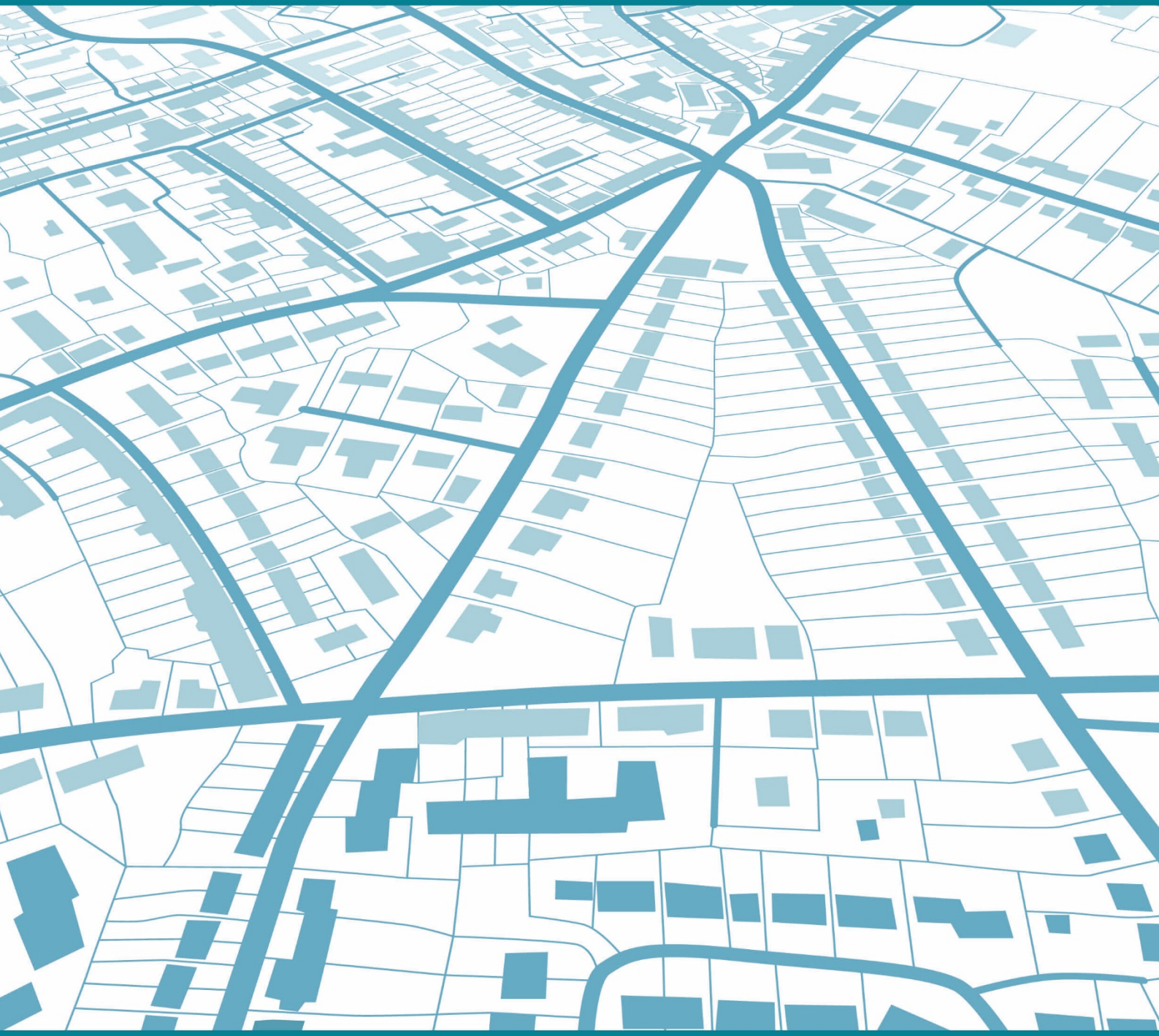
ttpa TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Established 1994

Suite 502, Level 5, 282 Victoria Avenue
Chatswood NSW 2067
T (02) 9411 5660 | F (02) 9904 6622
E info@ttpa.com.au | ttpa.com.au



Greenwich Hospital
Proposed Seniors Health Campus
97 – 115 River Road, Greenwich

Traffic and Parking Assessment

Ref: 20352
Date: May 2022
Issue: D

Table of Contents

1.0 INTRODUCTION 1

2.0 PROPOSED DEVELOPMENT SCHEME 5

2.1 Site, Context and Existing Circumstances 5
2.2 Proposed Development 6

3.0 ROAD NETWORK AND TRAFFIC CONDITIONS 8

3.1 Road Network 8
3.2 Traffic Controls 8
3.3 Traffic Conditions 9
3.4 Transport Services 10
3.5 Bicycles and Pedestrians 11

4.0 PARKING 12

5.0 TRAFFIC 14

6.0 ACCESS, INTERNAL CIRCULATION AND SERVICING 17

7.0 PRELIMINARY CONSTRUCTION TRAFFIC MANAGEMENT PLAN 18

8.0 GREEN TRAVEL PLAN 19

9.0 CONCLUSION 20

List of Figures

Figure 1 Location
Figure 2 Site
Figure 3 Road Network
Figure 4 Traffic Controls
Figure 5 Existing Peak Traffic Flows

List of Appendices

Appendix A Responses from TfNSW and Council
Appendix B Plan of Existing
Appendix C Development Plans
Appendix D Traffic Survey Results
Appendix E Bus Services
Appendix F SIDRA Results
Appendix G ITE Trip Generation Rates
Appendix H Turning Path Assessment
Appendix I Construction Traffic Management Plan
Appendix J Green Travel Plan

1.0 Introduction

This report has been prepared for Hammond Care to accompany an Application to the Department of Planning, Industry & Environment for a redevelopment of the existing Greenwich Hospital site on River Road at Greenwich (Figure 1).

The subject proposal is for the detailed design and construction of the facility following its concept approval under SSD-8699. Specifically, SSD-13619238 seeks approval for the following:

- Demolition of the existing hospital building and associated facilities at the site;
- Construction of a new hospital facility and integrated healthcare campus comprising of hospital, residential aged care, seniors housing, overnight respite, comprising:
    - A new main hospital building up to RL 80.0;
    - Two new seniors' living buildings, Nth to RL 56.36, Sth to RL 60.65;
    - A new respite care building up to RL 56.9.
- Construction of associated site facilities and services, including pedestrian and vehicular access and basement parking;
- Site landscaping and infrastructure works; and
- Preservation of Pallister House which will continue to host dementia care and administrative functions.

The DPIE has issued SEARS for SSD-13619238 and these in relation to Traffic, Access and Parking together with the responses are provided in the following:

No.	SEARs	Summary Response	TIA Section
1.	*Consistency with requirements of conditions imposed under SSD-8699.*	Yes	All relevant sections
2.	*Analysis of the existing transport network, including existing performance levels of nearby intersections utilising appropriate traffic modelling methods (such as SIDRA network modelling).*	Provided	Section 3

LEGEND

LOCATION

FIG 1

3.	*Analysis of the impacts due to the operation of the proposed development, including:* o *proposed modal split for all users of the development including vehicle, pedestrian, bicycle riders, public transport and other sustainable travel modes.* o *a clear explanation and justification of the:* • *assumed growth rate applied.* • *volume and distribution of proposed trips to be generated.* • *type and frequency of vehicles accessing the site.* o *adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users.*	Provided	Section 5
4.	***Consultation*** *Consultation with:* *• Lane Cove Council.* *• Transport for NSW.*		

Consent Conditions have been issued for SSD-8699 application and these in relation to Traffic, Access and Parking together with the responses are provided in the following:

No.	SEARs	Summary Response	TIA Section
	Traffic, Access, Car and Bicycle Parking		
B21.	*All future development applications for new built form must be accompanied by:*		
a)	*A Road Safety evaluation of all access points, pedestrian and vehicle movement along River Road and St Vincents Road within the vicinity of the Site.*	Yes	Section 6
b)	*A Traffic Impact Assessment that considers the traffic and transport impacts associated with the construction and operation of the proposed development, including details of:*		
i.	*current daily and peak hour vehicle movements (using current traffic flow surveys);*	Yes	Section 6
ii.	*estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips;*	Yes	Section 6
iii.	*the adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development*	Yes	Section 6
iv.	*the impact of trips generated by the development on nearby intersections using a realistic distribution of traffic based on Site characteristics, with consideration of the cumulative impacts from other approved developments in the vicinity using SIDRA traffic modelling;*	Yes	Section 6

v.	*any upgrades or road improvement works require to ameliorate any impacts on traffic efficiency or road safety impacts associated with the proposed development and funding arrangements;*	None required	Section 6
vi.	*walking and cycling access arrangements and connections to public transport services, including assessment of road and pedestrian safety in line with CPTED and provision of adequate way-finding signage and strategy;*	Yes	Section 3
vii.	*access arrangements, including pick-up/drop-off facilities and the design of the left in and left-out River Road eastern access, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones;*	Yes	Section 2
viii.	*bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance;*	No	None required
ix.	*the number of on-site car parking spaces for staff and visitors and compliance with existing parking codes, including requirements of the State Environment Planning Policy (Housing for Seniors or People with a Disability) 2004, and justification for the level of car parking provided on-site;*	Yes	Appendix J
x.	*an assessment of the cumulative on-street parking spaces of cars, staff parking and any other parking demands associated with the development; and*	Yes	Section 5
xi.	*emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times).*	Yes	Section 5
c)	*A Green Travel Plan outlining the measures to reduce private vehicle usage, including provision of a free shuttle bus service to local retail centres and public transport nodes.*	Yes	Appendix J
d)	*A preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:*	Yes	Appendix I
i.	*assessment of cumulative impacts associated with other construction activities (if any).*	No	Not relevant

ii.	*an assessment of road safety at key intersections and locations subject to heavy vehicle construction traffic movements and high pedestrian activity.*	Yes	Appendix I
iii.	*details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process.*	Yes	Appendix I
iv.	*details of anticipated peak hour and daily construction vehicle movements to and from the Site.*	Yes	Appendix I
v.	*details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the Site, emergency vehicles and service vehicles.*	Yes	Appendix I
vi.	*details of temporary cycling and pedestrian access during construction.*	No	None required

The purpose of this report is to:

- describe the site, its 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 potential traffic implications
- assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements.
- respond to the SEARS and Consent Conditions as well as Authority requirements (Appendix A)

2.0 Proposed Development Scheme

2.1 Site, Context and Existing Circumstances

Greenwich Hospital (Figure 2) was established in 1966 and is a consolidation of Lots 3 & 4 in DP584287 which occupy an irregular shaped area of some 3.37ha located on the southern side of River Road adjacent to Gore Creek Reserve.

The surrounding landuses comprise medium/large single dwelling residential properties while other significant uses in the vicinity include:

- Greenwich Public School which is situated directly opposite the site on the northern side of River Road
- Lane Cove Country (Golf) Club located a short distance to the west of the site
- Royal North Shore Hospital Precinct located to the north-east of the site.

The existing Hospital, which functions as part of the Northern Sydney Area Health Service provides rehabilitation with an integrated day therapy and home based rehabilitation service, inpatient palliative care services and day respite services as well as psycho geriatric assessment and inpatient care. The various services provided by the Hospital are located in a number of buildings which have been erected in a fragmented fashion throughout the site.

The Hospital has 74 beds and staff are rostered on over 3 shifts per day with a maximum day shift of 26 specialists and 75 staff. There are also:

- a hydrotherapy pool also available for outpatients
- outpatient palliative care
- overnight respite

Visiting hours are generally unrestricted although it is preferred that visitors limit attendance to between 10.00am – 10.00pm.

LEGEND

SITE

FIG 2

Carparking is provided in the form of (designated) parking bays and informal areas located throughout the site accommodating some 150 cars. There are some 10 delivery service movements per day with generally no more than 1 vehicle at any one time (vans to 8/12 tonne trucks).

Vehicle access comprises, a traffic signal controlled entry/exit connection to River Road at the western site boundary, a combined entry/exit driveway on St Vincents Road and another access driveway on River Road towards the centre of the frontage. Details of the existing site development are provided on the plan provided in Appendix B.

2.2 Proposed Development

The proposed development involves a 5 stage process which will permit the existing Hospital activities to continue to function throughout the construction process. The proposed development stages comprise:

Stage 1 **Early Works**
Infrastructure works

Stage 2 **Hospital Building**
Demolition of eastern wing of existing hospital, demolition of Bluegum Lodge and construction of the new hospital building

Stage 3 **Seniors Living South**
Demolition of the remaining existing hospital building and Riverglen and construction of the southern Seniors Living building

Stage 4 **Seniors Living North**
Construction of the northern Seniors Living building

Stage 5 **Respite**
Construction of the Respite building

The completed development will comprise:

- the new Hospital/RACF complex on the eastern part of the site with:
  - Administration Staff 60
  - Specialists 56
  - Sub-acute hospital with 65 inpatient beds and 25 staff

- 12 Consulting Rooms (staff included above)
- RACF with 65 beds and 15 staff
- Respite with 10 beds and 6 staff
- Ancillary elements (café etc.)
- Porte cochere and short term parking
- Basement parking

❖ the Supported Seniors Living complex in 2 blocks on the western part of the site:

10 x 1 bed
64 x 2 bed (or 1 bed and study)
15 x 3 bed
Total 89 dwellings

- staff included in maximum day time shift
- ancillary elements
- basement car parking with some supplementary at-grade visitor parking
- total of 329 parking spaces

The vehicle access arrangements will largely remain as existing although the driveway near the centre of the River Road frontage will be modified and limited to left turn IN/OUT only (apart from emergency vehicles). The hospital porte cochere will connect to this access and there will be a revised internal circulation roadway with connections to the various parking areas and loading dock. Importantly, interconnection will enable all vehicles to utilise the traffic signal controlled access point on River Road.

Details of the proposed development scheme are provided on the plans prepared by Bickerton Masters which accompany the Application and are reproduced in part in Appendix C.

3.0 Road Network and Traffic Conditions

3.1 Road Network

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

- *Pacific Highway* – a State Road and arterial route providing the major north/ south connection between Sydney and Hornsby
- *River Road* – a Regional Road and sub-arterial route which connects between Longueville and Crows Nest
- *Greenwich Road* – collector route which links to the Pacific Highway
- *St Vincents Road* – a local access road which connects across River Road

3.2 Traffic Controls

The existing traffic controls which have been applied to the roads in the vicinity of the site (Figure 4) include:

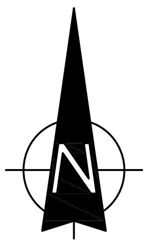
- the traffic signals at the River Road/Greenwich Road and Pacific Highway/Greenwich Road intersections
- the traffic signals on River Road at the main Hospital access (see details overleaf)
- the 50 kmph speed limit on St Vincents Road and River Road where there is a section of 40 kmph School Speed Zone in the vicinity of the Public School
- the GIVEWAY signage at the River Road and St Vincents Road intersection and pedestrian crossing over the northern side of St Vincents Road
- the BUS ZONES (with shelters) on each side of River Road adjacent to traffic signal controlled access and at St Vincents Road

