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Aviation Assessment Report as Part of a Development Application for a Building and Cranes at Lot 602, DP 128908, King William Road, Adelaide

Final Report

Walker Riverside (Retail) Pty Ltd

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18 March 2025

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Glossary

AAL	Adelaide Airport Ltd
AHD	Australian Height Datum
ARP	Aerodrome Reference Point
CASA	Civil Aviation Safety Authority
CBD	Central Business District
DA	Development Application
DER	Departure End of Runway
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communications and the ARTS
ft	Feet
IFP	Instrument Flight Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
km	Kilometres
m	Metres
nm	Nautical miles
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services-Operations
RTCC	Radar Terrain Clearance Chart Surface
Rwy	Runway
SID	Standard instrument departure
TC	Tower crane
VFR	Visual Flight Rules

Executive Summary

- Walker Riverside (Retail) Pty Ltd is seeking to construct a building at Lot 602, DP 128908, King William Road, Adelaide. This is referred to as 'the Site' throughout the aviation impact assessment report.

- This aviation impact assessment report has been prepared for two purposes, being 1) to provide aviation input to accompany the development application (DA) to the planning authority, and 2) to form part of the aviation application for the building and cranes to penetrate Adelaide prescribed airspace. In both cases, the aviation impact assessment report will assess whether the building and cranes at the Site will impact the safety and efficiency of air transport operations.

- The building will be constructed to a maximum height of 197.0m AHD. Other building developments in the Adelaide central business district are also impacted by the prescribed airspace restrictions defined for Adelaide Airport.

- The Site is located 5.41km northeast of the Runway 23 Threshold. At this position, the heights of prescribed airspace are: obstacle limitation surface (OLS)-112m AHD; and radar terrain clearance chart (RTCC)-243.8m AHD. The height of the PANS-OPS surface is not uniform across the Site. Over the south and western area of the Site, the height of the PANS-OPS surface is 184.7m AHD. Above the eastern and northeastern sections of the Site, amounting to approximately 33% of the area, the PANS-OPS surface increases to a maximum height of 199.3m (654ft) AHD, at the northeast corner.

- Beneath the site section with the lowest PANS-OPS surface (184.7m AHD) the maximum building height is 183.8m AHD. Withing the site section with the highest PANS-OPS surface (199.3m AHD) the maximum building height is 197.0m AHD. This tallest area accommodates plantrooms and the building maintenance unit.

- Since the PANS-OPS surface is lower than the RTCC it is the surface that controls the maximum height of obstructions. Temporary penetrations of the PANS-OPS surface may be approved for a duration of three months.

- Construction will be undertaken by two cranes. Both cranes will penetrate the OLS and the PANS-OPS surface but remain below the RTCC. Most of the activities undertaken by the two cranes will be undertaken up to but not penetrating the PANS-OPS surface (termed the operating height). The two cranes will penetrate the PANS-OPS surface for three months (termed the maximum height). Table 1 details the operating and

maximum heights of the building and the two cranes, along with their impact on the OLS, PANS-OPS and RTCC surfaces.

Table 1: Building and Crane Heights with Impact on OLS, PANS-OPS and RTCC Surfaces

	Operating Height	Max. Height	Impact on Adelaide Prescribed Airspace
Building		197.0m AHD	Penetrate OLS by 85.0m 2.3m below PANS-OPS 46.8m below RTCC
TC1	180.6m AHD	220.6m AHD	Penetrate OLS by 108.6m Penetrate PANS-OPS by 21.3m 23.2m below RTCC
TC2	165.6m AHD	210.6m AHD	Penetrate OLS by 98.6m Penetrate PANS-OPS by 11.3m 33.2m below RTCC

- Table 1 shows that the building will penetrate the OLS by 85.0m but remain below the PANS-OPS surface. It also shows that TC1 and TC2 at their maximum height will penetrate the OLS by 108.6m and 98.6m respectively. These cranes will penetrate the PANS-OPS surface by 21.3m and 11.3m respectively. Both cranes and the building are below the RTCC.

- From information provided by Airservices and Adelaide Airport Ltd (AAL), four instrument flight procedures (IFPs) will be impacted by the crane penetration of the PANS-OPS surface, namely Circling C/D approach, SID Rwy 05 West, VOR Rwy 23 and APV Runway 23. The crane penetration of the PANS-OPS surface for three months will require parameters of these four approaches to be adjusted.

- Table 2 below summarises the Airservices advice of the IFPs at the Site. It presents the PANS-OPS height for key instrument flight procedures (IFPs)and provides some notes.

Table 2: Procedures Impacting Crane Penetration of PANS-OPS Surface

Procedure	PANS-OPS Height	Notes
Circling C/D	184.7m (606ft) AHD	Need to increase minima by 118ft (35.9m) to accommodate crane penetration of PANS-OPS surface at 220.6m AHD. Procedure seldom used by jet air transport operations
SID Rwy 05 West	197.5m (634ft) AHD (DEP West)-4.4% from DER. Increases over site from 648ft to 654ft (flat surface).	Able to make modest increase to climb gradient (5%) for crane penetration of PANS-OPS. SID Rwy 05 East has 5.5% climb gradient to achieve 260m PANS-OPS surface
ILS Rwy 23	Outside of splay area (using OAS)	Does not impact development site
VOR 23	199.3m (654ft) flat surface	Non-core aid mainly used by training aircraft. Able to increase minima without impacting air transport operations
APV 23	FAS above 197.5m AHD	Need to increase minima by 10m (33ft) (AAL 210m AHD). Minimal impact from PANS-OPS penetration. ILS Rwy 23 remains available with a lower minima
RNP Approaches	All above 197.5m AHD	No impact from PANS-OPS penetration (AAL all above 240m)

Notes:

- Information provided by Airservices 6 December 2024;
- Additional PANS-OPS information provided by Adelaide Airport Ltd (AAL) 31 March 2023.

- The most significant IFP impact will be to the Circling C/D approach. The minima for this approach will need to increase by 118ft (35.9m). A circling approach, however, is seldom flown by this category of jet aircraft.

  A temporary increase to the Category C/D circling minima, however, will mean that the forecast cloud base for the nomination of an alternate airport will raise by 200ft. This 200ft increase to the forecast cloud base for a duration of three months, however, is unlikely to cause a meaningful operational and financial penalty for these Category C/D aircraft.

  An increased climb gradient can be incorporated into SID Runway 05 West to increase the PANS-OPS surface without impacting air transport operations. An increase to the minima of the VOR Runway 23 approach will not impact air transport operations. Further, an increase to the APV Runway 23 minima can be overcome by aircraft flying the Runway 23 ILS-Y or ILS-Z approaches. These two approaches have a lower minima than the APV Runway 23 and are not impacted by cranes at the development site.

  We conclude that the PANS-OPS penetration by cranes to a maximum height of 220.6m AHD will not impact the safety and efficiency of air transport operations.

- A review of VFR operations has highlighted that the minimum height of VFR aircraft flying over the Adelaide CBD, within 300m of the Site, will increase by 200ft to be 1,300ft AHD. This increased operational height will not significantly impact VFR aircraft operations over the Adelaide CBD. All other VFR aircraft and helicopter operations are not impacted by the crane activities at the Site.

- One building is in proximity to the Site has been approved to penetrate the Adelaide OLS. This building at Adelaide Festival Plaza adjoins the Site and has been constructed to a maximum height of 151.6m AHD, which is 45.4m below the height of the building at Lot 602, King William Road.

- The building will not impact the performance of surveillance, communication and navigation systems.

- In conclusion, the building that will penetrate the Adelaide OLS, including two cranes that will penetrate the Adelaide PANS-OPS surface to a maximum height of 220.6m AHD for three months, will not impact the safety and regularity of air transport operations.

1.0 Introduction

Walker Riverside (Retail) Pty Ltd is seeking approval to construct a building at Lot 602, DP 128908, King William Road, Adelaide. This is referred to as 'the Site' throughout the aviation impact assessment report.

The development site is located 5.41km northeast of the Runway 23 threshold. This building will reach a maximum height of 197.0m AHD. This building will penetrate the Adelaide obstacle limitation surface (OLS) but remain below the PANS-OPS and radar terrain clearance chart (RTCC) surfaces.

It is important to note that the height of the PANS-OPS surface is not uniform across the Site. Over the south and western area of the Site, the height of the PANS-OPS surface is 184.7m AHD. Above the eastern and northeastern sections of the Site, amounting to approximately 33% of the area, the PANS-OPS surface increases to a maximum height of 199.3m (654ft) AHD, at the northeast corner. The building, therefore, will reach a maximum height of 197.0m AHD within the eastern and northeastern sections of the Site. It will reach 183.8m AHD within the south and western area of the Site. The tallest section of the building accommodates plantrooms and the building maintenance unit.

Two hammerhead cranes will undertake construction, with the tallest reaching a maximum height of 220.6m AHD. Both cranes will penetrate the Adelaide OLS and PANS-OPS surface, the latter for three months. This aviation assessment is to provide information about the impact of the building and cranes on the Adelaide OLS, PANS-OPS and radar terrain clearance chart (RTCC) surfaces and aviation operations at Adelaide Airport.

The aviation impact assessment report has been prepared for two purposes, being 1) to provide aviation input to accompany the development application (DA) to the planning authority, and 2) to form part of the aviation application for the building and cranes to penetrate Adelaide prescribed airspace. In both cases, the aviation impact assessment report will assess whether the building and cranes at the Site will impact the safety and efficiency of air transport operations.

This report details the height of the prescribed airspace above the proposed development site at the Site plus presents an assessment of the impact on aircraft operations from proposed building and crane operations. It includes: legislative context; methodology for the study; a summary of the crane strategy; location of the building and cranes relative to prescribed airspace; an assessment of aircraft and helicopter operations in the vicinity of the Site; other high-rise developments in the

vicinity; and the impact of the building on the performance of navigation aids and surveillance systems.

2.0 Legislative Context

Airspace surrounding an airport is protected by the Airports (Protection of Airspace) Regulations 1996. It details the process required to be undertaken when an obstacle could infringe prescribed airspace and the responsibilities of various organisations.

Prescribed airspace around an airport includes the obstacle limitation surface (OLS) and the PANS-OPS surface. An OLS provides general protection for aircraft operations around an airport. The PANS-OPS surface protects the airspace used by aircraft flying instrument approach procedures. A permanent obstruction, in this case a building and cranes, can be approved to penetrate the OLS. Permanent obstructions, however, cannot penetrate the PANS-OPS surface. Temporary obstructions, however, may be approved to penetrate a PANS-OPS surface for a maximum duration of three months. A temporary penetration of the PANS-OPS surface requires the support of the airport owner-operator. The airport owner-operator is required to make an assessment about whether the temporary penetration of the PANS-OPS surface will impact the safety and regularity of schedule air transport operations.

In addition to the two categories of prescribed airspace described above, Airservices Australia has placed a radar terrain clearance chart (RTCC) surface above Adelaide. The RTCC enables air traffic controllers to descend aircraft under radar control when they are not flying on an instrument approach or departure procedure. Temporary penetrations of this surface may also be approved for a maximum duration of three months.

When the proposed height of an obstruction is likely to penetrate prescribed airspace, a proponent is required to make application to the airport owner-operator, in this case Adelaide Airport Ltd (AAL). The airport owner-operator then seeks the input from the Civil Aviation Safety Authority (CASA), Airservices and the building authority concerned. This process seeks to determine whether there is any impact on safety or operational efficiency to aircraft activities.

Approval for building developments that penetrate prescribed airspace is ultimately granted by the Department of Infrastructure, Transport, Regional Development,

Communication and the Arts (DITRDCA). Should the development not be approved by DITRDCA, there is also an appeal process to the Administrative Appeals Tribunal.

3.0 Methodology

This section provides an overview of the approach undertaken to determine the impact on prescribed airspace and aircraft operations of the proposed building development at the Site.

The airspace over the Adelaide central business district (CBD) is impacted by the prescribed airspace defined for Adelaide International Airport. It governs the maximum permissible heights for buildings in the Adelaide CBD. Calculations of the height of the OLS, PANS-OPS and RTCC surfaces were sourced from Airservices and planning information maintained by AAL.

Developments around the Adelaide CBD that are planned to penetrate the OLS are normally approved when they are shielded by other existing structures. Shielding means that a proposed development is beneath a 10% slope from the maximum height of an existing building. When shielding does not exist, AAL require that an aviation assessment is undertaken to support the application. The aviation assessment involves a safety assessment about the impact on aircraft operations of the proposed development.

