20 September 2022
Our Ref: 21BRT0549
Your Ref: DEV2022/1310

Attention: Elizabeth Piper

Economic Development Queensland
GPO Box 2202
Brisbane Queensland 4001 Australia

Dear Elizabeth,

RE: 15 Nexus Way Southport, Traffic Response to Further Issues

1 Background

TTM has been engaged to respond to further issues letter for a proposed heath care use at the above address. This request from Economic Development Queensland is dated 9 September 2022 and refers to Application Number DEV2022/1310.

The traffic items are raised by the State are under item 3 of the further issues request. It is noted that in response to the information request the plan of development has been amended and the following responses considered the updated plans, as shown in **Appendix A**.

2 Traffic Responses

2.1 Spaces 34 and 105

Item 3(a) of the EDQ letter asks to remove parking spaces 34 and 105 to provide pedestrian access to the lifts.

Rather than removing these spaces the plan of development has been amended to locate these spaces as close a practical to the wall adjacent to the basement vehicle ramps. The 300mm wall clearance, adjacent to a 2400mm wide parking space, retains approximately 980mm clearance for pedestrians. This is sufficient to provide thoroughfare between the lift lobby and the southern parking aisle.

2.2 Access Driveway Width

Item 3(e) of the EDQ letter asks to provide a 1m separation for vehicle movements on the Type 2 access driveway.

The separation of inbound and outbound traffic results from the provision of the median internal to the site for security control. At the property boundary, the access is a single carriageway, undivided crossover. This allows pedestrians to cross in a single movement and the 1m separation between vehicle lanes is therefore not required.

2.3 Ground Floor Loading Zone

Item 3(f) of the EDQ letter requires demonstration that the ground floor service vehicle bay is adequate considering that a hospital/ research facility use requires AV access.

A research facility of this scale does not necessitate a loading bay suitable for an AV. Typically in a hospital or large scale medical use, the primary requirement for an AV is to deliver large scale quantities of gases. However, at this scale, the proposed development will not require this. A room is identified adjacent tot the loading bay for bottled gas, which will be required in relatively small quantities and can be delivered by an MRV. There is also a need for the substation to be occasionally accessed by an Energex vehicle.

The largest design vehicle that can access the proposed loading bay is a 12.5m HRV. This is a suitable vehicle to provide for Energex access and large scale deliveries. Advice from Northwest Health confirms that their facilities are not serviced by AV's as a usual practice and deliveries can be managed to avoid this.

2.4 Largest Vehicle Swept Path

Item 3(g) of the EDQ letter requests swept paths of the largest vehicle accessing this loading bay.

Consistent with the response to item 3(f) the swept path for a HRV is shown in Appendix B.

2.5 Largest Vehicle Swept Path

Item 3(h) of the EDQ letter requests the vehicle cross over is shown to demonstrate vehicle swept path are contained.

All swept paths shown in Appendix B identify the edge of the access, allowing for 1500mm by 1800mm tapers. The exception to this will be the exit taper from the service bay to allow for larger vehicles to turn right from the site.

2.6 Swept Path Overlay

Item 3(i) of the EDQ letter requests swept paths all vehicles be submitted on the latest plans.

All paths shown in Appendix B are provided on the latest set f plans produced by DWP

2.7 Largest Vehicle Swept Path

Item 3(j) of the EDQ letter requests swept paths of the RCV and SRV are provided for both directions along Hill Street vehicle accessing this loading bay.

This full set of paths is shown in Appendix B.

2.8 Swept Paths at Boom Gates

Item 3(l) of the EDQ letter requests swept paths of SRV and ambulance are shown to have clearance to boom gates including 600mm on curved sections.

This full set of paths is shown in Appendix B.

2.9 SRV Swept Paths to Parking

Item 3(m) of the EDQ letter requests swept paths of the SRV are 300mm clear to parking bay.

This full set of paths is shown in Appendix B.

2.10 Largest Vehicle Swept Path

Item 3(o) of the EDQ letter requests the boom gate is relocated to provide 24m of queue capacity.

As shown in the swept paths in Appendix B and consistent with the response to item 3(l), the relocation of the boom gates further into the site would result in significant impacts on the ability for service vehicles to access the site.

Additionally, the requirement under AS2890.1 for the 4 space queuing is based on a carpark with an inbound traffic flow up to 75% of the parking capacity. The estimate for this site is that the total flow will be equivalent to 50% of the parking spaces and the inbound flow up to 65% in these peak periods. This equates to an inbound flow of approximately 33% of the parking capacity. This is less than half the maximum rate specified for this queue provision. As such, the very low traffic generation, relative to the scale of the parking, will allow a single gate to service the inbound flow with a 15m queue clear of the pedestrian path.

2.11 Largest Vehicle Swept Path

Item 3(p) of the EDQ letter requests grades at control points are limited to 1:20.

ITTM notes that he gradients specified at entry control points (as outlined in Table 3.3 of AS2890.1) are addressed in clause 3.3(c). This identifies that the maximum queue area for up t 80% of the queue zone can be at 1:10. The exit queue for a vehicle is fully located within a section where the ramp transitions from 1:10 to 1:20, resulting in full compliance with this provision.

The entry queue of 15m is also primarily located in the 1:20 and 1:10 grade zones where a vehicle enters the site and must commence breaking to the control point. The final car length is then located on a 1:6 down grade. This is considered appropriate as there is a very low design approach speed, allowing vehicles to adequately stop and then vehicles can safely processed on the downhill grade once the boom gate opens.

2.12 Largest Vehicle Swept Path

Item 3(q) of the EDQ letter requests confirmation of how cyclists will access the EoT facilities with the ambulance bay an space 14 occupied.

The updated plans of development shown in **Appendix A** identify a marked 1.3m wide path to provide access for cyclists to access end of trip facilities. Actual clearance is generally expected to be greater to a parked vehicle as cars do not typically park up to the painted line.

2.13 Largest Vehicle Swept Path

Item 3(r) of the EDQ letter requests surface treatment is provided to show cyclist access to EoT facilities.

