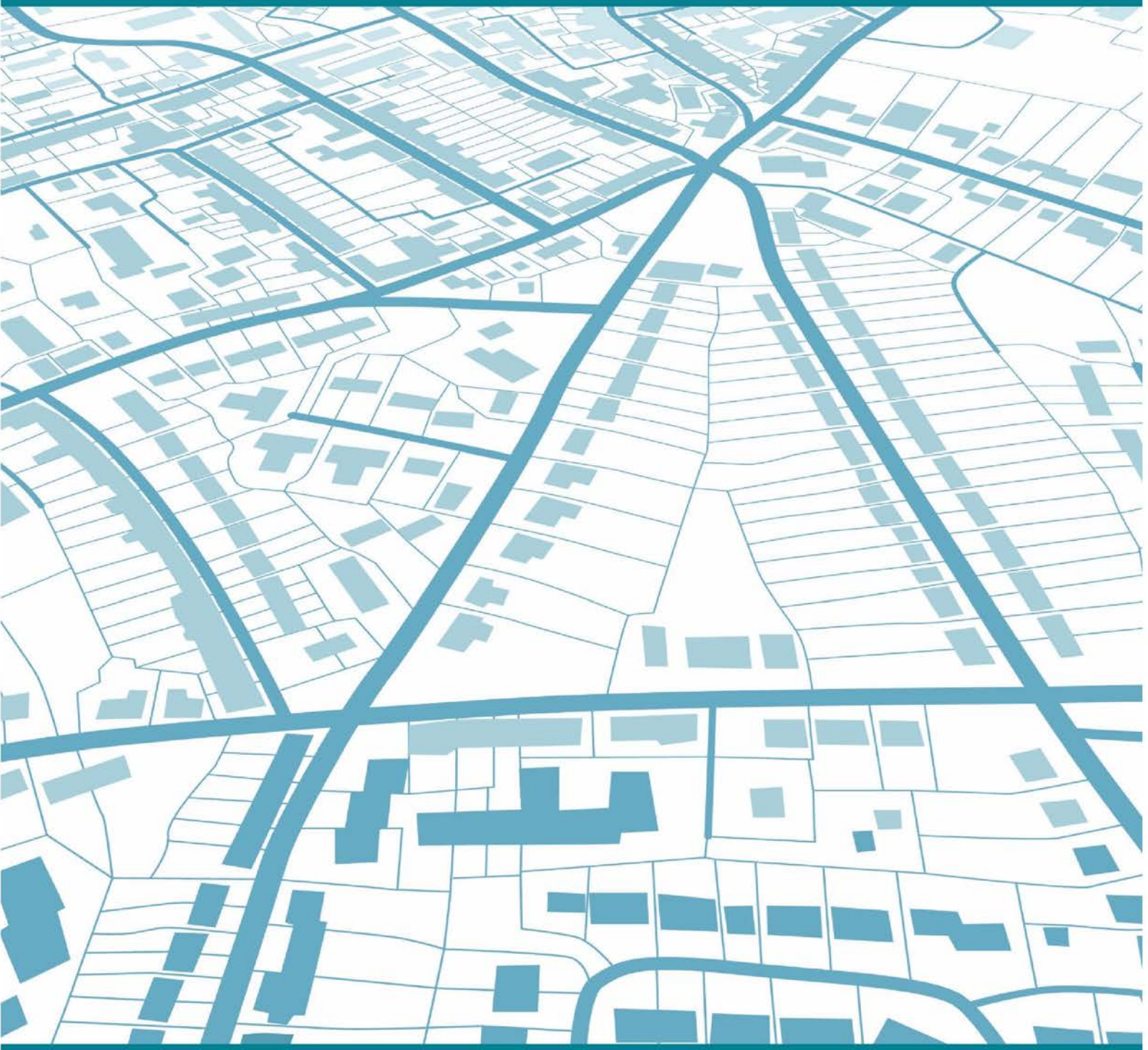
TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Established 1994

Suite 604, Level 6, 10 Help Street
Chatswood NSW 2067
T (02) 9411 5660 | F (02) 9904 6622
E info@ttpa.com.au | ttpa.com.au



Proposed Child Care Centre

41-63 Ryans Road, Gillieston Heights

Traffic and Parking Assessment

Ref: 24262
Date: February 2025
Issue: B

Table of Contents

List of Figures

List of Appendices

1.0 Introduction

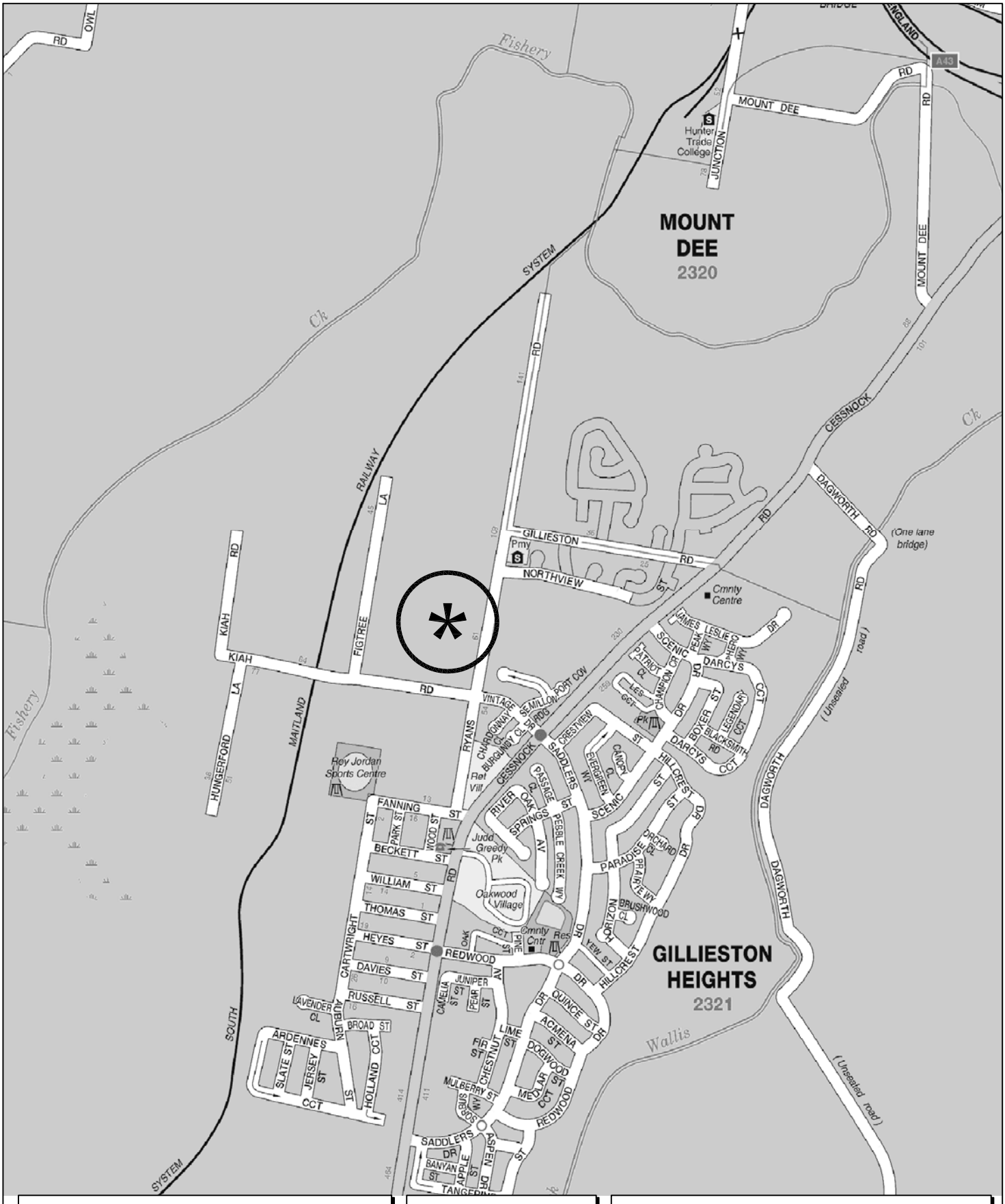
This report has been prepared to accompany a Development Application to Maitland City Council for a proposed Child Care Centre at 41-63 Ryans Road, Gillieston Heights (Figure 1).

The establishment of childcare facilities has become an important element of community services to support young families particularly in new developing areas. The opportunities to develop much needed centres are often limited by environmental considerations however, the proposed development represents a favourable circumstance where the site has convenient access to the surrounding residential areas.

The proposed development scheme involves the construction of a new single level Child Care Centre accommodating 96 children with frontage at-grade carparking.

The purpose of this report is to:

- describe the site, it's context and the proposed development scheme
- describe the road network serving the site and the prevailing traffic conditions
- assess the adequacy of the proposed parking provision
- assess the proposed vehicle access arrangements and the potential traffic implications
- assess the suitability of the proposed internal circulation and servicing arrangements



LEGEND

LOCATION

FIG 1

2.0 Proposed Development

2.1 Site, Context and Existing Circumstances

The site (Figure 2) is a consolidation of 4 residential lots (Lots 76, 77, 80 & 81) and part of Lot 79 within a new residential subdivision of 81 lots (see details overleaf). The site occupies an irregular shaped area of some 2,493m^2 with frontages to Ryans Road, Kiah Road and the future Golden Bell Circuit that is part of the approved subdivision scheme.

The surrounding uses comprise:

- large open farmland to the north and west
- the Maitland Town Centre some 2km to the north
- the recent residential subdivisions extending to the east and south along Cessnock Road

The site is currently vacant although construction works for the approved subdivision involving roadworks are currently being undertaken.

2.2 Proposed Development Scheme

It is proposed to undertake minor earthworks to provide level platforms for the new building and hardstand areas. A new single level building will be constructed on the southern part of the site with at-grade parking on the northern part. The centre will comprise:

- foyer/reception, indoor play rooms, outdoor play areas, office, cot room, kitchen, staff rooms, ancillary room and amenities

- provision for 96 children with a maximum staffing of 18 (8 permanent and 10 part time/casual)

Parents will essentially arrive to drop off children between 7.0am and 10.0am and return between 3.30pm to 6.0pm to pickup children. The start and finish times of staff will be

staggered with full time staff working 8 hours per day while part-time and casual staff working shifts generally between 9.0am and 4.0pm

A total of 21 parking spaces including 1 accessible will be provided with separate ingress and egress driveways located on the future Golden Bell Circuit frontage.

Architectural details of the proposed development are provided on the plans prepared by Shaddock Architects which accompany the Development Application and reproduced in part in Appendix A.

LEGEND

N

SITE

FIG 2

ADJOINS SHEET 323

EXISTING WATER COURSE

70 71 72 73 74 75 MC01 76 77 78 79 80 81

RYANS ROAD

KIAH ROAD

PLAN
SCALE 1:250

MGA

LEGEND

- EXISTING LOT BOUNDARY
- PROPOSED LOT BOUNDARY
- FUTURE LOT BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED KERB
- EXISTING KERB
- 18.2 DESIGN SURFACE CONTOURS
- EXTENT OF BATTER
- SS SUBSOIL DRAINAGE
- EXISTING STORMWATER
- PROPOSED STORMWATER
- FP FLUSHING POINT
- SUBSOIL DRAINS TO PIT
- SUBSOIL DRAINS TO CONNECT TO SUBSOIL UNDER KERB

CONTOUR INTERVAL = 0.2m

BEFORE YOU DIG www.byda.com.au

CONSTRUCTION ISSUE

100mm AT FULL SIZE

This plan includes coloured information. If you have a black and white copy you do not have all of the information. This note is coloured RED.

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
D	21.03.2023	LOTS 76 TO 81 AMENDED	J.C.	N.D.	Z.J.	B.M.
E	24.04.2023	UPDATE FOR COUNCIL COMMENTS	J.C.	Z.J.	Z.J.	B.M.
F	30.05.2023	UPDATE RETAINING WALL DESIGN	J.C.	Z.J.	Z.J.	B.M.
G	06.06.2023	AMENDMENTS TO RETAINING WALL DESIGN	J.C.	Z.J.	Z.J.	B.M.
0	31.08.2023	CONSTRUCTION ISSUE	J.C.	B.M.	S.W.	B.M.
1	26.06.2024	MINOR AMENDMENTS IN RESPONSE TO COUNCIL COMMENTS	J.C.	B.M.	M.A.	B.M.
2	03.09.2024	AMENDMENTS IN RESPONSE TO COUNCIL COMMENTS	J.C.	B.M.	M.A.	B.M.
3	20.09.2024	DESIGN UPDATES	A.M.	B.M.	T.N.	B.M.
4	30.09.2024	HEADWALL STRUCTURAL DETAILS AMENDED	A.M.	B.M.	T.N.	B.M.

DESIGN FILE S:\190682\DESIGN\12D\CC DESIGN

SCALES: 0 5 10 — A1 / A3 1:250 / 1:500

ALL DIMENSIONS ARE IN METRES U.N.O. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: EXP GH2

PROPERTY DESCRIPTION: PROPOSED SUBDIVISION
LOT 17 D.P.263196 & LOT 182 D.P.1282386
41-63 RYANS RD, GILLIESTON HEIGHTS
D.A./2020/1347
SUBDIVISION WORKS CERTIFICATE

SURVEYED: ADW Johnson

DATUM: GDA2020 M.G.A. ZONE 56 A.H.D.