In order to explore the safety impact on aircraft operations of the proposed development at the Site, discussions were held with:

- Adelaide Airport Pty Ltd;
- Airservices;
- Babcock Australia.

4.0 Height and Position of Building

The building will be constructed to a maximum height of 197.0m AHD.

Table 3 below presents the position coordinates for each corner of the building.

Table 3: Position Coordinates for Each Building Corner

Position ID	Coordinates
Northwest corner	E 280621.775 N 6133165.652
Northeast corner	E 280662.025 N 6133169.127
Southeast corner	E 280672.655 N 6133116.345
Southwest corner	E 280627.597 N 6133112.455

Attachment 1 presents an elevation diagram of the building. Attachment 2 provides the position coordinates for the corners of the roof.

The maximum building height varies across the Site, in accordance with the rise in the PANS-OPS surface. Table 4 below details the position coordinates where the maximum building height reaches 197.0m AHD.

Table 4: Position Coordinates of Tallest Building Section

Position ID	Coordinates
North Side	N 6133167.4 E 280641.2
Northeast corner	N 6133169.1 E 280663.4
Southeast corner	N 6133144.3 E 280665.3
South Side	N 6133144.5 E 280651.0

Note: Outside the area denoted above in Table 4, the maximum building height is 183.8m AHD. Attachment 3 presents the position coordinates for the tall section of the building. The tallest area of the building accommodates plantrooms and the building maintenance unit.

Details of the height of the PANS-OPS surface above the Site are presented below in Section 7.0.

5.0 Summary of Crane Strategy

This section describes the crane strategy to provide assurance that TC1 and TC2 will penetrate the Adelaide PANS-OPS for a maximum of three months.

Operations by TC1 and TC2 will extend up to but not penetrate the PANS-OPS surface (184.7m AHD). This is termed the operational height. During this operational period the cranes will undertake construction activities up to Level 34. Building activities will include prefabricating the walls to the core to reduce the work needed to be performed while the cranes are penetrating the PANS-OPS surface.

Both cranes need to penetrate the PANS-OPS surface once construction commences for Level 35. The cranes will then be raised to their maximum height to undertake construction of levels 35 to 37, as well as the tallest section of the building. Works undertaken while cranes are in the PANS-OPS surface include: removal of safety screens; completion of roof steelwork; façade completion; and loading roof plant. To undertake these works within the three-month period, both cranes will work two shifts each day from 6am to 10.30pm.

Following completion of the upper floors and the three-month PANS-OPS penetration, TC1 will dismantle TC2. TC1 then lowers to below the PANS-OPS surface and be disassembled by a mobile crane. This mobile crane will not operate above 100m AHD, therefore, will not penetrate the OLS.

This crane strategy provides the context for the details about the cranes detailed in the next section.

6.0 Height, Position and Operating Radius of Cranes

Below we detail the height, position and operating radius of the cranes.

6.1 Height of Cranes

Two hammerhead cranes will undertake construction. Most of the crane activities will be undertaken up to but not penetrating the PANS-OPS surface. This is termed the operating height. To complete construction activities, both cranes will penetrate the PANS-OPS surface. This is termed the maximum height. Table 5 presents the operating and maximum heights of the two cranes.

Table 5: Crane Operating and Maximum Height

	Operating Height	Max. Height
TC1	180.6m AHD	220.6m AHD
TC2	165.6m AHD	210.6m AHD

Attachment 4 presents the operating and maximum height of the two cranes.

6.2 Position and Operating Radius of the Cranes

The position coordinates and operating radius of each crane are presented below in Table 6.

Table 6: Position Coordinates and Operating Radius of Each Crane

Crane ID	Position Coordinates	Operating Radius
TC1	N6133135.38 E 2800677.14	61.6m
TC2	N 6133178.53 E 280653.25	36.5m

The position and operating radius of each crane is detailed in Attachment 4.

7.0 Impact of Proposed Building and Cranes on Prescribed Airspace

Below is a description of the proposed building height relative to the Adelaide Airport OLS, PANS-OPS and RTCC surfaces.

7.1 Heights of the OLS PANS-OPS and RTCC surfaces

At the position of the Site the heights of prescribed airspace are:

- OLS: 112m AHD;
- PANS-OPS: 199.3m AHD;
- RTCC: 243.8m AHD.

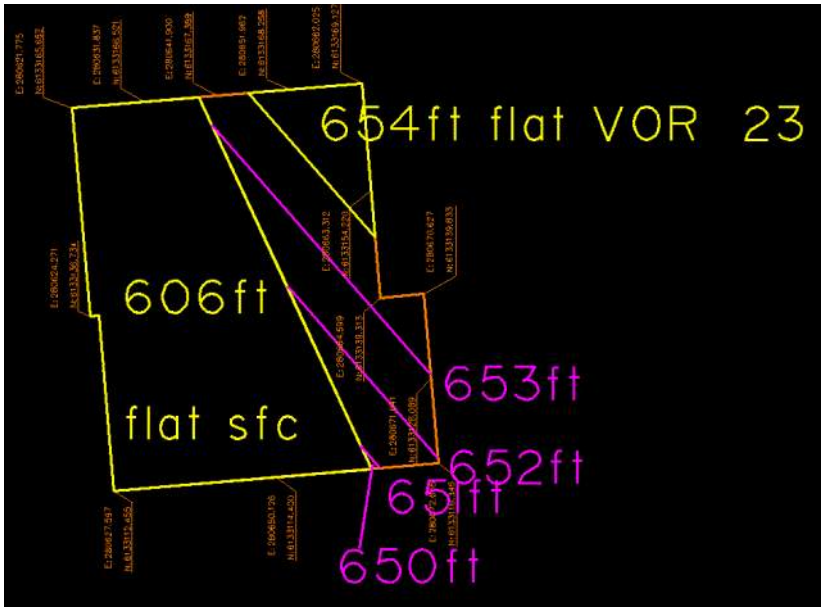
Note: the PANS-OPS surface listed above is the lowest provided by instrument flight procedures.

7.2 PANS-OPS Surfaces over the Site

Ahead of the preparation of this aviation impact assessment report we engaged with Airservices' Procedure Design Unit (PDU) to accurately determine the PANS-OPS surface over the Site. As noted above, the height of the lowest PANS-OPS surface is 184.7m (606ft) AHD. The height of the PANS-OPS surface increases above the eastern and northeastern sections of the Site, amounting to approximately 33% of the area. In these areas, the PANS-OPS surface increases to a maximum height of 199.3m (654ft) AHD, at the northeast corner.

Below is a diagrammatic representation of the PANS-OPS above the Site provided by Airservices on 6 December 2024. The diagram shows how the PANS-OPS surface increases in height tower the east and northeast section of the roof area.

Diagram 1: PANS-OPS Surfaces Over Development Site



Attachment 5 presents the above plan view superimposed on the development site. It also shows elevation diagrams of the PANS-OPS height over the roof area.

7.3 Impact of the Building and Cranes on OLS and PANS-OPS Surfaces

Table 7 below details the maximum height of the building and two luffing cranes, and their impact on the OLS and tallest PANS-OPS surface, namely 199.3m AHD.

Table 7: Impact of Building and Cranes on OLS and Lowest PANS-OPS Surfaces

	Operating Height	Max. Height	Impact on Adelaide Prescribed Airspace
Building		197.0m AHD	Penetrate OLS by 85.0m 2.3m below PANS-OPS 46.8m below RTCC
TC1	180.6m AHD	220.6m AHD	Penetrate OLS by 108.6m Penetrate PANS-OPS by 21.3m 23.2m below RTCC
TC2	165.6m AHD	210.6m AHD	Penetrate OLS by 98.6m Penetrate PANS-OPS by 11.3m 33.2m below RTCC

Table 7 shows that the building and both cranes will penetrate the Adelaide OLS. The building will penetrate the OLS by 85.0m but will remain 2.3m below the PANS-OPS surface. TC1 and TC2 will penetrate the OLS by 108.6m and 98.6m respectively. TC1 will penetrate the PANS-OPS surface for three months by 21.3m (220.6m AHD). TC2 will penetrate the PANS-OPS surface for three months by 11.3m (210.6m AHD). Both cranes, as well as the building, are below the RTCC.

7.4 Instrument Flight Procedures (IFPs) Impacting PANS-OPS Penetration by Cranes

We have engaged with Airservices and AAL to understand the IFPs that determine the maximum building height and those that will be impacted by the temporary crane penetration of the PANS-OPS surface. Table 8 presents the instrument flight procedures (IFP) that determine the maximum building height and will be impacted by the crane penetration of the PANS-OPS surface.

Table 8: Procedures Impacting Crane Penetration of PANS-OPS Surface

Procedure	PANS-OPS Height	Notes
Circling C/D	184.7m (606ft) AHD	Need to increase minima by 118ft (35.9m) to accommodate crane penetration of PANS-OPS surface at 220.6m AHD. Procedure seldom used by jet air transport operations
SID Rwy 05 West	197.5m (634ft) AHD (DEP West)-4.4% from DER. Increases over site from 648ft to 654ft (flat surface).	Able to make modest increase to climb gradient (5%) for crane penetration of PANS-OPS. SID Rwy 05 East has 5.5% climb gradient to achieve 260m PANS-OPS surface
ILS Rwy 23	Outside of splay area (using OAS)	Does not impact development site
VOR 23	199.3m (654ft) flat surface	Non-core aid mainly used by training aircraft. Able to increase minima without impacting air transport operations
APV 23	FAS above 197.5m AHD	Need to increase minima by 10m (33ft) (AAL 210m AHD). Minimal impact from PANS-OPS penetration
RNP Approaches	All above 197.5m AHD	No impact from PANS-OPS penetration (AAL all above 240m)

Notes:

- Information provided by Airservices 6 December 2024;
- Additional PANS-OPS information provided by Adelaide Airport Ltd (AAL) 31 March 2023.

Table 8 shows that the maximum building height, in the lowest section, is governed by the Circling C/D procedure. The VOR Rwy 23 determines the maximum building height in the highest PANS-OPS surface section. Two other IFPs, namely SID Rwy 05 West, VOR Rwy 23 and APV Rwy 23, are impacted by the crane penetration of the PANS-OPS surface to a maximum height of 220.6m AHD.

Discussion of these procedures and impact on the PANS-OPS surface is provided below in Section 8.0.

8.0 Aircraft and Helicopter Operations in the Vicinity of Adelaide CBD

This section presents analysis of the impact of the building and cranes on aircraft and helicopter operations. The analysis is provided in two parts, instrument flight rules (IFR) and visual flight rules (VFR).

8.1 IFR Operations

Adelaide Airport has two crossing runways. In general terms, Adelaide aircraft movements comprise around 50% jet and 50% turbo prop or training aircraft. The most used runway is the longer 05/23. Turbo prop aircraft on occasions use runway 12/30. Jet operations prefer runway 05/23, although in strong northerly conditions that result in a significant cross wind, they will use runway 30.

Airservices, in an email date 6 December 2024, advised the instrument flight procedures (IFP) that govern the height of the PANS-OPS surface at the Site. The following instrument approaches govern the maximum building height and crane penetration of the PANS-OPS surface. These are:

- Circling approach for Category C/D aircraft;
- SID Runway 05 West;
- VOR Runway 23; and
- APV Runway 23.

AAL, in an email dated 31 March 2023, provided the approximate heights of IFPs that have a PANS-OPS surface above the maximum building height.

The below IFPs will not impact the PANS-OPS penetration by cranes to a maximum height of 210.6m AHD. These procedures are:

- ILS Runway 23-outside splay area; and
- RNP approaches-all above 240m AHD.

In the section below we will provide commentary about the four procedures that are impacted by the crane penetration of the PANS-OPS surface to a maximum height of 220.6m AHD.

8.1.1 Circling Approach Category C/D Aircraft

The circling area of Adelaide runways 05 and 30 for Category C/D aircraft governs the height of the PANS-OPS surface overhead the proposed development at the Site i.e., 184.7m (606ft) AHD. For context, Category C/D aircraft are of B737 size and above.

Cranes to a maximum height of 220.6m (724ft) AHD, which penetrate the PANS-OPS surface by 35.9m (118ft), will require the circling minima to be increased from 1,000ft (304.8m) AHD to 1,200ft (365.8m) AHD i.e., 200ft.

A circling approach is rarely flown by IFR air transport operations conducted by Category C/D aircraft. These aircraft almost always land directly on the runway served by the instrument approach procedure, not circle to land on another runway.