The updated plans of development shown in **Appendix A** identify a marked cyclist access areas to be shared with vehicle movements on aisles.

2.14 Largest Vehicle Swept Path

Item 3(s) of the EDQ letter requests further justification for clearance to columns.

The updated plans of development shown in **Appendix A** identify a parking envelopes for critical spaces demonstrating clearance to columns for door opening. Where the majority of spaces are located adjacent to 400mm wide columns, the spaces are separated by 600mm. This provides an extra 100mm clearance for access manoeuvring and door opening, such that the slight intrusion of the column length is mitigated.

2.15 Largest Vehicle Swept Path

Item 3(t) of the EDQ letter requests that sight distance o 35m minimum, 55m desirable is demonstrated.

A sight distance diagram is provided in **Appendix C** demonstrating the available sight distance. It is noted that significantly less sight distance is required to the south, given the operating speed of vehicles through the roundabout is expected to be 25km/hr, rather than the Hill Street general design speed of 40km/hr.

3 Summary

The proposed development layout, as shown in Appendix A, is considered appropriate to provide safe and efficient access to the proposed site for cars, service vehicles, pedestrians and cyclists. This considers the low speed, low volume nature of the site and fronting road.

Yours sincerely,

Simon Crank
RPEQ: 18360
Director
TTM Consulting Pty Ltd

Appendix A Amended Development Plans

NOTE:
- BUILDING SPRINKLER PROTECTED THROUGHOUT

PARKING SCHEDULE

Description	Count
B1	
ACCESSIBLE PARKING SPACE	4
PARKING SPACE: 90°/ CLASS 2/ C1	19
PARKING SPACE: 90°/ CLASS 2/ C1 (STAFF ONLY)	3
PARKING SPACE: 90°/SMALL CAR	7
	33
B2	
PARKING SPACE: 90°/ CLASS 2/ C1	50
PARKING SPACE: 90°/ CLASS 2/ C1 (STAFF ONLY)	11
PARKING SPACE: 90°/ TANDEM	4
PARKING SPACE: 90°/SMALL CAR	5
	70
B3	
PARKING SPACE: 90°/ CLASS 2/ C1	62
PARKING SPACE: 90°/ CLASS 2/ C1 (STAFF ONLY)	4
PARKING SPACE: 90°/ TANDEM	4
PARKING SPACE: 90°/SMALL CAR	7
	77
GRAND TOTAL: 180	180

EV CHARGING STATIONS PROVIDED: 10

Notes

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Verify all dimensions and levels on site and report any discrepancies to dwp for direction prior to the commencement of work.

Drawings are to be read in conjunction with all other contract documents.

Use figured dimensions only. Do not scale from drawings. dwp cannot guarantee the accuracy of content and format for copies of drawings issued electronically. The completion of the Issue Details Checked and Authorised section isconfirmation of the status of the drawing. The drawing shall not be used forconstruction unless endorsed 'For Construction' and authorised for issue.

DEPARTMENT LEGEND

- ENG
- ENG ELECTR
- ENG FIRE
- ENG HYD
- ENG MECH
- EOTF
- VERTICAL TRAVEL

DESIGN DEVELOPMENT
NOT TO BE USED DURING CONSTRUCTION

Issue	Description	Date	Chk	Auth
A	ISSUE FOR INFORMATION	14.04.22	SC	AM
B	WORK IN PROGRESS	22.04.22	NC	SM
C	WORK IN PROGRESS	26.04.22	NC	FM
D	WORK IN PROGRESS	27.04.22	NC	FM
E	WORK IN PROGRESS	17.05.22	NC	FM
F	WORK IN PROGRESS	19.05.22	SC	AM
G	DRAFT - NO LINK BRIDGE	20.05.22	SM	SC
H	FOR PLANNING APPROVAL	26.05.22	SM	SC
J	FOR INFORMATION	30.05.22	AH	NC
K	FOR PLANNING APPROVAL	31.05.22	AH	NC
L	FOR PLANNING APPROVAL	08.07.22	AH	NC
M	FOR PLANNING APPROVAL	16.09.22	SM	NC