LEGEND

ARTERIAL

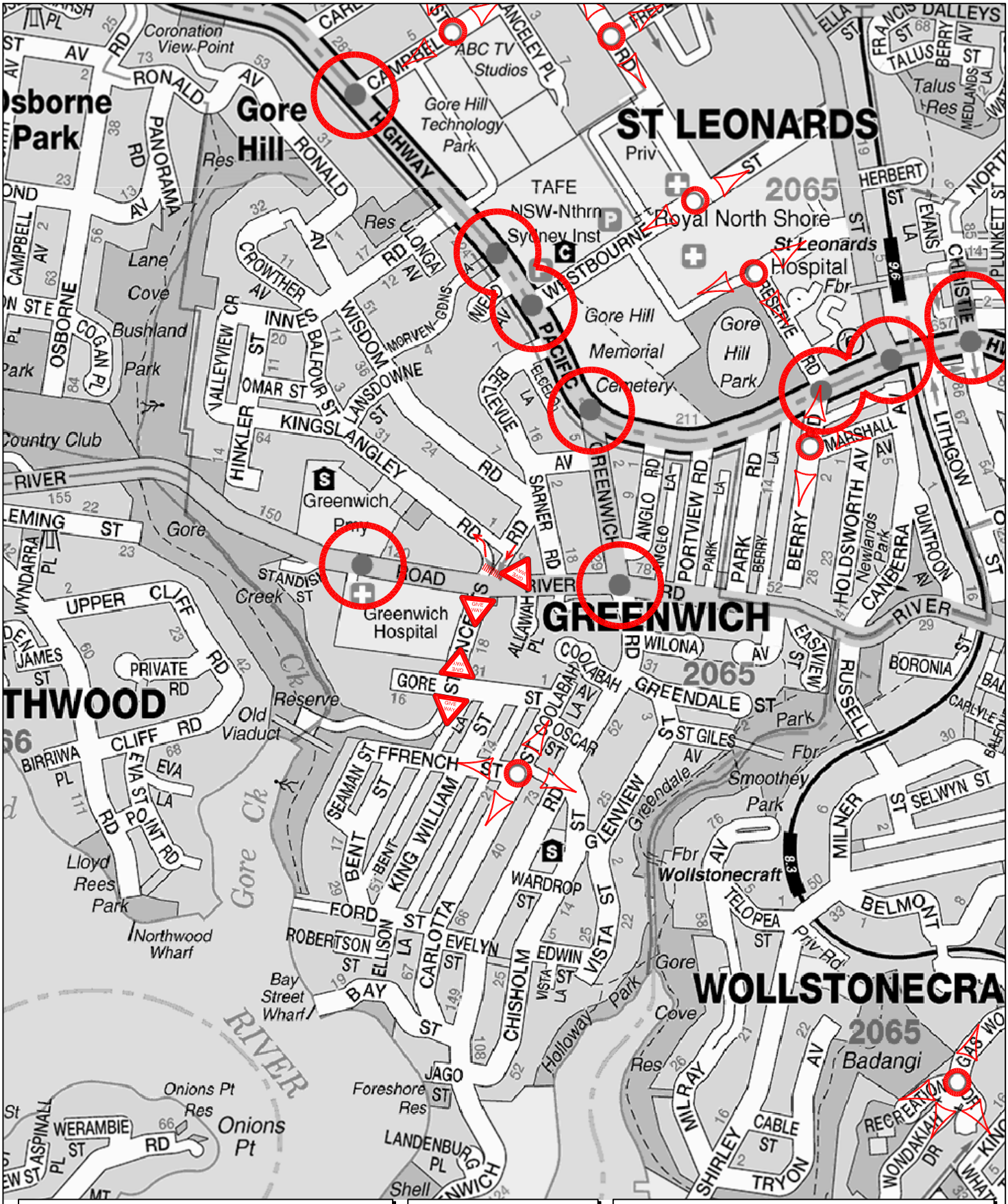
SUB-ARTERIAL

COLLECTOR



ROAD NETWORK

FIG 3



LEGEND

- TRAFFIC SIGNAL CONTROL
- ROUNDABOUT
- RESTRICTED TURNING MOVEMENT

N

TRAFFIC CONTROLS

FIG 4

2070.254.VV.2337

DATE IN SERVICE : 24/6/82

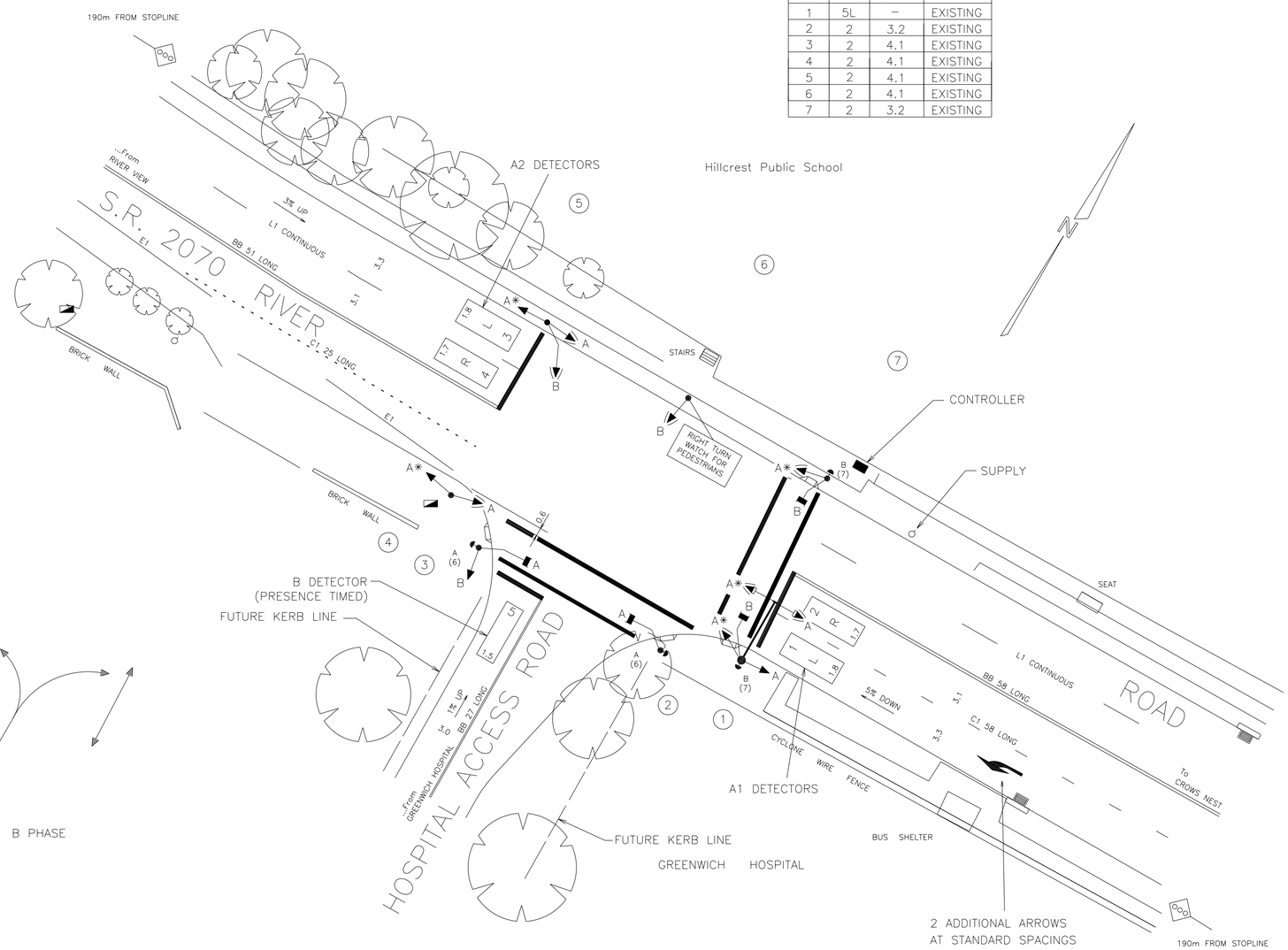
R T A

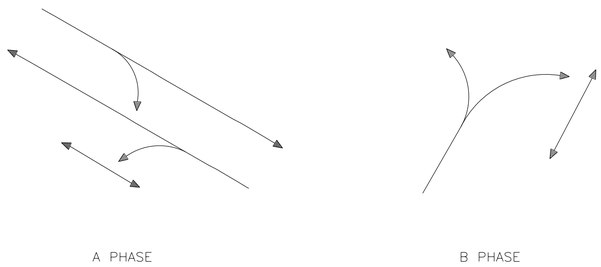
NOTES

1. This site is SCATS linked.
2. Special Regulatory Stop Sign (R1–202) placed on post 3.
3. All push buttons are audio tactile.

POSTS

POST	TYPE	LENGTH	REMARKS
1	5L	–	EXISTING
2	2	3.2	EXISTING
3	2	4.1	EXISTING
4	2	4.1	EXISTING
5	2	4.1	EXISTING
6	2	4.1	EXISTING
7	2	3.2	EXISTING





MOVEMENTS

DESIGN LAYOUT

A ORIGINAL ISSUE

'B' ISSUE – WAE
NEW SITE – POST 5 WAS 15L.
POST 1 WAS 5L.
BD SNOWCHEF

PUBLIC UTILITY LEGEND		REFERENCE PLANS	
HYDRANT	□	SYMBOLS/ABBS.	VD003–6
STOP VALVE	▲	STD POSIT	VD001–5
GAS VALVE	#	DET SCHED EXP	VD018–10
SEWER MANHOLE	⊕	PRES. DETECT	VC005–17
TELECOM PIT	◪	SSG DIS. SEQ.	VD018–8
ELECT LIGHT POLE	○		
POWER POLE	○		
STAY POLE	⊘		
TELEPHONE BOX	T	SURVEYOR : ROSE ATKINS	
TELECOM PILLAR	◕	DATE : AUGUST 1996	

U.B.D. Ref. Map 215–K7
I.S.G. CO–ORDS E: 316540 N:1250670
DESIGNED G VARLEY– ProVision DRAFTING
CHECKED T LAWRENCE
SITE CHECKED
RECOMMENDED

APPROVED
T LAWRENCE
22–2–97
DATE
ACCEPTED
John Leach
6–3–97
DATE

Roads and Traffic Authority,N.S.W

LANE COVE CITY COUNCIL
S.R.2070 RIVER ROAD
AND GREENWICH HOSPITAL ACCESS ROAD
GREENWICH

DESIGN LAYOUT TCS No 2337

DESIGN OFFICE PARRAMATTA – SYDNEY TECHNICAL SERVICES
CADD FILE: VV2337_4B.DGN
SCALE 5 0 (1:200) 5 10
ISSUE B
FILE 254 TS 123
SUPERSEDES SHEET/ISSUE 1
REGN. 2070.254.VV.2337
SHEET 4

© COPYRIGHT ROADS AND TRAFFIC AUTHORITY

VV2337_04B.dgn 2/12/2008 2:24:41 PM

- the “light traffic” restriction for vehicles travelling southerly from River Road along St Vincents Road however, this does not apply to vehicles accessing the hospital site due to the provisions of the Road Rules.

3.3 Traffic Conditions

An indication of the existing traffic conditions in the vicinity of the site is provided by data published by the TfNSW and surveys undertaken as part of this study. The data published by the TfNSW is expressed in terms of Annual Average Daily Traffic (AADT) and the most recent available data is summarised in the following:

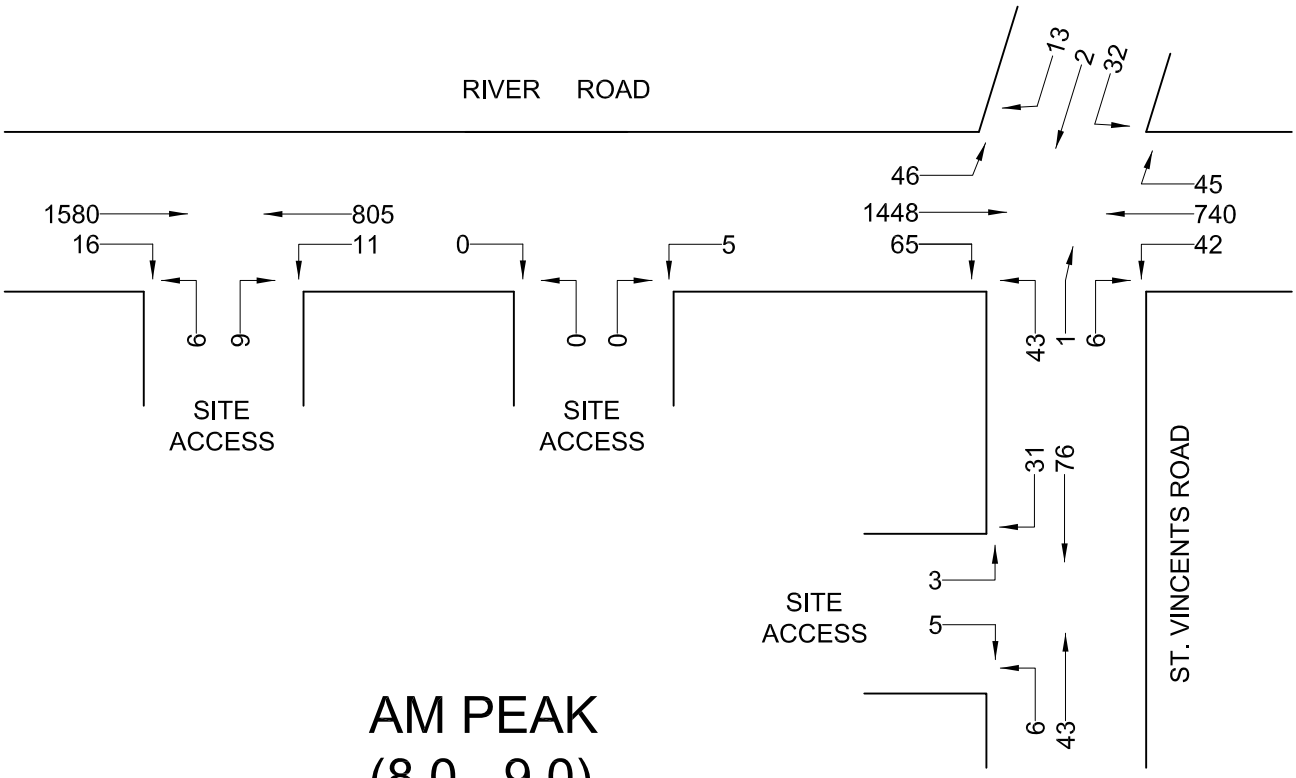
Location	AADT
River Road east of St Vincents Road	26,798
Pacific Highway north of Westbourne Street	41,595

It is noted that the traffic count locations experience slightly different peak hours. By combining the hourly totals, the peak morning hour occurs between 8am – 9am and the peak afternoon hour occurs between 5pm-6pm. The proposed development impacts will be assessed against these hours.

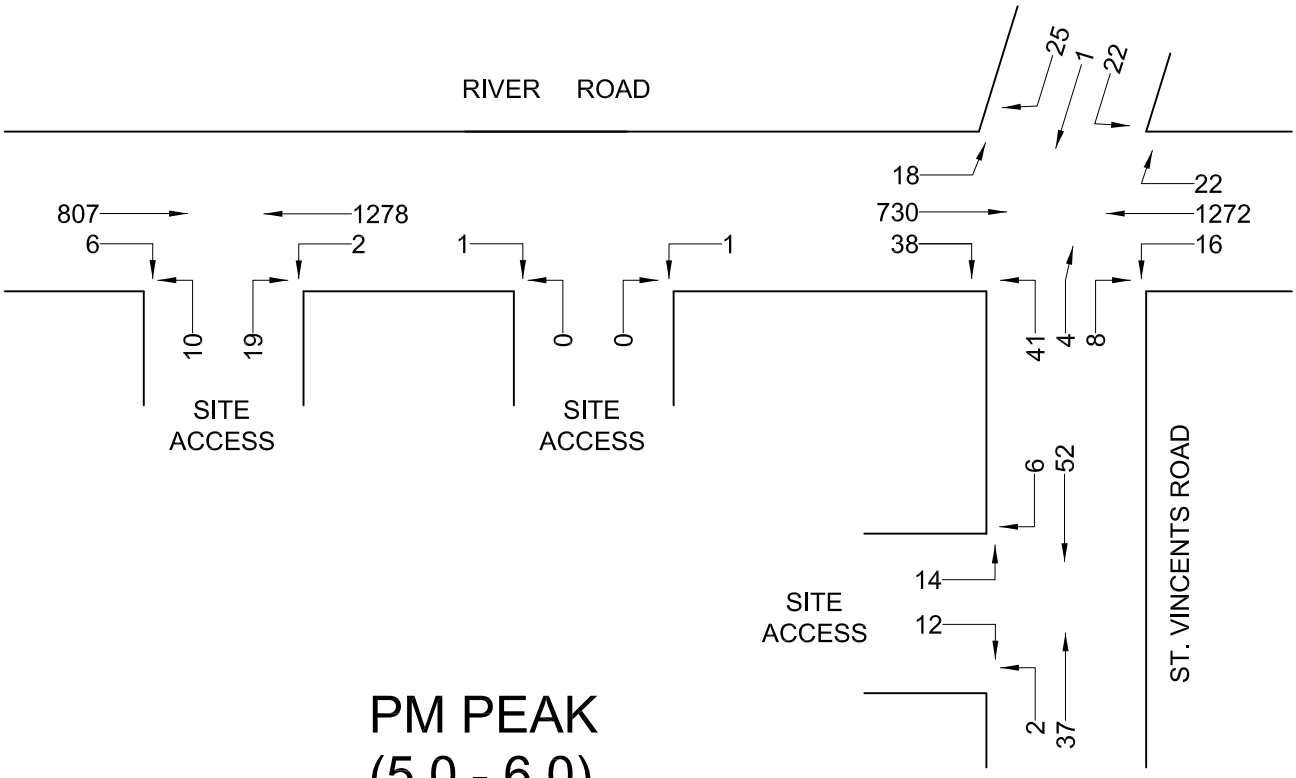
AM peak hour	Combined Volumes	PM peak hour	Combined Volumes
7:00 – 7:15	6,492	4:00 – 5:00	5,933
7:15 – 8:15	7,180	4:15 – 5:15	6,035
7:30 – 7:30	7,280	4:30 – 5:30	6,088
7:45 – 8:45	7,240	4:45 – 5:45	6,460
8:00 – 9:00	7,324	5:00 – 6:00	6,501

The traffic movements along River Road and through the Hospital access points are subject to fluctuation and change over time and an indication of this is provided by surveys undertaken and data provided by TfNSW for 2007, 2017 and 2021 (May) which is summarised in the following for the “road network” peak periods.

	NETWORK PEAK VOLUMES					
	May 2007		October 2017		May 2021	
	AM	PM	AM	PM	AM	PM
River Road Eastbound	1,473	850	1,580	807	1,397	692
River Road Westbound	880	1,486	805	1,278	686	1,261

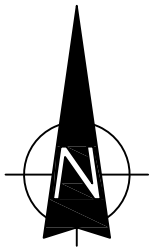


AM PEAK
(8.0 - 9.0)



PM PEAK
(5.0 - 6.0)

LEGEND



EXISTING NETWORK PEAK TRAFFIC FLOWS

FIG 5

It is apparent that there has been no general traffic growth on the River Road in recent years and the 2017 volumes essentially reflect the existing circumstance as indicated on Figure 5 for the "network peak periods".

The operational performance of the River Road/Hospital access and River Road/St Vincents Road intersections has been assessed with SIDRA. The results of that assessment are provided in Appendix F and summarised in the following while the criteria for interpreting SIDRA results is reproduced overleaf.

	AM		PM	
	LOS	**AVD**	**LOS**	**AVD**
River Road/Hospital Access	A	5.4	A	12.4
River Road/St Vincents Road	A-C	3.5	1A-C	3.2

The results indicate that these intersections operate quite satisfactorily at the present time.

3.4 Transport Services

The site is serviced by the Route 261 and 265 bus services (see details overleaf) which provide access to railway stations and interchange with other bus services (particularly those that operate along the Highway and at the railway stations). The Route 261 service operates along River Road between Lane Cove and the City via Longueville, Northwood and Crows Nest and North Sydney. This route operates as a 6 days per week service with a number of weekday services extending to Chatswood. Bus stops are provided on either side of River Road adjacent to the Hospital's signalised access and also in the vicinity of St Vincents Road.

The Route 265 service operates along Greenwich Road and River Road (part) connecting between Lane Cove and McMahons Point via St Leonards, Crows Nest and North Sydney. This service operates on a full-time basis on weekdays with peak period frequencies of 30 minutes and 60 minute frequencies at other times and daytime on Saturdays. Bus stops for this service are located either side of St Vincents Road at the River Road intersection.

Details of the Route 261 and 265 services are provided in Appendix E.

Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and Accident Study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below, which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabouts	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals** both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout or GIVE WAY or STOP signs**, satisfactory intersection operation is indicated by a DS of 0.8 or less.