An increase to the Category C/D minima raises the cloud base when aircraft are required to nominate an alternate airport. An alternate

airport needs to be nominated when the cloud base is forcast to be 500ft above the circling minima. When an alternate airport needs to be nominated, aircraft must carry additional fuel to fly to this destination. The increase to the circling minima to accommodate crane operations at the Site will mean that the requirement to nominate an alternate airport will rise from 1,500ft AHD to 1,700ft AHD. This 200ft increase will likely mean that Category C/D will be required to carry alternate fuel on a small number of additional occasions.

8.1.2 SID Runway 05 West;

The SID Runway 05 West requires IFR aircraft to track 042°, at a climb gradient of 4.4% to 900ft thence 3.3%. To accommodate the crane penetration of the PANS-OPS surface to 220.6m AHD, aircraft will be required to achieve a higher climb gradient. This climb gradient will not exceed 5%, which is within the normal parameters for the design of instrument flight procedures. It is less than the 5.7% climb gradient that aircraft departing on the SID Runway 05 East must following until above 3,300ft AHD. The SID Runway 05 East PANS-OPS surface at the Site is 260m AHD.

8.1.3 VOR Runway 23

The VOR Runway 23 approach requires IFR aircraft to descend on track 227° to minima 730ft (222.5m) AHD. To accommodate the crane penetration of 220.6m AHD the minima must be raised 21.3m (70ft). This means the minima for the VOR Runway 23 approach will increase to 770 ft (233.8m) AHD.

The VOR Runway 23 approach is seldom used for air transport operations, instead it is a navigation aid primarily for pilot training. As a result, an increase to the VOR Runway 23 minima will not impact air transport operations nor will it disrupt pilot training activities.

8.1.4 APV Runway 23

An APV or VNAV approach provides vertical guidance to an aircraft descending on an instrument approach procedure. It accompanies a RNP approach. The APV Runway 23 approach requires an aircraft to descend on track 227° to minima 430ft AHD. The approximate height of the APV Runway 23 PANS-OPS surface at the Site is 210m (689ft) AHD.

To accommodate cranes to a maximum height of 220.6m AHD, the minima of the APV Runway 23 approach needs to be increased by 35ft (10.6m) from 430ft (131.1m) AHD to 465 ft (141.7m) AHD.

The increase of 35ft (10.6m) to the minima of the APV Runway 23 will have minimal impact on air transport operations. An ILS-Y or ILS-Z Runway 23 are not impacted by the proposed crane operations. They both provide a precision approach with a minima of 270ft (82.3m) AHD, which is 160ft lower than the APV Runway 23 approach.

8.1.5 Other Aircraft Operations

In regard to other operations. Aircraft taking off from Runway 12, who suffer an emergency soon after take-off, will likely turn right and join the circuit to land. A right turn takes aircraft away from the Adelaide CBD and the proposed development at the Site. Aircraft departing Runway 05, who suffer an emergency, would normally turn left, away from the CBD, and join the circuit to land.

Turbo prop aircraft from the southeast, operating under IFR, may be cleared to descend on a visual approach left base for runway 23. Operating procedures require that these aircraft must remain within a 3nm radius of the runway 23 threshold at Adelaide Airport. The proposed development at the Site is approximate 2.9nm from the threshold of Runway 23 i.e., just inside the 3nm radius. These aircraft, however, are operating visually and are required to maintain their own separation from terrain. This includes building and crane obstructions in the Adelaide CBD such as the cranes at the Site. The flight path of turbo prop aircraft joining runway 30 from the south and southeast is clear of the Adelaide CBD. Obstacle lighting placed

on the cranes will ensure that pilots can see and avoid these obstructions.

Parafield Airport is located approximately 10nm northeast of Adelaide Airport. IFR aircraft departing Parafield on the Parafield Nine SID (Radar) runway 03L are required to climb to the northeast to 3,000ft before turning onto their assigned heading from radar control. IFR aircraft departing runway 21R are required to climb to the southwest to 1,600ft before turning onto their assigned heading. The climb gradients for both departures keep aircraft inside the PANS-OPS surface defined around Adelaide Airport and above buildings and cranes within the Adelaide CBD.

8.2 VFR Operations

Civil Aviation regulations require aircraft operating visually to fly at least 1,000ft above built-up areas. In addition, the regulations require aircraft to be above 500ft above the highest obstacle within a 300m radius. This means that aircraft operating visually need to be at least 1,300ft AHD within a 300m radius of the proposed development Site, taking account of a maximum crane height of 220.6m (724ft) AHD.

The Westpac Centre requires VFR aircraft to operate above 1,100ft AHD. Cranes at the Site will require VFR aircraft to operate at least 200ft above the height required by the Westpac Centre, namely 1,300ft. Obstacle lighting will enable pilots to see and avoid the cranes at the Site.

Aircraft operating under visual flight rules (VFR) transiting Adelaide are generally required to keep clear of the Adelaide control zone and track via the coast. The CBD is located within the Adelaide control zone, inland from the coast.

VFR aircraft from Parafield are normally required to remain 3nm to the north of the extended Adelaide Runway 23 centreline. This restriction is to ensure that radar separation can be maintained from aircraft arriving Runway 23 or departing Runway 05 at Adelaide. In light traffic conditions IFR aircraft may be cleared to cross the extended runway 23 centreline and operate over the city or transit the control zone to the south or east. These VFR aircraft are required to maintain their own separation from terrain or building obstructions.

The VFR entry/exit lanes to Parafield Class D airspace to the north and east are outside the Adelaide control zone and away from the central business district. The Hope Valley VFR route, a path for aircraft arriving/departing to the south, also remains clear of the Adelaide control zone.

Babcock Australia operate emergency services into the helipad at Royal Adelaide Hospital. They advise that the proposed development is well clear of helicopter flight paths to north and south of the Adelaide CBD. Helicopters operating over the city generally maintain an altitude of 1,500ft.

8.3 Summary

Four instrument flight procedures will be impacted by the crane penetration of the PANS-OPS surface to a maximum height of 220.6m AHD. Mitigation measures incorporated into these instrument flight procedures will not impact the safety and efficiency of air transport operations.

The building and cranes will not significantly impact VFR operations over the CBD or transiting Adelaide airspace. IFR and VFR operations at Parafield Airport are not impacted.

9.0 Other Nearby Developments

Only one development in close proximity to the Site has been constructed. Adelaide Festival Plaza, placed alongside the Site, has been constructed to a maximum height of 151.6m AHD. This building is 32.6m below the Site.

10.0 Impact on Navigation, Communication Aids and Surveillance Performance

Secondary surveillance radar is the technology used by air traffic controllers to provide radar separation between aircraft. Dual secondary surveillance radar coverage of the area overhead the Adelaide CBD is available from sensors located on the airport and Mt Lofty. This means the proposed development building will not impact radar performance.

Primary radar is used to detect aircraft that do not have an operational transponder. The proposed development at the Site is located approximately 7km from the primary radar antenna. At this distance primary radar coverage will not be impacted by the building.

At a distance of 5.4km from the Adelaide Airport ARP, the building will not impact on the performance of navigation and communication aids located on the airport.

11.0 CASA

CASA will review this report in assessing the safety impact to aircraft arising from the proposed building at the Site. They will consider safety issues relating to the aerodrome and flight operations in the surrounding area.

As the proposed building and crane will penetrate the OLS for Adelaide Airport, CASA will almost certainly require the crane and the tallest point of the building to be lit. It is likely that medium intensity red strobe lights will be required to be placed on the building and crane. At the top of the crane a further lighting system is likely to be required. This will involve lights that flash red at night and white during the day.

In addition to lighting, CASA is likely to require the crane to be painted with bands of contrasting colours. Details of lighting and painting requirements will be provided by CASA during the Airports (Protection of Airspace) approval process. General requirements for lighting and painting are contained in the Manual of Standards (MOS) Part 139-Aerodromes.

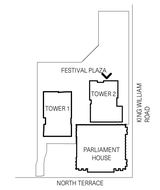
12.0 Conclusion

This aviation impact assessment report has been prepared for two purposes. It serves to provide aviation input to accompany the development application (DA) to the planning authority. The aviation impact assessment report also forms part of the aviation application for the building and cranes to penetrate Adelaide prescribed airspace. In both cases, the aviation impact assessment report will assess whether the building and cranes at the Site will impact the safety and efficiency of air transport operations.

Approval is being sought for a building to penetrate the Adelaide OLS to a maximum height of 197.0m AHD, with two hammerhead cranes to also penetrate the PANS-OPS surface for three months to maximum height of 220.6m AHD. The report identified four IFPs that will be impacted by the crane penetration of the PANS-OPS surface. This report found that a temporary increase in the height of the PANS-OPS surface can be achieved without impacting the safety and efficiency of air transport operations at Adelaide Airport. VFR operations transiting Adelaide and operating over the CBD will also not be impacted.

General Notes
Do not scale from drawing. Use marked dimensions.
To be read in conjunction with all other consultant's drawings.
JPW to be immendiately notified of any discrepancies.
Nominated Architects: Graeme Dix 6256 | Hee Kiong Lee 7407
Matthew Patrick Morel 7244 | Mathew Howard 8784 | Matteo Salval 9536

Key



Scale / North Point

1:400 @ A1
1:800 @ A3

0 2.5 5 10 15M

Status
DEVELOPMENT APPLICATION

Rev	App	Ckd	Revision or reason for issue	Date
00	GD	WB	Issued for DA	17-03-25

Legend

Design with Country
Mantirri Design
Kaurna Country, Adelaide
South Australia
paul.herzich@bigpond.com

Landscape
ASPECT Studios
Level 2, 140 Rundle Mall
Adelaide SA 5000
international@aspect-studios.com

Heritage Consultant
Hosking Willis Architecture
Level 1, 121 South Terrace
Adelaide SA 5000
office@hoskingwillis.com.au

ESD Consultant
Dsquared Consulting
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Adelaide SA 5000
hello@dsquaredconsulting.com.au

Facade Consultant
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Level 4, 152 Clarence Street
Sydney NSW 2000
info@prismfacades.com.au

Structural Engineer
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Melbourne VIC 3000
info@4dworkshop.com.au

Services
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consulting@bestec.com.au

BCA / Certifier
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Marleston SA 5033
admin@kdcertifiers.com.au

Traffic
WGA
60 Wyatt St
Adelaide SA 5000
adelaide@wga.com.au

Waste mangement
Rawtec
11 Paringa Ave
Somerton Park SA 5044
info@rawtec.com.au

Architect
JPW

Johnson Pilton Walker Pty Ltd ACN 095 778 886
Level 10 Plaza Building Australia Square 95 Pitt Street Sydney
New South Wales 2000 Australia

Telephone +61 2 9259 5900
Facsimile +61 2 9259 5999
Email jpw@jpw.com.au

Client

Walker Corporation
Level 21 Governor Macquarie Tower
1 Farrer Place Sydney, NSW 2000 Australia
T +61 2 8273 9600 | F +61 2 8273 7400

Project
ADELAIDE FESTIVAL PLAZA
TOWER 2

Drawing Title
GENERAL ARRANGEMENT
ELEVATION - NORTH

Project Number
21011

Documentation Stage
DA

Drawing Number
DA-AR-2-2000

Revision
00

TD TE TF TG TH TI

3010

NW N1 N2 N3 NE

N 6133166.9
E 280640.2

N 6133168.8
E 280662.3

ROOF

E3

N 6133144.2
E 280650.2

N 6133144.1
E 280664.5

W1 E2A E2 E1

SW S1 SE

PARLIAMENT LANE

FESTIVAL TOWER

T7 T6 T5A T5 T4A T4 T3A T3 T2 T1

OLD GRID SYSTEM

B3

N

MGA94 GRID
SCALE 1:1

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E: 280631.837 N: 6133166.521
E: 280641.900 N: 6133167.389
E: 280651.962 N: 6133168.258
E: 280662.025 N: 6133169.127
E: 280624.271 N: 6133136.734
E: 280663.312 N: 6133154.220
E: 280670.627 N: 6133139.833
E: 280627.567 N: 6133124.555
E: 280650.123 N: 6133114.400
E: 280672.455 N: 6133116.345

654ft flat VOR 23

6600ft

flat sfc

6653ft

6652ft

650ft

Disclaimer
Extra position coordinates in blue are generated using architectural software and have not been verified by a surveyor.
PANS-OPS based on Airservices' advice

JPW-SK-2-1219	R01
POSITION COORDINATES FOR NE SECTION	1 : 150 @B1
19/03/25	
Project: Adelaide Festival Plaza Tower 2	