PROJECT: PROPOSED SUBDIVISION

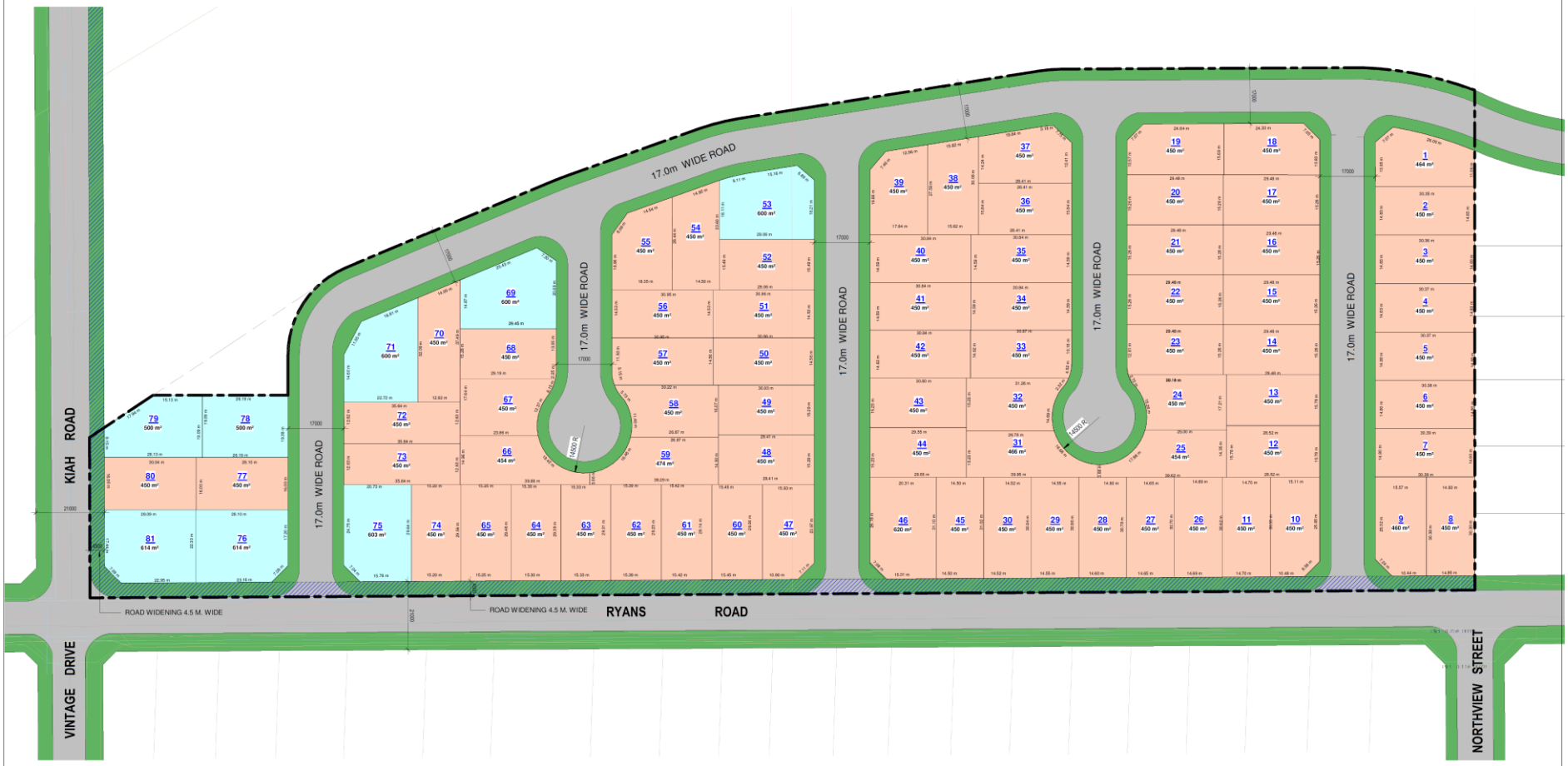
PLAN TITLE: RETAINING WALL & SUBSOIL DRAINAGE PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
190682	ENG	324	4

TABLE			
CODE	LOT SIZE	FRONTAGE	NO. OF LOTS
	450m2-499M2	12.5-20.0	73
	500m2-615M2	15.0-28.5	8
TOTAL LOTS=81			

TOTAL SITE AREA=17.24 HA

NET DEVELOPABLE AREA=6.06 HA



1 DA02 SUBDIVISION PLAN

1 : 600

ISSUE	DATE	REVISION	BY
A	13/11/20	ISSUED FOR DEVELOPMENT APPLICATION	JP

GENERAL NOTES:

NORTH:

The Bathla Group
137 Gilba Road, Girraween Sydney NSW - 2145
PO Box 272, Wentworthville NSW 2145
T: 02 9636 2465 | F: 02 9688 4762
info@bathla.com.au | www.bathla.com.au

PROJECT: 32 KIAH ROAD & 63 RYANS ROAD,GILLIESTON HEIGHTS

LOT NUMBER: LOT 17 & 18 IN D.P.263196

DRAWING TITLE: SUBDIVISION PLAN

PROJECT No.	DATE:	DRAWING No:	REV:
	13/11/20	DA02	A
DRAWN BY: JP	SCALE: As indicated		

Z:\Projects- Current\Kiah Road 32 & Ryans Road 63 GILLIESTON HEIGHTS\03 DA\ARCHITECTURAL\REVIT\PROJECT DA\R1\32 KIAH ROAD.rvt

3.0 Road Network and Traffic Conditions

3.1 Road Network

The road network serving the site (Figure 3) comprises:

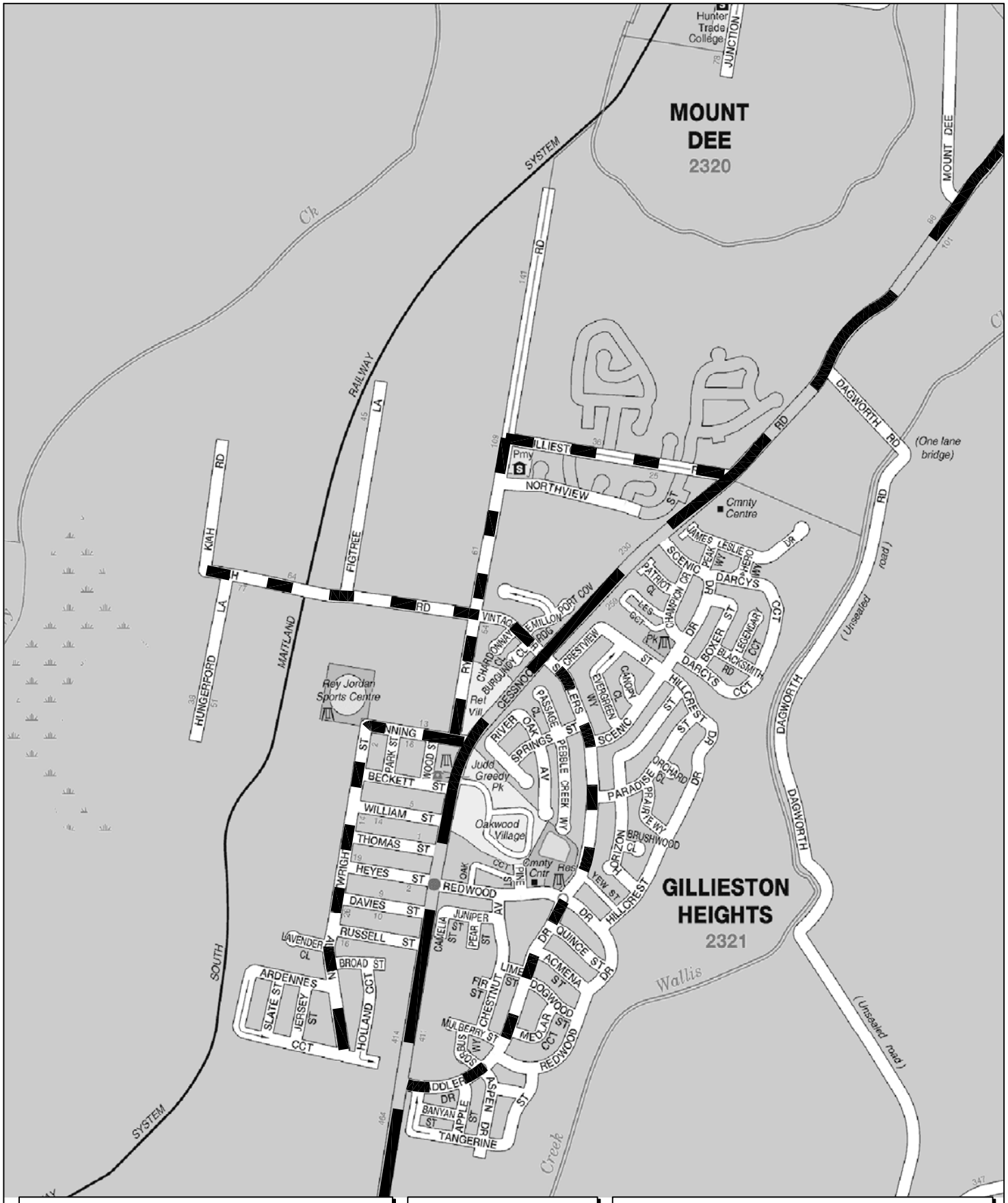
- *Cessnock Road* – a State Road and sub-arterial route connecting between the Hunter Expressway at Kurri Kurri and Maitland
- *Ryans Road / Gillieston Road* – a collector route connecting to Cessnock Road
- *Kiah Road/Vintage Drive/Saddlers Drive* – a collector route linking across Cessnock Road and Ryans Road

The new proposed road with frontage to the northern side of the site is relatively straight and level with one lane in each direction and kerbside parking.

3.2 Traffic Controls

The limited existing traffic controls on the road system serving the site (Figure 4) comprise:

- the STOP signs at the intersection of Ryans Road and Kiah Road / Vintage Drive
- the traffic signals at intersections along Cessnock Road including the Vintage Drive/Saddlers Drive intersection
- the NO RIGHT TURN restriction and GIVE WAY control at the Ryans Road and Cessnock Road intersection
- the 50 kmph speed restriction on Ryans Road and Kiah Road



LEGEND

- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR

N

ROAD NETWORK

FIG 3

LEGEND

- TRAFFIC SIGNAL CONTROL
- ROUNDABOUT
- RESTRICTED TURNING MOVEMENT

N

TRAFFIC CONTROLS

FIG 4

3.3 Traffic Conditions

Details of the prevailing traffic conditions in the area are provided by surveys undertaken by Trans Traffic Survey for the Traffic Report which accompanied the subdivision application. The results of these surveys for the weekday peak periods on Ryans Road and Kiah Road at the site frontages are as follows:

Ryans Road	**AM**	**PM**
Northbound	108	16
Southbound	82	20
Kiah Road		
Eastbound	11	11
Westbound	7	14

This data indicates that the prevailing traffic conditions at the Ryans Road/Kiah Road intersection are free flowing and without any delays.

3.4 Transport Services

Public transport services in the vicinity of the site comprise the following bus service:

- Route 164 – Maitland to Cessnock via Kurri Kurri (see Appendix B details)

3.5 Future Circumstances

The traffic assessment for the approved subdivision assessed that development on the proposed lots would generate some 80 vtph in the peak periods and that these movements would distribute to/from the north and south via Cessnock Road and Ryans Road. The new access road network in the subdivision will be completed including widening of parts of Ryans Road and Kiah Road.

There are also new residential subdivisions proposed in the Roads extending along Cessnock Road.

4.0 Traffic

An indication of the potential traffic generation of the proposed development is provided by the TfNSW Development Guidelines 2002. However, this was derived from a study undertaken in 1992 and is an aggregation of survey results from 3 types of centres namely:

- Pre School
- Long Day Care
- Before/After School Care

The former RMS undertook a more recent study[1] of Child Care Centres and the results are included in the new Guide to Transport Impact Assessment. This study involved surveys at 4 types of Centres namely:

- Long Day Care
- Occasional Care
- Before/After School Care
- Pre School Care

Occasional Care and Before/After School Centres have different traffic characteristics to the other centres and the RMS study includes details of all the centres surveyed and the averaged results.

Extracts from this study are provided in Appendix C and it can be seen that the average peak traffic generation in the AM and PM road network peaks (excluding the OC & BASC centres) was 0.64 vtph per child in the AM and 0.39 vtph per child in the PM.

[1] *Trip Generation and Parking Surveys*
Child Care Centres
TEF Consulting for RMS, Aug 2015

Application of this criteria to the proposed development with 96 children would indicate a generation of some 62 vtph and 38 vtph respectively as follows:

AM		PM	
IN	**OUT**	**IN**	**OUT**
31	31	19	19

While this generation will be somewhat more than that attributable to the 4 residential lots which will be replaced, many of the trips will be generated by nearby residential dwellings and will not represent additional trips on the broader road network because:

- they will incorporate trips to/from the workplace
- they will be very localised trips to/from residences

Vehicle access to/from and across Cessnock Road will readily be provided by the traffic signal control at the Vintage Drive/Saddlers Drive intersection. It is apparent that the proposed development will not result in any adverse traffic implications.

5.0 Parking

An indication of the car parking needs for the proposed development is provided in Councils DCP as follows:

1 space per 4 children in attendance or part thereof.

Application of this criteria to the proposal would indicate the following:

96 Children	24 spaces

The Guide to Transport Impact Assessment document also recommends a “blanket” provision of 1 space per 4 children however, the extracts from the relevant RMS Study provided in Appendix D indicate that:

- the peak parking demands for surveyed Childcare Centres with 90 children were only some 14.5 cars
- the recommended provision for centres catering for 70 to 100 children was 1 space per 6 children (or 16 spaces for 96 children)

It is noted that part-time and casual staff will generally start after 9.0am and finish by 4.0pm. During these hours there will be very few if any parent’s cars parked. As such, by arrangement with the centres management, any part-time/casual staff requiring to park will be able to park in a “parents” space. While there will be a maximum of 18 staff a significant number will not own a car and will either “car share”, be set down and picked up by family/friend, live nearby and walk or catch the bus service which runs along Cessnock Road. This circumstance is evidenced by the RMS data and the study recommendation.