3.5 Bicycles and Pedestrians

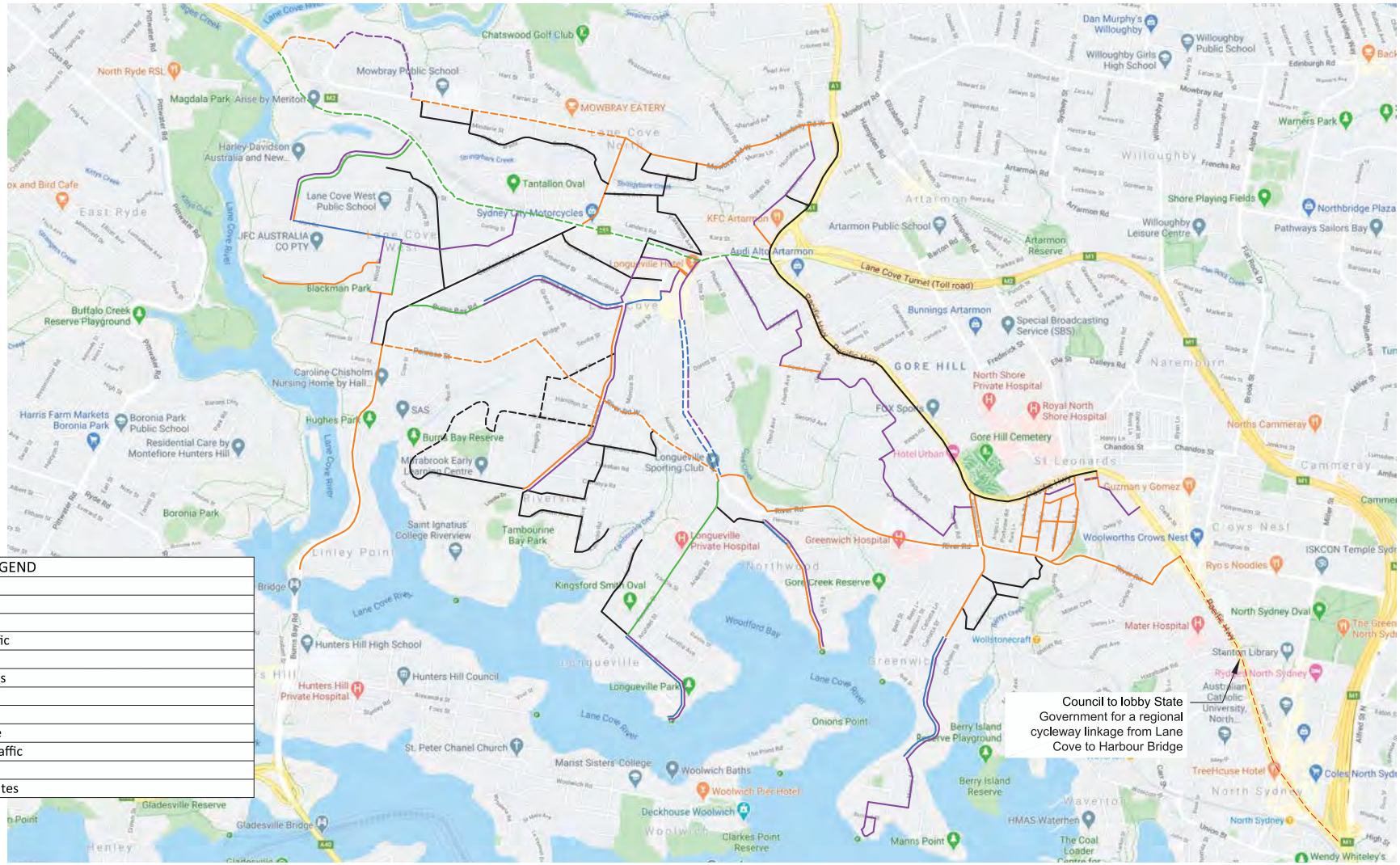
There are existing footpaths along River Road (southern side in part) and along St Vincents Road while pedestrian movements are also enhanced by the traffic signal controlled crossings at the Hospital access signals, the marked foot crossing across St Vincents Road at River Road and the traffic signal controlled crossings at the River Road and Greenwich Road intersection.

There is an existing bicycle route along River Road/Penrose Street westwards from Longueville Road and it is proposed to extend this route easterly past the site to Greenwich Road with connection to the north, south and east from there as shown on the details overleaf.

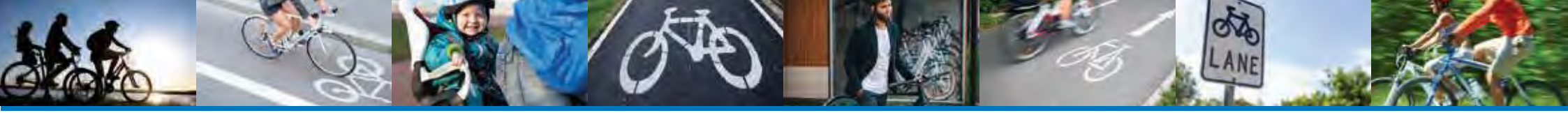
Details of this proposed off-road Shared Path along the northern side of River Road are shown on the diagram overleaf.

Attachment 2 – Proposed Bicycle Routes

Short Term Routes



LEGEND	
Existing Routes	
	Existing Bike Path
	Existing Bike Lane
	Existing Mixed Traffic
	Existing SUP
	2013 Existing Routes
Proposed Routes	
	Proposed Bike Path
	Proposed Bike Lane
	Proposed Mixed Traffic
	Proposed SUP
	2013 Proposed Routes


LANE

Richardson St
Cogan Pl
Lane Cove Public Golf Course
Stevenson St
Lane Cove Bushland Park
River Rd
Arabella St
Fleming St
Wisdom Rd
Kingsmangley Rd
Gore Creek Reserve
River Road
(12.0m roadway)
Northern Side
Southern Side
Off-road Shared Path
(2.0m-2.5m)
Traffic Lane
(3.0m)

4.0 Parking

An indication of the appropriate parking provision for the proposed development is provided by Council's DCP (in relation to the hospital element) and the SEPP (HS & PWD) as follows:

Hospital

1 space per 3 beds

1 space per 2 staff

1 space per registered medical practitioner

RACF

1 space per 10 beds (1 per 15 dementia)

1 space per 2 staff

Supported Seniors Living

0.5 spaces per bedroom

Application of this criteria to the proposed development would indicate the following minimum parking provision:

Hospital & Respite	
65 + 10 Beds	25 spaces
118 Staff	59 spaces
56 Specialists	56 spaces
RACF	
65 Beds	7 spaces
Supported Seniors Living (non "Housing Provider")	
10 x 1 Bed	
64 x 2 Bed	
15 x 3 Bed	
Total 89 apartments	92 spaces
Hammond Care at Home, Dementia Centre, Palliative Centre and Centre for Positive Aging	30 spaces (say)
Grand Total	**269 spaces**

It is proposed to provide a total of 329 parking space and this is largely due to the fact that there is no convenient or appropriate off-site on street spaces available in the vicinity of the site to accommodate occasional peak visitor/patient activity (eg. Christmas, Mother's and Father's days) as well as the inevitable non-bonafide use by parents/carers of school children.

Council's DCP also specifies the following provision for bicycle parking:

	Staff	**Visitors**
Hospital	1 space per 5 practitioners/professionals	1 rack plus 1 rack per 200m^2
Consulting Rooms	As above	As above
RACF	Not Stated	
Seniors Living	Not Stated	

The DCP also specifies the provision of 1 motorbike space per 15 car spaces.

There is no provision at the site for bicycles or motorbikes at the present time and the absence of shared path/bike lane provisions together with the nature of the terrain makes it very difficult for cyclists to access. There will be 56 practitioners/professionals and 12 consulting rooms and it is proposed to provide a total of 20 bicycle spaces and 4 motorcycle spaces, which is slightly less than the DCP criteria but it is apparent that this will be appropriate to the circumstances.

5.0 Traffic

Various traffic surveys at the hospital access points over the years reveal a significant variation in the recorded traffic generation as follows:

	Total vtph	
	AM	**PM**
May 2007	85	44
June 2007	-	77
October 2017	92	73
May 2021	64	57

The existing hospital has 74 beds and day shift 101 persons with some 130 parking spaces.

Application of the RTA Development Guideline traffic generation criteria for private hospital would indicate the following:

AM - 10.21 + 0.47B + 0.06S

- 10.21 + 0.47 x 74 + 0.06 x 101

PM - 2.84 + 0.25B + 0.40S = 30 vtph

- 2.84 + 0.25 x 74 + 0.40 x 101 = 56 vtph

A later 2013 Study for RMS of major public hospitals (e.g. RPA, Liverpool, Royal North Shore) indicated the following:

AM 0.34 staff + 0.32 beds

0.34 x 101 + 0.32 x 74 = 58 vtph

PM 0.39 staff + 0.33 beds

0.39 x 101 + 0.33 x 74 = 64 vtph

The existing hospital has a number of supplementary services and there is a regular use of the available at-grade parking spaces by parents and carers of children attending the school on the other side of River Road. These factors would explain why the recorded traffic generation is slightly higher than that indicated by the RMS criteria, particularly in the AM due to the school drop off factor.

In relation to the potential traffic generation of the completed development, the following has been considered:

Hospital	-	adopt the rates from the recent RMS Study
RACF and Seniors Housing (ILU's)	-	the 2014 RMS Study results are not appropriate because: • they aggregated results from mixed developments • they involved sites not in the Metropolitan Area where transport services were limited.

TTPA have undertaken surveys at numerous RACF sites which have indicated a peak traffic generation rate of 0.17 vtph/bed in the AM and 0.22 vtph/bed in the PM. By coincidence, this compares exactly to the rates specified in the Institute of Traffic Engineers Trip Generation Guide (see Appendix G). That publication also specifies a traffic generation for Senior Adult Housing of 0.08 vtph/unit in the AM and 0.11 vtph/unit in the PM.

It is noted that the average people moving into the proposed housing will be 80 years. Thus, the assessed traffic generation of the proposed development is as follows:

Hospital and Respite		
65 beds and 136 staff		
AM	0.34 x 136 + 0.32 x 65	67 vtph
PM	0.39 x 136 + 0.33 x 65	64 vtph
RACF		
65 beds		
AM	65 @ 0.17	11 vtph
PM	65 @ 0.22	14 vtph
Seniors Living		
89 dwellings		
AM	89 @ 0.08	7 vtph
PM	89 @ 0.11	10 vtph
Total		
AM	85 vtph	
PM	88 vtph	

The difference between the current recorded generation and that derived from the RMS criteria was +34 vtph in the AM and 9 vtph in the PM and this can be attributed to the ancillary facilities and activity. If this is “factored in”, the assessed generation is:

AM	119 vtph	(+27 vtph)
PM	97 vtph	(+24 vtph)

The factors which will determine the distribution of the generated traffic will be:

- the basement connection directly to the western access road and its traffic signal control at River Road
- the restriction of access for the eastern access on River Road to left turn IN/OUT
- the far shorter distance to/from River Road via the western access road than via the southern access road and St Vincents Road.

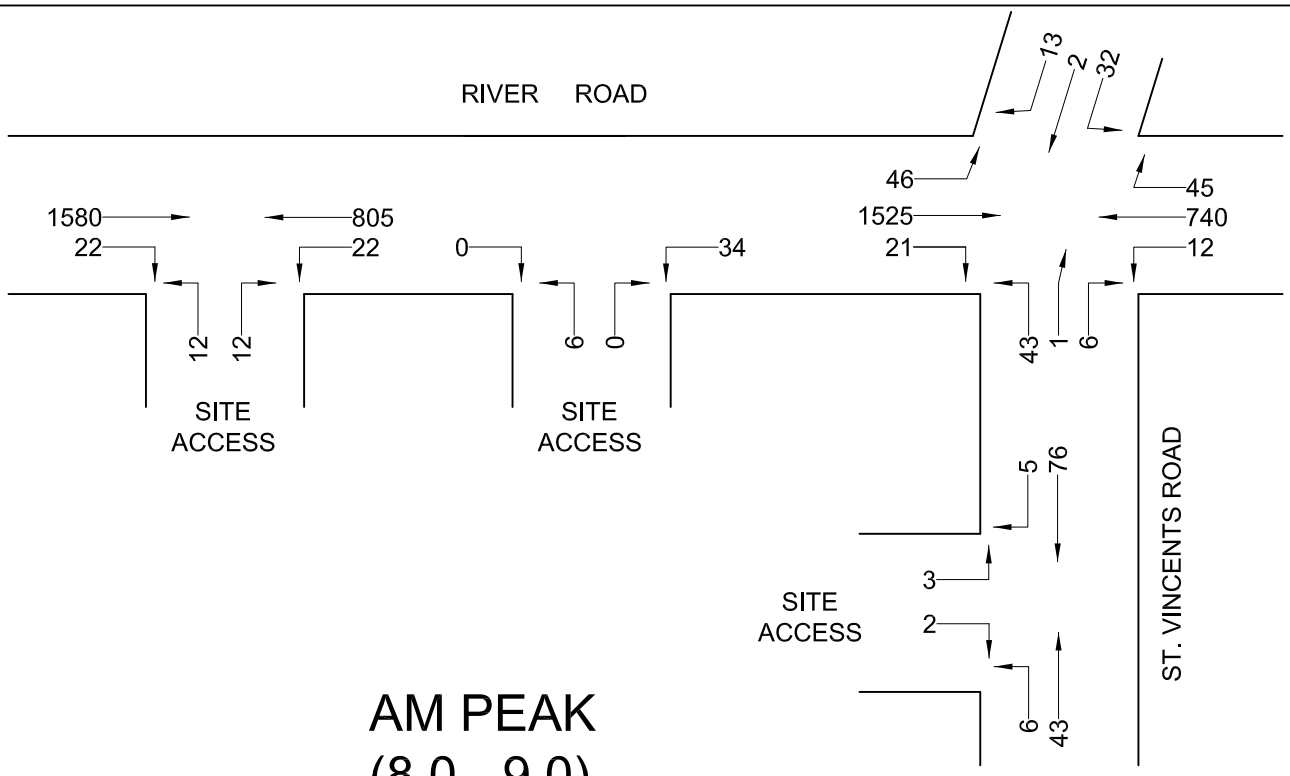
The existing distribution of movements is as follows:

	IN	OUT
AM	75%	25%
PM	25%	75%

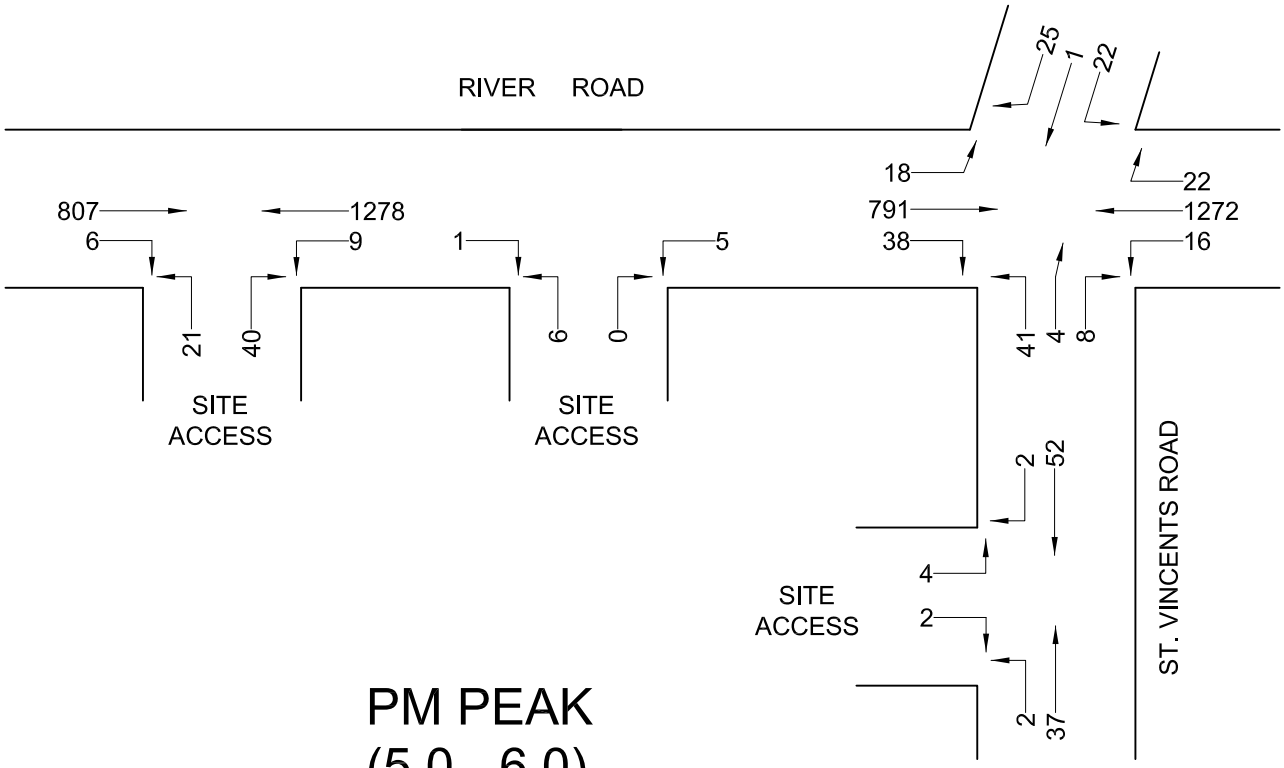
The projected future AM and PM network peak traffic volumes are as shown on Figure 6 and it is apparent that the movements between the western access road and the southern access road will be very minor with the very great majority of movements on the western access road being to/from the basement car park and access at the River Road traffic signals.

The movements to/from St Vincents Road at the River Road intersection will reduce significantly and therefore, this intersection will operate better than it does at the present time. The operational performance of the River Road/Access Road has been assessed with SIDRA and the results of that assessment are provided in Appendix F and summarised in the following indicating that a satisfactory level of service will be maintained:

AM		**PM**	
LOS	AVD	LOS	AVD
A	5.8	A	12.9

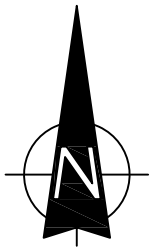


AM PEAK
(8.0 - 9.0)



PM PEAK
(5.0 - 6.0)

LEGEND



FUTURE NETWORK PEAK TRAFFIC FLOWS

FIG 6

6.0 Access, Internal Circulation and Servicing

Access

The vehicle access arrangements will remain generally as existing as follows:

- the western traffic signal controlled connection to River Road
- the eastern driveway connection to River Road which will be upgraded with formal prohibition of right turn movements (emergency vehicles expected)
- the access driveway on St Vincents Road

Internal Circulation

The existing at-grade circulation roadway connecting between River Road and St Vincents Road will be up-graded with removal of the great majority of the at-grade parking. Similarly, the eastern access road connection will also be upgraded providing access to the porte cochere.