Plot Date & Time: 19-Mar-25 4:44:25 PM

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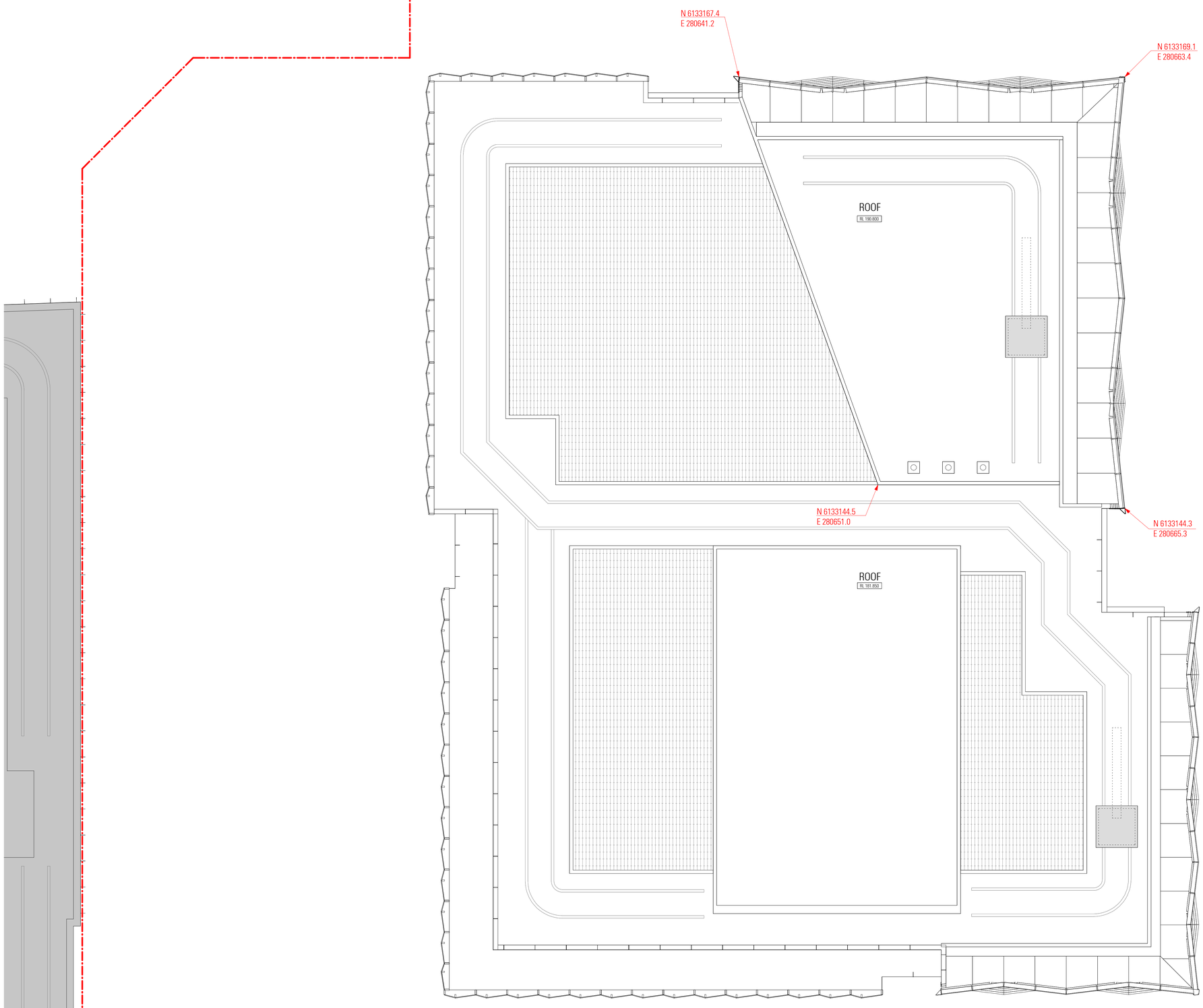

JPW-SK-2-1219

POSITION COORDINATES FOR NE SECTION

13/03/25

Project # Z1011

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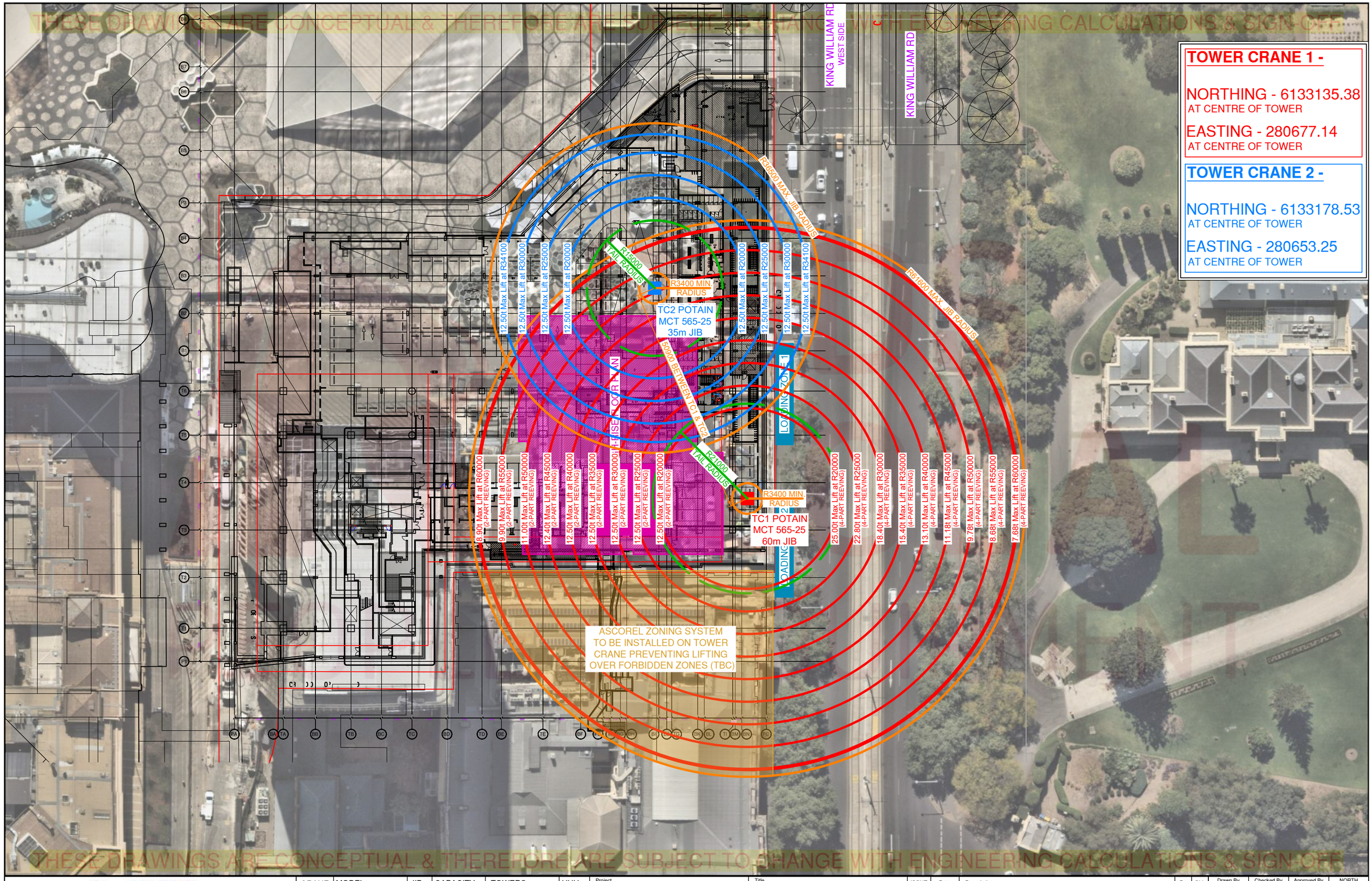

TOWER CRANE 1 -

NORTHING - 6133135.38
AT CENTRE OF TOWER

EASTING - 280677.14
AT CENTRE OF TOWER

TOWER CRANE 2 -

NORTHING - 6133178.53
AT CENTRE OF TOWER

EASTING - 280653.25
AT CENTRE OF TOWER

THESE DRAWINGS ARE CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN OFF

REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN MAP OVERLAY

Drawing Number
SK1001

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

PRELIMINARY
NOT FOR CONSTRUCTION
DO NOT SCALE DRAWINGS. IF IN DOUBT ASK!

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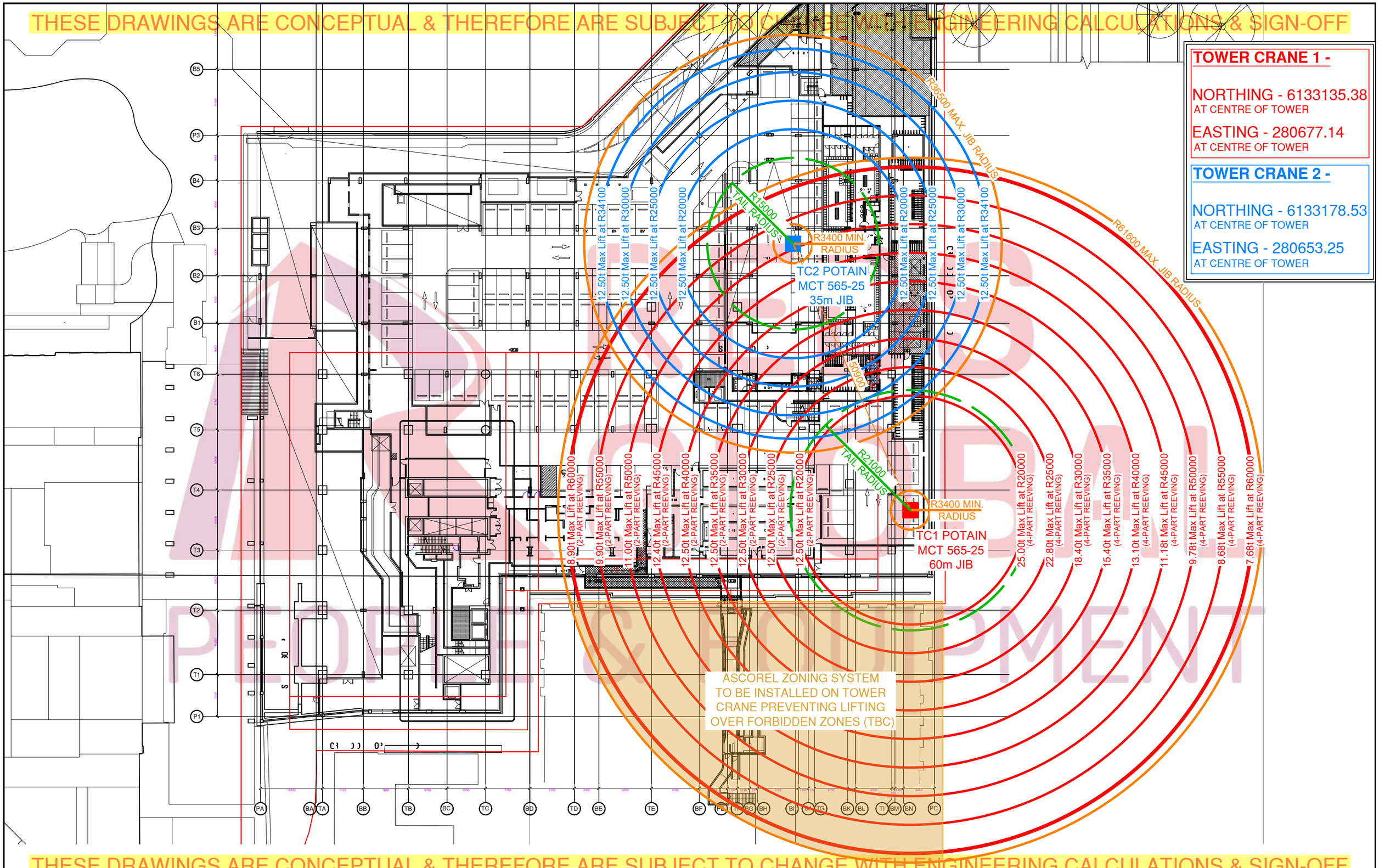

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REDS GLOBAL
PEOPLE & EQUIPMENT

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Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN
BASEMENT LEVEL 1 PLAN