It is proposed to provide 21 spaces (including 1 accessible space) for the proposed and it is apparent that this parking provision will be quite adequate and appropriate for the proposed development.

6.0 Access, Internal Circulation and Servicing

6.1 Access

The design of the proposed driveways complies with the AS2890.1 design criteria and there will be good sight distances available at these driveways which will be located on the "lower order" road frontage and well away from the Ryans Road intersection.

6.2 Internal Circulation

The design of the carpark including bays, aisles, grades etc complies with the AS2890.1 & 6 design criteria. Adequate provision will be available for cars to manoeuvre into and out of the parking bays as indicated in the Appendix D turning path assessment however, it is recommended that all spaces be designated "rear to kerb parking" only.

6.3 Servicing

Refuse will be removed by private contractors, while other minor deliveries will be made by vans which, along with occasional service personnel, will be able to park in the set-down/pick-up visitor area outside of peak usage hours.

7.0 Conclusion

The traffic and parking assessment undertaken for the proposed Child Care Centre on Ryans Road at Gillieston Heights has concluded that:

- the traffic generation of the proposed development will be relatively minor and not present any adverse traffic implications

- the proposed parking provision will be quite adequate for the needs of the development

- the proposed vehicle access, internal circulation and servicing arrangements will be appropriate to the AS2890 design standards

Appendix A

Development Plans

ROAD

KIAH ROAD

RYANS ROAD

REFER TO SHEET A05 FOR DETAILS

CHILDCARE CENTRE & CARPARK

REFER TO CIVIL DOCUMENTATION FOR CARPARK GRADES & RAMP DESIGNS

REFER TO LANDSCAPE PLANS

LOT 78
600sqm

CARPARK
21 spaces

ROOM 5
age 4–5
20 children

ROOM 4
age 2–3
20 children

ROOM 3
age 2–3
20 children

ROOM 2
age 1–2
18 children

ROOM 1
age 0–1
18 children

OUTDOOR PLAY 2
age 2–5

OUTDOOR PLAY 1
age 0–2

RL. 15.690

RL 15.400

RL 14.400

BDRY 36.121

BDRY 7.080

BDRY 3.454

BDRY 44.043

BDRY 40.673

BDRY 7.860

BDRY 16.000

BDRY 37.500

2100

34569

4450 nom.

4553 nom.

16013

21369

21495

13321 nom.

FT.1

FT.2

AB.1

RW

PROPOSED SITE PLAN

0m 5 10 15m

LEGEND:

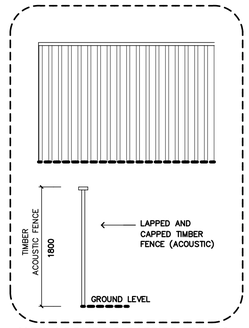
AB ... ACOUSTIC BARRIER TYPE ...
FT ... FENCE TYPE ...
RW RETAINING WALL

KEY:

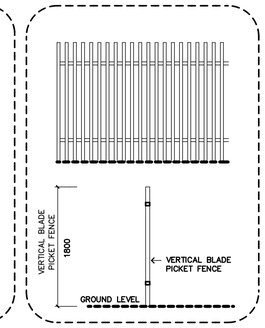
PAVED AREA

DENSE LANDSCAPING

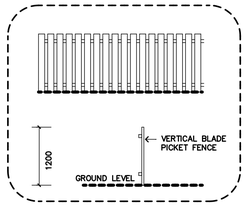
SOFT LANDSCAPING



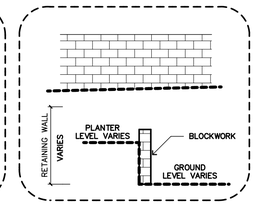
(AB1) ACOUSTIC BARRIER TYPE 1



(FT1) FENCE TYPE 1



(FT2) FENCE TYPE 2



(RW) RETAINING WALL

NOTES:

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FULL DA DOCUMENTATION PACKAGE.
THESE DRAWINGS ARE FOR THE PURPOSE OF A DA ONLY AND ARE NOT TO BE USED FOR ANY WORK ON-SITE.
SITE BOUNDARIES & LEVELS HAVE BEEN ESTABLISHED UTILIZING PROPOSED SUBDIVISION PLAN PRODUCED BY ADW JOHNSON DATED 20/09/2024 REF: 190682 (DA/2020/1347)

All dimensions are in millimeters unless otherwise shown. All levels are in metes to AHD unless otherwise noted. Work to figured dimensions. Do not scale from drawings. Check all dimensions on site and report any discrepancies to Shaddock Architects prior to construction or fabrication of any item. This drawing is to be read nonfunctional with the total documentation package.

NO.	REVISION	DATE
9	PRELIMINARY DA	03.02.2025
8	PRELIMINARY DA	24.01.2025
7	PRELIMINARY DA	21.01.2025

PROJECT: CHILD CARE FACILITY

LOCATION: 77–76, 79–81 RYANS ROAD
GILLIESTON HEIGHTS, NSW, 2321

CLIENT: EXP GILLIESTON HEIGHTS PTY. LTD.

DRAWING TITLE: PROPOSED SITE PLAN

SCALE: 1:150 @ A1

No. IN SET: 3 of 19

PROJECT No.: 1302

DWG No.: A03

SHADDOCK ARCHITECTS

LEGEND:

AB ...	ACOUSTIC BARRIER TYPE ...
AW	AWNING
B	BOLLARD
CS	CRAFT SINK
CTS	CHILD TOILET SUITE
CWB	CHILD WASH BASIN
D ...	DOOR NUMBER ...
DW	DISHWASHER
ES	EQUIPMENT STORAGE
F	FRIDGE
FT ...	FENCE TYPE ...
G ...	GATE NUMBER ...
GU	GLAZING UNIT
HB	HAND BASIN
JU	JOINERY UNIT
LO	LOCKER
NC	NAPPY CHANGE
OV	OVEN
RW	RETAINING WALL
SC	STEEL COLUMN
SK1	SKYLIGHT TYPE 1
SK2	SKYLIGHT TYPE 2
SSK	SINK
ST	STOVE
SU	STORAGE UNIT
W ...	WINDOW NUMBER ...
WS	WHEEL STOP

KEY:

PAVED AREA

DENSE LANDSCAPING

SOFT LANDSCAPING

NOTES:

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FULL DA DOCUMENTATION PACKAGE.
THESE DRAWINGS ARE FOR THE PURPOSE OF A DA ONLY AND ARE NOT TO BE USED FOR ANY WORK ON-SITE.
SITE BOUNDARIES & LEVELS HAVE BEEN ESTABLISHED UTILIZING PROPOSED SUBDIVISION PLAN PRODUCED BY ADW JOHNSON DATED 20/09/2024 REF: 190682 (DA/2020/1347)

RYANS ROAD

OUTDOOR PLAY 2
age 2-5

OUTDOOR PLAY 1
age 0-2

0m 5m
0 1 5

All dimensions are in millimeters unless otherwise shown. All levels are in metes to AHD unless otherwise noted. Work to figured dimensions. Do not scale from drawings. Check all dimensions on site and report any discrepancies to Shaddock Architects prior to construction or fabrication of any item. This drawing is to be read nonfunctional with the total documentation package.

NO.	REVISION	DATE
9	PRELIMINARY DA	03.02.2025
8	PRELIMINARY DA	24.01.2025
7	PRELIMINARY DA	21.01.2025

PROJECT: CHILD CARE FACILITY

LOCATION: 77-76, 79-81 RYANS ROAD
GILLIESTON HEIGHTS, NSW, 2321

CLIENT: EXP GILLIESTON HEIGHTS PTY. LTD.

DRAWING TITLE: PROPOSED FLOOR PLAN

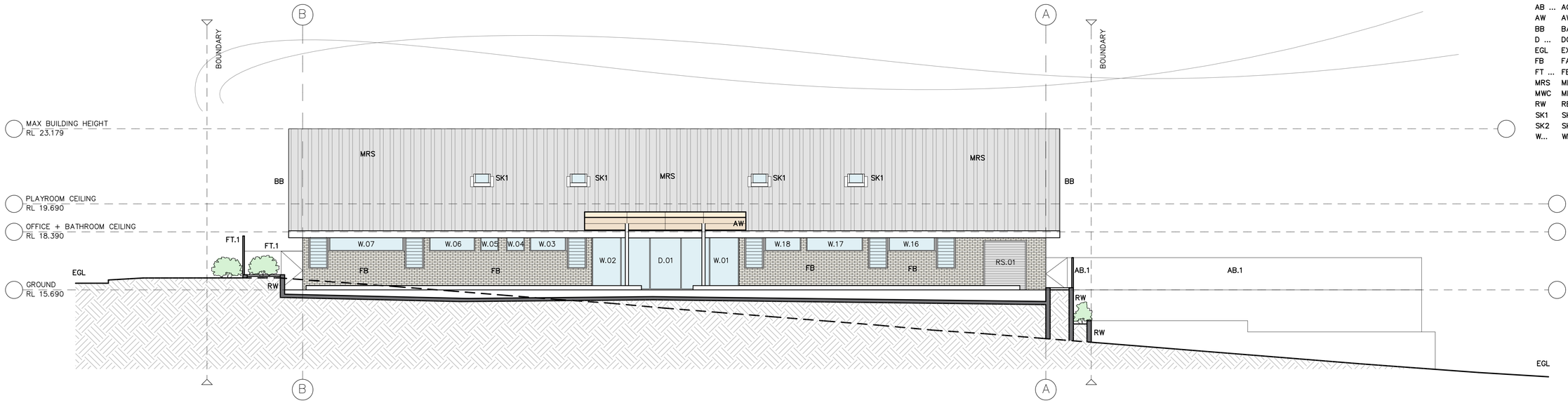
SCALE: 1:100 @ A1

No. IN SET: 5 of 19

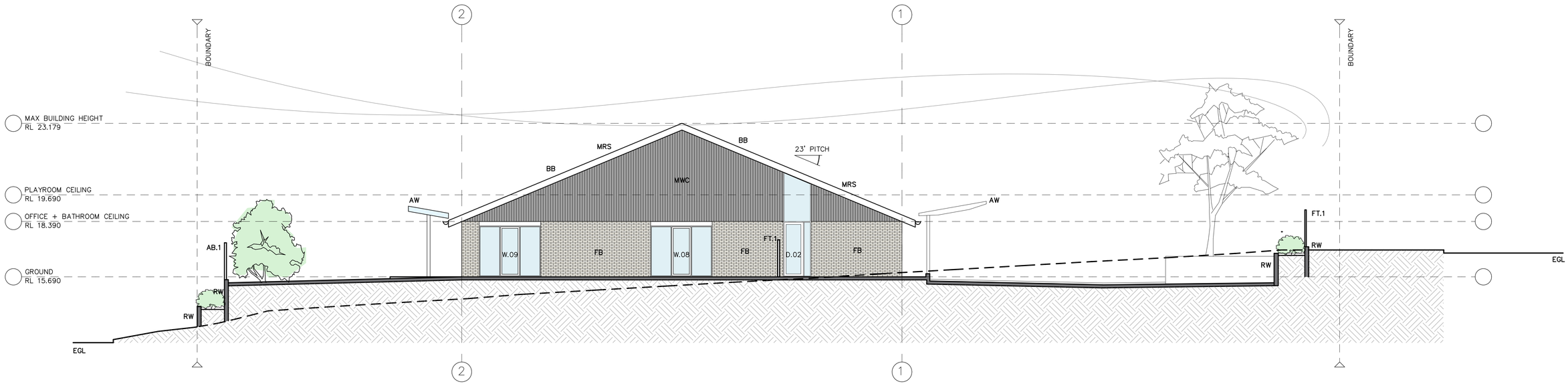
PROJECT No.: 1302

DWG No.: A05

SHADDOCK ARCHITECTS



NORTHERN ELEVATION



EASTERN ELEVATION

LEGEND:

AB ...	ACOUSTIC BARRIER TYPE ...
AW	AWNING
BB	BARGE BOARD
D ...	DOOR NUMBER ...
EGL	EXISTING GROUND LINE
FB	FACE BRICK
FT ...	FENCE TYPE ...
MRS	METAL ROOF SHEETING
MWC	METAL WALL CLADDING
RW	RETAINING WALL
SK1	SKYLIGHT 1
SK2	SKYLIGHT 2
W...	WINDOW NUMBER ...

NOTES:

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FULL SECTION 4.55 DOCUMENTATION PACKAGE.
THESE DRAWINGS ARE FOR THE PURPOSE OF A SECTION 4.55 ONLY AND ARE NOT TO BE USED FOR ANY WORK ON-SITE.
SITE BOUNDARIES & LEVELS HAVE BEEN ESTABLISHED UTILIZING PROPOSED SUBDIVISION PLAN PRODUCED BY ADW JOHNSON DATED 20/09/2024 REF: 190682 (DA/2020/1347)

All dimensions are in millimeters unless otherwise shown. All levels are in metes to AHD unless otherwise noted. Work to figured dimensions. Do not scale from drawings. Check all dimensions on site and report any discrepancies to Shaddock Architects prior to construction or fabrication of any item. This drawing is to be read nonfunctional with the total documentation package.