The design of the car park areas will comply with the requirements of AS 2890.1 & 6 while the design of the circulation roadway will provide for all vehicles requiring to access the site.

Servicing

A generous segregated loading dock area will be provided at the rear of the Hospital building and this will accommodate all delivery and service vehicles associated with the development apart from the “gas” delivery vehicle which will occur in the area adjacent to the porte cochere.

Details of the turning path assessment for service vehicles are provided in Appendix H.

7.0 Preliminary Construction Traffic Management Plan

The Preliminary Construction Traffic Management Plan is provided in Appendix I.

8.0 Green Travel Plan

The Green Travel Plan for the proposed development is provided in Appendix J.

9.0 Conclusion

This report documents the assessment of the potential traffic, transport and parking implications of the proposed redevelopment of the Greenwich Hospital site for an integrated Hospital and Seniors Living facility. The assessment has concluded that:

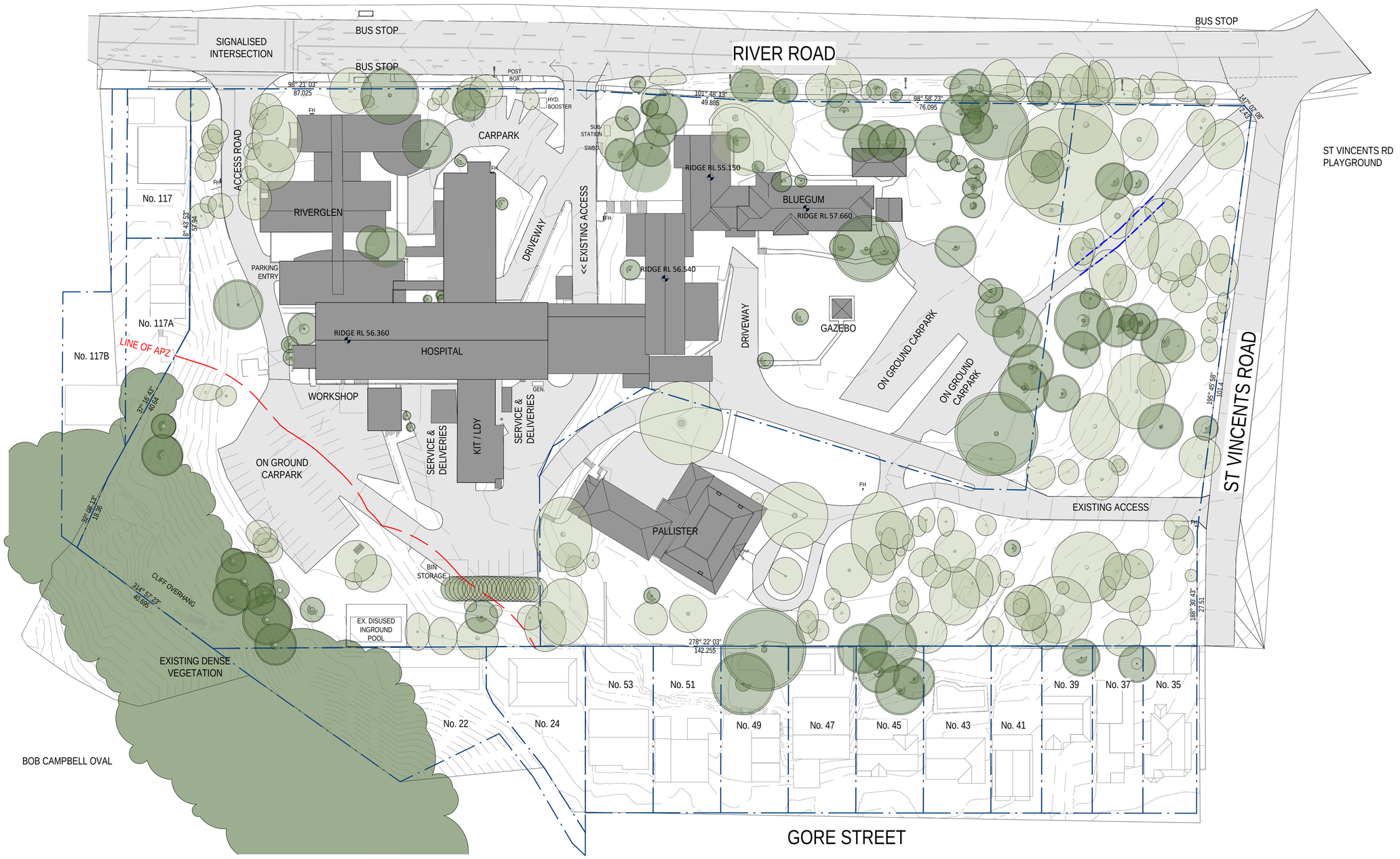
- there will not be any adverse traffic implications
- the proposed parking provision with adequate and appropriate
- the proposed vehicle access, internal circulation and servicing arrangements will be suitable and compliant with the design standards and the needs of the vehicles which will access the site.

Appendix A

Responses from TfNSW and Council

Appendix B

Plan of Existing



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P4	2021.06.16	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH
P1	2021.03.11	ISSUE TO CONSULTANTS	NAH

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P4
DATE: 01/06/21
DRAWING TITLE: EXISTING SITE PLAN

DRAWING No: SW-AR-0100

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

16/06/2021 9:17:43 AM

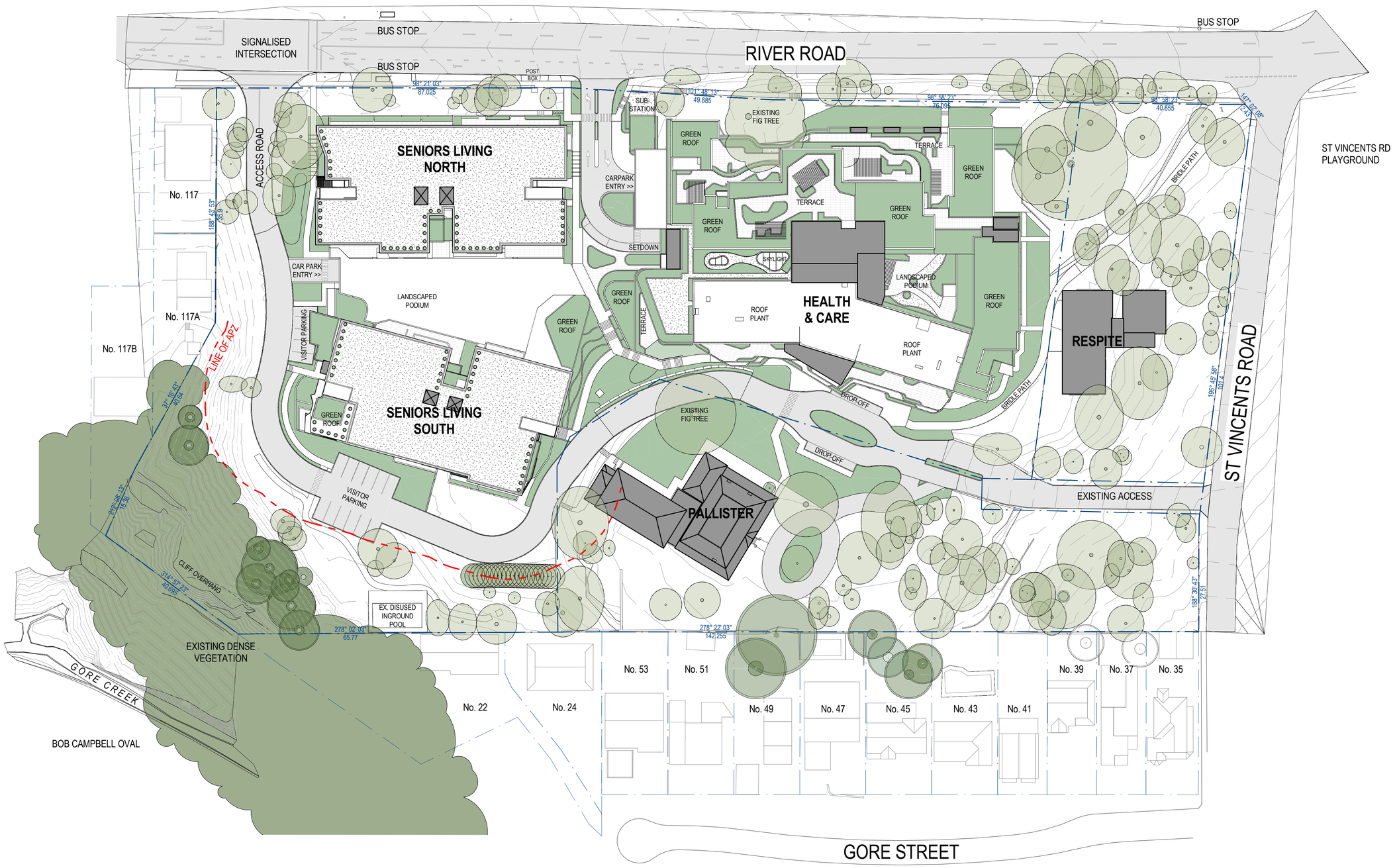
C:\Users\nathanh\Documents\SW-AR-GREENWICH_nathanh@bmarch.com.au.rvt

PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

Appendix C

Development Plans



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P19	2022.05.06	EIS LODGEMENT ISSUE	NAH
P18	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P17	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P16	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P15	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

APPROVAL ISSUE
NOT FOR CONSTRUCTION

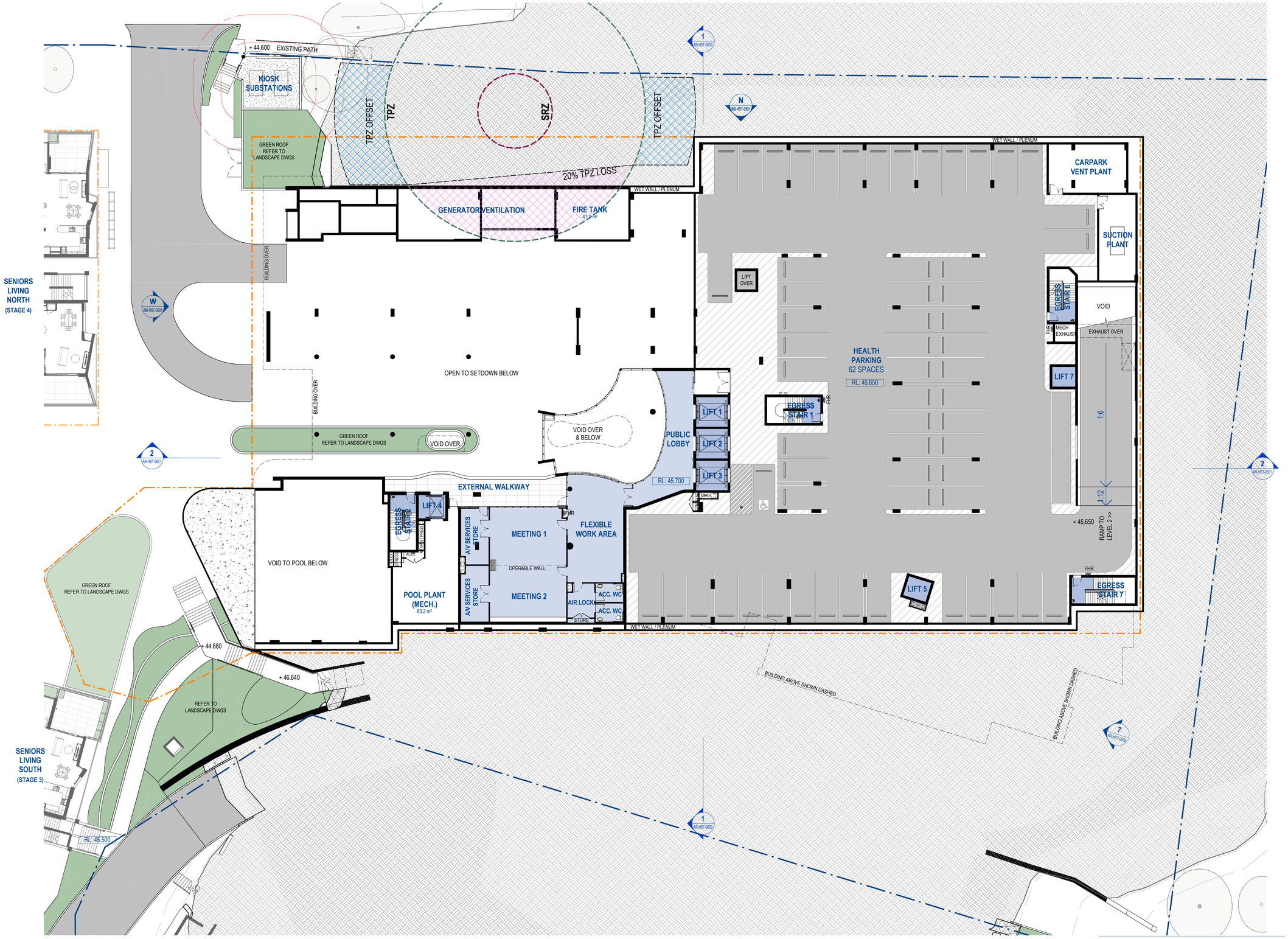
REVISION: P19
DATE: 01/06/21
DRAWING No: **DD-SW-0101**
DRAWING TITLE: PROPOSED SITE PLAN

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:08:10 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 4m 8m 12m 16m 20m

1 : 200 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P5	2022.08.04	ISSUE TO CONSULTANTS	CL
P4	2022.07.22	ISSUE TO CONSULTANTS	HV
P3	2022.07.08	ISSUE TO CONSULTANTS	AMac
P2	2022.06.24	ISSUE TO CONSULTANTS	AMac
P1	2022.06.13	ISSUE TO CONSULTANTS	AMac

NORTH

LEGEND - PLAN

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
ROOM NAME 000	Room Name Room Number		Planning Envelope Property Boundary
000 SIM (200-HST-0000)	Detail Number of Section / Elevation Sheet Number of Section / Elevation		

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P5
DATE: 11/05/21
DRAWING TITLE: H&C - OVERALL PLAN - L3

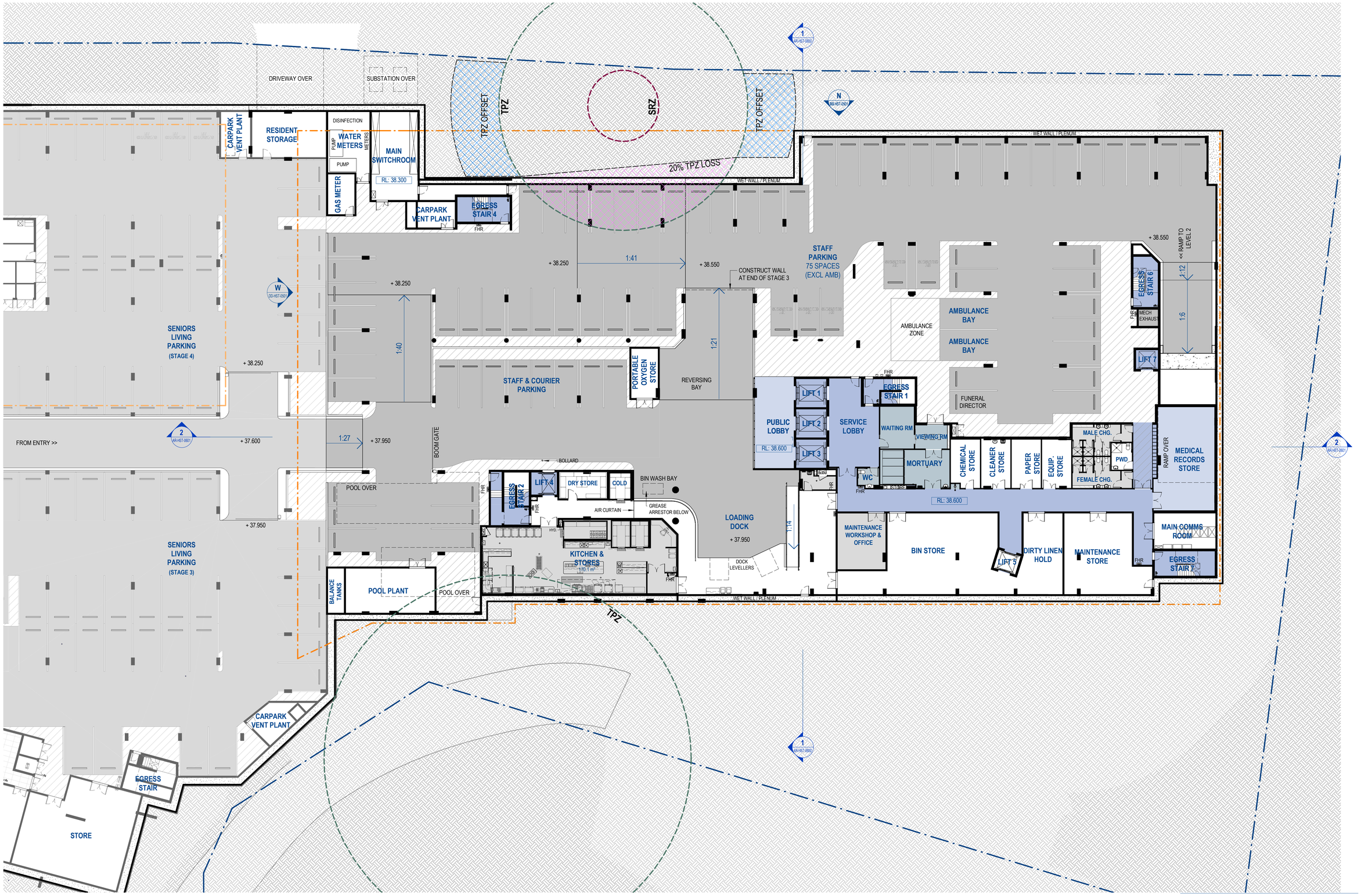
DRAWING No: **AR-HST-0102**

DRAWN: NAH CHECKED: SCALE: 1 : 200 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

C:_Revit Projects\HST-AR-GREENWICH_coccolKTLMR.rvt

4/08/2022 4:52:48 PM



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 4m 8m 12m 16m 20m

1 : 200 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:_Revit Projects\HST-AR-GREENWICH_cocolKTLMR.rvt