Drawing Number
SK1002

Issue
15

ISSUE	Date	Description	By	Chk
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11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
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15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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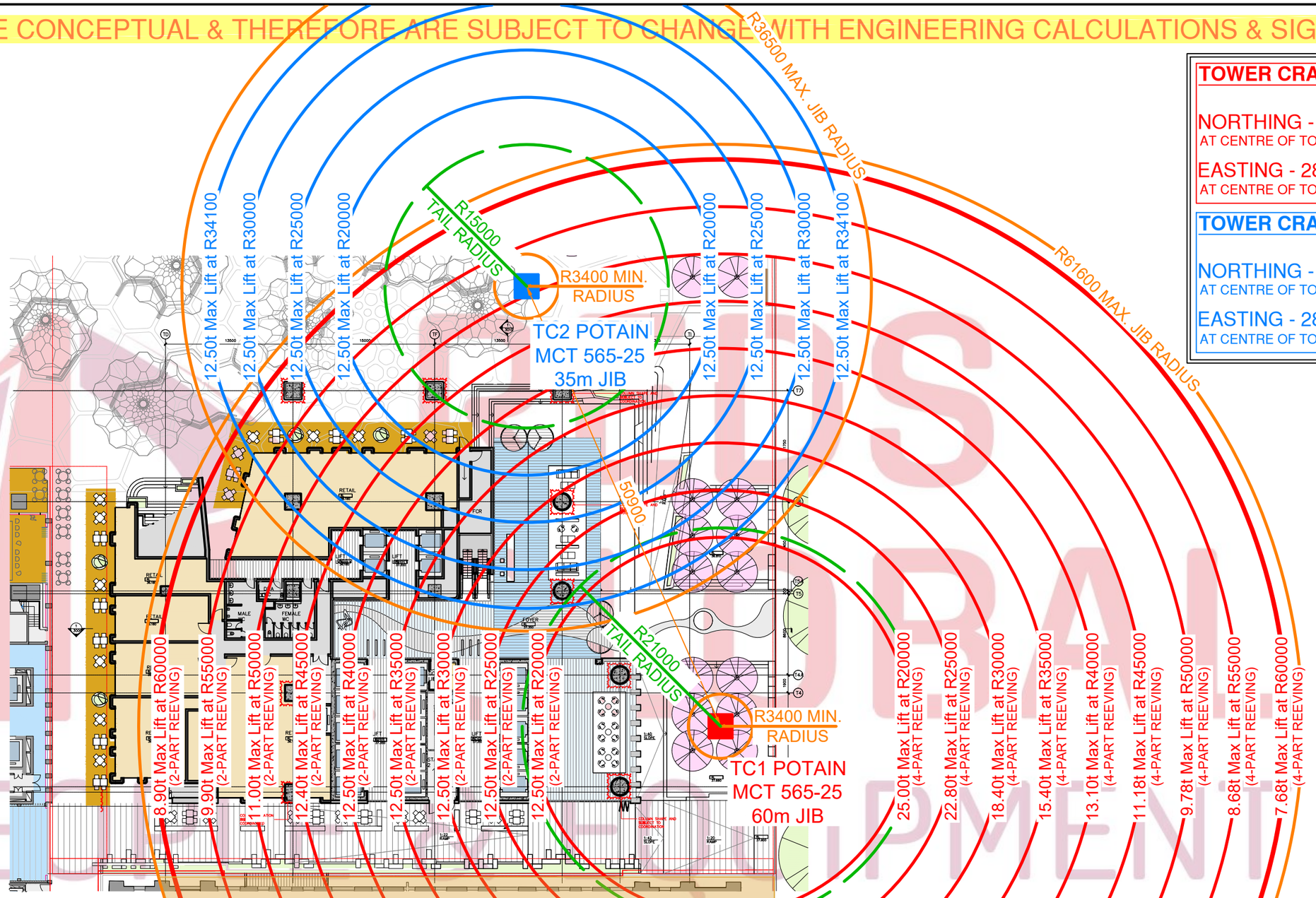
NORTHING - 6133135.38
AT CENTRE OF TOWER

EASTING - 280677.14
AT CENTRE OF TOWER

TOWER CRANE 2 -

NORTHING - 6133178.53
AT CENTRE OF TOWER

EASTING - 280653.25
AT CENTRE OF TOWER



ASCOREL ZONING SYSTEM TO BE INSTALLED ON TOWER CRANE PREVENTING LIFTING OVER FORBIDDEN ZONES (TBC)

THESE DRAWINGS ARE CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN-OFF

REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
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Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN
PLAZA LEVEL PLAN

Drawing Number
SK1003

Issue
15

ISSUE	Date	Description	By	Chk
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Drawn By	Checked By	Approved By	NORTH
TE			

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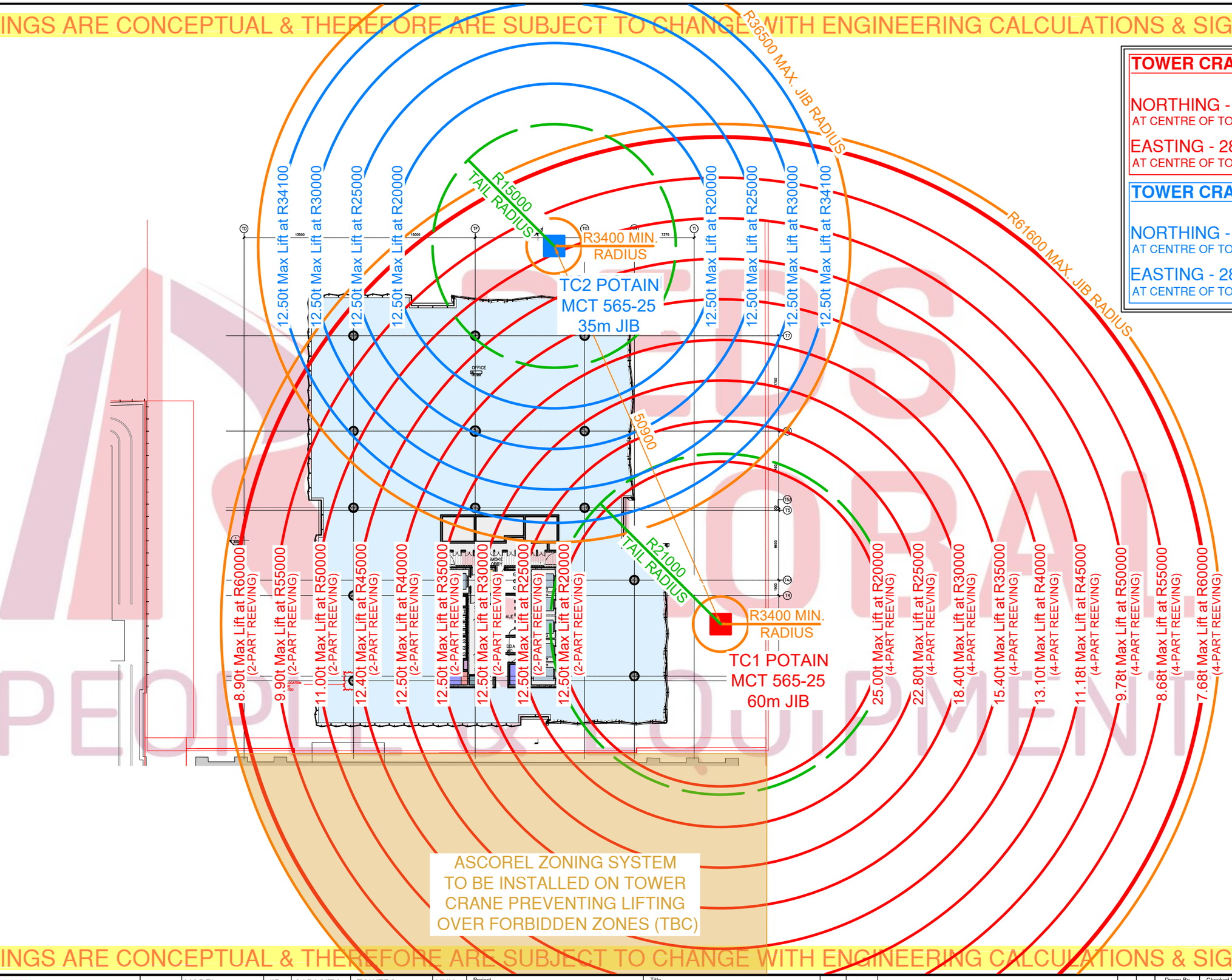
NORTHING - 6133178.53
AT CENTRE OF TOWER

EASTING - 280653.25
AT CENTRE OF TOWER



ASCOREL ZONING SYSTEM
TO BE INSTALLED ON TOWER
CRANE PREVENTING LIFTING
OVER FORBIDDEN ZONES (TBC)

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PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN
TYPICAL HIGH-RISE LEVEL

Drawing Number
SK1004

Issue
15

ISSUE	Date	Description	By	Chk
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15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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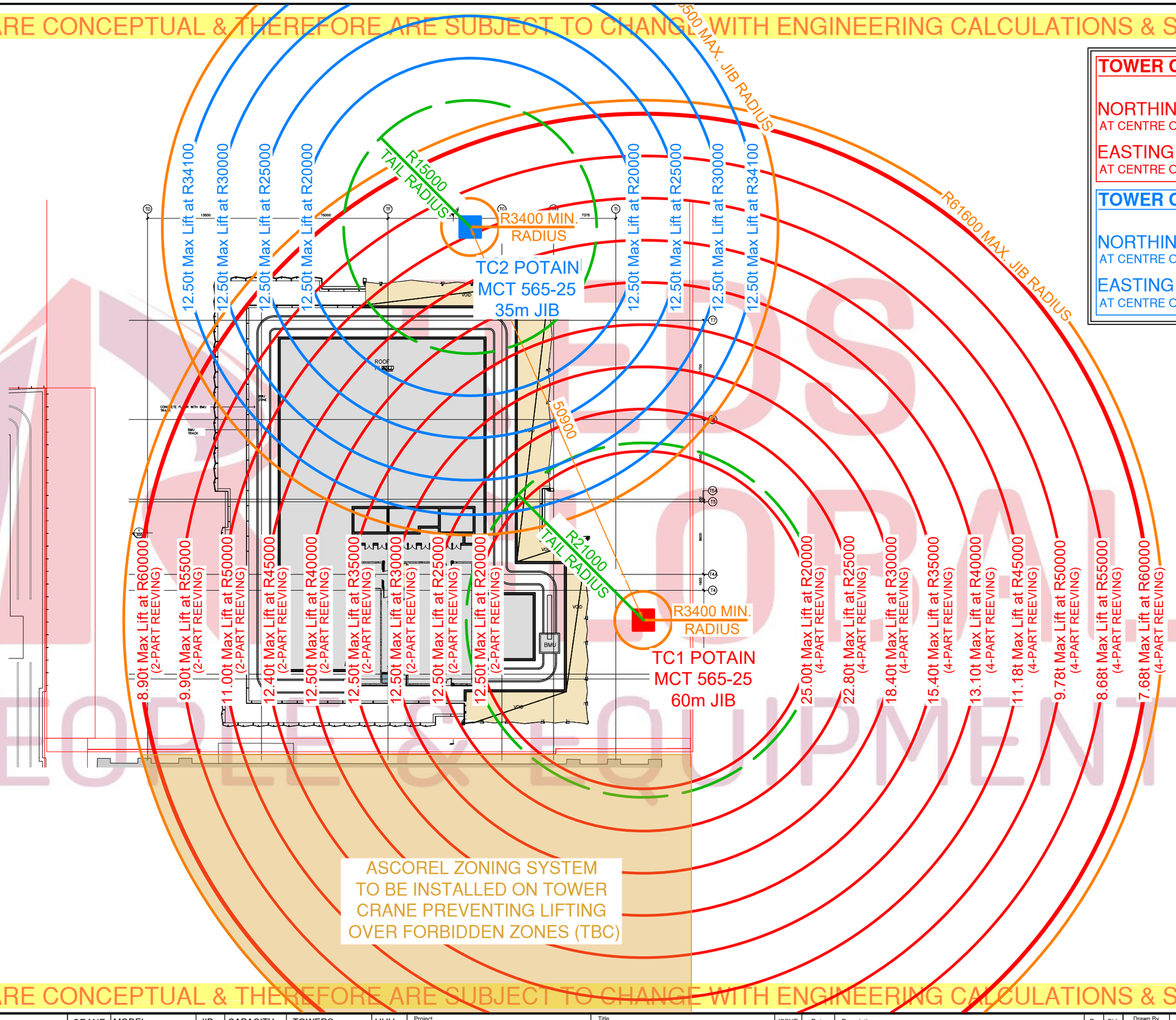
AT CENTRE OF TOWER

TOWER CRANE 2 -

NORTHING - 6133178.53
AT CENTRE OF TOWER

EASTING - 280653.25
AT CENTRE OF TOWER



ASCOREL ZONING SYSTEM
TO BE INSTALLED ON TOWER
CRANE PREVENTING LIFTING
OVER FORBIDDEN ZONES (TBC)