NO.	REVISION	DATE
9	PRELIMINARY DA	03.02.2025
8	PRELIMINARY DA	24.01.2025
7	PRELIMINARY DA	21.01.2025

PROJECT: CHILD CARE FACILITY

LOCATION: 48-63 WILSONS ROAD
GILLIESTON HEIGHTS, NSW, 2321

CLIENT: EXP GILLIESTON HEIGHTS PTY. LTD.

DRAWING TITLE: ELEVATIONS 1

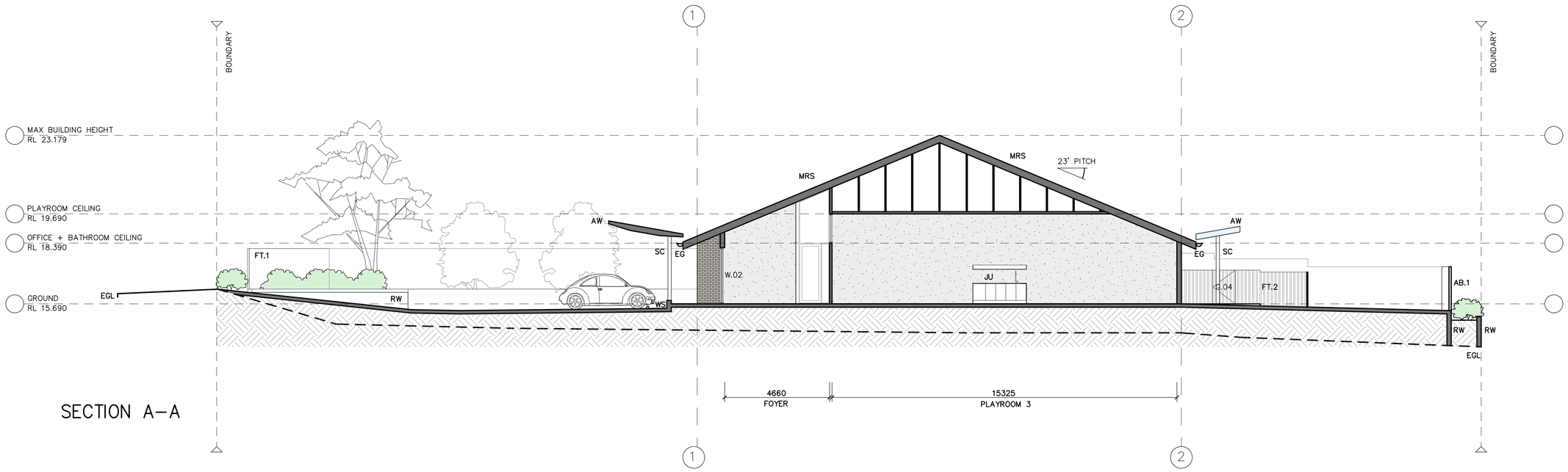
SCALE: 1:100 @ A1

No. IN SET: 7 of 19

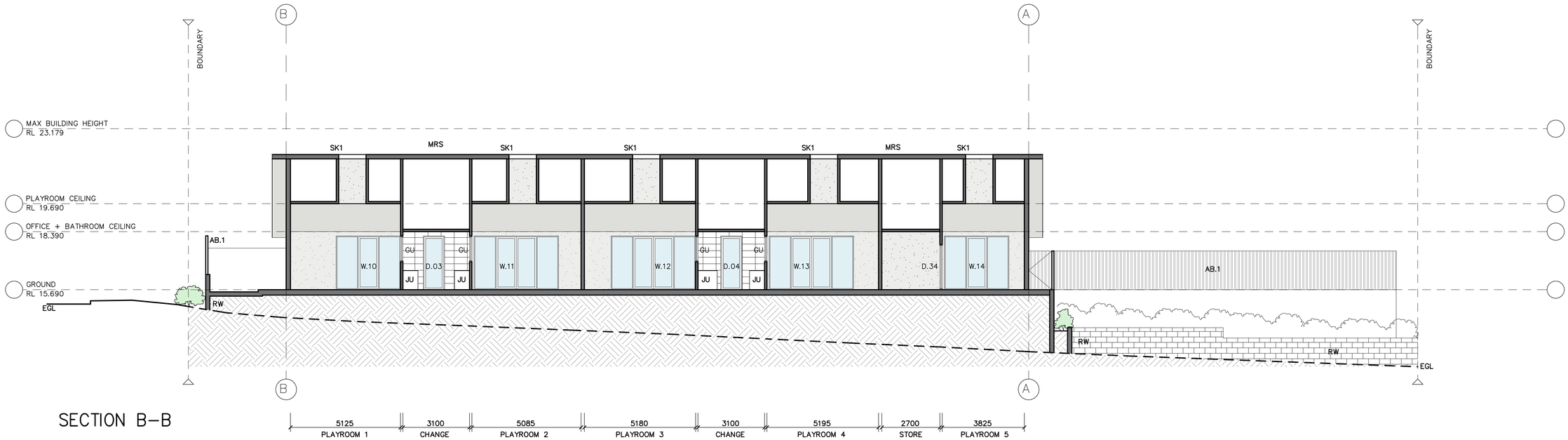
PROJECT No.: 1302

DWG No.: A07

SHADDOCK ARCHITECTS



SECTION A–A



SECTION B–B

LEGEND:

AB ... ACOUSTING BARRIER TYPE ...
AW AWNING
D ... DOOR NUMBER ...
EG EAVES GUTTER
EGL EXISTING GROUND LINE
FT ... FENCE TYPE ...
GU GLAZING UNIT
JU JOINERY UNIT
RW RETAINING WALL
SC STEEL COLUMN
SK ... SKYLIGHT TYPE ...
W ... WINDOW NUMBER ...
WS WHEEL STOP

NOTES:

THESE DRAWNGS ARE TO BE READ IN CONJUNCTION WITH THE FULL SECTION 4.55 DOCUMENTATION PACKAGE.
THESE DRAWNGS ARE FOR THE PURPOSE OF A SECTION 4.55 ONLY AND ARE NOT TO BE USED FOR ANY WORK ON–SITE.
SITE BOUNDARIES & LEVELS HAVE BEEN ESTABLISHED UTILIZING PROPOSED SUBDIVISION PLAN PRODUCED BY ADW JOHNSON DATED 20/09/2024 REF: 190682 (DA/2020/1347)

All dimensions are in millimeters unless otherwise shown. All levels are in metes to AHD unless otherwise noted. Work to figured dimensions. Do not scale from drawings. Check all dimensions on site and report any discrepancies to Shaddock Architects prior to construction or fabrication of any item. This drawing is to be read nonfunctional with the total documentation package.

NO.	REVISION	DATE
9	PRELIMINARY DA	03.02.2025
8	PRELIMINARY DA	24.01.2025
7	PRELIMINARY DA	21.01.2025

PROJECT
CHILD CARE FACILITY

LOCATION
48–63 WILSONS ROAD
GILLIESTON HEIGHTS, NSW, 2321

CLIENT
EXP GILLIESTON HEIGHTS PTY. LTD.

DRAWING TITLE
SECTIONS

SCALE
1:100 @ A1

No. IN SET
9 of 19

PROJECT No.
1302

DWG No.
A09

SHADDOCK ARCHITECTS

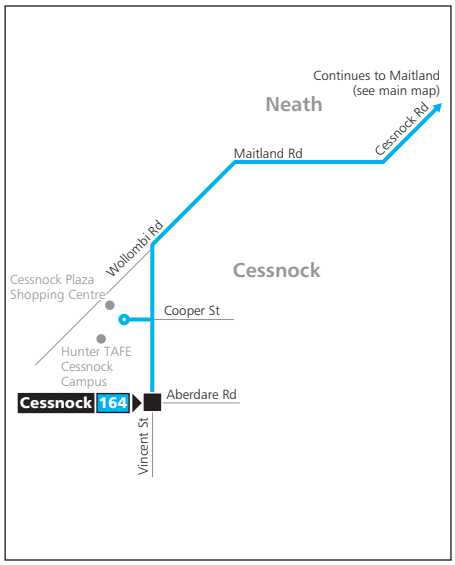
Appendix B

Bus Services

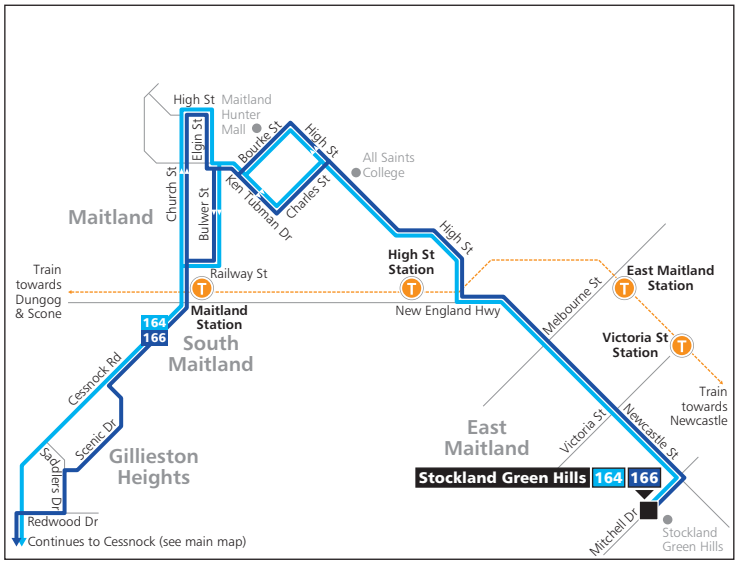
Routes 164, 166, 171, 172

B

Cessnock Inset



Maitland Inset



Legend

- Bus route
- 164 Bus route number
- Bus route start/finish
- Train line/station

Diagrammatic Map
Not to Scale
North

NSW GOVERNMENT Transport

transportnsw.info

Appendix C

Extract from RMS Study

TRAFFIC, ENVIRONMENTAL & FORENSIC ENGINEERS
CONSULTING

Address PO Box 215, Bondi NSW 2026
Phone 02) 9332 2024
Fax (02) 9332 2022
Mobile 0414 978 067
e-mail o.s@tefconsult.com.au
www http://www.tefconsult.com.au

Transport Roads & Maritime Services
NSW GOVERNMENT

ROADS AND MARITIME SERVICES

VALIDATION TRIP GENERATION SURVEYS

CHILD CARE CENTRES

ANALYSIS REPORT

3.4.1.2 Number of licensed places for children (without OSHC)

- R^2 for Centre peak hour vehicle trips (AM & PM) and the number of licensed places for children is high which indicates that there is a reliable dependency between the variables (R^2 = 0.8497 for AM & R^2 = 0.8573 for PM).

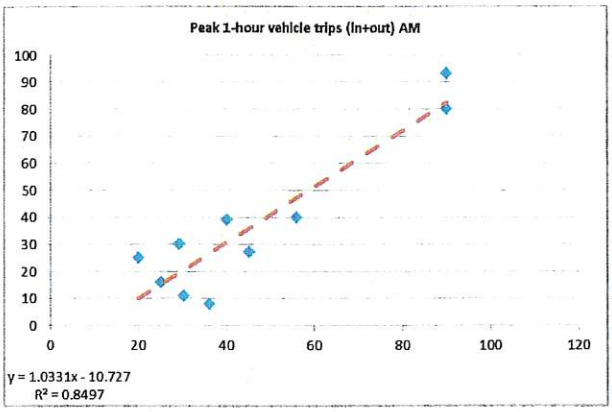


Figure 3.26 **Centre peak hour vehicle trips (AM) vs. Total building GFA – Linear type**

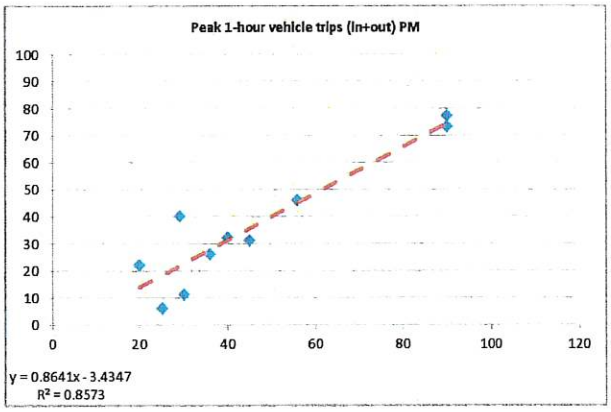


Figure 3.27 **Centre peak hour vehicle trips (PM) vs. Total building GFA – Linear type**

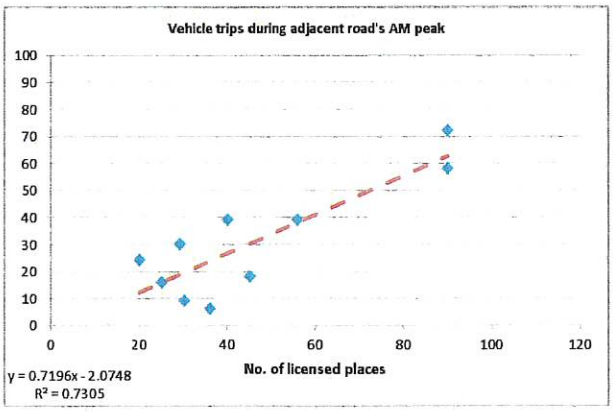


Figure 3.28 **Centre vehicle trips during Peak hour on adjacent road (AM) vs. Number of licensed places – Linear type**

