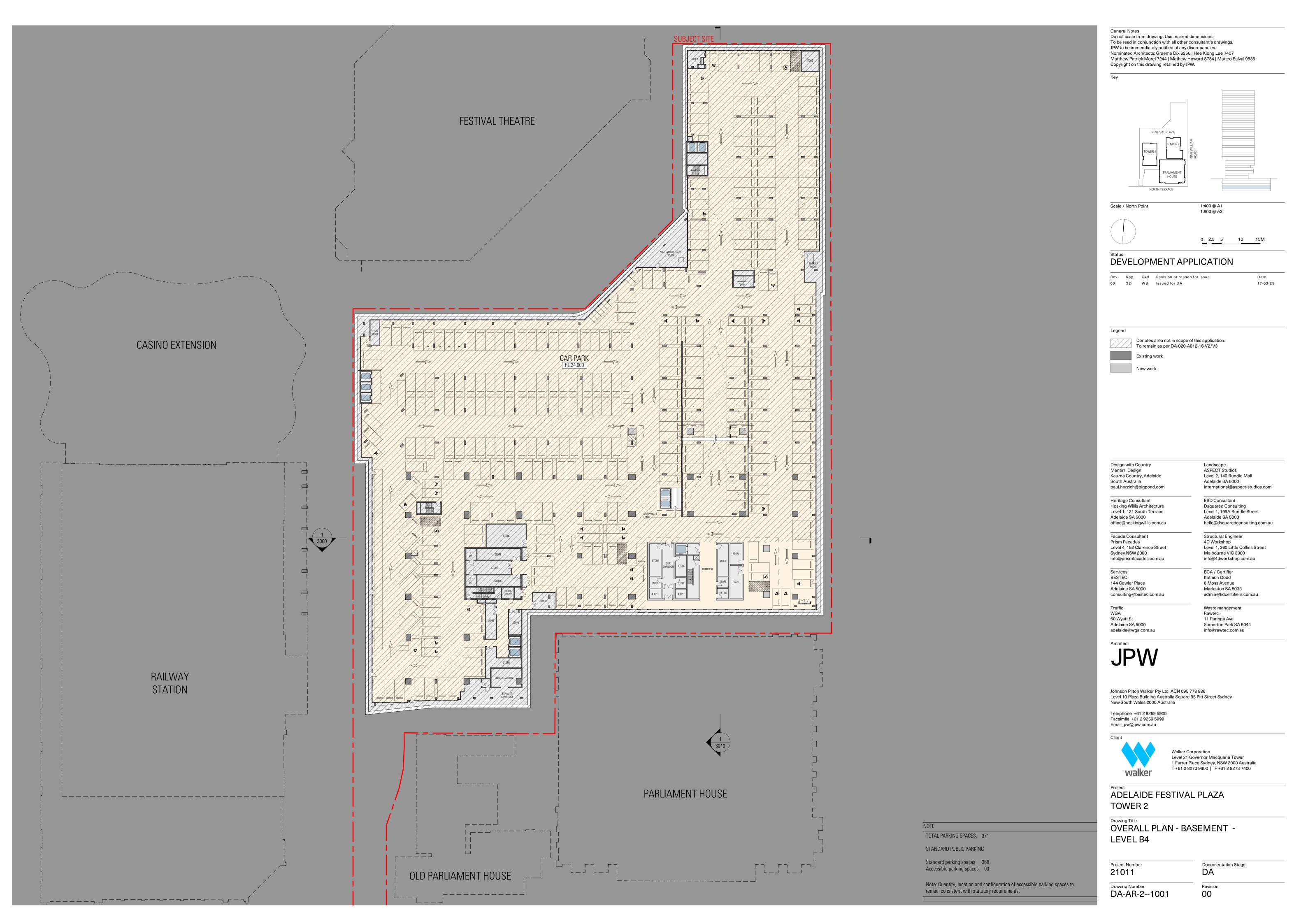


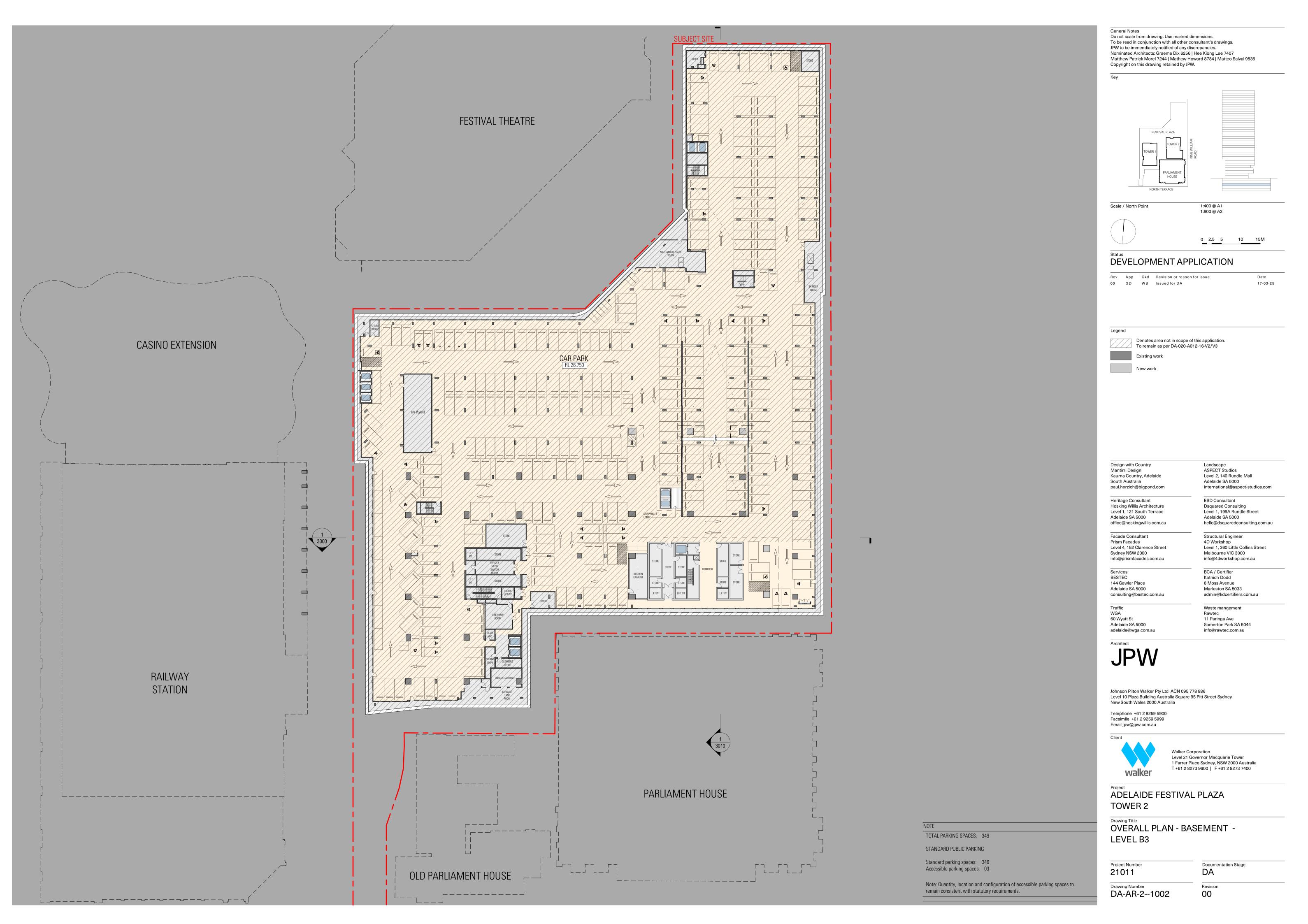