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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE
TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN
ROOF LEVEL

Drawing Number
SK1005

Issue
15

ISSUE	Date	Description	By	Chk
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Drawn By	Checked By	Approved By	NORTH
TE			

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AT CENTRE OF TOWER

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AT CENTRE OF TOWER

EASTING - 280653.25
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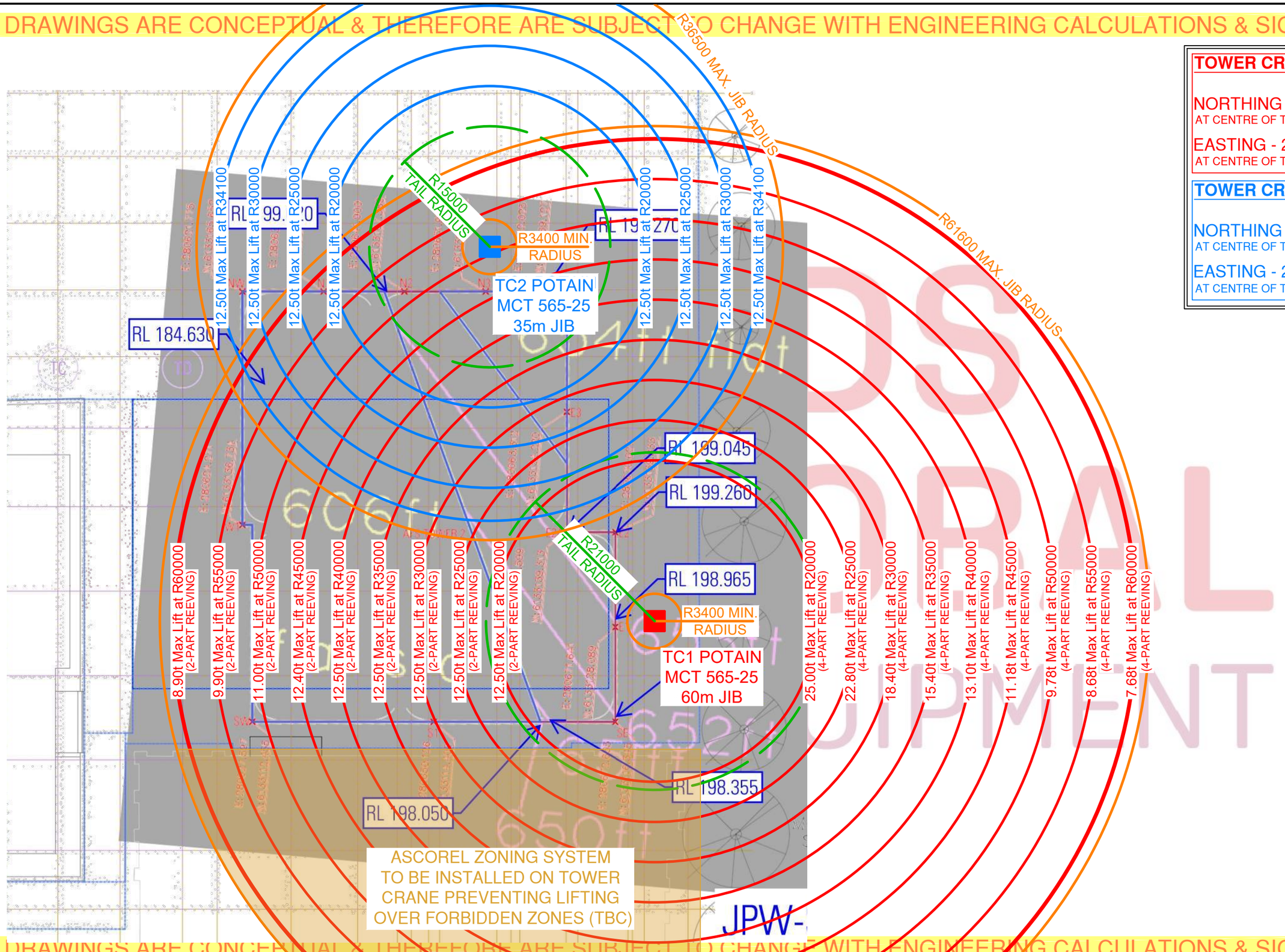

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REDS GLOBAL
PEOPLE & EQUIPMENT

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Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE RADIUS PLAN
ROOF LEVEL - FACADE OVERLAY

Drawing Number
SK1006

Issue
15

ISSUE	Date	Description	By	Chk
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15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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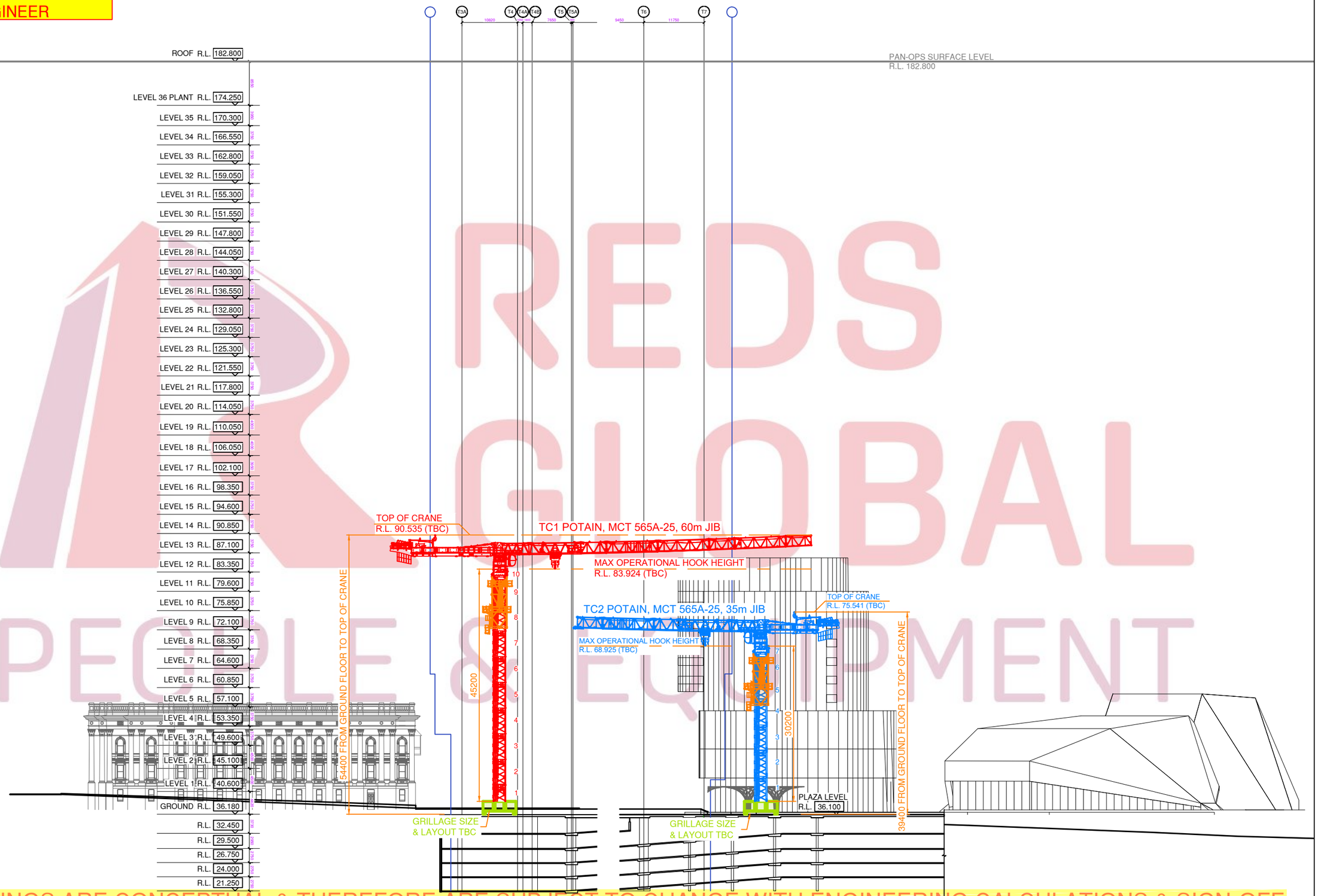
TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN-OFF



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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
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TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN A - TC1 & TC2 INSTALL HEIGHT

Drawing Number
SK1007

Issue
15

ISSUE	Date	Description	By	Chk
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Drawn By	Checked By	Approved By	NORTH
TE			

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TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

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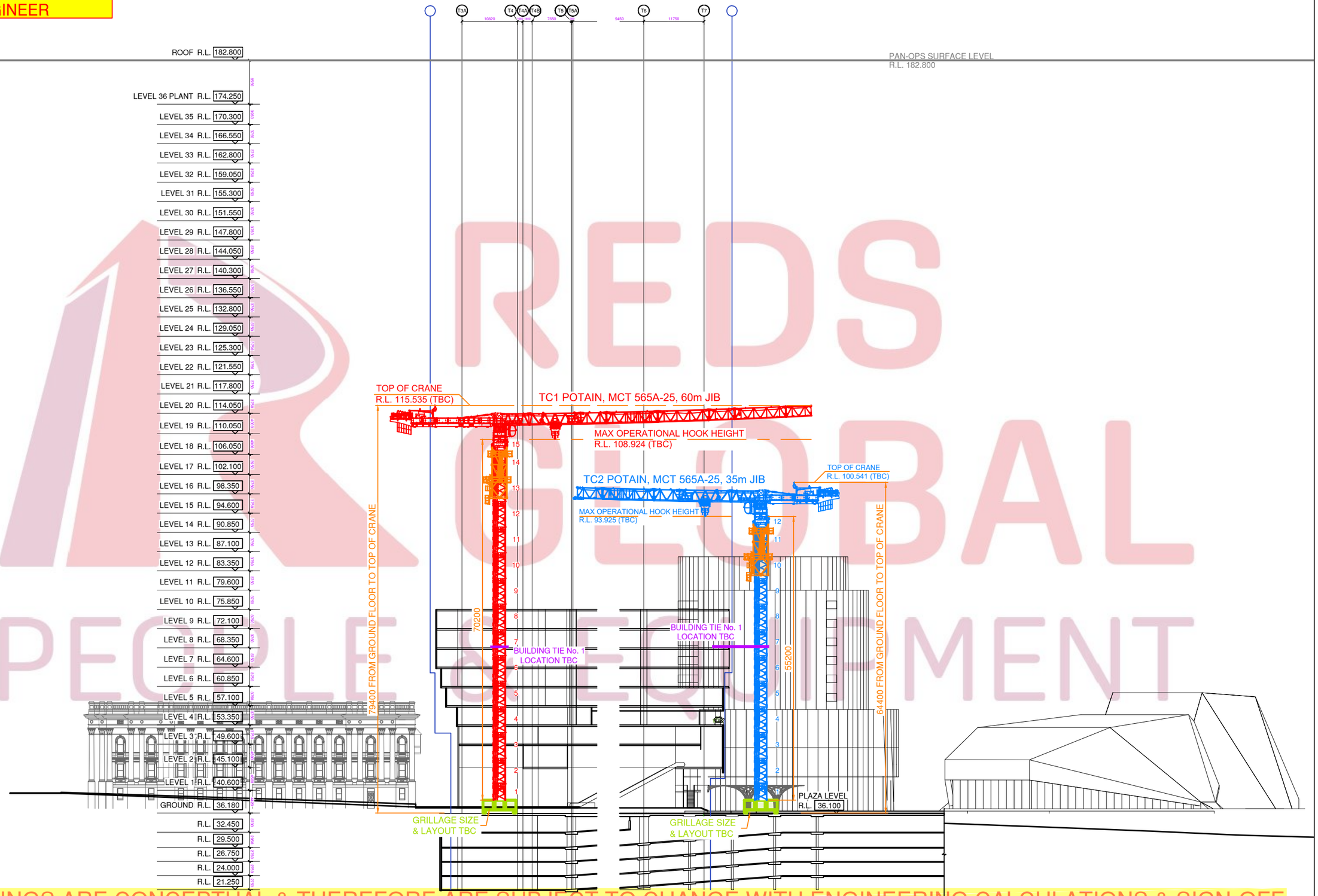

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REDS GLOBAL PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN B