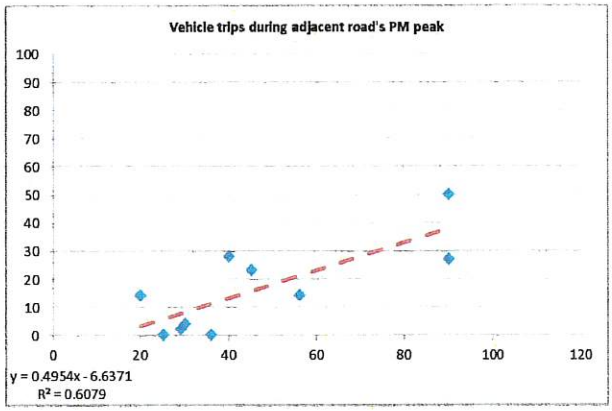


Figure 3.29 **Centre vehicle trips during Peak hour on adjacent road (PM) vs. Number of licensed places – Linear type**

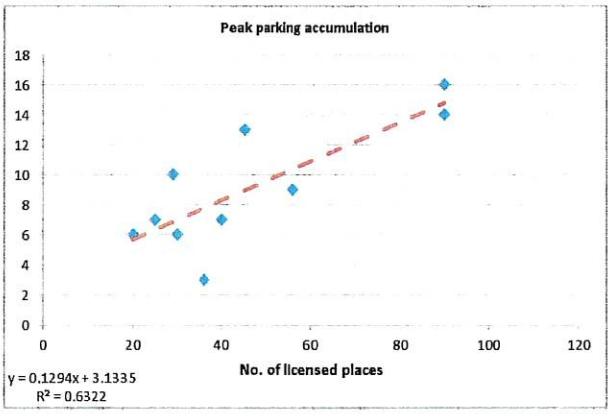


Figure 3.30 **Peak parking accumulation vs. Number of licensed places – Linear type**

In summary, the analysis of data highlighted the following facts:

- Average trip rates should not be utilised for planning purposes.
- Good linear and non-linear relationships were established between the Centre peak hour vehicle trips AM and PM, Centre vehicle trips (in+out) during AM peak hour on adjacent road and the independent variable "number of licensed places for children" for all centres except OSHC.
- Good linear and non-linear relationships were established between the peak parking accumulation and the independent variable "total building GFA" for LDCC and PS centres.
- It is noted that the current rate of parking provision in the RMS (2002) Guide, based on 1992 data, is 1 parking space per 4 children. For comparison with this rate, the Peak Parking Accumulation formula from Table 4.2 was used for a range of numbers of children places. The resulting calculations indicate the following average rates:
    - Centres with 20 to 35 children – 1 space per 4 children
    - Centres with 40 to 65 children – 1 space per 5 children
    - Centres with 70 to 100 children – 1 space per 6 children

4.3 Comparison with 1992 data

- In this study, the sample sizes for each type of the centre were smaller than those in the 1992 study. However, analysis of the combined 2015 data for LDCC and PS centres returned reliable regression equations. In the 1992 study these types of child care centres were analysed separately.
- The following graphs show comparisons of trip generation and parking demand trend lines for regression analysis of LDCC and PS centres. Graphs for 1992 LDCC and PS data were overlayed separately on the combined 2015 LDCC/PS data.

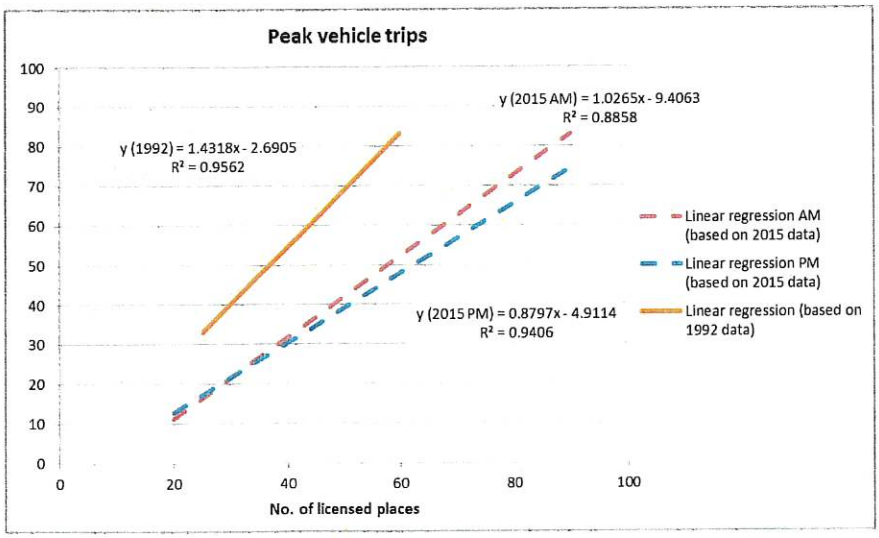
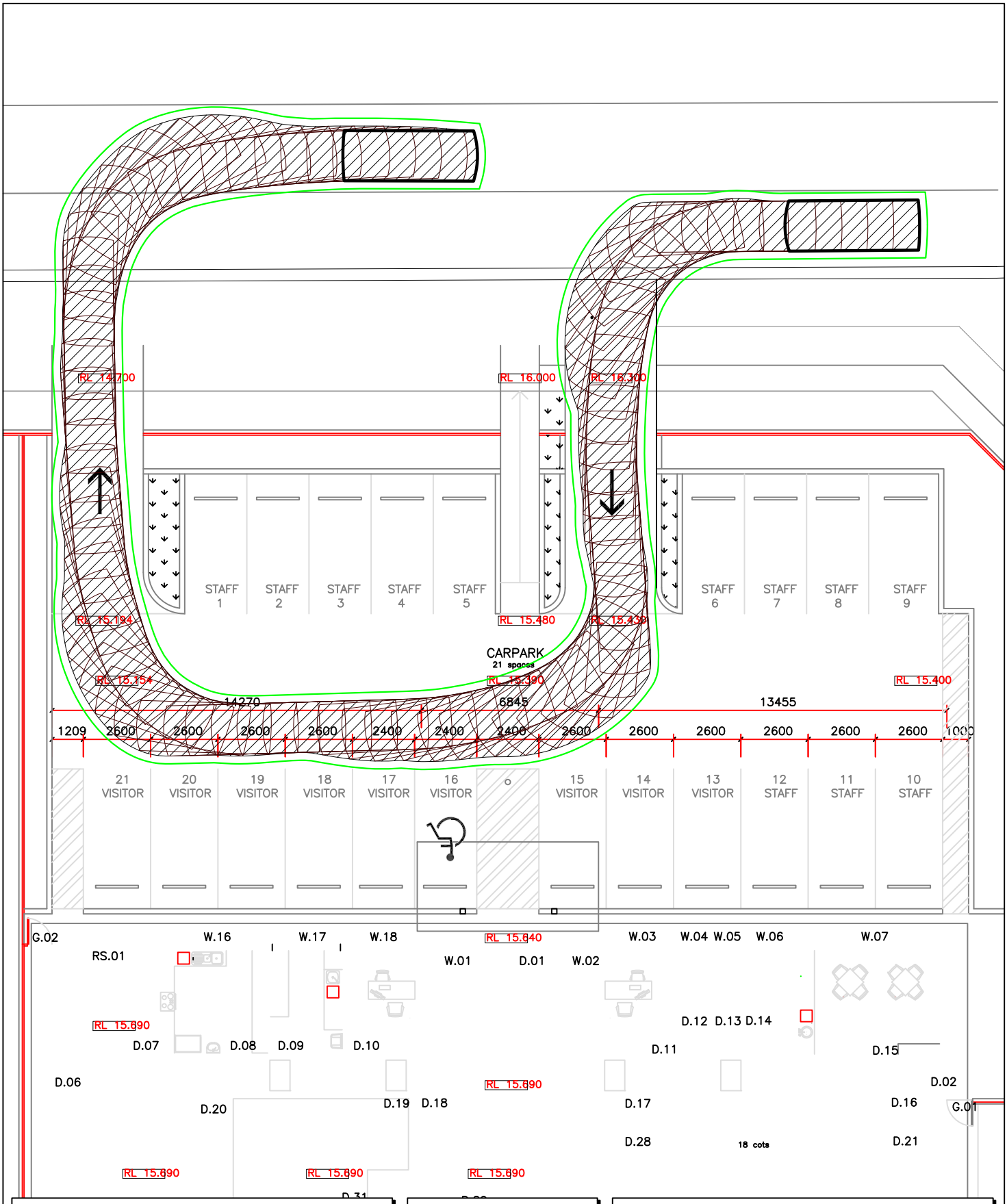


Figure 4.1 **Centre peak hour vehicle trips vs. Number of licensed places – comparison of 1992 PS and 2015 LDCC/PS data.**

- Peak trip generation of PS centres in 1992 was generally higher and the rate of its increase with the increase of the centre capacity was greater than those from the 2015 LDCC/PS data.

Appendix D

Turning Path Assessment



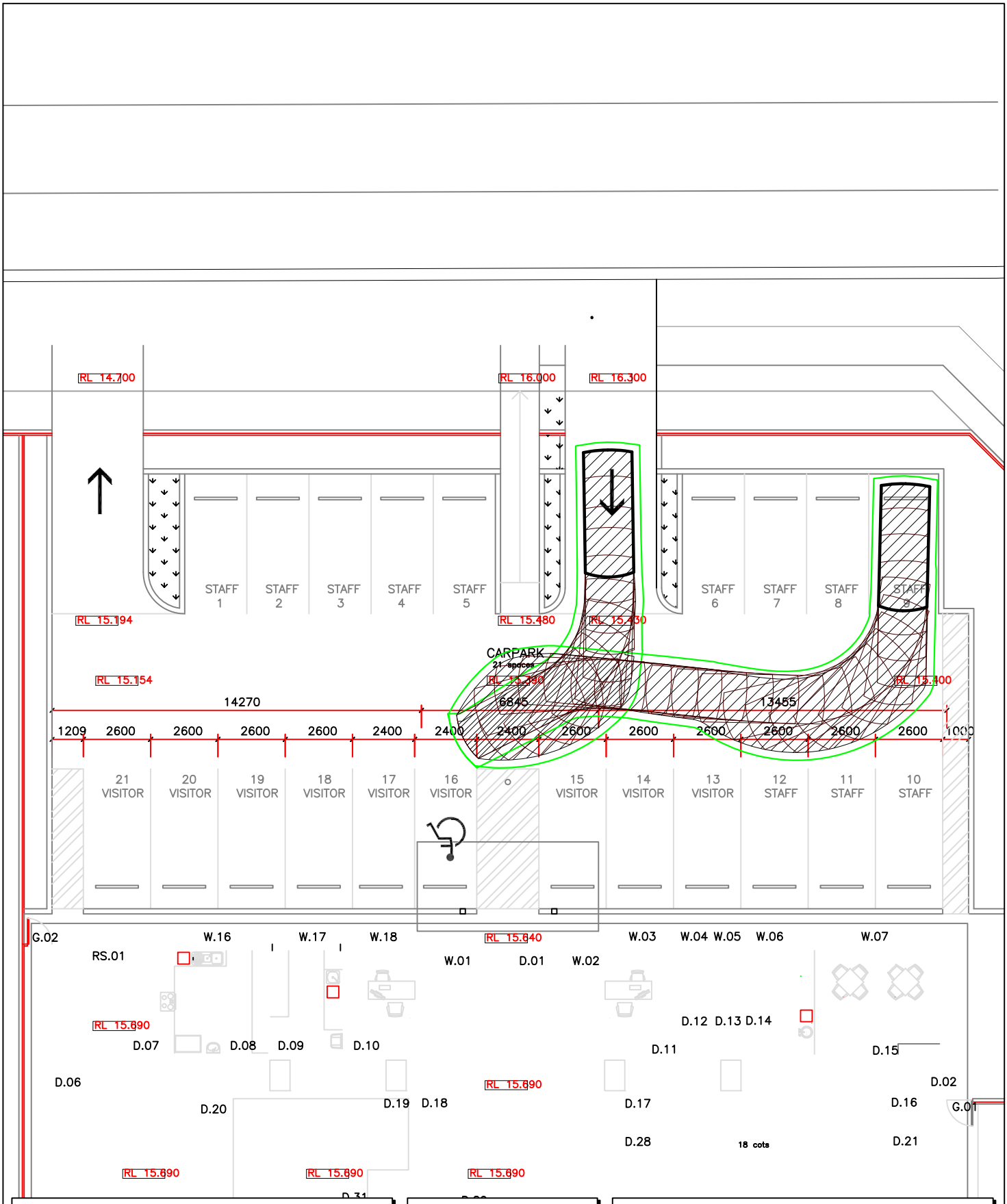
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF A 99th PERCENTILE VEHICLE ACCESSING THE SITE