REV	DATE	DETAILS	INITIALS
P5	2022.08.04	ISSUE TO CONSULTANTS	CL
P4	2022.07.22	ISSUE TO CONSULTANTS	HV
P3	2022.07.08	ISSUE TO CONSULTANTS	AMac
P2	2022.06.24	ISSUE TO CONSULTANTS	AMac
P1	2022.06.13	ISSUE TO CONSULTANTS	AMac

NORTH

LEGEND - PLAN

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
ROOM NAME 000	Room Name Room Number		Planning Envelope Property Boundary
000 SIM (00-HST-0000)	Detail Number of Section / Elevation Sheet Number of Section / Elevation		

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

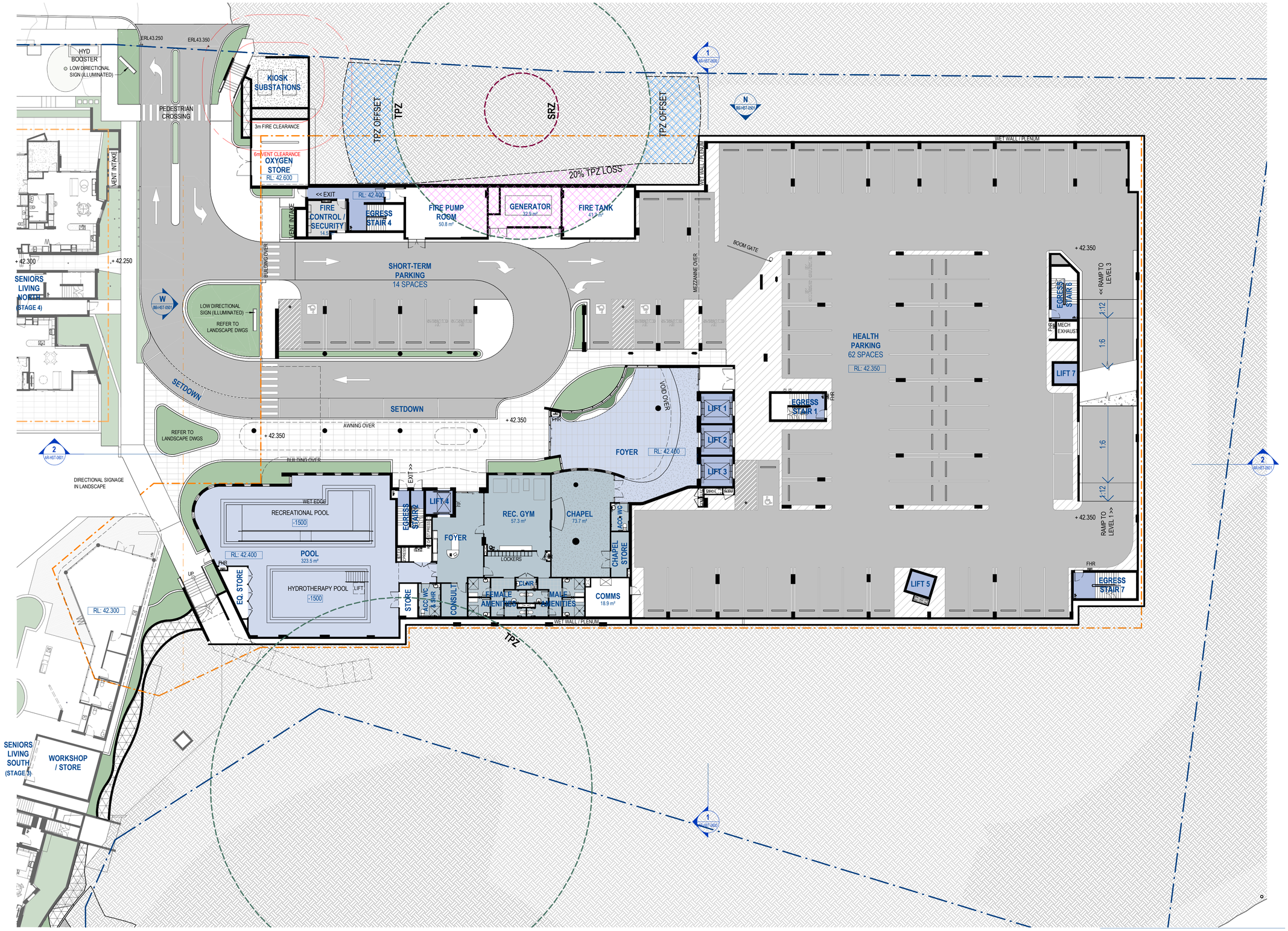
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P5
DATE:
DRAWING TITLE: H&C - OVERALL PLAN - L1
DRAWING No: **AR-HST-0100**

DRAWN: NAH CHECKED: SCALE: 1 : 200 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

4/08/2022 4:52:09 PM



PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

0m 4m 8m 12m 16m 20m

1 : 200 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:_Revit Projects\HST-AR-GREENWICH_coco\KTLMR.rvt

REV	DATE	DETAILS	INITIALS
P5	2022.08.04	ISSUE TO CONSULTANTS	CL
P4	2022.07.22	ISSUE TO CONSULTANTS	HV
P3	2022.07.08	ISSUE TO CONSULTANTS	AMac
P2	2022.06.24	ISSUE TO CONSULTANTS	AMac
P1	2022.06.13	ISSUE TO CONSULTANTS	AMac

NORTH

LEGEND - PLAN

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
ROOM NAME 000	Room Name Room Number		Planning Envelope Property Boundary
000 SIM (D0-HST-0000)	Detail Number of Section / Elevation Sheet Number of Section / Elevation		

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P5

DATE:

DRAWING TITLE: H&C - OVERALL PLAN - L2

DRAWING No: AR-HST-0101

DRAWN: NAH CHECKED: SCALE: 1 : 200 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

4/08/2022 4:52:29 PM

APPROVAL ISSUE

NOT FOR CONSTRUCTION

0m 4m 8m 12m 16m 20m

1 : 200 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P15	2022.08.18	EIS LODGEMENT ISSUE WITH APT AMENDMENTS	CL
P14	2022.05.27	ISSUE TO CONSULTANTS	AA
P13	2022.05.23	FINAL EIS LODGEMENT ISSUE	AA
P12	2022.05.06	EIS LODGEMENT ISSUE	NAH
P11	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH

NORTH

C:_Revit Projects\SLN-AR-GREENWICH_cocolKTLMR.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605

GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P15

DATE: 09/01/21

DRAWING TITLE: SL - OVERALL PLAN - L1

DRAWING No: DD-SL-0100

DRAWN: NAH CHECKED: SCALE: 1 : 200 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

18/08/2022 1:16:42 PM

Appendix D

Traffic Survey Results

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Friday 18th May 07

All Vehicles

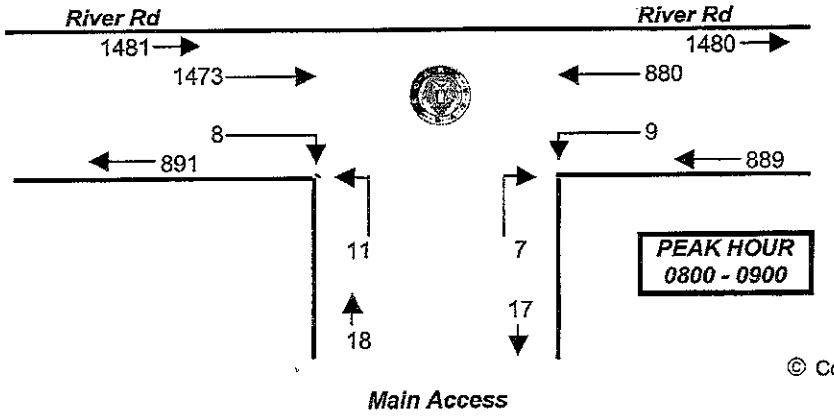
	WEST		SOUTH		EAST			East
	River Rd		*Main Access*		*River Rd*			Peds
Time Per	R	T	L	R	T	L	TOTAL	
0700 - 0715	0	264	0	2	137	1	**404**	4
0715 - 0730	2	286	0	5	166	3	**462**	5
0730 - 0745	3	312	1	3	148	4	**471**	8
0745 - 0800	2	337	2	4	183	3	**531**	12
0800 - 0815	3	346	4	1	221	2	**577**	9
0815 - 0830	1	372	2	3	210	3	**591**	16
0830 - 0845	2	361	3	1	231	2	**600**	11
0845 - 0900	2	394	2	2	218	2	**620**	13
Period End	**15**	**2672**	**14**	**21**	**1514**	**20**	**4256**	**78**

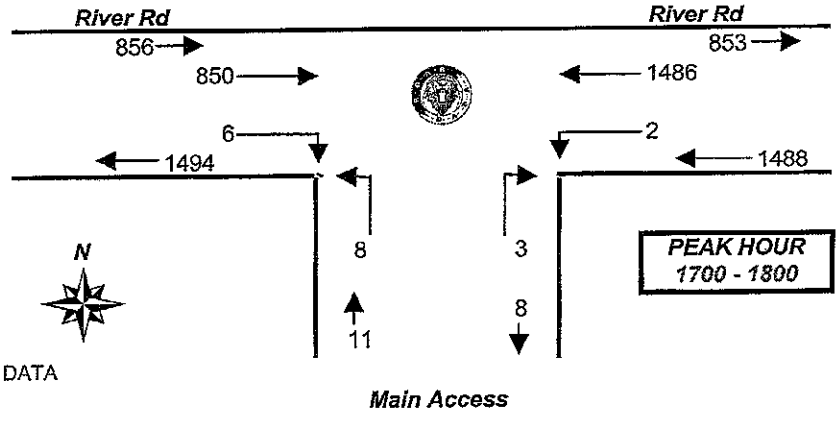
All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Main Access*		*River Rd*		
Time Per	R	T	L	R	T	L	TOTAL
1500 - 1515	2	156	1	2	283	1	**445**
1515 - 1530	1	131	3	3	272	1	**411**
1530 - 1545	0	144	8	5	331	0	**488**
1545 - 1600	3	171	2	6	248	2	**432**
1600 - 1615	0	123	2	1	286	0	**412**
1615 - 1630	0	173	3	3	316	1	**496**
1630 - 1645	1	165	4	4	318	0	**492**
1645 - 1700	0	200	3	2	319	1	**525**
1700 - 1715	1	200	2	1	344	0	**548**
1715 - 1730	2	213	0	0	395	0	**610**
1730 - 1745	1	222	2	1	352	0	**578**
1745 - 1800	2	215	4	1	395	2	**619**
Period End	**13**	**2113**	**34**	**29**	**3859**	**8**	**6056**

	WEST		SOUTH		EAST			East
	River Rd		*Main Access*		*River Rd*			Peds
Peak Per	R	T	L	R	T	L	TOTAL	
0700 - 0800	7	1199	3	14	634	11	**1868**	29
0715 - 0815	10	1281	7	13	718	12	**2041**	34
0730 - 0830	9	1367	9	11	762	12	**2170**	45
0745 - 0845	8	1416	11	9	845	10	**2299**	48
0800 - 0900	8	1473	11	7	880	9	**2388**	49
PEAK HR	**8**	**1473**	**11**	**7**	**880**	**9**	**2388**	**49**

	WEST		SOUTH		EAST		
	River Rd		*Main Access*		*River Rd*		
Peak Per	R	T	L	R	T	L	TOTAL
1500 - 1600	6	602	14	16	1134	4	**1776**
1515 - 1615	4	569	15	15	1137	3	**1743**
1530 - 1630	3	611	15	15	1181	3	**1828**
1545 - 1645	4	632	11	14	1168	3	**1832**
1600 - 1700	1	661	12	10	1239	2	**1925**
1615 - 1715	2	738	12	10	1297	2	**2061**
1630 - 1730	4	778	9	7	1376	1	**2175**
1645 - 1745	4	835	7	4	1410	1	**2261**
1700 - 1800	6	850	8	3	1486	2	**2355**
PEAK HR	**6**	**850**	**8**	**3**	**1486**	**2**	**2355**





© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

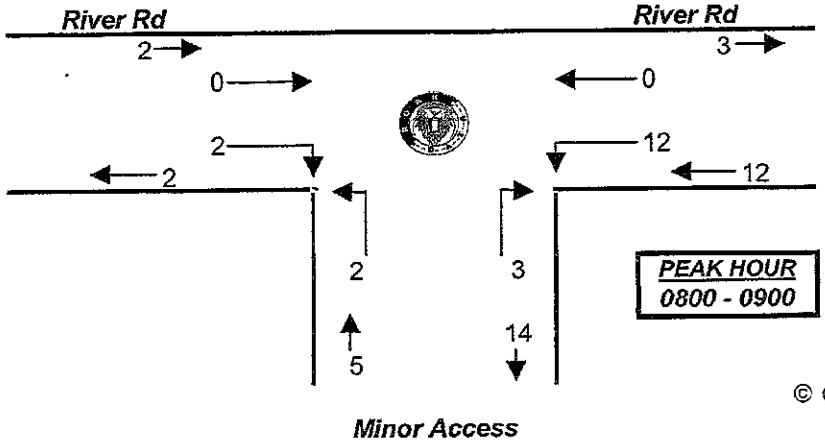
Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Friday 18th May 07

All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Minor Access*		*River Rd*		
Time Per	T	R	L	R	L	T	**TOTAL**
0700 - 0715		0	0	1	3		4
0715 - 0730		0	1	0	1		2
0730 - 0745		1	0	0	2		3
0745 - 0800		0	0	0	2		2
0800 - 0815		0	0	1	5		6
0815 - 0830		1	1	1	1		4
0830 - 0845		1	1	0	5		7
0845 - 0900		0	0	1	1		2
Period End	0	3	3	4	20	0	30

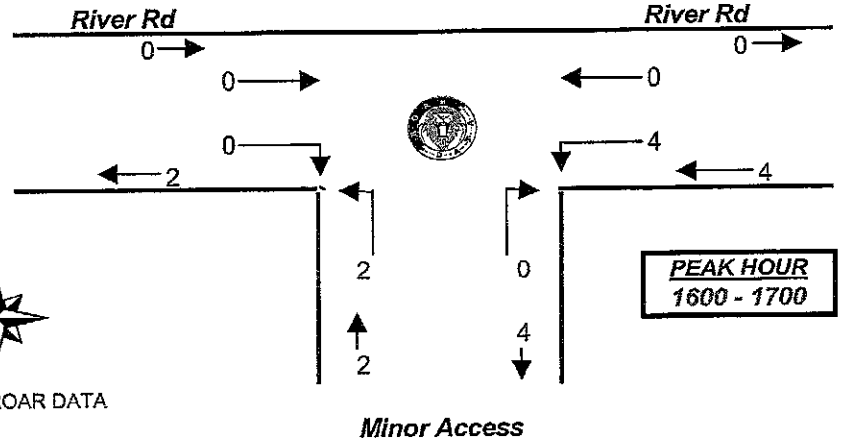
	WEST		SOUTH		EAST		
	River Rd		*Minor*		*River Rd*		
Peak Per	T	R	L	R	L	T	**TOTAL**
0700 - 0800	0	1	1	1	8	0	11
0715 - 0815	0	1	1	1	10	0	13
0730 - 0830	0	2	1	2	10	0	15
0745 - 0845	0	2	2	2	13	0	19
0800 - 0900	0	2	2	3	12	0	19
PEAK HR	0	2	2	3	12	0	19



All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Minor Access*		*River Rd*		
Time Per	T	R	L	R	L	T	**TOTAL**
1600 - 1615		0	2	0	2		4
1615 - 1630		0	0	0	1		1
1630 - 1645		0	0	0	0		0
1645 - 1700		0	0	0	1		1
1700 - 1715		0	0	1	1		2
1715 - 1730		0	0	0	1		1
1730 - 1745		0	0	0	0		0
1745 - 1800		0	0	0	1		1
Period End	0	0	2	1	7	0	10

	WEST		SOUTH		EAST		
	River Rd		*Minor*		*River Rd*		
Peak Per	T	R	L	R	L	T	**TOTAL**
1600 - 1700	0	0	2	0	4	0	6
1615 - 1715	0	0	0	1	3	0	4
1630 - 1730	0	0	0	1	3	0	4
1645 - 1745	0	0	0	1	3	0	4
1700 - 1800	0	0	0	1	3	0	4
PEAK HR	0	0	2	0	4	0	6



N

© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

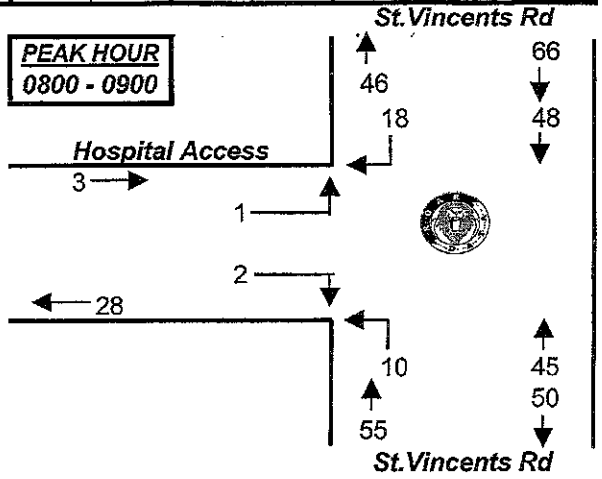
Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Friday 18th May 07

All Vehicles

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715	7	2	1	0	1	3	14
0715 - 0730	11	3	1	1	1	5	22
0730 - 0745	11	3	2	1	3	11	31
0745 - 0800	10	2	2	0	1	10	25
0800 - 0815	15	2	0	1	5	8	31
0815 - 0830	9	6	0	0	2	14	31
0830 - 0845	12	8	0	1	1	11	33
0845 - 0900	12	2	1	0	2	12	29
Period End	**87**	**28**	**7**	**4**	**16**	**74**	**216**

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	39	10	6	2	6	29	92
0715 - 0815	47	10	5	3	10	34	109
0730 - 0830	45	13	4	2	11	43	118
0745 - 0845	46	18	2	2	9	43	120
0800 - 0900	48	18	1	2	10	45	124