Architect/ Designer
dwp
www.dwp.com

Client
NorthWest Healthcare Properties REIT

Location
LOT6A, NEXUS WAY, SOUTHPORT, QLD 4215

Project
GCHKP - RESEARCH DEVELOPMENT CENTRE of EXCELLENCE

Drawing
LEVEL B1 GENERAL ARRANGEMENT PLAN

Scale (A1)
1 : 100

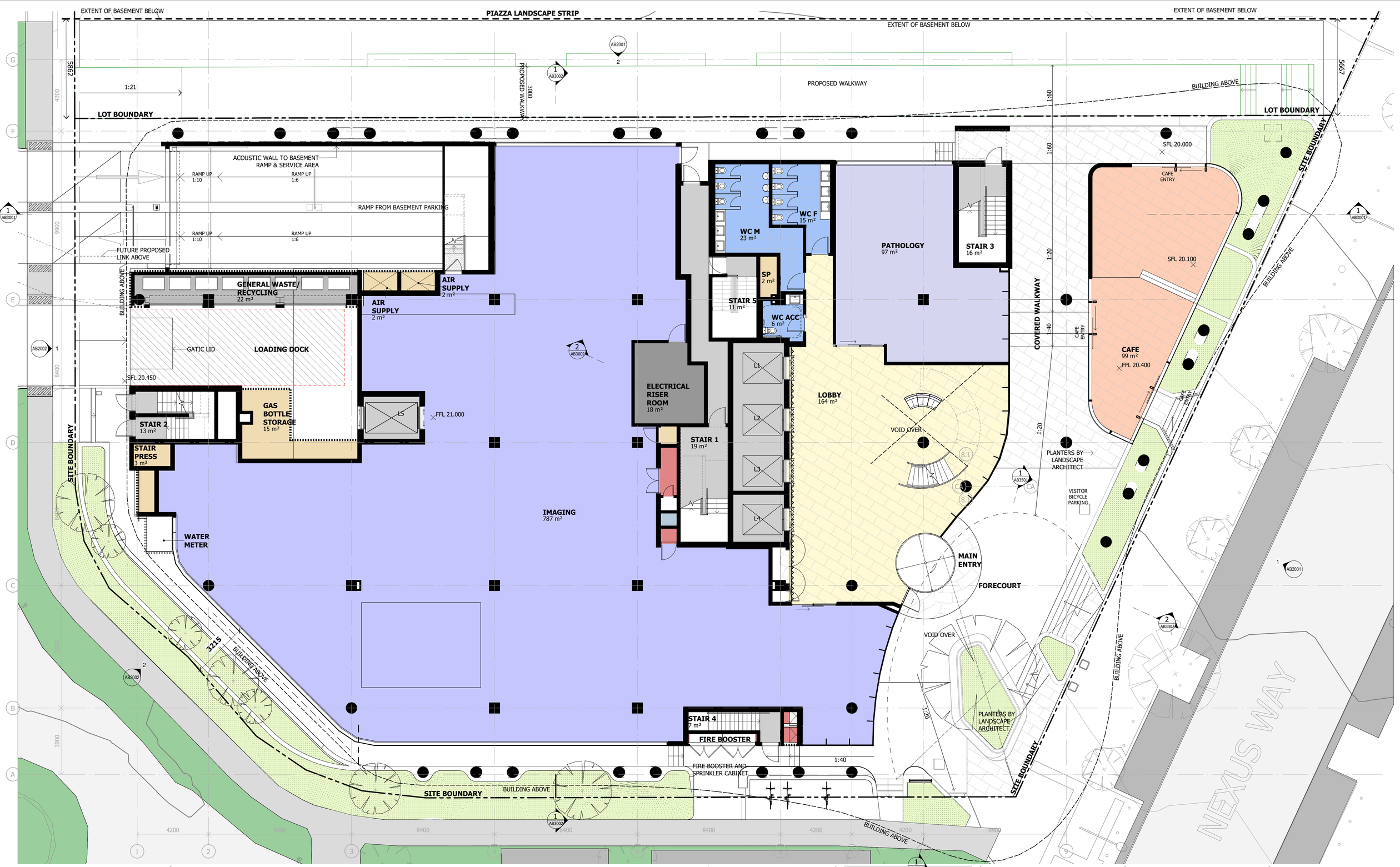
Date Printed
20/09/2022 4:03:00 PM

Project Number
20-0579

Drawing Number
AB1303

Issue
M

File Name: Autodesk Docs://20-0579_Gold Coast Health & Knowledge Precinct/20-0579-AR-GCHKP-CENTRAL-R22.rvt



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DESIGN DEVELOPMENT

NOT TO BE USED DURING CONSTRUCTION

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B	WORK IN PROGRESS	22.04.22	NC	SM
C	WORK IN PROGRESS	27.04.22	NC	FM
D	WORK IN PROGRESS	17.05.22	NC	FM
E	WORK IN PROGRESS	19.05.22	SC	AM
F	DRAFT - NO LINK BRIDGE	20.05.22	SM	SC
G	FOR PLANNING APPROVAL	26.05.22	SM	SC
H	FOR INFORMATION	30.05.22	AH	NC
J	FOR PLANNING APPROVAL	31.05.22	AH	NC
K	FOR PLANNING APPROVAL	08.07.22	AH	NC
L	FOR PLANNING APPROVAL	16.09.22	SM	NC

Architect/ Designer
dwp
www.dwp.com

Client
NorthWest Healthcare Properties REIT

Location
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Project
GCHKP - RESEARCH DEVELOPMENT CENTRE of EXCELLENCE

Drawing
LEVEL 0 GENERAL ARRANGEMENT PLAN

Scale (A1)
1 : 100

Date Printed
20/09/2022 4:03:13 PM

Project Number
20-0579

Drawing Number
AB1304

Issue
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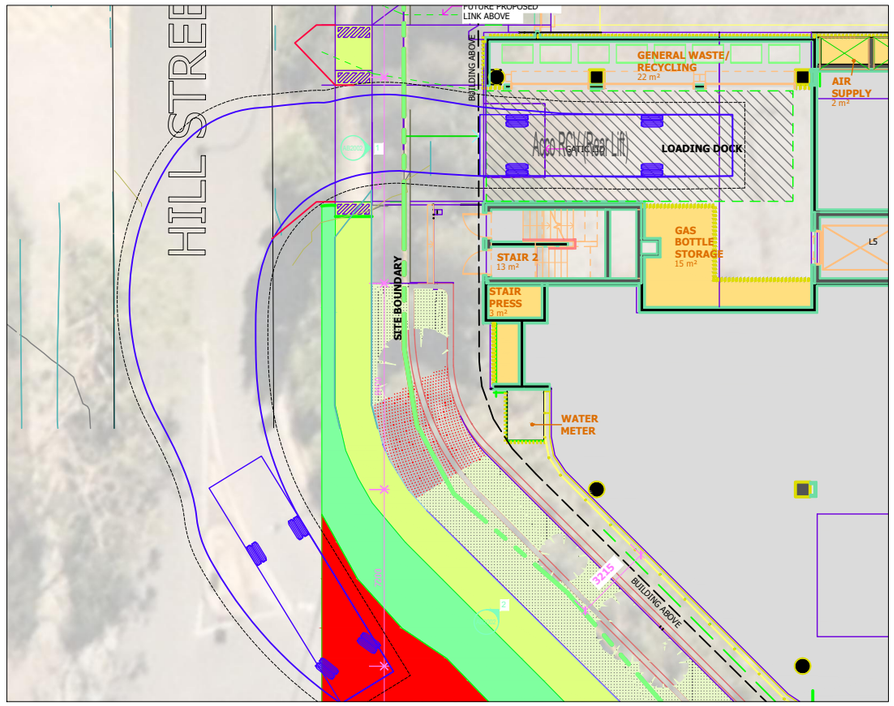
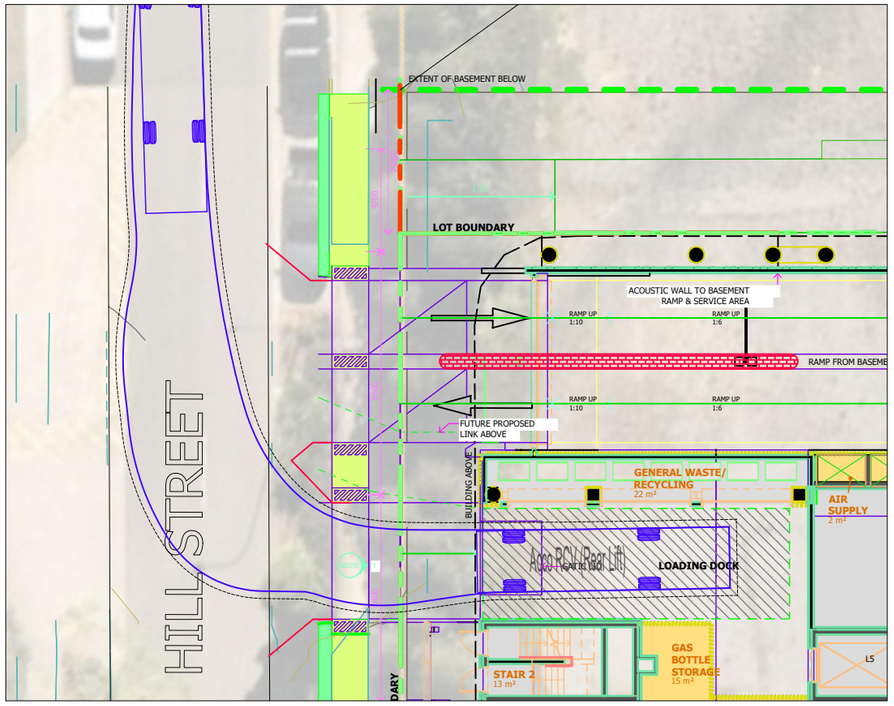
Appendix B Vehicle Swept Paths