SP 1



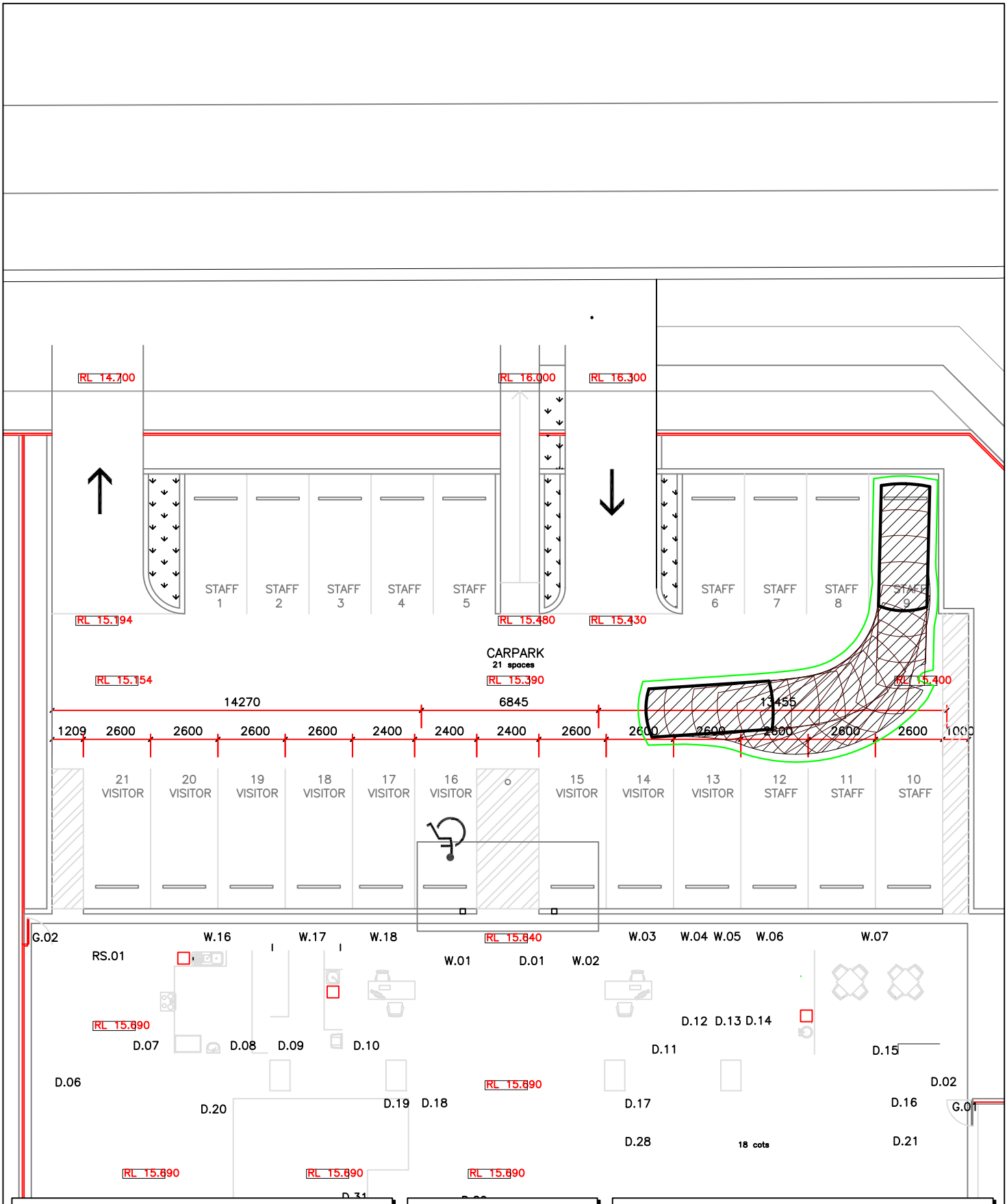
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 2



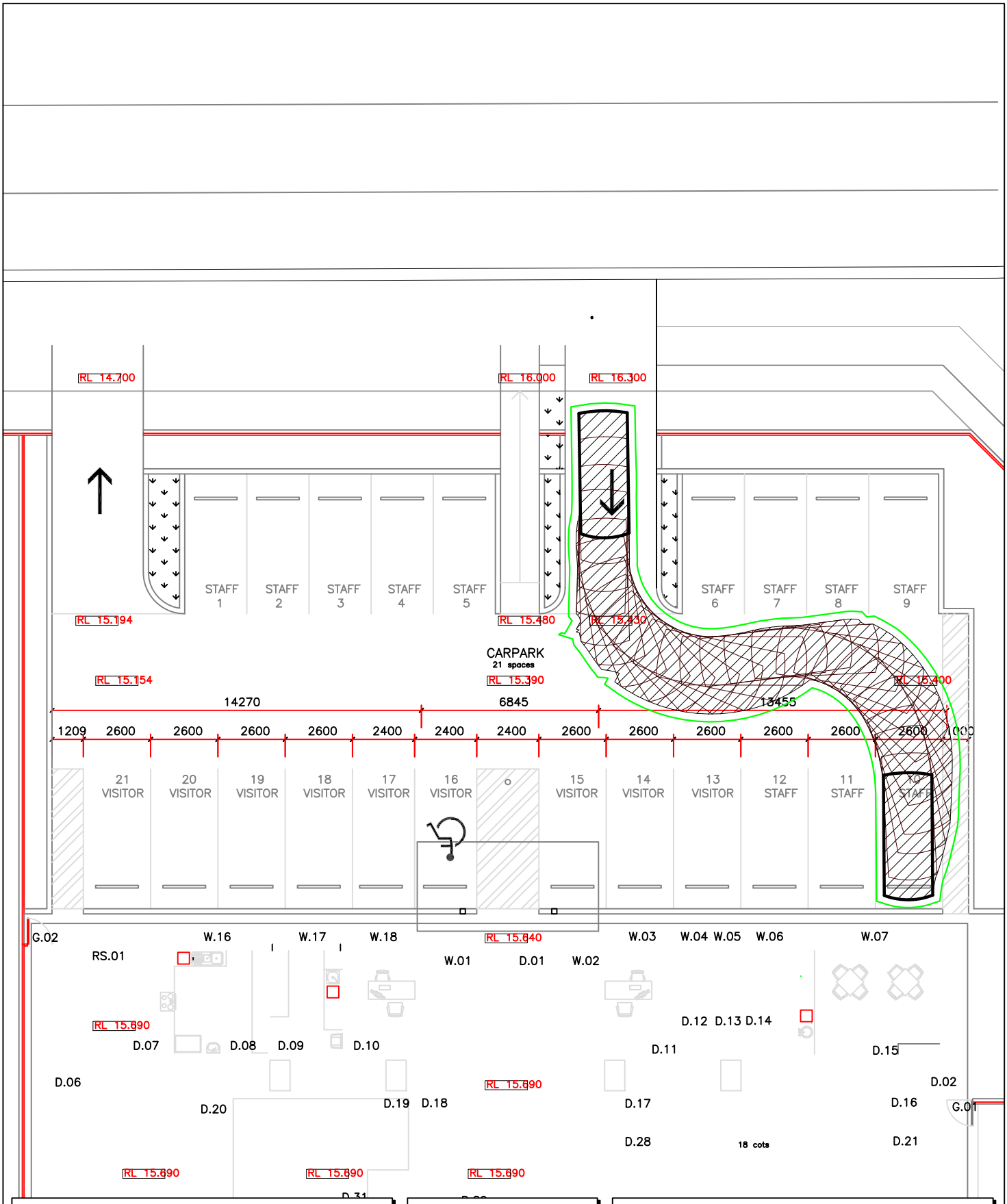
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 3



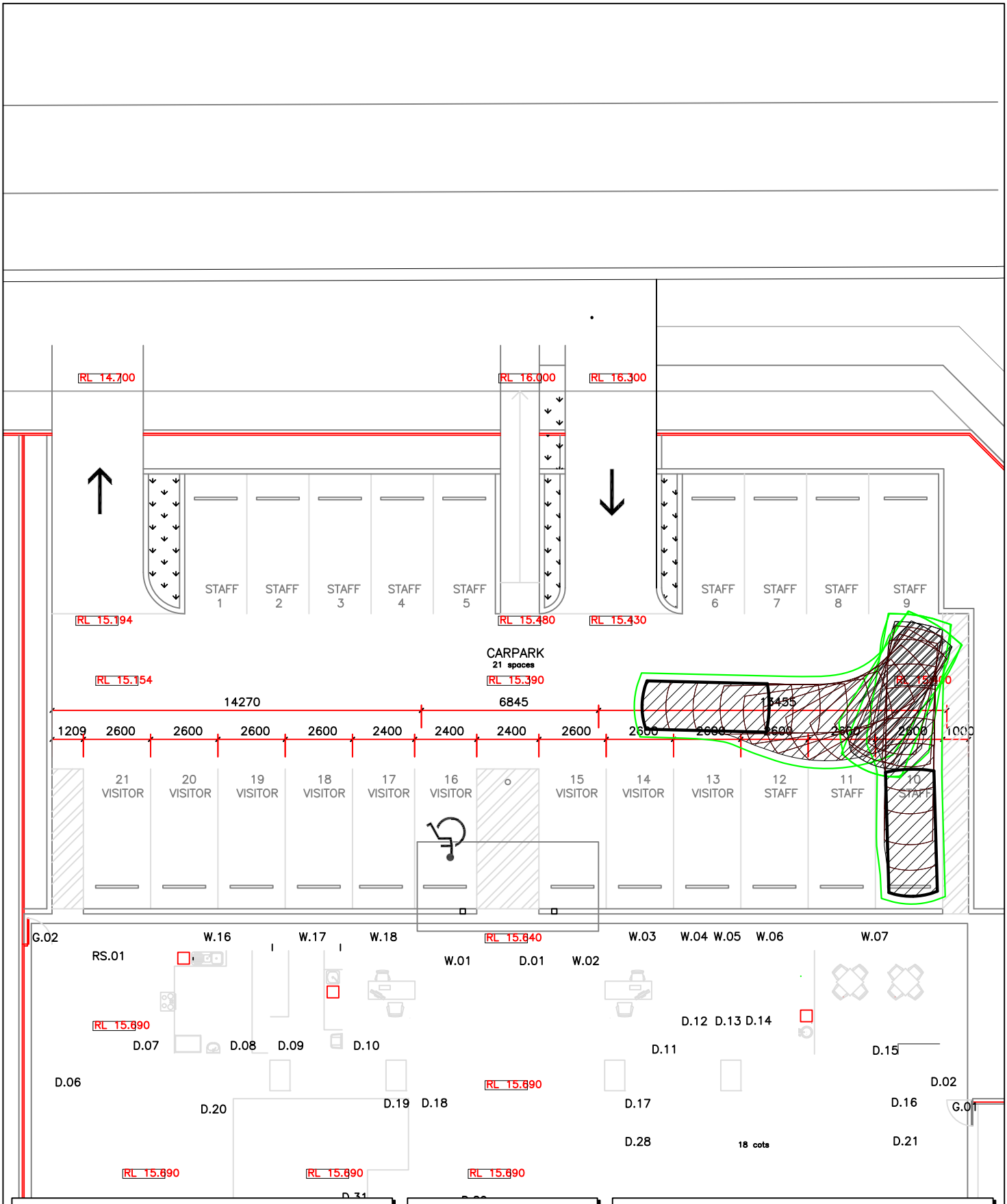
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 4



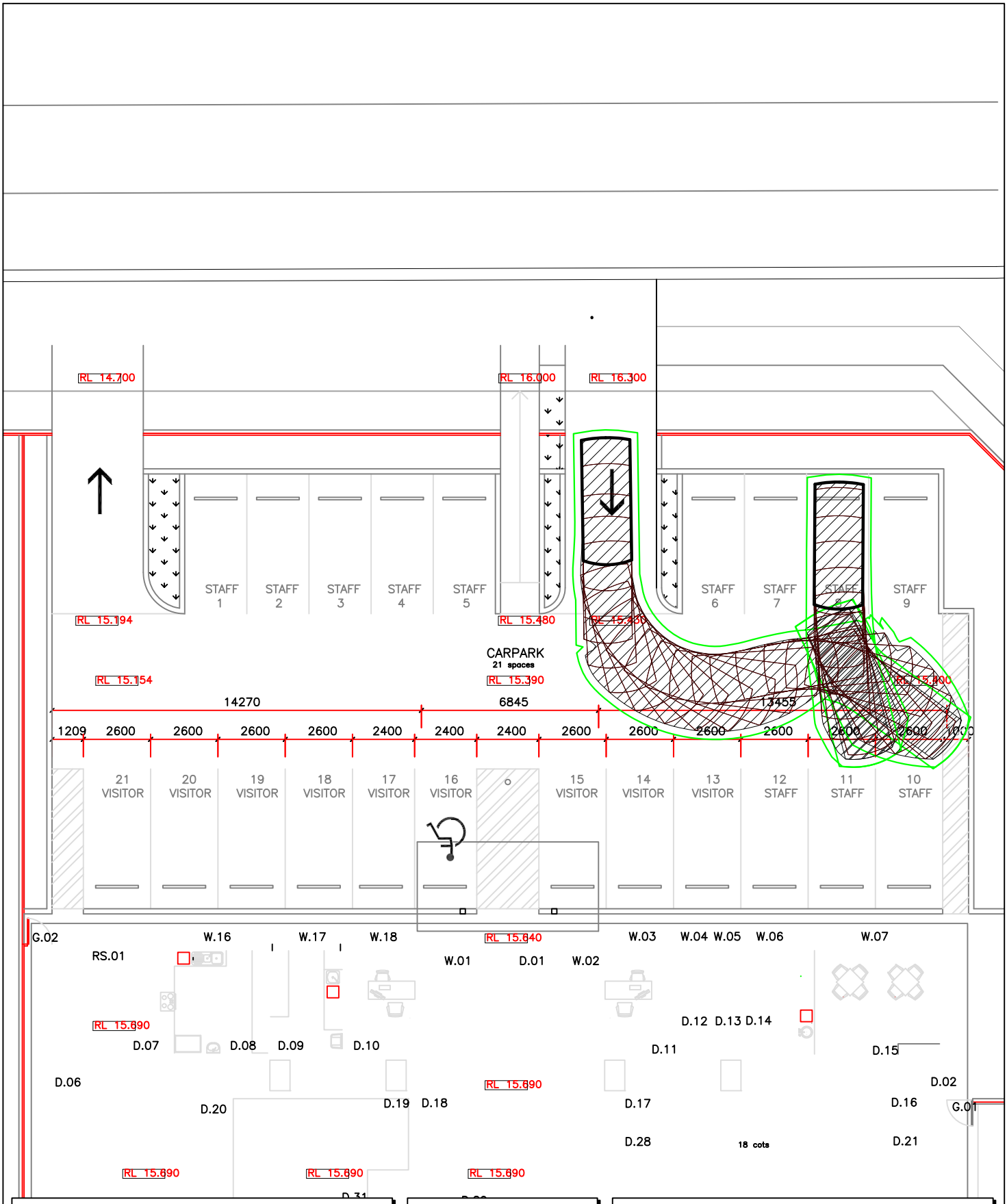
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 5