PEAK HR	**48**	**18**	**1**	**2**	**10**	**45**	**124**

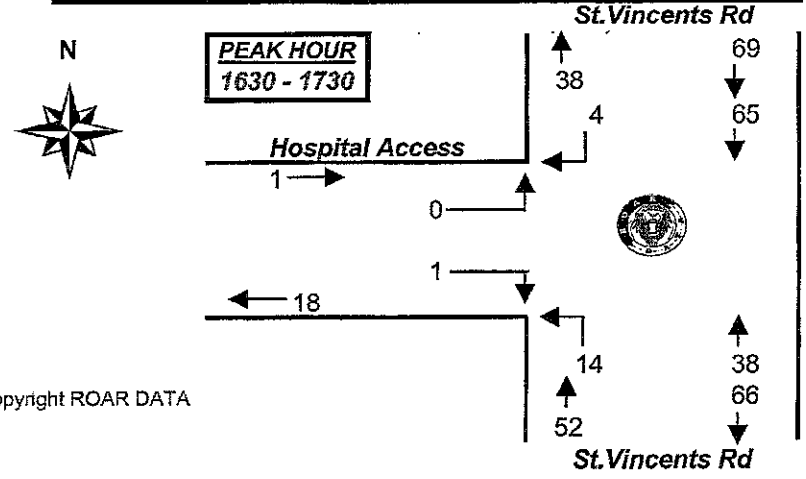


All Vehicles

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615	14	1	0	0	5	8	28
1615 - 1630	14	1	1	0	2	8	26
1630 - 1645	15	1	0	0	3	13	32
1645 - 1700	13	1	0	0	1	12	27
1700 - 1715	17	1	0	1	6	9	34
1715 - 1730	20	1	0	0	4	4	29
1730 - 1745	16	0	0	0	3	7	26
1745 - 1800	14	0	0	0	1	6	21
Period End	**123**	**6**	**1**	**1**	**25**	**67**	**223**

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	56	4	1	0	11	41	113
1615 - 1715	59	4	1	1	12	42	119
1630 - 1730	65	4	0	1	14	38	122
1645 - 1745	66	3	0	1	14	32	116
1700 - 1800	67	2	0	1	14	26	110

PEAK HR	**65**	**4**	**0**	**1**	**14**	**38**	**122**



© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1848 GREENWICH Hospital 2
Day/Date :Monday 25th June 07

All Vehicles

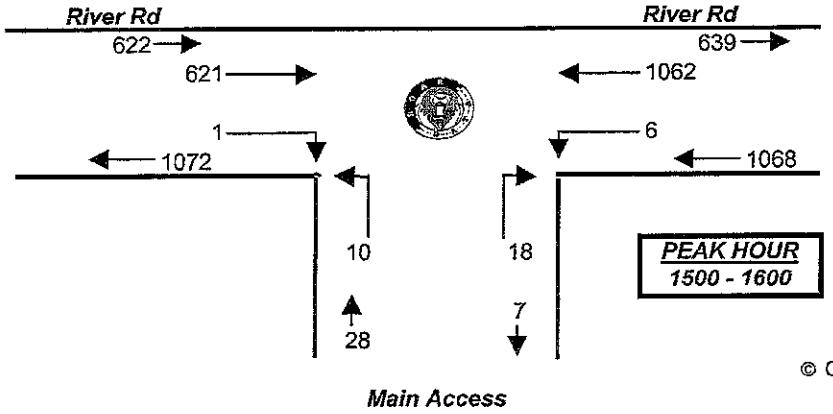
	WEST		SOUTH		EAST		
	River Rd		*Main Access*		*River Rd*		
Time Per	R	T	L	R	T	L	TOTAL
1330 - 1345	1	115	2	1	142	3	**264**
1345 - 1400	1	111	1	4	144	1	**262**
1400 - 1415	1	123	1	4	212	4	**345**
1415 - 1430	1	122	5	2	197	1	**328**
1430 - 1445	1	137	0	1	203	3	**345**
1445 - 1500	2	146	1	4	232	2	**387**
1500 - 1515	1	165	3	3	266	1	**439**
1515 - 1530	0	153	3	5	263	0	**424**
1530 - 1545	0	143	2	8	275	1	**429**
1545 - 1600	0	160	2	2	258	4	**426**
Period End	**8**	**1375**	**20**	**34**	**2192**	**20**	**3649**

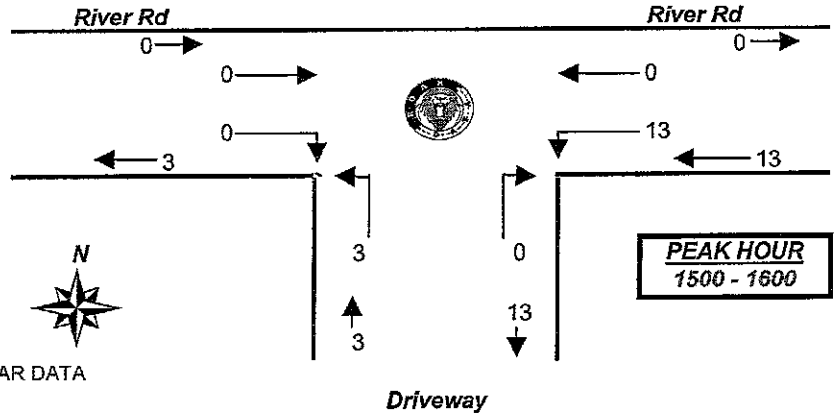
All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Driveway*		*River Rd*		
Time Per	R	T	L	R	T	L	TOTAL
1330 - 1345	0		0	0		1	**1**
1345 - 1400	0		0	1		1	**2**
1400 - 1415	0		0	1		1	**2**
1415 - 1430	1		2	1		3	**7**
1430 - 1445	0		0	0		0	**0**
1445 - 1500	0		0	0		1	**1**
1500 - 1515	0		0	0		2	**2**
1515 - 1530	0		0	0		7	**7**
1530 - 1545	0		1	0		2	**3**
1545 - 1600	0		2	0		2	**4**
Period End	**1**	**0**	**5**	**3**	**0**	**20**	**29**

	WEST		SOUTH		EAST		
	River Rd		*Main Access*		*River Rd*		
Peak Per	R	T	L	R	T	L	TOTAL
1330 - 1430	4	471	9	11	695	9	**1199**
1345 - 1445	4	493	7	11	756	9	**1280**
1400 - 1500	5	528	7	11	844	10	**1405**
1415 - 1515	5	570	9	10	898	7	**1499**
1430 - 1530	4	601	7	13	964	6	**1595**
1445 - 1545	3	607	9	20	1036	4	**1679**
1500 - 1600	1	621	10	18	1062	6	**1718**
PEAK HR	**1**	**621**	**10**	**18**	**1062**	**6**	**1718**

	WEST		SOUTH		EAST		
	River Rd		*Driveway*		*River Rd*		
Peak Per	R	T	L	R	T	L	TOTAL
1330 - 1430	1	0	2	3	0	6	**12**
1345 - 1445	1	0	2	3	0	5	**11**
1400 - 1500	1	0	2	2	0	5	**10**
1415 - 1515	1	0	2	1	0	6	**10**
1430 - 1530	0	0	0	0	0	10	**10**
1445 - 1545	0	0	1	0	0	12	**13**
1500 - 1600	0	0	3	0	0	13	**16**
PEAK HR	**0**	**0**	**3**	**0**	**0**	**13**	**16**





© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

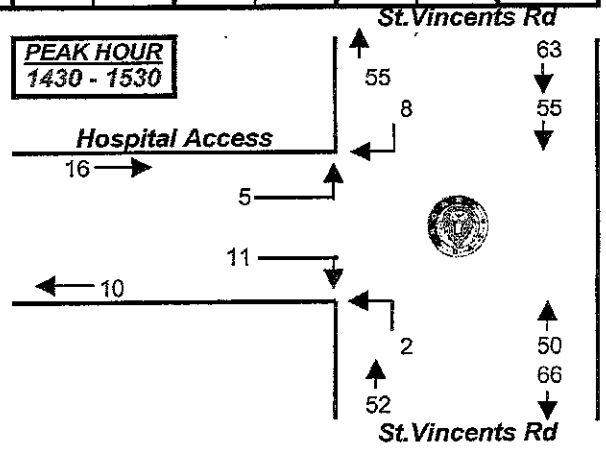
Client :T.T.P.A.
Job No/Name :1848 GREENWICH Hospital 2
Day/Date :Monday 25th June 07

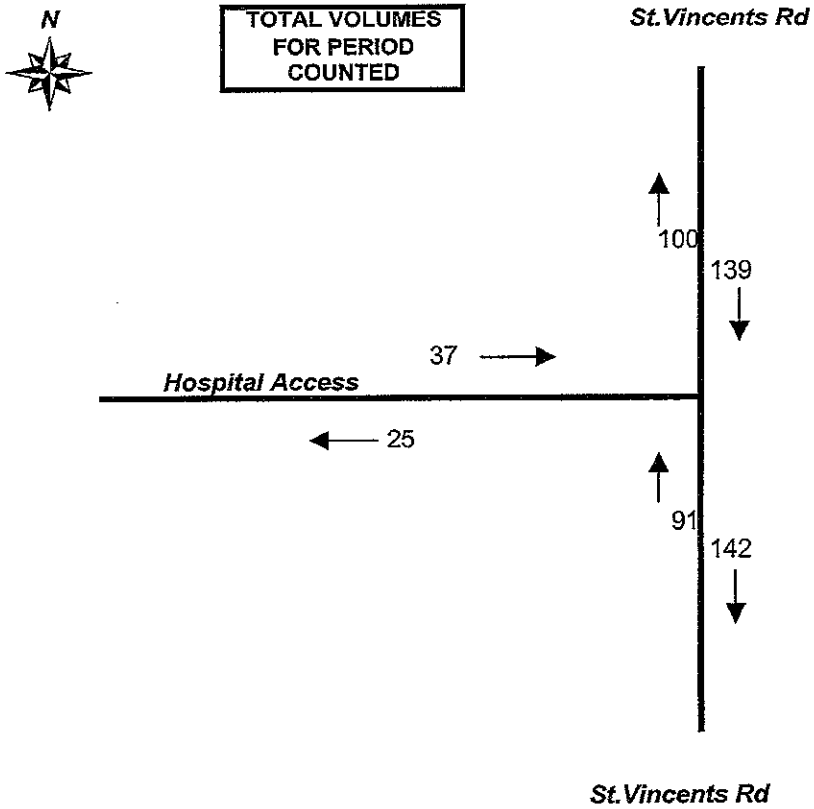
All Vehicles

	NORTH		WEST		SOUTH		
	St.Vincents Rd		*Hospital*		*St.Vincents Rd*		
Time Per	R	T	L	R	L	T	TOTAL
1330 - 1345	2	9	2	2	0	3	18
1345 - 1400	1	7	0	1	1	3	13
1400 - 1415	3	14	1	1	1	13	33
1415 - 1430	2	11	2	3	1	5	24
1430 - 1445	2	14	0	4	1	14	35
1445 - 1500	2	12	2	3	0	14	33
1500 - 1515	3	15	3	2	0	15	38
1515 - 1530	1	14	0	2	1	7	25
1530 - 1545	1	8	2	2	1	8	22
1545 - 1600	2	16	3	2	0	3	26
Period End	**19**	**120**	**15**	**22**	**6**	**85**	**267**

	NORTH		WEST		SOUTH		
	St.Vincents Rd		*Hospital*		*St.Vincents Rd*		
Peak Per	R	T	L	R	L	T	TOTAL
1330 - 1430	8	41	5	7	3	24	88
1345 - 1445	8	46	3	9	4	35	105
1400 - 1500	9	51	5	11	3	46	125
1415 - 1515	9	52	7	12	2	48	130
1430 - 1530	8	55	5	11	2	50	131
1445 - 1545	7	49	7	9	2	44	118
1500 - 1600	7	53	8	8	2	33	111

PEAK HR	**8**	**55**	**5**	**11**	**2**	**50**	**131**





© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : BarkerRyanStewart
Job No/Name : 6595 GREENWICH HOSPITAL Counts
Day/Date : Thursday 12th October 2017

All Vehicles

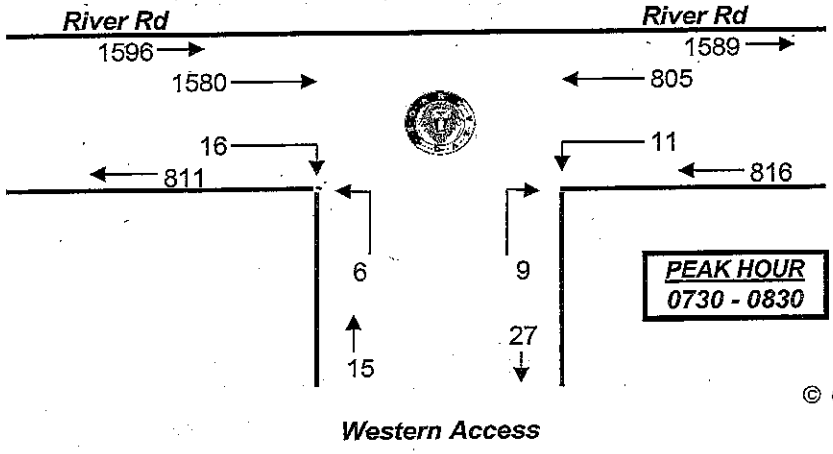
	WEST		SOUTH		EAST		
	River Rd		*Western*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715	282	4	0	0	3	122	**411**
0715 - 0730	395	4	1	3	1	183	**587**
0730 - 0745	378	4	1	3	4	165	**555**
0745 - 0800	380	5	1	2	2	187	**577**
0800 - 0815	428	5	2	3	2	214	**654**
0815 - 0830	394	2	2	1	3	239	**641**
0830 - 0845	329	3	0	1	1	161	**495**
0845 - 0900	384	2	1	0	3	198	**588**
Period End	**2970**	**29**	**8**	**13**	**19**	**1469**	**4508**

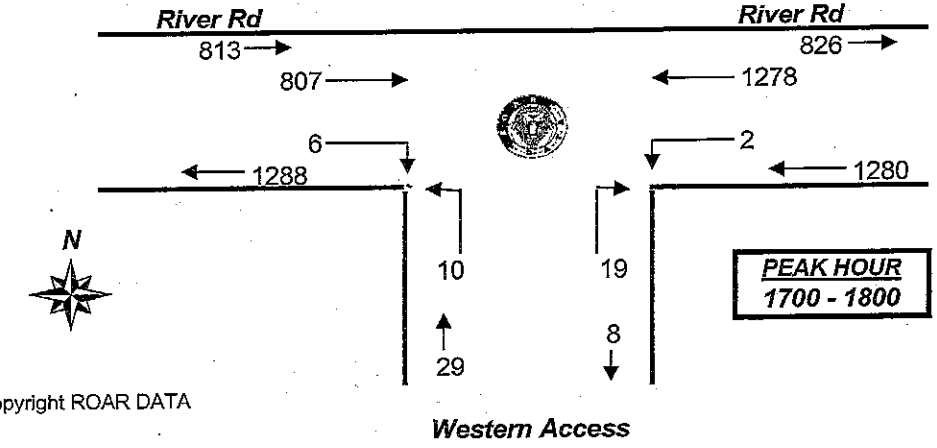
	WEST		SOUTH		EAST		
	River Rd		*Western*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	1435	17	3	8	10	657	**2130**
0715 - 0815	1581	18	5	11	9	749	**2373**
0730 - 0830	1580	16	6	9	11	805	**2427**
0745 - 0845	1531	15	5	7	8	801	**2367**
0800 - 0900	1535	12	5	5	9	812	**2378**
PEAK HR	**1580**	**16**	**6**	**9**	**11**	**805**	**2427**

All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Western*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615	173	1	8	9	1	308	**500**
1615 - 1630	176	2	11	10	2	257	**458**
1630 - 1645	168	2	9	7	1	321	**508**
1645 - 1700	161	1	5	2	1	319	**489**
1700 - 1715	191	2	3	7	1	331	**535**
1715 - 1730	179	3	4	7	0	285	**478**
1730 - 1745	228	0	1	2	0	379	**610**
1745 - 1800	209	1	2	3	1	283	**499**
Period End	**1485**	**12**	**43**	**47**	**7**	**2483**	**4077**

	WEST		SOUTH		EAST		
	River Rd		*Western*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	678	6	33	28	5	1205	**1955**
1615 - 1715	696	7	28	26	5	1228	**1990**
1630 - 1730	699	8	21	23	3	1256	**2010**
1645 - 1745	759	6	13	18	2	1314	**2112**
1700 - 1800	807	6	10	19	2	1278	**2122**
PEAK HR	**807**	**6**	**10**	**19**	**2**	**1278**	**2122**





N

© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : BarkerRyanStewart
Job No/Name : 6595 GREENWICH HOSPITAL Counts
Day/Date : Thursday 12th October 2017

All Vehicles

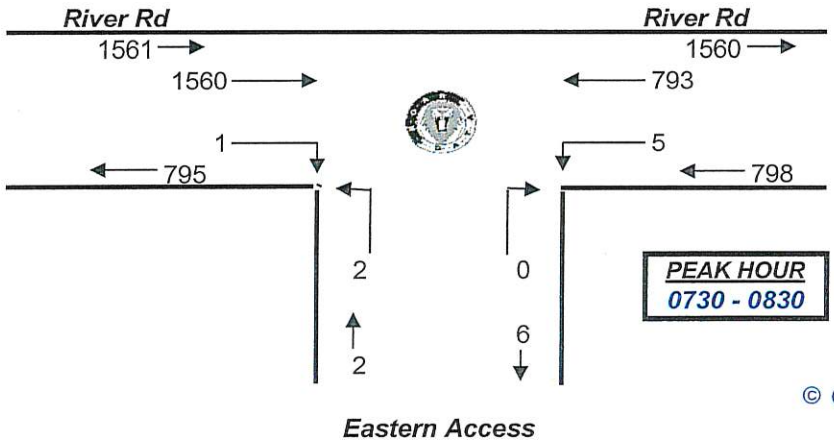
	WEST		SOUTH		EAST		
	River Rd		*Eastern*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715	281	1	0	1	3	121	**407**
0715 - 0730	397	1	0	0	3	179	**580**
0730 - 0745	376	0	1	0	1	161	**539**
0745 - 0800	375	1	1	0	2	184	**563**
0800 - 0815	429	0	0	0	1	211	**641**
0815 - 0830	380	0	0	0	1	237	**618**
0830 - 0845	321	0	0	0	2	156	**479**
0845 - 0900	375	0	0	0	1	185	**561**
Period End	**2934**	**3**	**2**	**1**	**14**	**1434**	**4388**