RCV EXIT FROM LOADING BAY TO SOUTH



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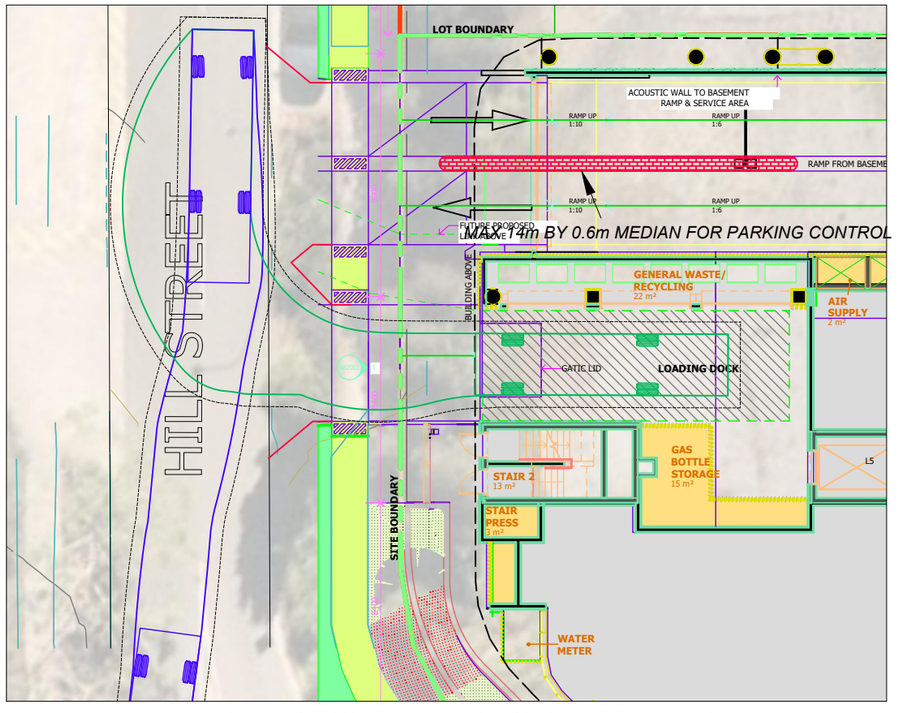

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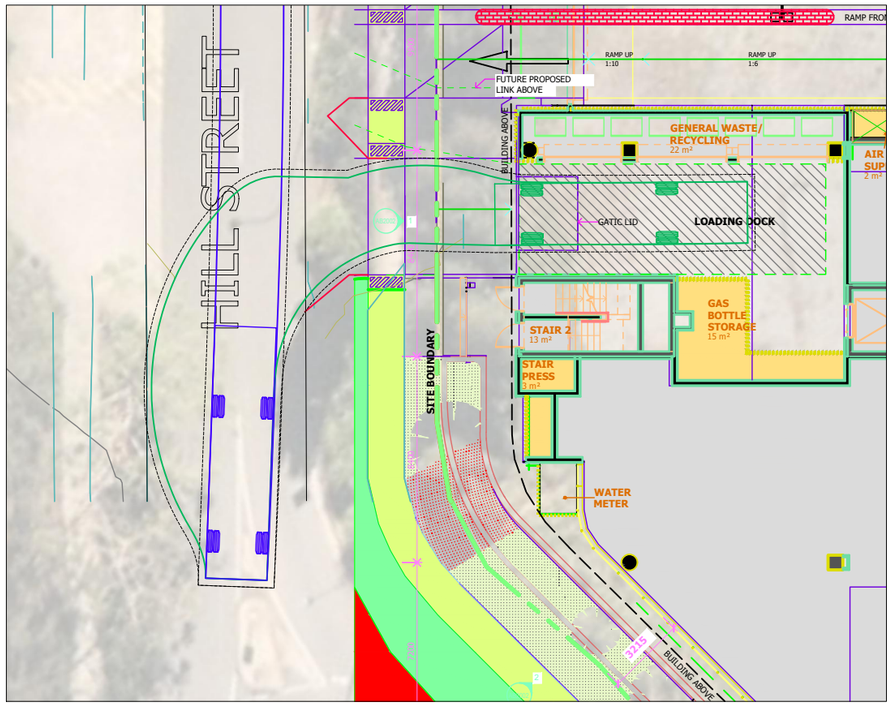