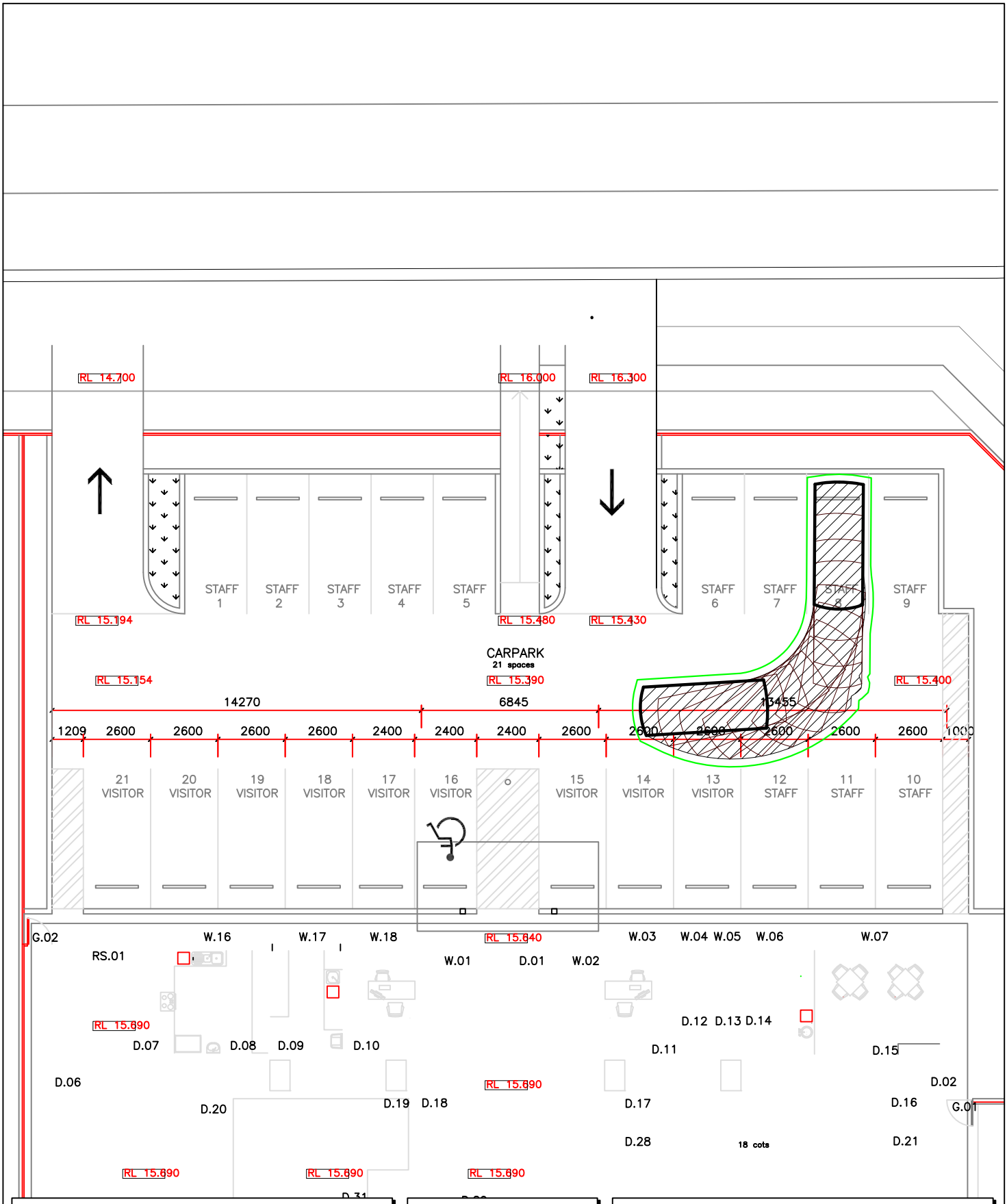
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 6



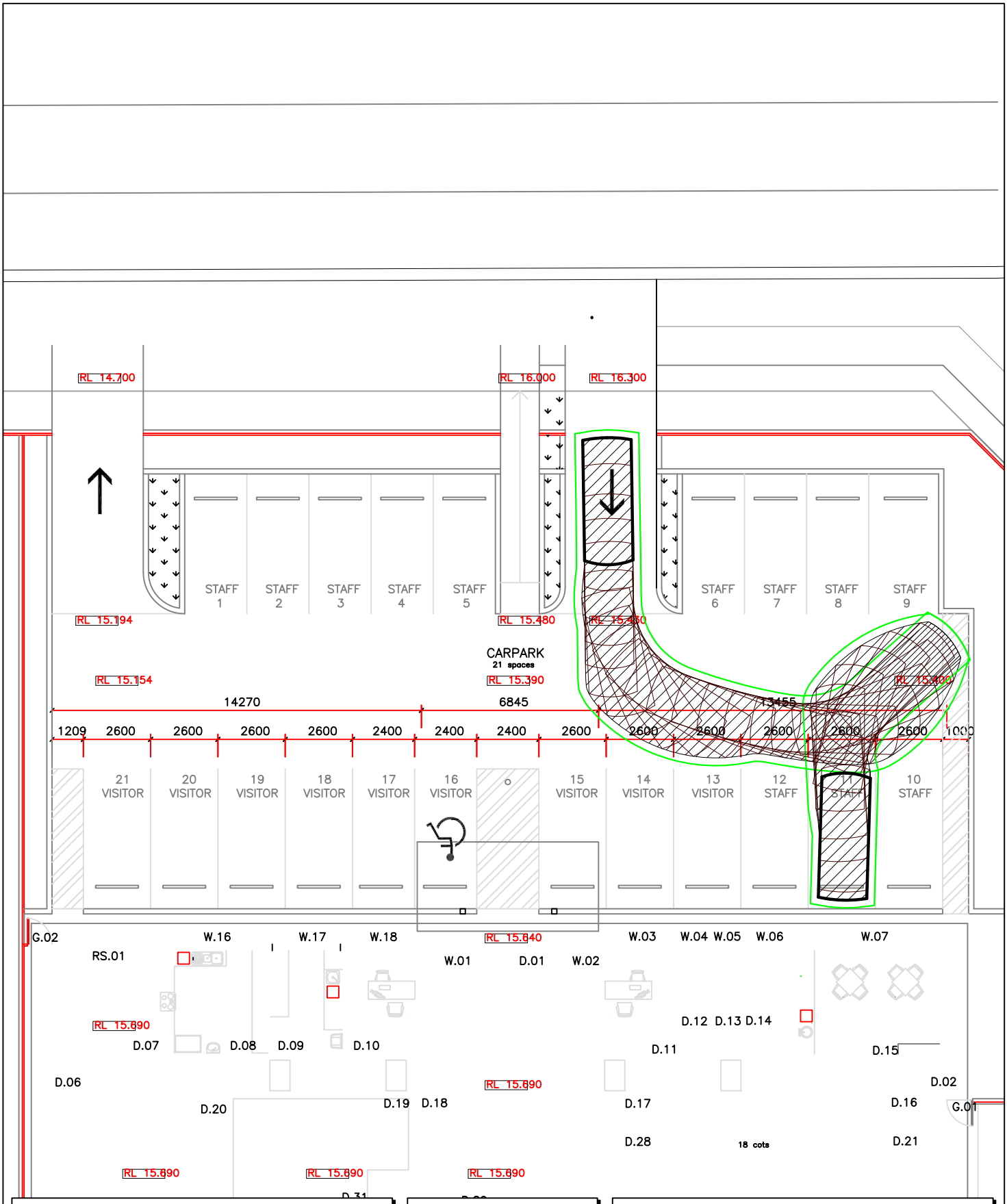
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 7



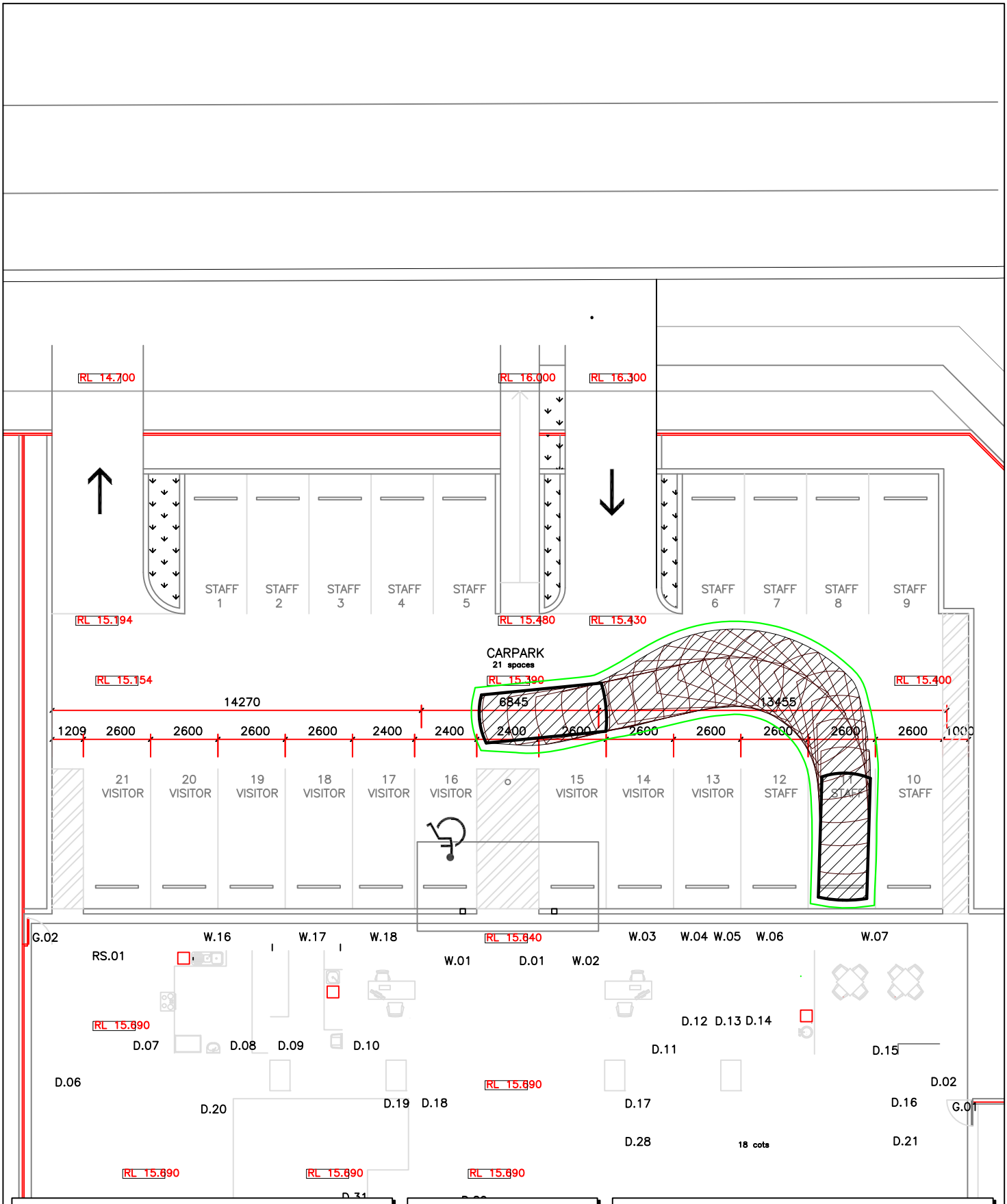
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 8