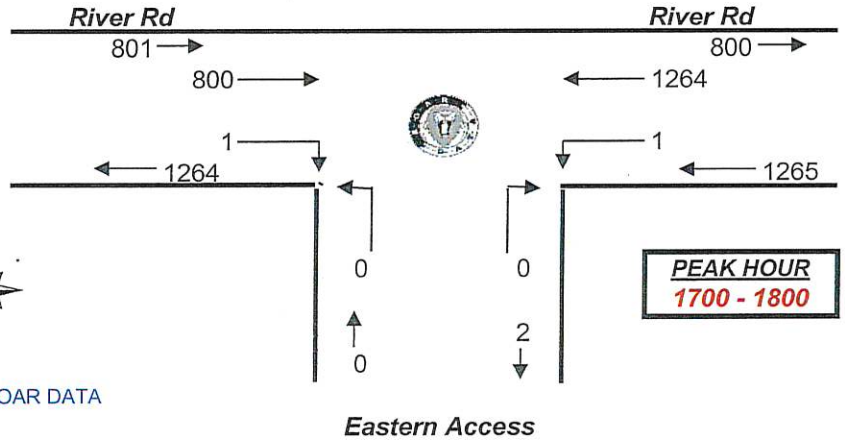
	WEST		SOUTH		EAST		
	River Rd		*Eastern*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	1429	3	2	1	9	645	**2089**
0715 - 0815	1577	2	2	0	7	735	**2323**
0730 - 0830	1560	1	2	0	5	793	**2361**
0745 - 0845	1505	1	1	0	6	788	**2301**
0800 - 0900	1505	0	0	0	5	789	**2299**
PEAK HR	**1560**	**1**	**2**	**0**	**5**	**793**	**2361**

All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Eastern*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615	169	0	0	0	3	307	**479**
1615 - 1630	172	0	0	0	0	253	**425**
1630 - 1645	166	0	0	0	0	317	**483**
1645 - 1700	159	0	0	0	1	315	**475**
1700 - 1715	188	0	0	0	1	326	**515**
1715 - 1730	176	0	0	0	0	282	**458**
1730 - 1745	226	1	0	0	0	376	**603**
1745 - 1800	210	0	0	0	0	280	**490**
Period End	**1466**	**1**	**0**	**0**	**5**	**2456**	**3928**

	WEST		SOUTH		EAST		
	River Rd		*Eastern*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	666	0	0	0	4	1192	**1862**
1615 - 1715	685	0	0	0	2	1211	**1898**
1630 - 1730	689	0	0	0	2	1240	**1931**
1645 - 1745	749	1	0	0	2	1299	**2051**
1700 - 1800	800	1	0	0	1	1264	**2066**
PEAK HR	**800**	**1**	**0**	**0**	**1**	**1264**	**2066**





© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

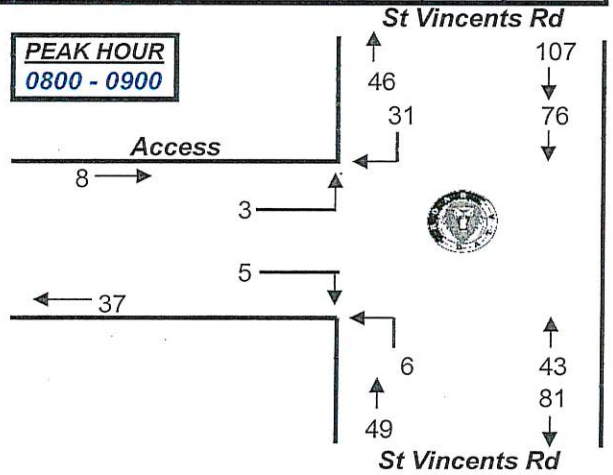
Client : BarkerRyanStewart
Job No/Name : 6595 GREENWICH HOSPITAL Counts
Day/Date : Thursday 12th October 2017

All Vehicles

	NORTH		WEST		SOUTH		
	St Vincents		*Access*		*St Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715	20	2	0	0	0	8	**30**
0715 - 0730	18	6	0	0	1	7	**32**
0730 - 0745	17	3	0	0	3	5	**28**
0745 - 0800	16	7	0	0	0	8	**31**
0800 - 0815	26	13	0	1	1	6	**47**
0815 - 0830	15	5	1	1	2	16	**40**
0830 - 0845	14	10	1	0	1	8	**34**
0845 - 0900	21	3	1	3	2	13	**43**
Period End	**147**	**49**	**3**	**5**	**10**	**71**	**285**

	NORTH		WEST		SOUTH		
	St Vincents		*Access*		*St Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	71	18	0	0	4	28	**121**
0715 - 0815	77	29	0	1	5	26	**138**
0730 - 0830	74	28	1	2	6	35	**146**
0745 - 0845	71	35	2	2	4	38	**152**
0800 - 0900	76	31	3	5	6	43	**164**

PEAK HR	**76**	**31**	**3**	**5**	**6**	**43**	**164**

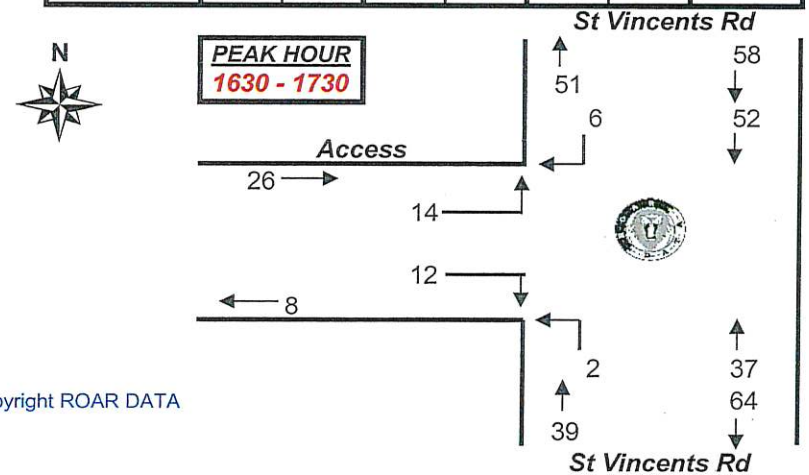


All Vehicles

	NORTH		WEST		SOUTH		
	St Vincents		*Access*		*St Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615	8	1	4	0	0	6	**19**
1615 - 1630	18	2	3	2	0	10	**35**
1630 - 1645	10	2	7	3	1	5	**28**
1645 - 1700	11	2	2	0	0	11	**26**
1700 - 1715	15	2	5	6	0	6	**34**
1715 - 1730	16	0	0	3	1	15	**35**
1730 - 1745	12	0	0	0	0	13	**25**
1745 - 1800	13	1	0	0	0	8	**22**
Period End	**103**	**10**	**21**	**14**	**2**	**74**	**224**

	NORTH		WEST		SOUTH		
	St Vincents		*Access*		*St Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	47	7	16	5	1	32	**108**
1615 - 1715	54	8	17	11	1	32	**123**
1630 - 1730	52	6	14	12	2	37	**123**
1645 - 1745	54	4	7	9	1	45	**120**
1700 - 1800	56	3	5	9	1	42	**116**

PEAK HR	**52**	**6**	**14**	**12**	**2**	**37**	**123**



© Copyright ROAR DATA

Site	Date	Interval start	Interval end	Detector 1	Detector 2	Detector 3	Detector 4	Detector 5	Detector 6
2337	Thursday, 20 May 2021	12:00:00 AM AEST	1:00:00 AM AEST	0	42	1	16	0	0
2337	Thursday, 20 May 2021	1:00:00 AM AEST	2:00:00 AM AEST	0	19	0	13	0	0
2337	Thursday, 20 May 2021	2:00:00 AM AEST	3:00:00 AM AEST	0	21	0	1	0	0
2337	Thursday, 20 May 2021	3:00:00 AM AEST	4:00:00 AM AEST	0	21	2	7	0	0
2337	Thursday, 20 May 2021	4:00:00 AM AEST	5:00:00 AM AEST	1	23	7	32	0	0
2337	Thursday, 20 May 2021	5:00:00 AM AEST	6:00:00 AM AEST	1	109	61	137	0	0
2337	Thursday, 20 May 2021	6:00:00 AM AEST	7:00:00 AM AEST	6	321	336	423	8	0
2337	Thursday, 20 May 2021	7:00:00 AM AEST	8:00:00 AM AEST	8	608	736	721	4	0
2337	Thursday, 20 May 2021	8:00:00 AM AEST	9:00:00 AM AEST	9	692	705	702	7	0
2337	Thursday, 20 May 2021	9:00:00 AM AEST	10:00:00 AM AEST	9	560	455	467	14	0
2337	Thursday, 20 May 2021	10:00:00 AM AEST	11:00:00 AM AEST	3	535	286	404	11	0
2337	Thursday, 20 May 2021	11:00:00 AM AEST	12:00:00 PM AEST	2	587	276	324	11	0
2337	Thursday, 20 May 2021	12:00:00 PM AEST	1:00:00 PM AEST	0	587	253	334	16	0
2337	Thursday, 20 May 2021	1:00:00 PM AEST	2:00:00 PM AEST	7	646	213	291	15	0
2337	Thursday, 20 May 2021	2:00:00 PM AEST	3:00:00 PM AEST	11	784	213	335	18	0
2337	Thursday, 20 May 2021	3:00:00 PM AEST	4:00:00 PM AEST	13	1100	323	391	39	0
2337	Thursday, 20 May 2021	4:00:00 PM AEST	5:00:00 PM AEST	8	1219	360	319	35	0
2337	Thursday, 20 May 2021	5:00:00 PM AEST	6:00:00 PM AEST	8	1261	483	384	48	0
2337	Thursday, 20 May 2021	6:00:00 PM AEST	7:00:00 PM AEST	6	904	320	344	61	0
2337	Thursday, 20 May 2021	7:00:00 PM AEST	8:00:00 PM AEST	3	555	133	223	9	0
2337	Thursday, 20 May 2021	8:00:00 PM AEST	9:00:00 PM AEST	1	391	97	159	35	0
2337	Thursday, 20 May 2021	9:00:00 PM AEST	10:00:00 PM AEST	2	350	60	150	34	0
2337	Thursday, 20 May 2021	10:00:00 PM AEST	11:00:00 PM AEST	1	266	40	105	8	0
2337	Thursday, 20 May 2021	11:00:00 PM AEST	12:00:00 AM AEST	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

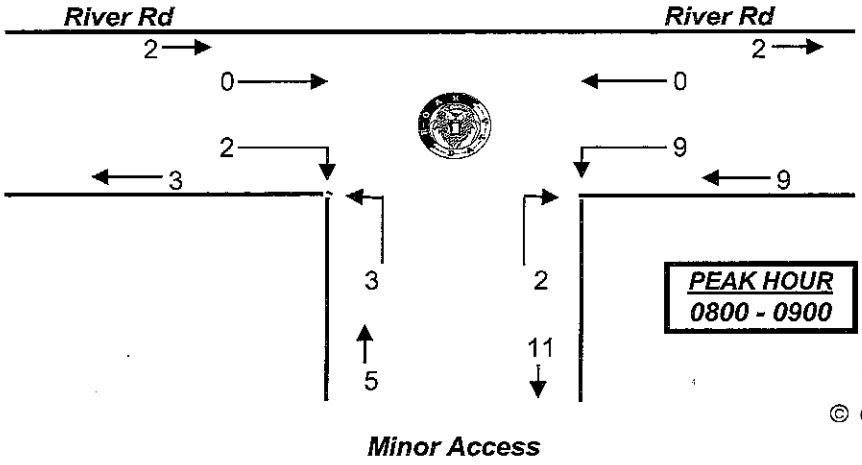
Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Thursday 20th May 21

All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Minor Access*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715		0	0	1	2		**3**
0715 - 0730		1	1	0	1		**3**
0730 - 0745		1	0	1	3		**5**
0745 - 0800		1	1	0	2		**4**
0800 - 0815		1	0	1	3		**5**
0815 - 0830		0	1	0	1		**2**
0830 - 0845		1	2	0	4		**7**
0845 - 0900		0	0	1	1		**2**
Period End	**0**	**5**	**5**	**4**	**17**	**0**	**31**

	WEST		SOUTH		EAST		
	River Rd		*Minor*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	0	3	2	2	8	0	**15**
0715 - 0815	0	4	2	2	9	0	**17**
0730 - 0830	0	3	2	2	9	0	**16**
0745 - 0845	0	3	4	1	10	0	**18**
0800 - 0900	0	2	3	2	9	0	**16**

PEAK HR	**0**	**2**	**3**	**2**	**9**	**0**	**16**

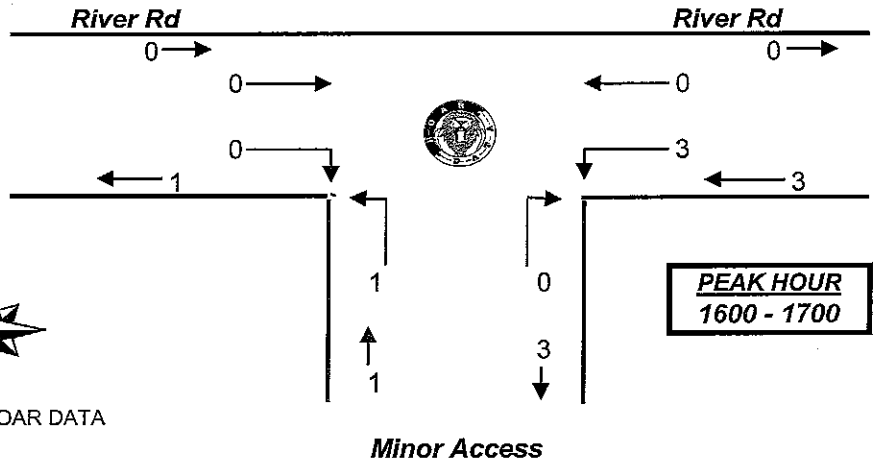


All Vehicles

	WEST		SOUTH		EAST		
	River Rd		*Minor Access*		*River Rd*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615		0	1	0	1		**2**
1615 - 1630		0	0	0	1		**1**
1630 - 1645		0	0	0	0		**0**
1645 - 1700		0	0	0	1		**1**
1700 - 1715		0	1	1	2		**4**
1715 - 1730		1	1	0	1		**3**
1730 - 1745		1	0	1	1		**3**
1745 - 1800		0	0	0	0		**0**
Period End	**0**	**2**	**3**	**2**	**7**	**0**	**14**

	WEST		SOUTH		EAST		
	River Rd		*Minor*		*River Rd*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	0	0	1	0	3	0	**4**
1615 - 1715	0	0	1	1	4	0	**6**
1630 - 1730	0	1	2	1	4	0	**8**
1645 - 1745	0	2	2	2	5	0	**11**
1700 - 1800	0	2	2	2	4	0	**10**

PEAK HR	**0**	**0**	**1**	**0**	**3**	**0**	**4**



N

© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

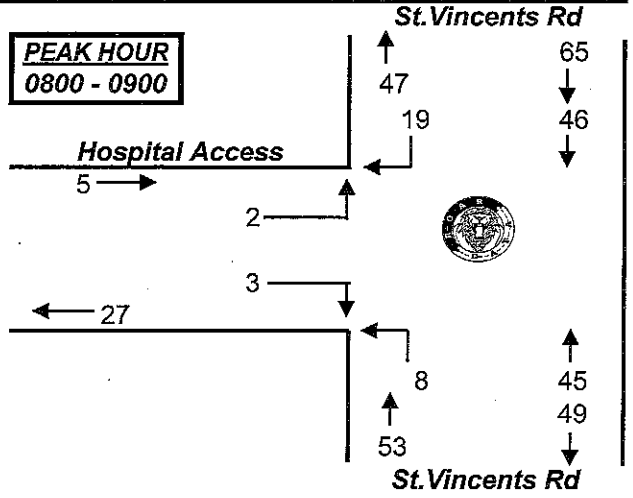
Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Thursday 20th May 21

All Vehicles

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0715	8	3	2	0	2	4	**19**
0715 - 0730	10	3	1	1	1	5	**21**
0730 - 0745	11	2	2	2	2	10	**29**
0745 - 0800	9	2	1	0	2	10	**24**
0800 - 0815	14	3	1	2	4	9	**33**
0815 - 0830	9	7	0	1	2	12	**31**
0830 - 0845	11	7	1	0	0	10	**29**
0845 - 0900	12	2	0	0	2	14	**30**
Period End	**84**	**29**	**8**	**6**	**15**	**74**	**216**

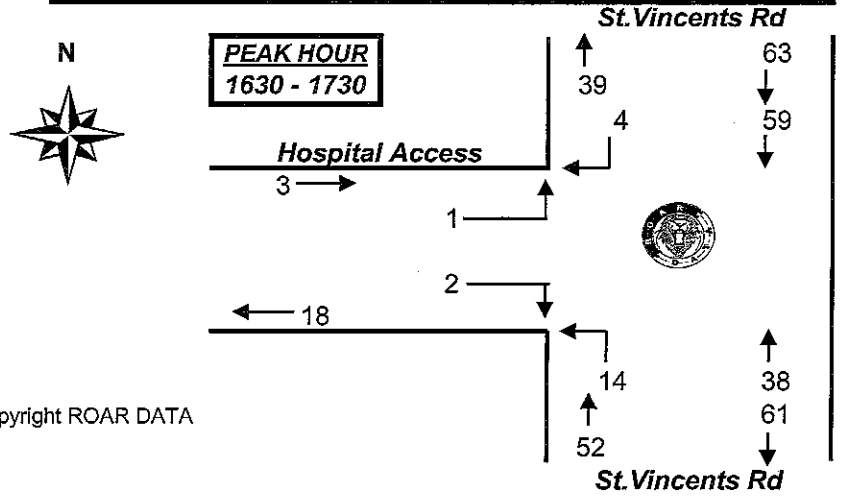
	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
0700 - 0800	38	10	6	3	7	29	**93**
0715 - 0815	44	10	5	5	9	34	**107**
0730 - 0830	43	14	4	5	10	41	**117**
0745 - 0845	43	19	3	3	8	41	**117**
0800 - 0900	46	19	2	3	8	45	**123**
PEAK HR	**46**	**19**	**2**	**3**	**8**	**45**	**123**