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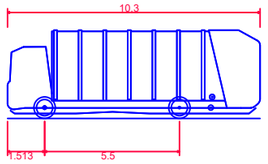

Acco RCV (Rear Lift)

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.200m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.500m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
C	20-09-22	TWO WAY RCV	SC		SC
B	12-07-22	ADD MEDIAN	SC		SC
A	01-06-22	ORIGINAL ISSUE	SC		SC

SCALE 0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

NORTH

CLIENT
NW HEALTH

TTM CONSULTING PTY LTD
ABN 65 010 868 621
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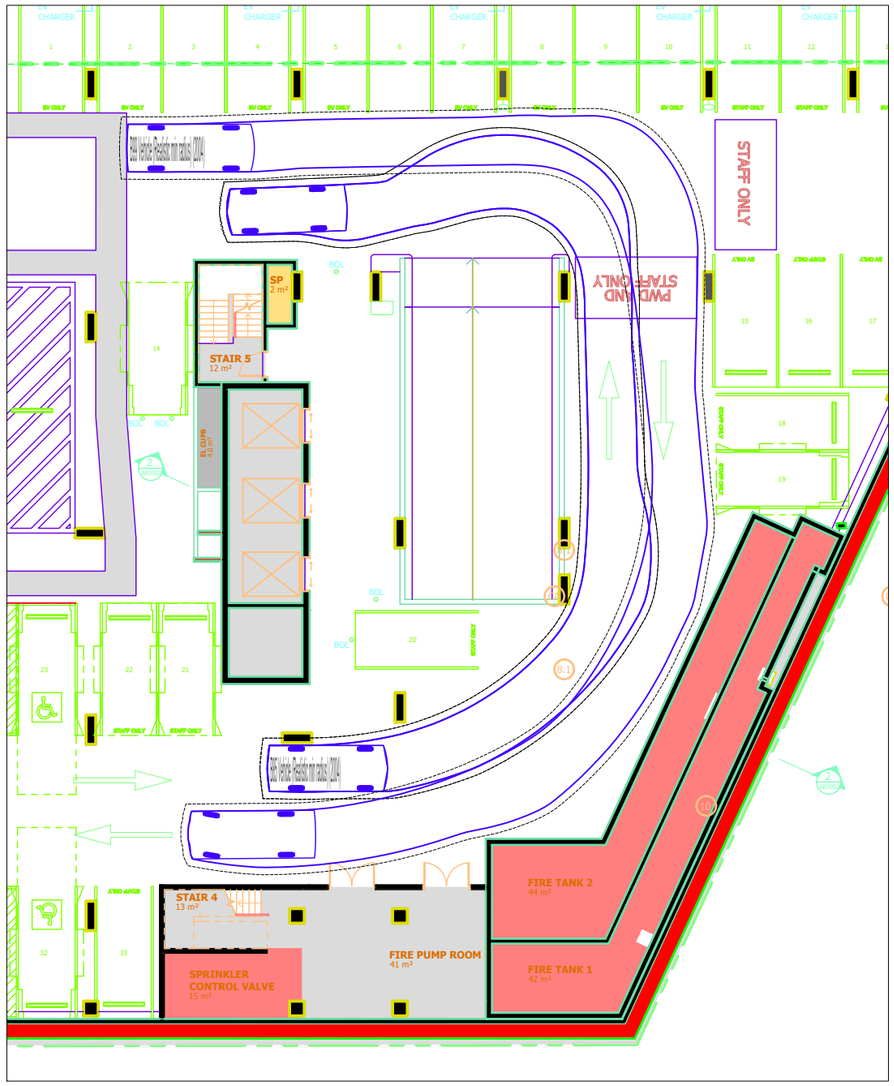
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