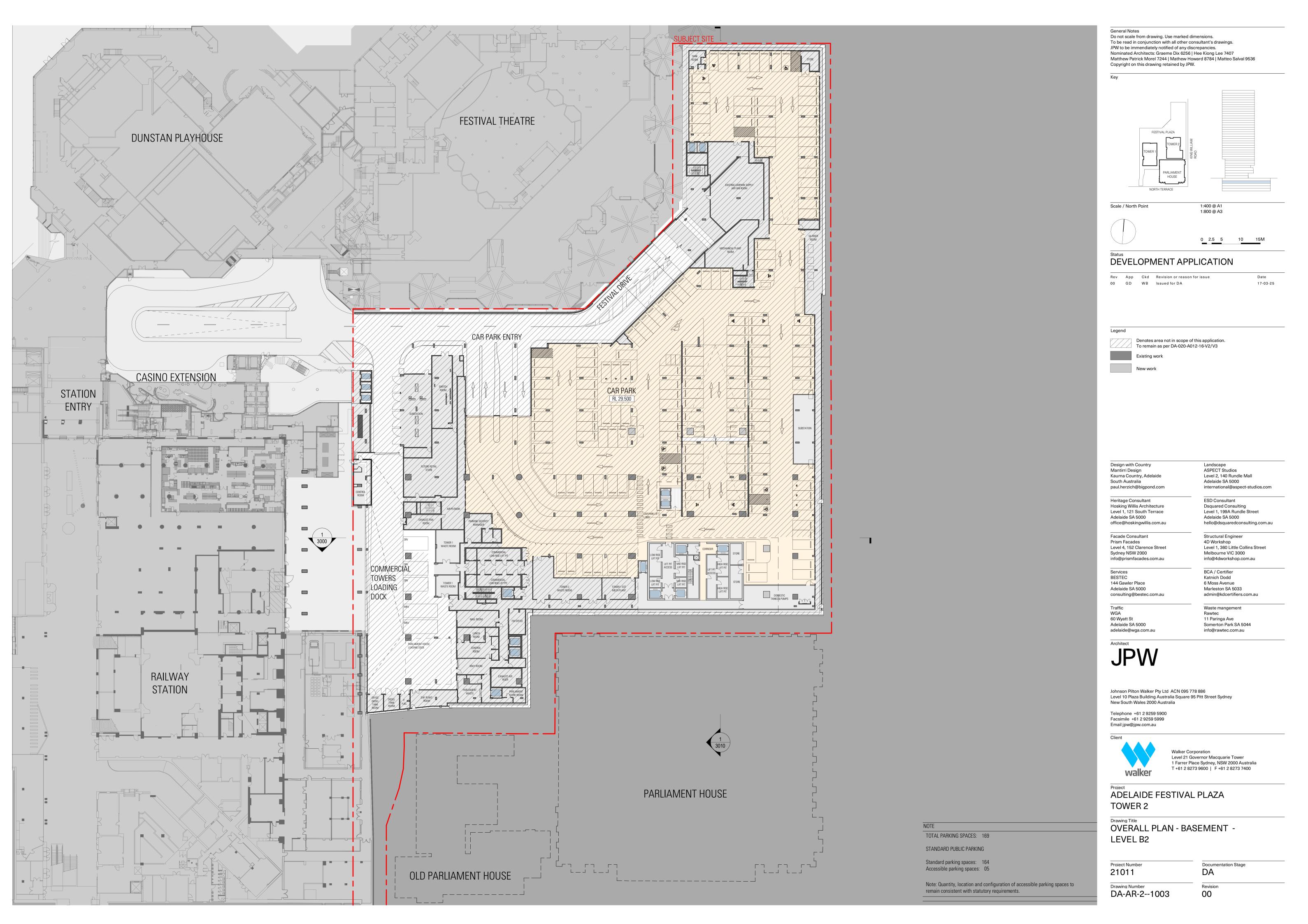
# APPENDIX B