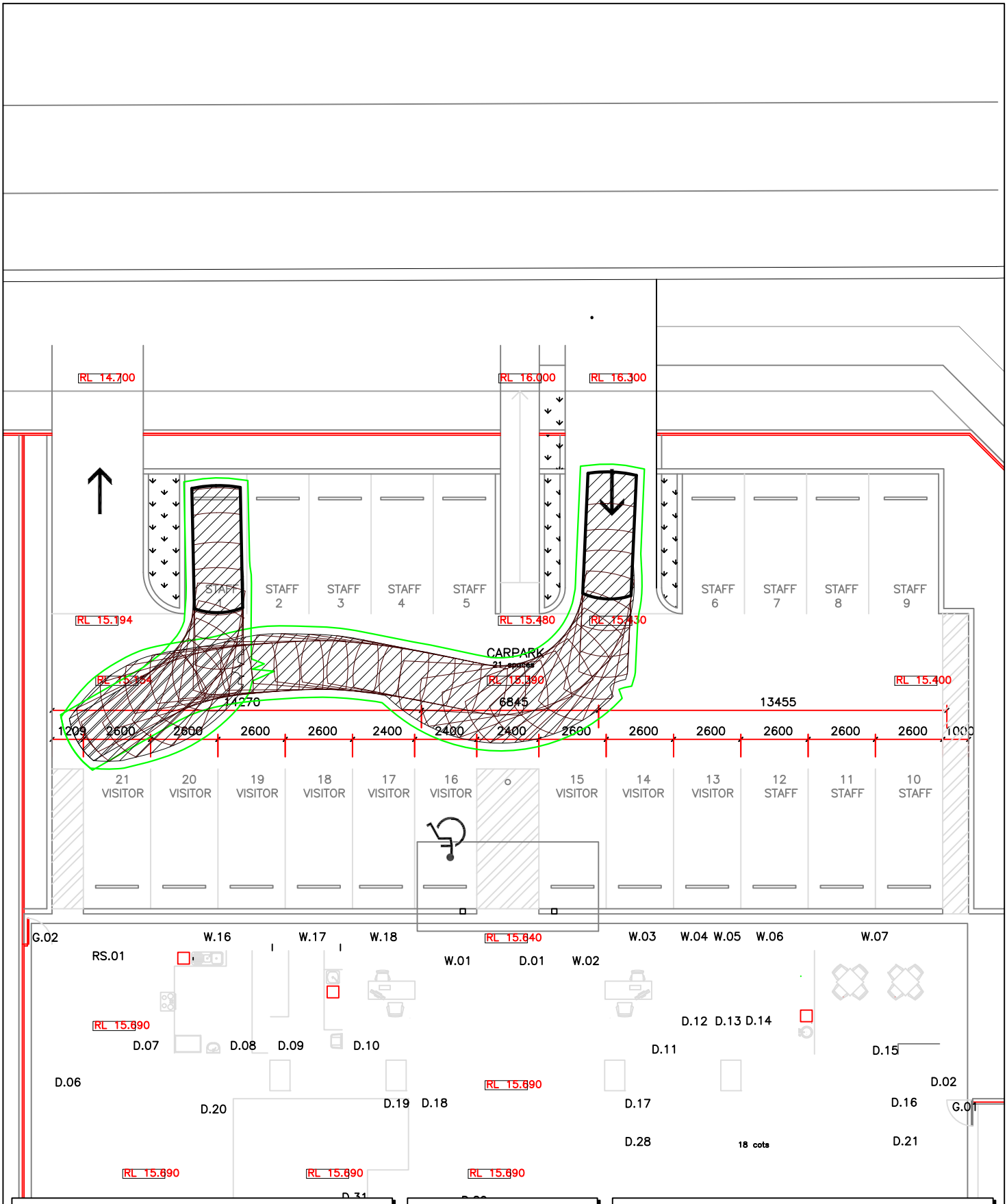
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 9



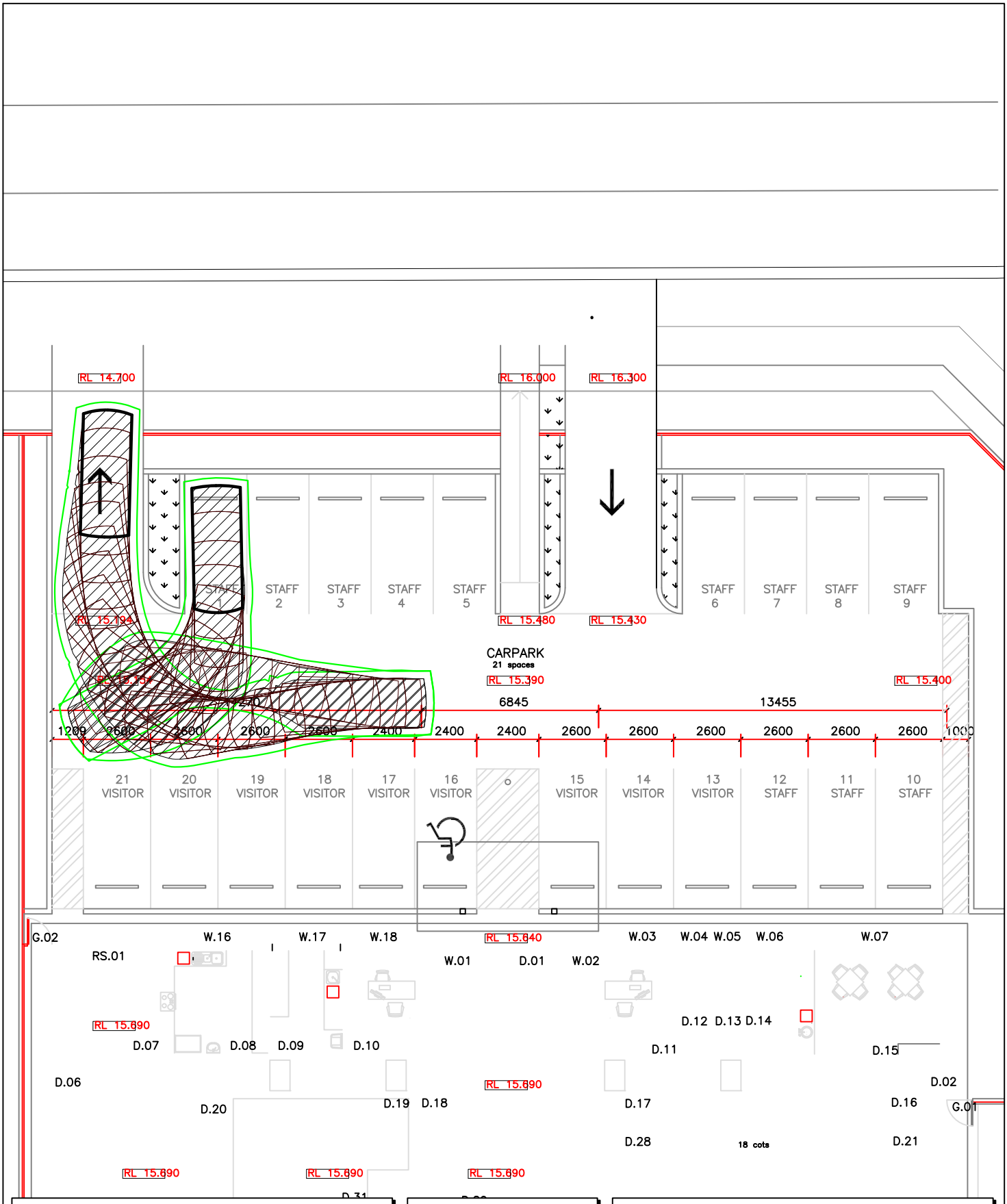
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 10



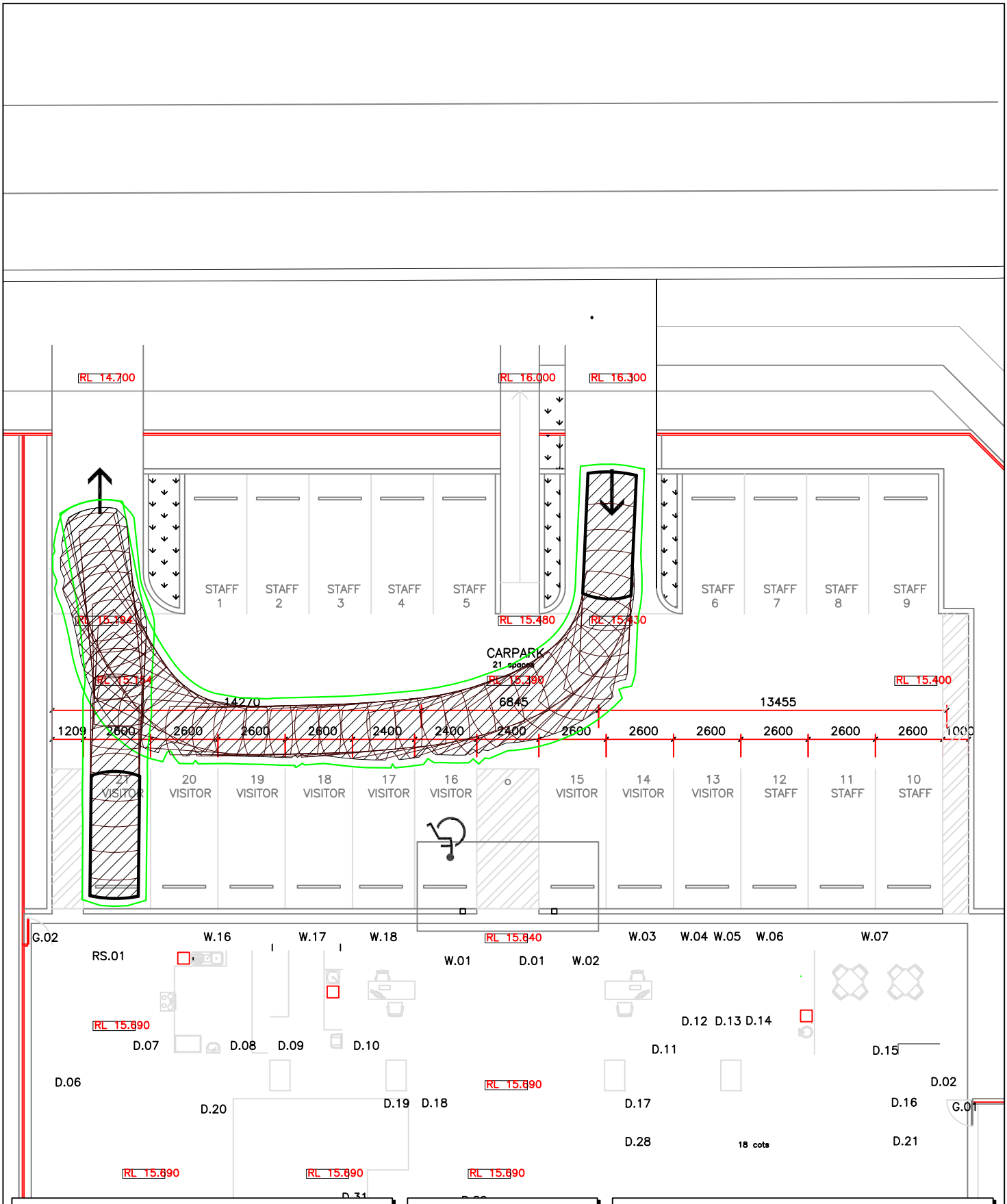
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 11



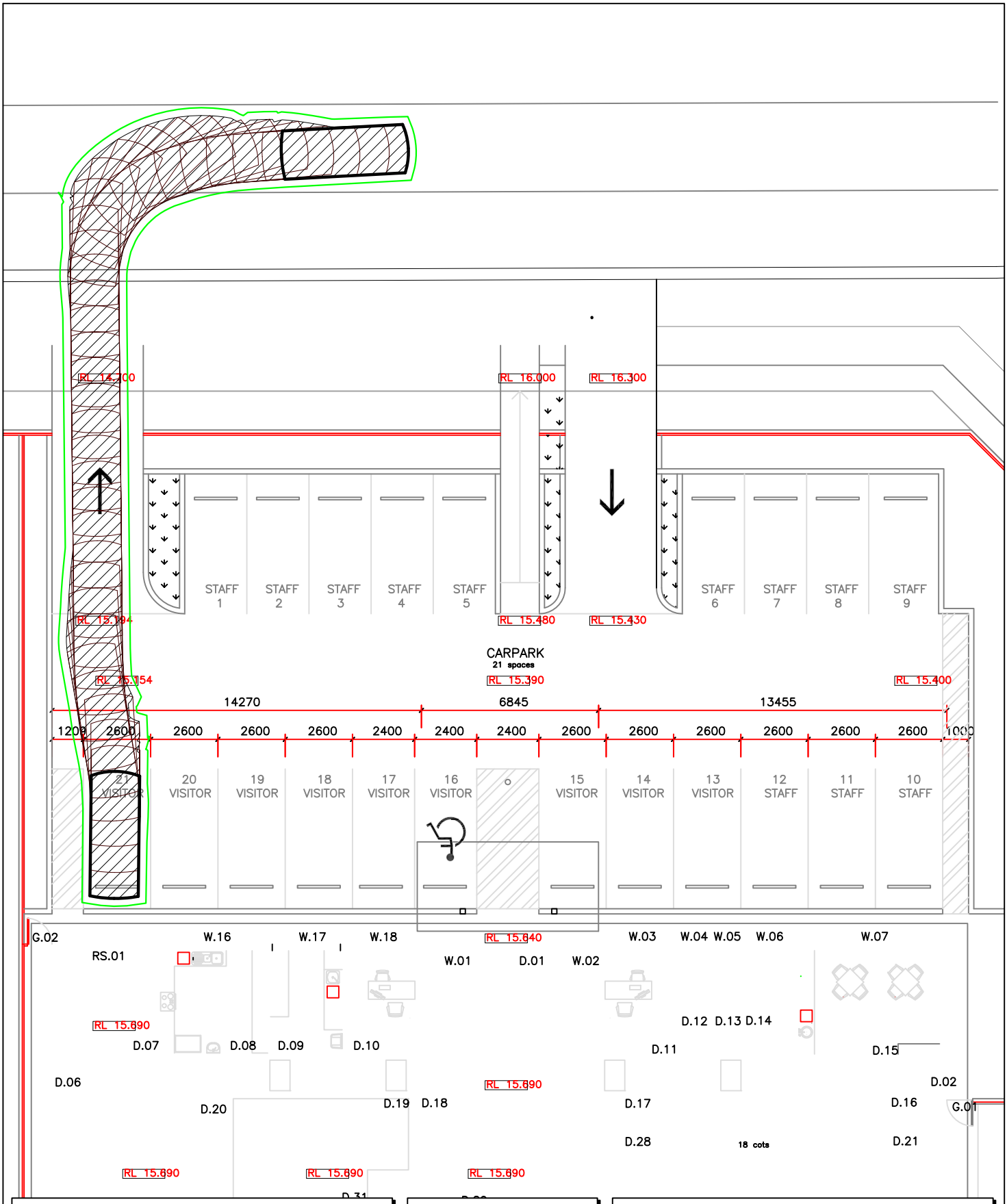
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE ENTERING THE SITE

SP 12



NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

N

SWEPT PATH ANALYSIS OF AN 85th PERCENTILE VEHICLE EXITING THE SITE

SP 13