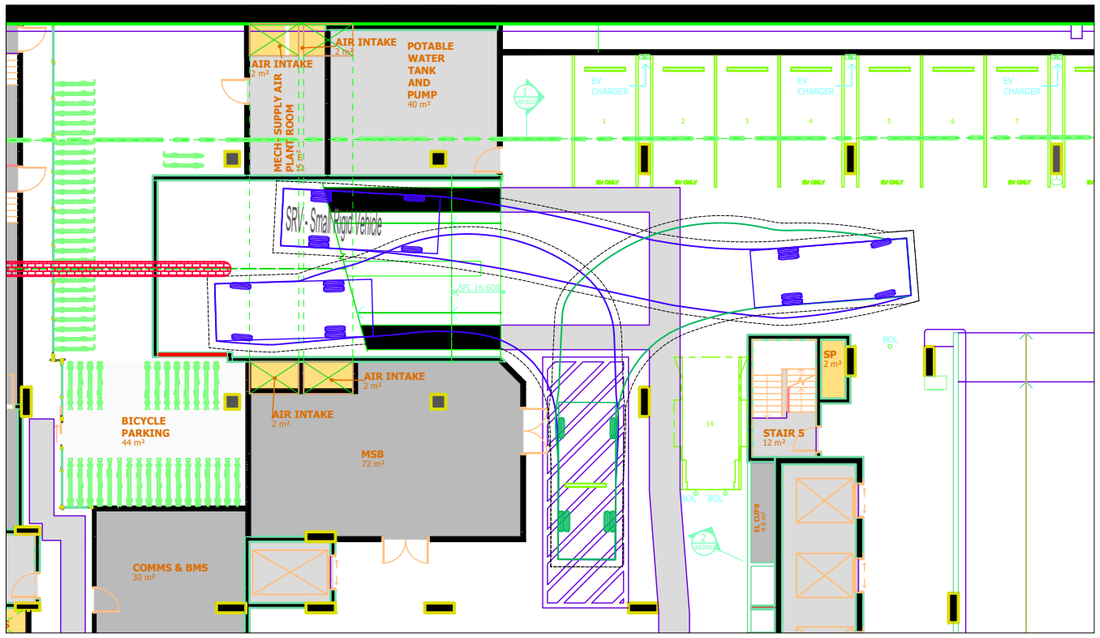
PROJECT
HILL STREET, SOUTHPORT

DRAWING TITLE
VEHCLE ACCESS ARRANGMENTS
RCV SWEPT PATH ANALYSIS

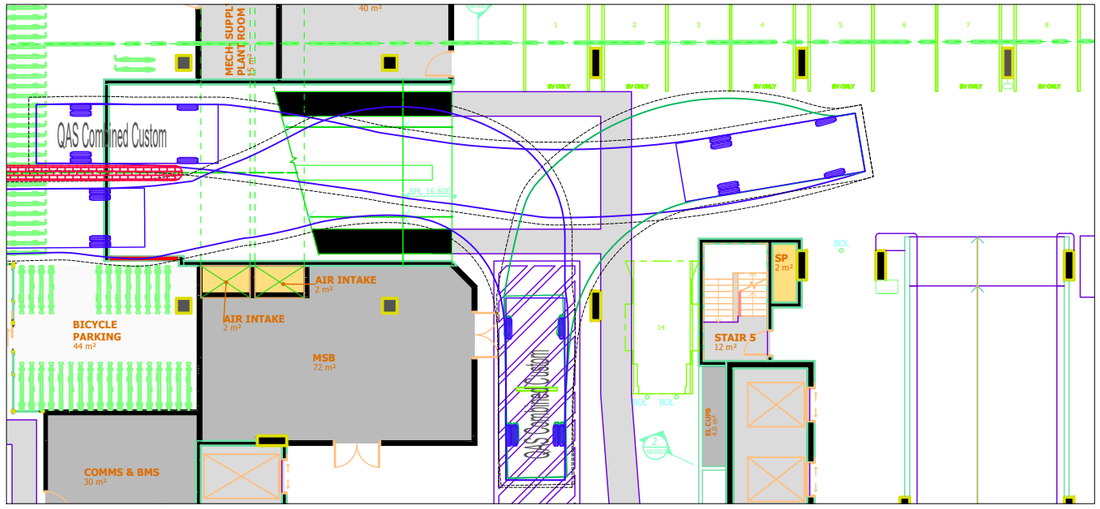
PROJECT NUMBER	21BRT0594
ORIGINAL SIZE	A3
DRAWING NUMBER	21BRT0594-11
REVISION	C
DATE	20 Sep 2022
SHEET	1 OF 1



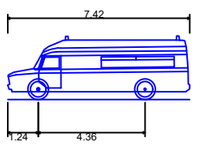
BASEMENT 1 CIRCULATION



SRV ACCESS TO BASEMENT LOADING

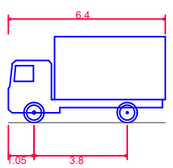


AMBULANCE ACCESS TO BASEMENT LOADING



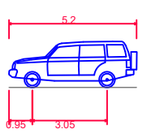
QAS Combined Custom

Overall Length	7.420m
Overall Width	2.400m
Overall Body Height	2.592m
Min Body Ground Clearance	0.320m
Track Width	2.400m
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°
Design Speed Forward	5.0km/h
Clearance Envelope	0.3m



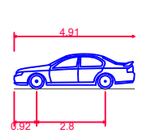
SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.0km/h
Clearance Envelope	0.3m



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m
Design Speed Forward	5.0km/h
Clearance Envelope	0.300m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
C	18-07-22	EDQ FURTHER ISSUES RESPONSE	SC		SC
B	18-07-22	BARIATRIC UNIT AMBULANCE	SC		SC
A	01-06-22	ORIGINAL ISSUE	SC		SC

SCALE 0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

NORTH

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NW HEALTH

TTM CONSULTING PTY LTD
ABN 65 010 868 621
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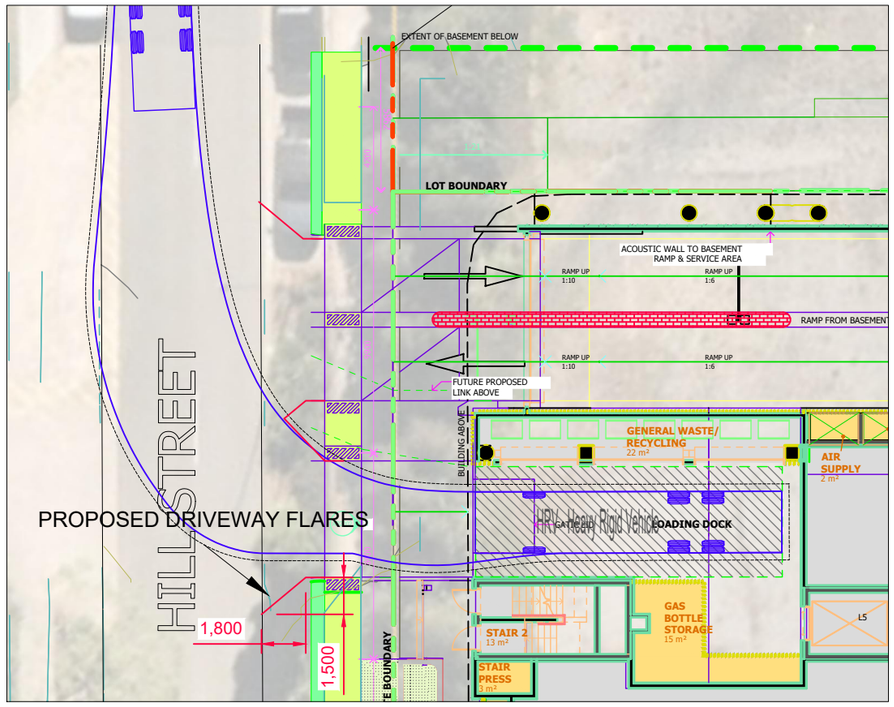
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