Drawing Number
SK1008

Issue
15

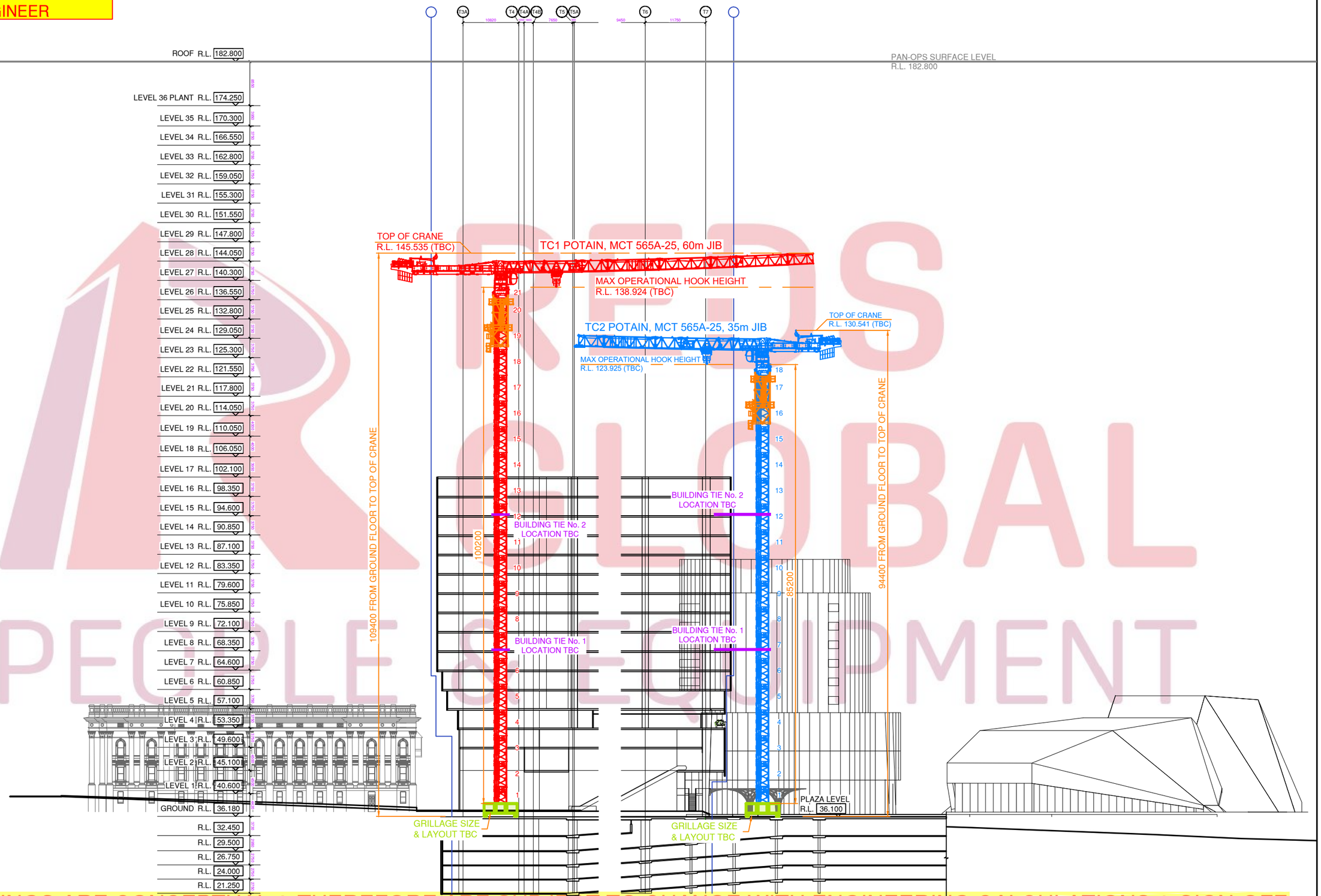
ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

PRELIMINARY
NOT FOR CONSTRUCTION
DO NOT SCALE DRAWINGS. IF IN DOUBT ASK!

TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN-OFF



THESE DRAWINGS ARE CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN-OFF

REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN C

Drawing Number
SK1009

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

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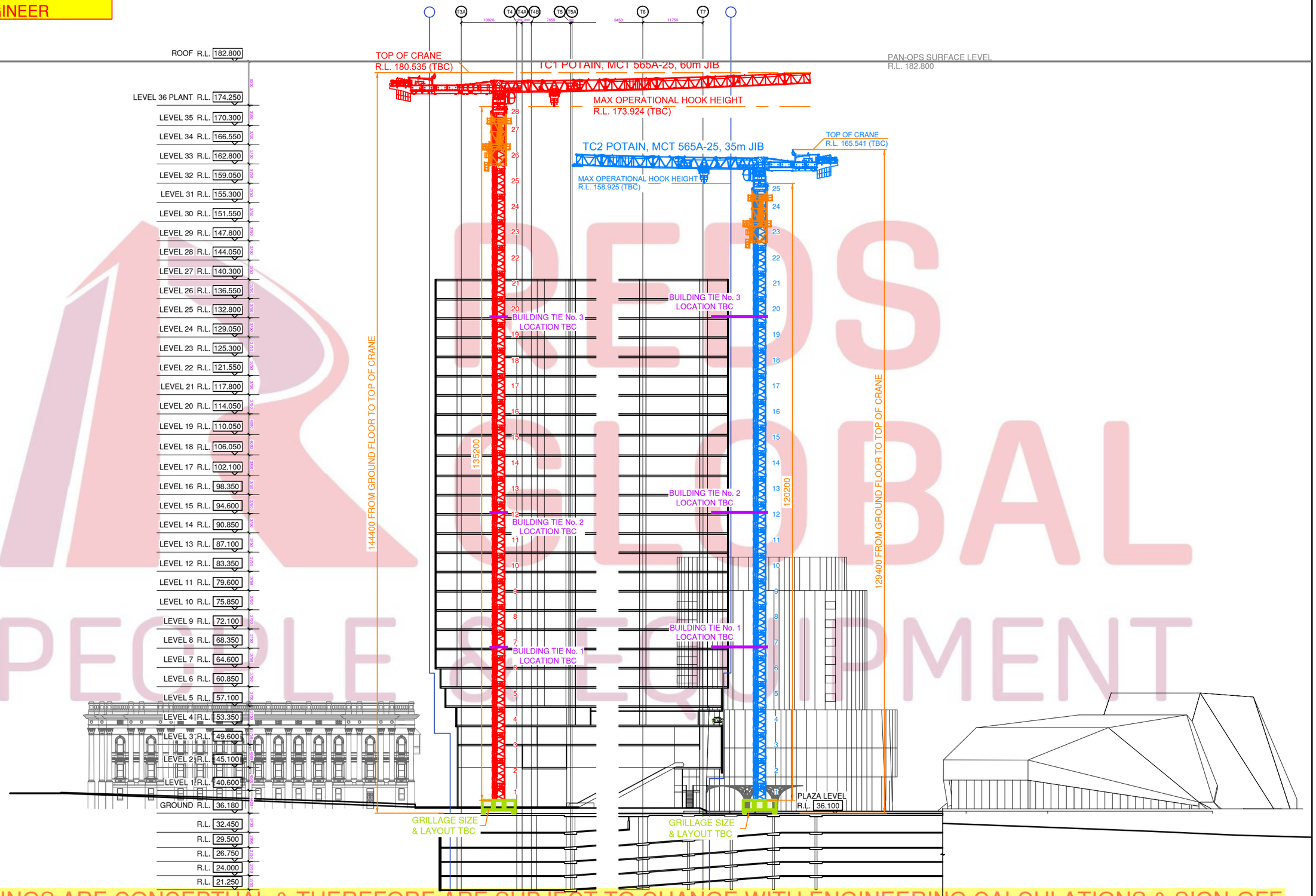

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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN D

Drawing Number
SK1010

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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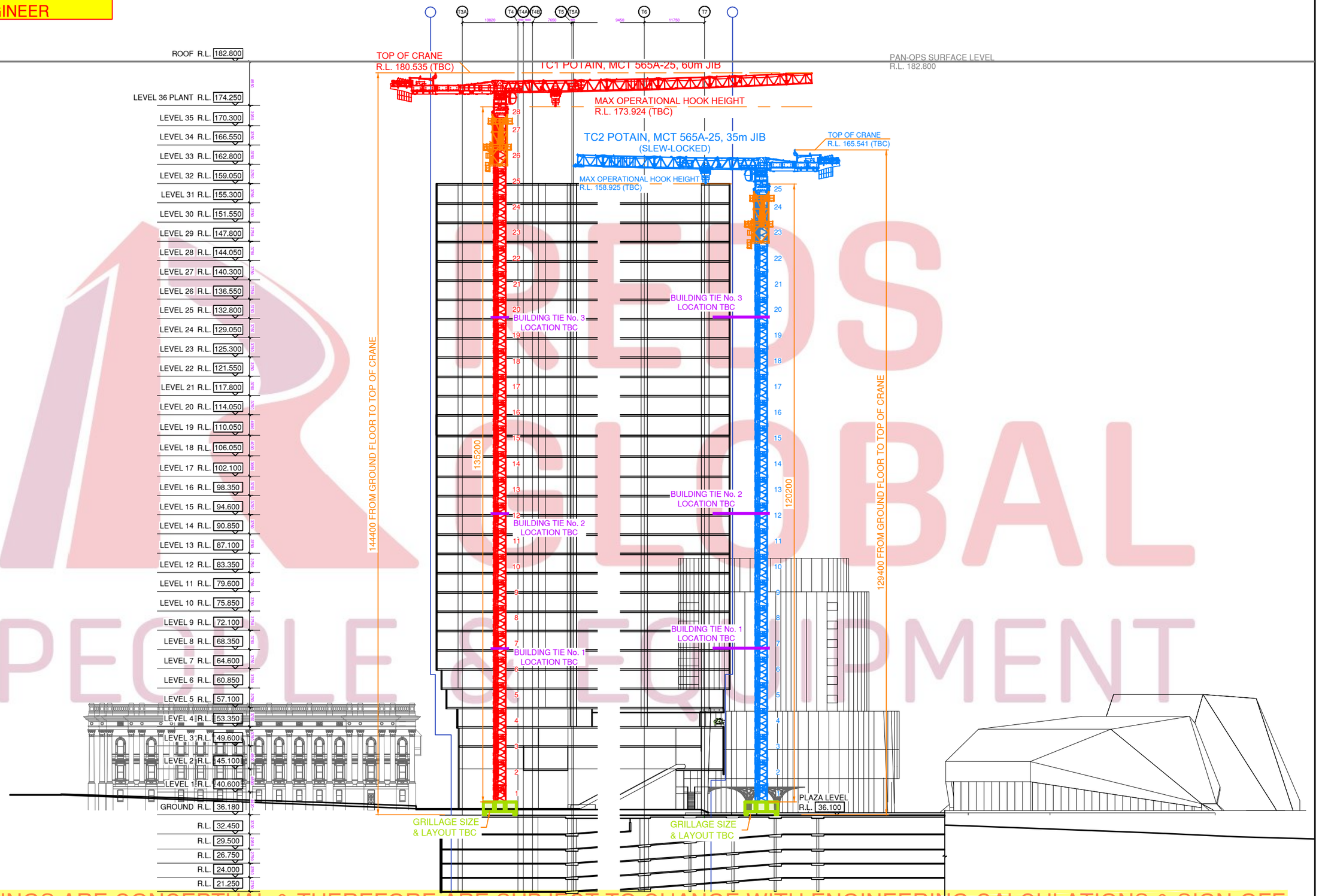
TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

CONCEPTUAL & THEREFORE ARE SUBJECT TO CHANGE WITH ENGINEERING CALCULATIONS & SIGN-OFF



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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN E

Drawing Number
SK1011

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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TOWER CONFIGURATION, STAGING & NUMBER OF TIES TO BE CONFIRMED BY CRANE ENGINEER