REVIEWED DEVELOPMENT APPLICATION PLANS

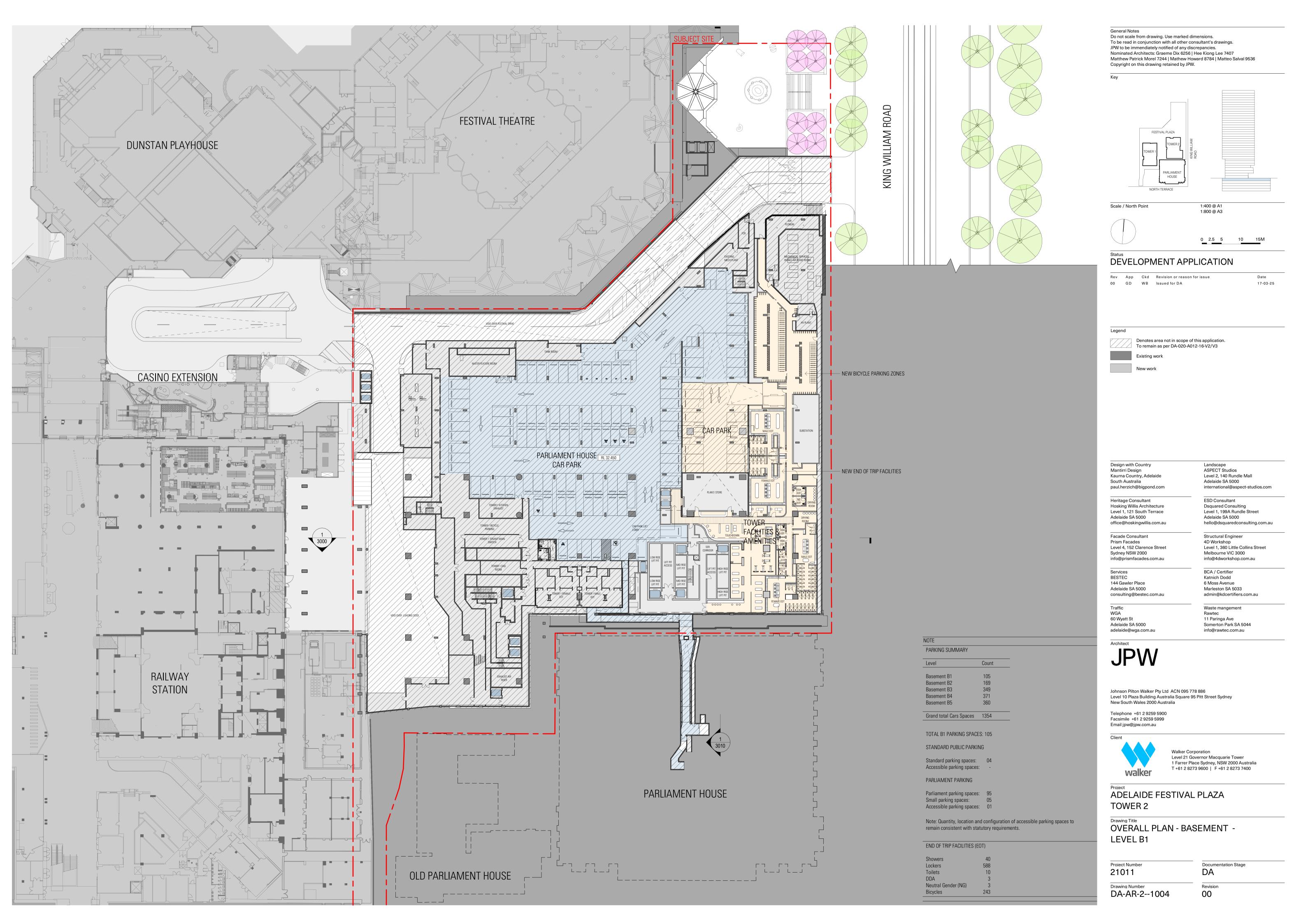














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