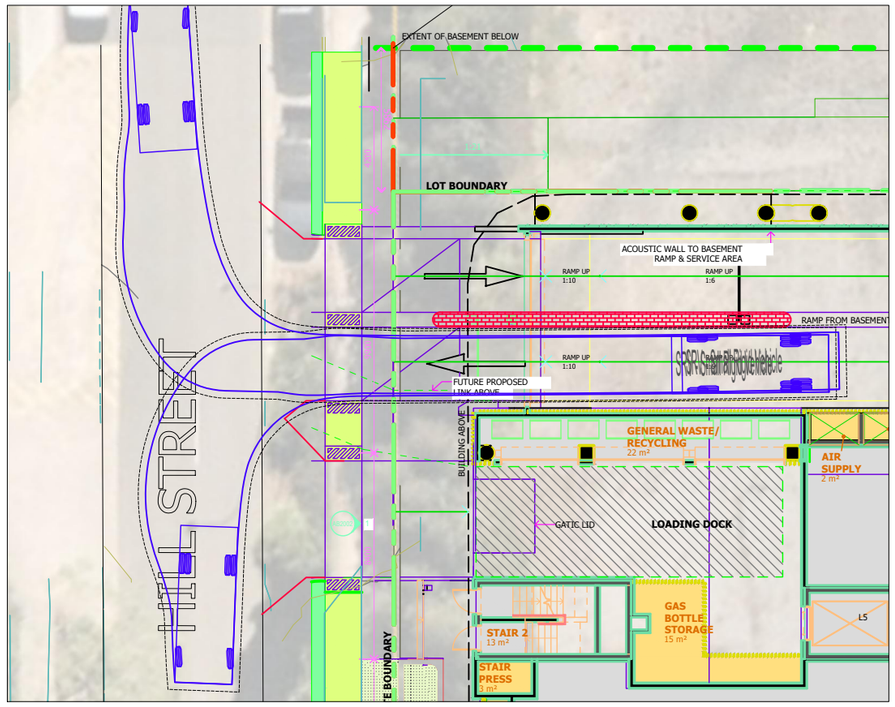
PROJECT
HILL STREET, SOUTHPORT

DRAWING TITLE
BASEMENT 1 VEHICLE ACCESS
SWEPT PATH ANALYSIS

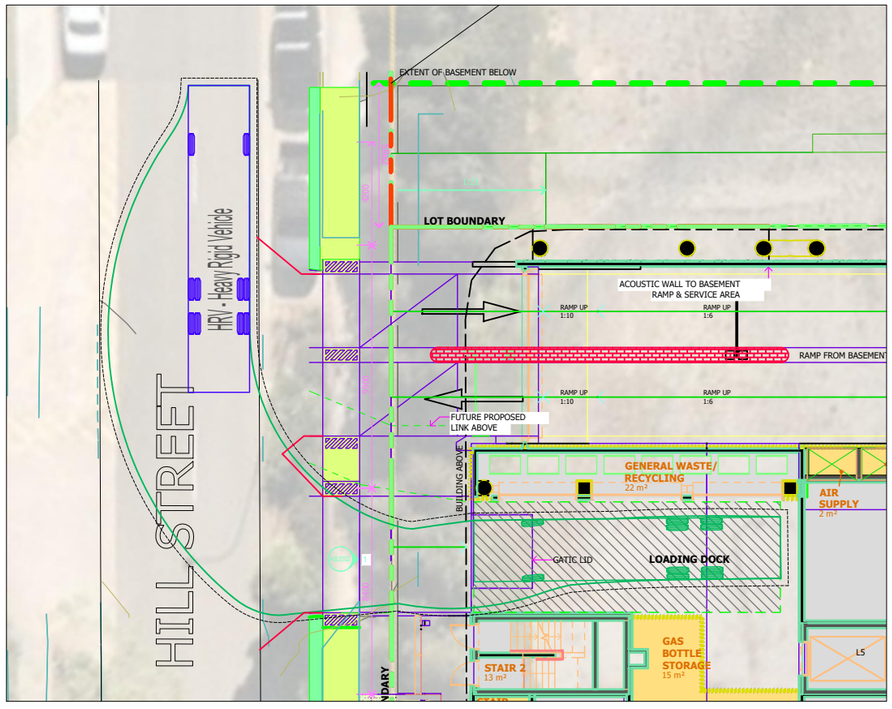
PROJECT NUMBER	ORIGINAL SIZE
21BRT0594	A3
DRAWING NUMBER	REVISION
21BRT0594-12	C
DATE	SHEET
20 Sep 2022	1 OF 1