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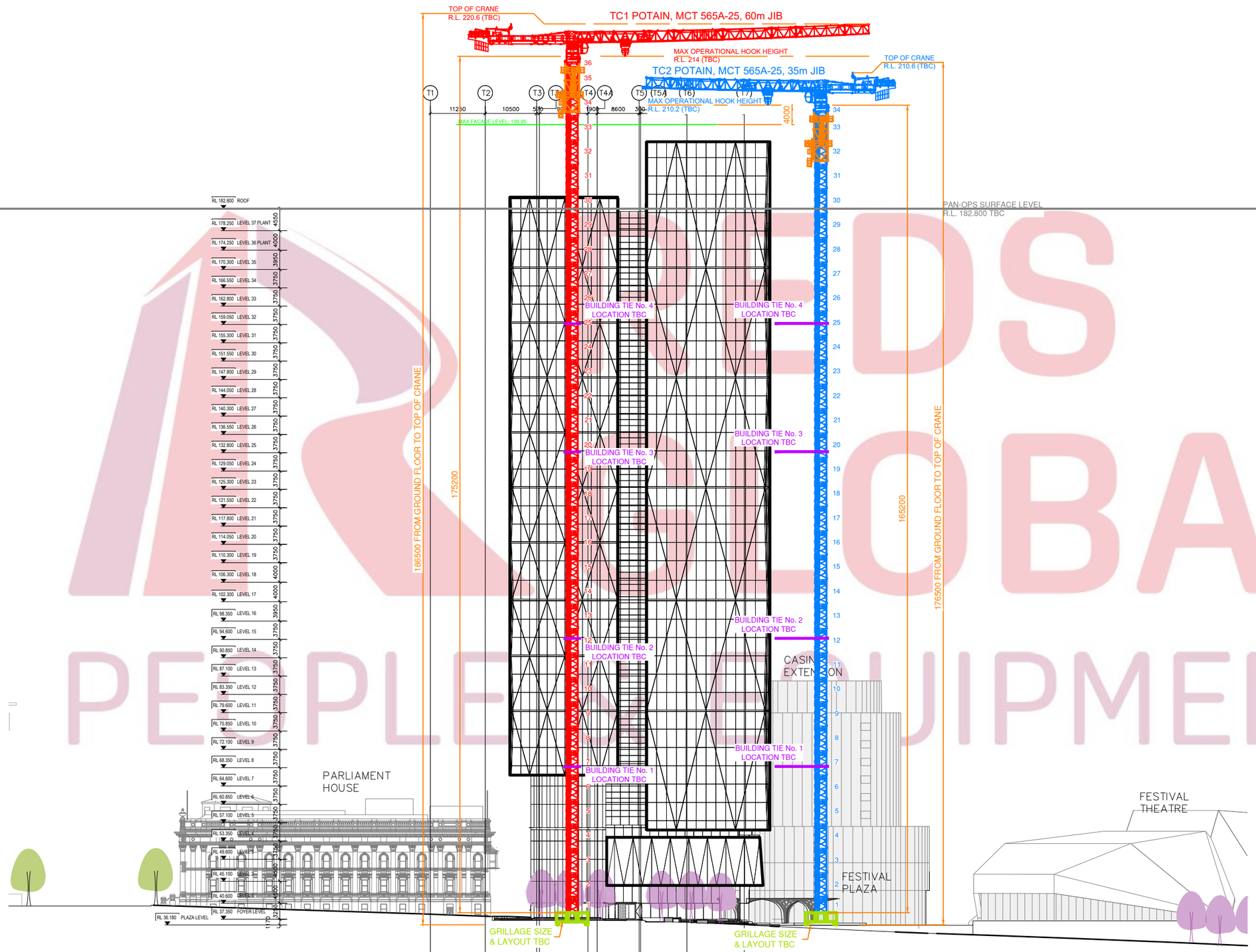

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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN F - FINAL HEIGHTS

Drawing Number
SK1012

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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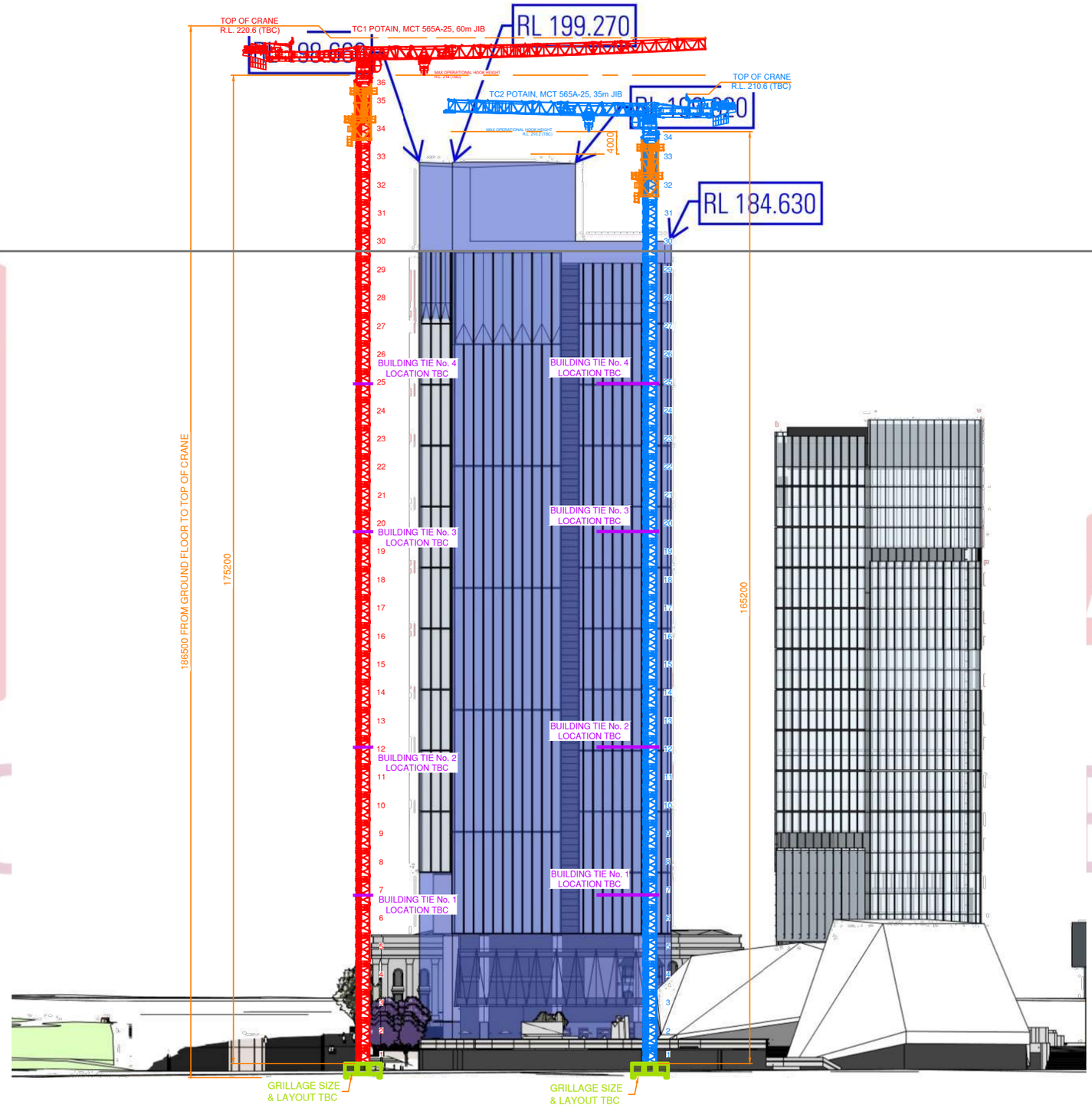

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REDS GLOBAL
PEOPLE & EQUIPMENT

CRANE	MODEL	JIB	CAPACITY	TOWERS	HUH
TC1	POTAIN MCT 565-25	60m	12.5t - 2 PART 25t - 4 PART	45.2m - 165.2m	N/A
TC2	POTAIN MCT 565-25	35m	12.5t - 2 PART	30.2m - 150.2m	N/A

Project
ADELAIDE FESTIVAL SQUARE TOWER 2
ADELAIDE, SA, 5000

Project Number
2310004 SQU 2

Title
CRANE CLEARANCE ELEVATION STAGING PLAN F - FINAL HEIGHTS WITH MAX. FACADE

Drawing Number
SK1013

Issue
15

ISSUE	Date	Description	By	Chk
9	18/12/24	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 + ARCHITECTURALS AMENDED	TE	
10	23/01/25	ISSUED FOR INFORMATION/TENDER - TC1 SHUFFLED TO ALLOW LEFT-SIDE CAB	TE	
11	03/02/25	ISSUED FOR INFORMATION/TENDER - ADDITIONAL STAGING PLANS	TE	
12	14/02/25	ISSUED FOR INFORMATION/TENDER - ELEVATION SEQUENCE AMENDED	TE	
13	26/02/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 NORTHING & EASTINGS ADDED	TE	
14	13/03/25	ISSUED FOR INFORMATION/TENDER - TC1 & TC2 UPDATED LAST STAGING	TE	
15	13/03/25	ISSUED FOR INFORMATION/TENDER - UPDATED FACADE INFO	TE	

Drawn By	Checked By	Approved By	NORTH
TE			

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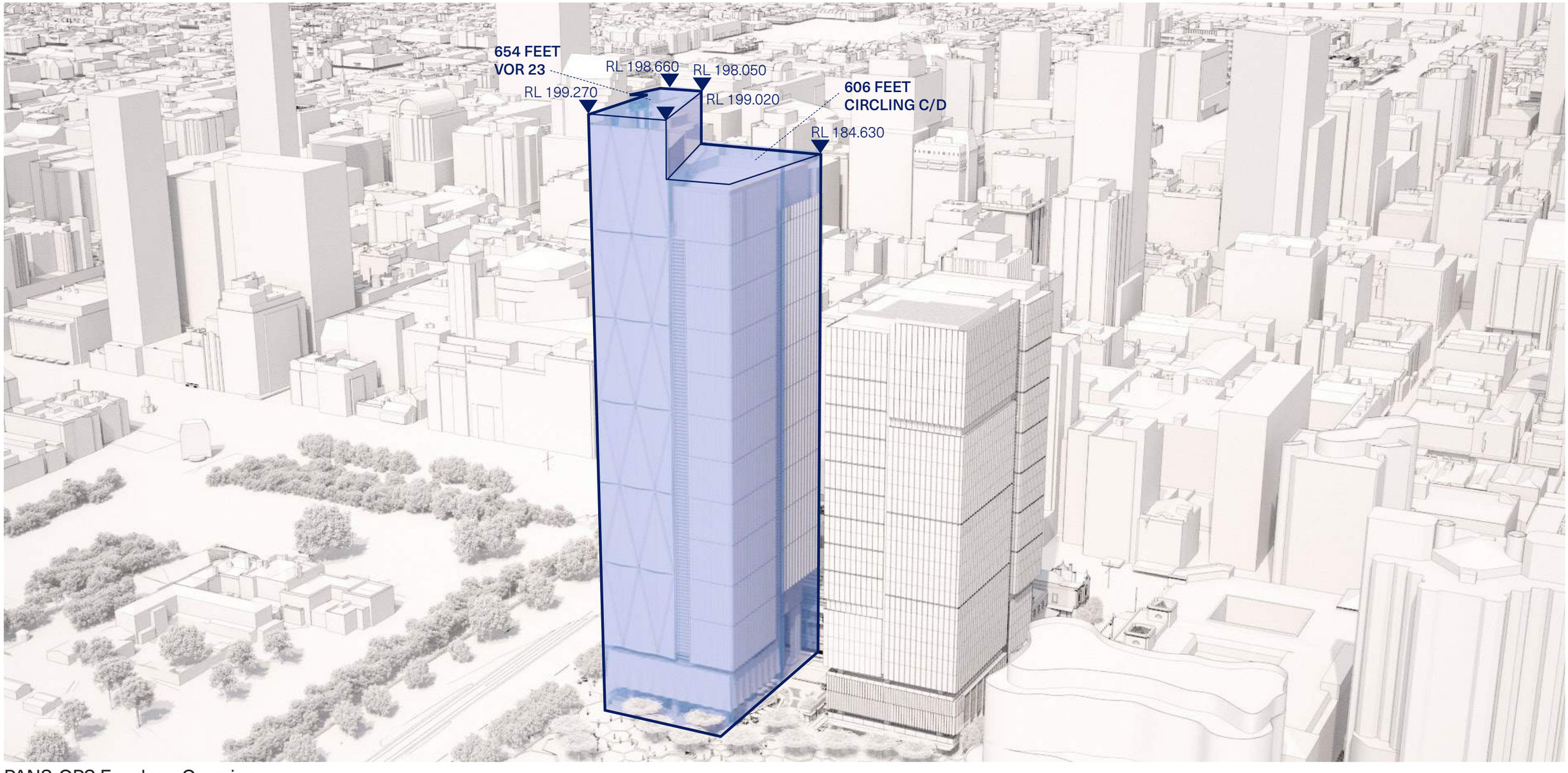
Height Envelope

We have worked closely with Airservices Australia and Adelaide Airport to understand paramters for the safe movement of air traffic.



PANS-OPS Envelope Overview

The site bisects two aviation control heights, VOR 23 and Circling C/D, with the higher control being located on the eastern side of the building.