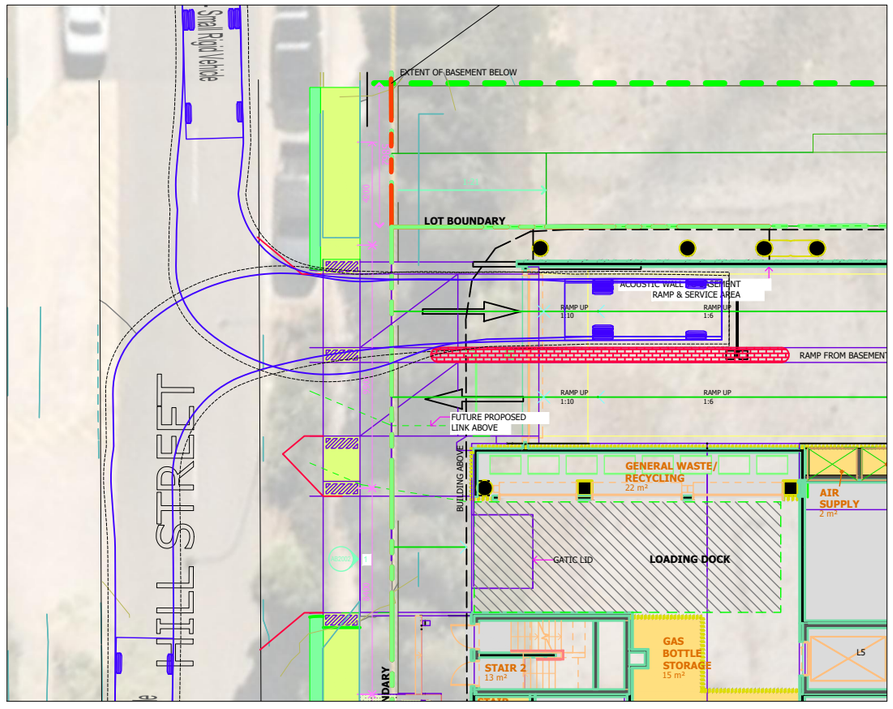
HRV EXIT FROM LOADING BAY



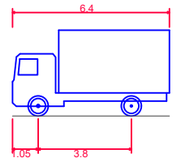
SRV EXIT FROM DRIVEWAY



HRV ACCESS TO LOADING BAY

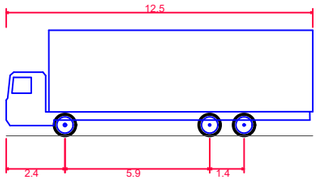


SRV ACCESS TO DRIVEWAY



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.0km/h
Clearance Envelope	0.3m



HRV 12.5m

Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m
Design Speed Forward	5.0km/h
Clearance Envelope	0.500m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	20-09-22	ORIGINAL ISSUE	SC		SC

SCALE 0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

NORTH

CLIENT
NW HEALTH

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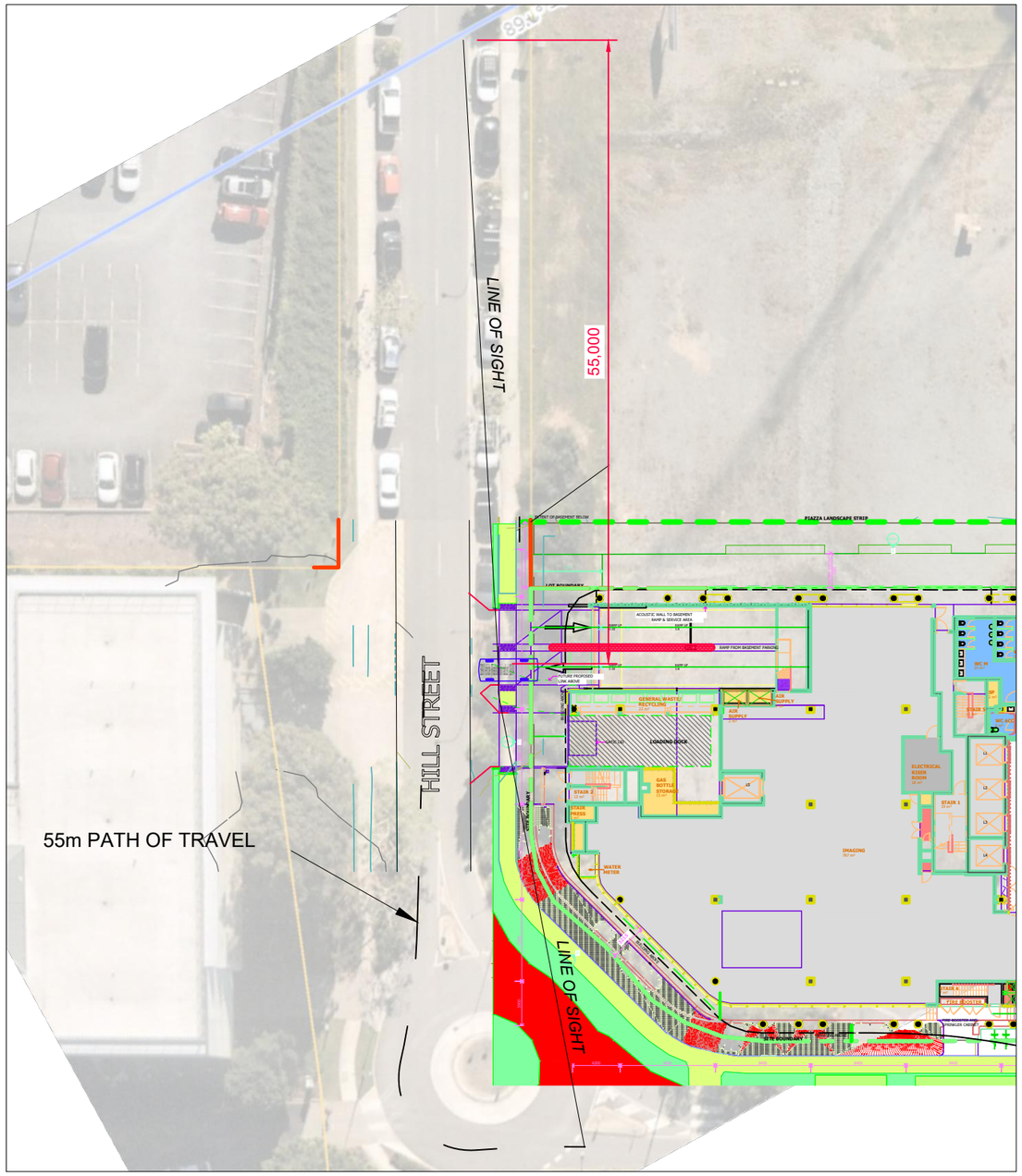
PROJECT
HILL STREET, SOUTHPORT

DRAWING TITLE
VEHCLE ACCESS ARRANGMENTS
SWEPT PATH ANALYSIS

PROJECT NUMBER	ORIGINAL SIZE
21BRT0594	A3
DRAWING NUMBER	REVISION
21BRT0594-14	A
DATE	SHEET
20 Sep 2022	1 OF 1

Appendix C Sight Distance Assessment



REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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SCALE
0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

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NW HEALTH

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PROJECT
HILL STREET, SOUTHPORT

DRAWING TITLE
VEHCLE ACCESS ARRANGMENTS
SWEPT PATH ANALYSIS

PROJECT NUMBER	ORIGINAL SIZE
21BRT0594	A3
DRAWING NUMBER	REVISION
21BRT0594-15	A
DATE	SHEET
20 Sep 2022	1 OF 1