All Vehicles

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1615	12	2	1	0	4	10	**29**
1615 - 1630	14	1	1	1	3	9	**29**
1630 - 1645	14	0	0	0	3	11	**28**
1645 - 1700	12	1	1	0	1	12	**27**
1700 - 1715	15	2	0	2	5	10	**34**
1715 - 1730	18	1	0	0	5	5	**29**
1730 - 1745	16	0	1	0	2	5	**24**
1745 - 1800	15	1	0	0	2	6	**24**
Period End	**116**	**8**	**4**	**3**	**25**	**68**	**224**

	NORTH		WEST		SOUTH		
	St.Vincents		*Hospital*		*St.Vincents*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOTAL**
1600 - 1700	52	4	3	1	11	42	**113**
1615 - 1715	55	4	2	3	12	42	**118**
1630 - 1730	59	4	1	2	14	38	**118**
1645 - 1745	61	4	2	2	13	32	**114**
1700 - 1800	64	4	1	2	14	26	**111**
PEAK HR	**59**	**4**	**1**	**2**	**14**	**38**	**118**



© Copyright ROAR DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

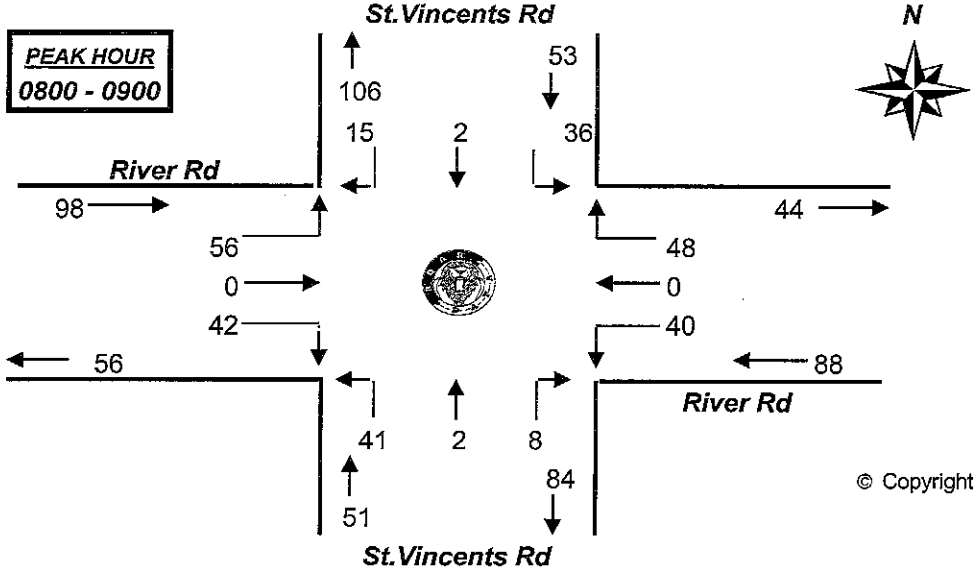
Client :T.T.P.A.
Job No/Name :1784 GREENWICH Hospital
Day/Date :Thursday 20th May 2021

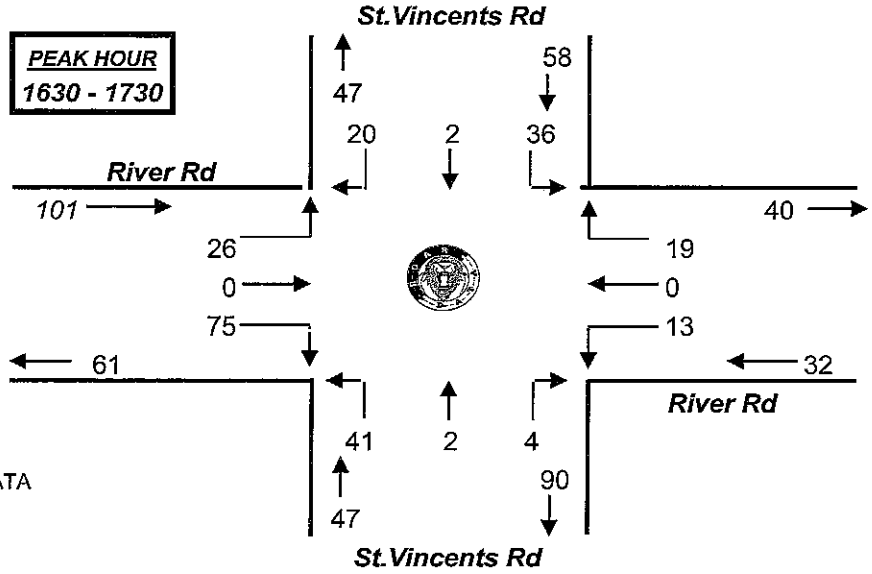
All Vehicles	NORTH St.Vincents Rd			WEST River Rd			SOUTH St.Vincents Rd			EAST River Rd			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0700 - 0715	3	0	1	3		8	5	0	0	1		6	**27**
0715 - 0730	4	0	3	3		9	5	0	0	5		7	**36**
0730 - 0745	6	0	2	6		12	9	0	1	4		7	**47**
0745 - 0800	8	0	5	9		8	10	0	0	3		9	**52**
0800 - 0815	12	1	5	12		12	7	1	2	8		12	**72**
0815 - 0830	5	0	5	15		6	9	1	1	12		10	**64**
0830 - 0845	8	1	4	13		12	13	0	4	12		14	**81**
0845 - 0900	11	0	1	16		12	12	0	1	8		12	**73**
Period End	**57**	**2**	**26**	**77**	**0**	**79**	**70**	**2**	**9**	**53**	**0**	**77**	**452**

All Vehicles	NORTH St.Vincents Rd			WEST River Rd			SOUTH St.Vincents Rd			EAST River Rd			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
1600 - 1615	3	3	6	3		11	8	0	2	3		2	**41**
1615 - 1630	6	0	6	4		11	9	1	0	3		3	**43**
1630 - 1645	9	0	2	7		18	13	0	0	4		3	**56**
1645 - 1700	12	1	7	5		20	12	1	0	3		4	**65**
1700 - 1715	8	1	6	7		19	6	1	2	3		7	**60**
1715 - 1730	7	0	5	7		18	10	0	2	3		5	**57**
1730 - 1745	11	0	3	5		13	6	1	3	6		6	**54**
1745 - 1800	6	0	3	5		10	5	0	1	4		4	**38**
Period End	**62**	**5**	**38**	**43**	**0**	**120**	**69**	**4**	**10**	**29**	**0**	**34**	**414**

	NORTH St.Vincents Rd			WEST River Rd			SOUTH St.Vincents Rd			EAST River Rd			
Peak Time	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0700 - 0800	21	0	11	21	0	37	29	0	1	13	0	29	**162**
0715 - 0815	30	1	15	30	0	41	31	1	3	20	0	35	**207**
0730 - 0830	31	1	17	42	0	38	35	2	4	27	0	38	**235**
0745 - 0845	33	2	19	49	0	38	39	2	7	35	0	45	**269**
0800 - 0900	36	2	15	56	0	42	41	2	8	40	0	48	**290**
PEAK HOUR	**36**	**2**	**15**	**56**	**0**	**42**	**41**	**2**	**8**	**40**	**0**	**48**	**290**

	NORTH St.Vincents Rd			WEST River Rd			SOUTH St.Vincents Rd			EAST River Rd			
Peak Time	L	T	R	L	T	R	L	T	R	L	T	R	TOT
1600 - 1700	30	4	21	19	0	60	42	2	2	13	0	12	**205**
1615 - 1715	35	2	21	23	0	68	40	3	2	13	0	17	**224**
1630 - 1730	36	2	20	26	0	75	41	2	4	13	0	19	**238**
1645 - 1745	38	2	21	24	0	70	34	3	7	15	0	22	**236**
1700 - 1800	32	1	17	24	0	60	27	2	8	16	0	22	**209**
PEAK HOUR	**36**	**2**	**20**	**26**	**0**	**75**	**41**	**2**	**4**	**13**	**0**	**19**	**238**





© Copyright ROAR DATA

Appendix E

Bus Services

Route 261

B

Legend

- Bus route
- Diversion/extended route
- 261 Bus route number
- Bus route start/finish
- Metro line/station
- Train line/station
- Ferry wharf

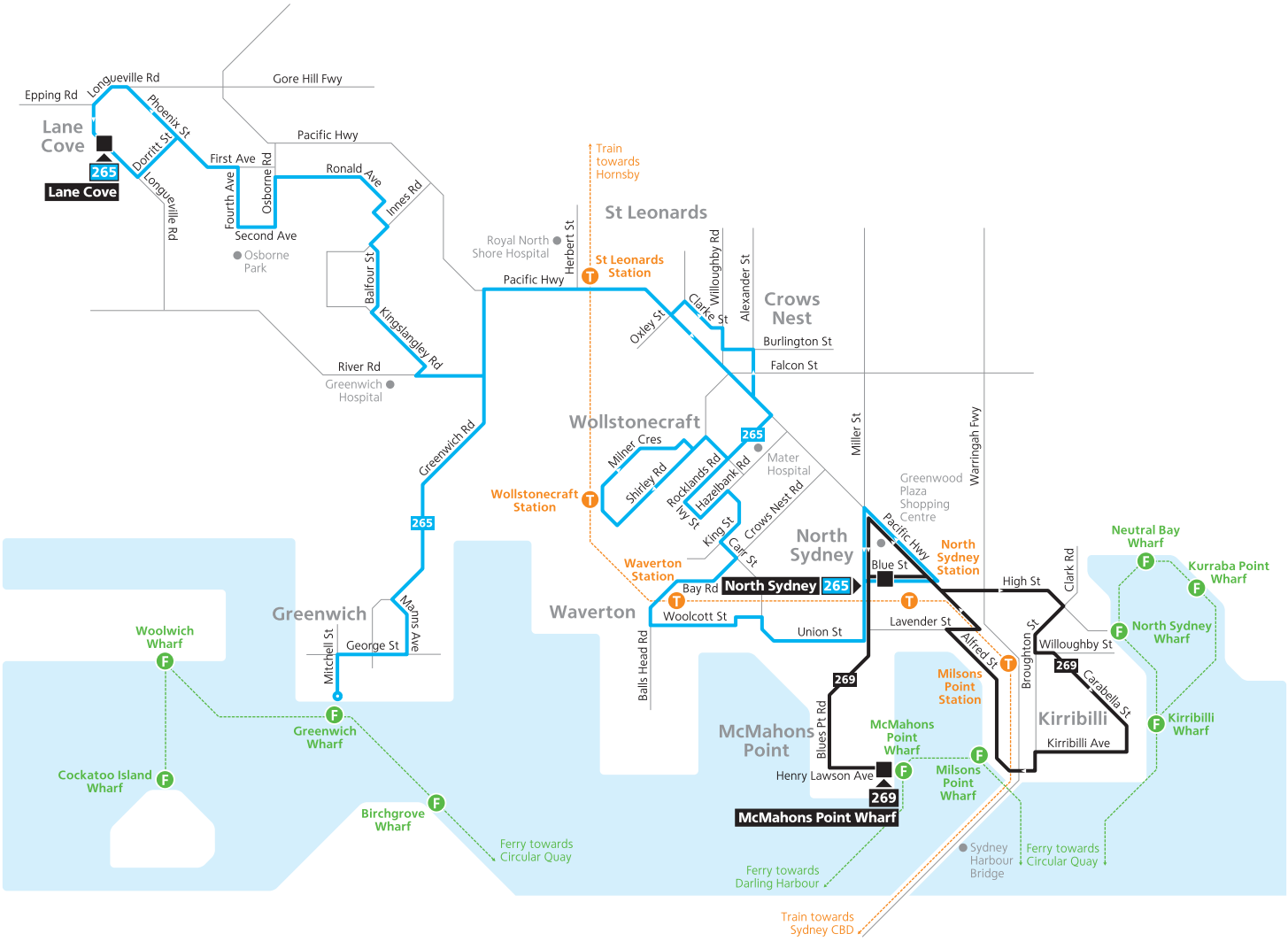
Diagrammatic Map
Not to Scale
North

NSW GOVERNMENT | Transport

transportnsw.info

Routes 265, 269

B



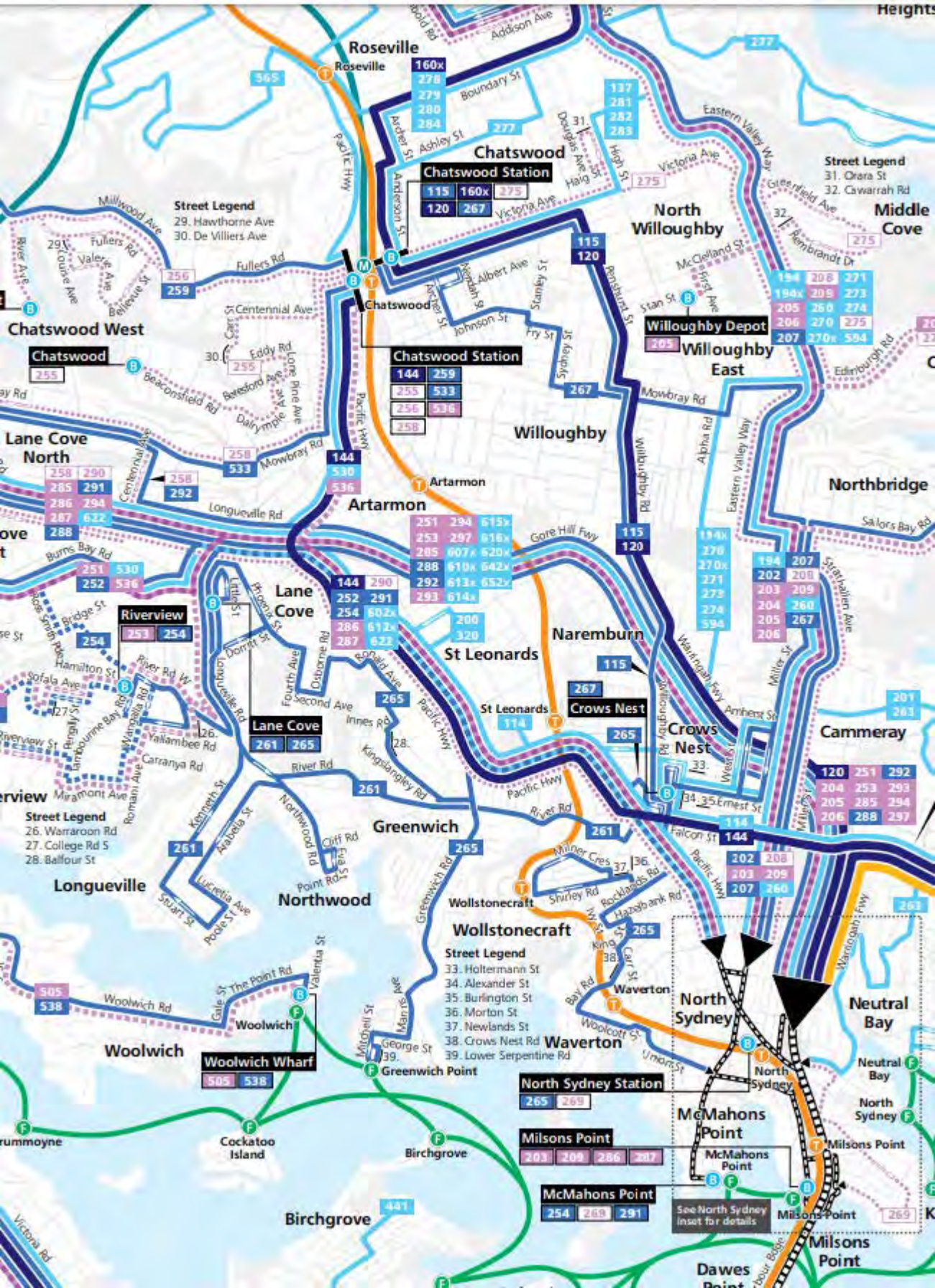
Legend

- Bus route
- 265 Bus route number
- Bus route start/finish
- Train line/station
- Ferry route/wharf

North

Diagrammatic Map
Not to Scale

transportnsw.info


Roseville
Chatswood
Chatswood Station
115 160x 275
120 267
Chatswood West
Chatswood
255
Chatswood Station
144 259
255 533
256 536
258
Street Legend
29. Hawthorne Ave
30. De Villiers Ave
Lane Cove North
258 290
285 291
286 294
287 622
288
Artarmon
Willoughby
Willoughby Depot
205
Willoughby East
North Willoughby
Street Legend
31. Orara St
32. Cawarrah Rd
Middle Cove
Northbridge
Lane Cove
144 290
252 291
254 602x
286 612x
287 622
Riverview
253 254
254
St Leonards
200
320
Naremburn
Crows Nest
267
Cammeray
Lane Cove
261 265
Street Legend
26. Warraroon Rd
27. College Rd S
28. Balfour St
Longueville
Greenwich
Northwood
Wollstonecraft
Street Legend
33. Holtermann St
34. Alexander St
35. Burlington St
36. Morton St
37. Newlands St
38. Crows Nest Rd
39. Lower Serpentine Rd
Waverton
North Sydney
Neutral Bay
Woolwich
Woolwich Wharf
505 538
Greenwich Point
North Sydney Station
265 269
McMahons Point
Milsons Point
203 209 286 287
McMahons Point
254 269 291
See North Sydney inset for details
Cockatoo Island
Birchgrove
Dawes Point
Rummoyne

Appendix F

SIDRA Results

MOVEMENT SUMMARY

Site: 1 [River Road & West Access (Site Folder: AM Peak Existing)] **Network: 1 [AM PEAK (Network Folder: Existing)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Access														
1	L2	6	0.0	6	0.0	0.077	48.7	LOS D	0.4	3.0	0.93	0.69	0.93	23.2
3	R2	9	0.0	9	0.0	* 0.077	48.7	LOS D	0.4	3.0	0.93	0.69	0.93	6.1
Approach		16	0.0	16	0.0	0.077	48.7	LOS D	0.4	3.0	0.93	0.69	0.93	15.1
East: River Road														
4	L2	12	0.0	12	0.0	0.008	7.1	LOS A	0.1	0.5	0.24	0.57	0.24	29.5
5	T1	847	0.0	847	0.0	0.564	4.9	LOS A	8.6	60.0	0.44	0.41	0.44	44.6
Approach		859	0.0	859	0.0	0.564	5.0	LOS A	8.6	60.0	0.44	0.41	0.44	44.5
West: River Road														
11	T1	1663	0.0	1663	0.0	0.579	5.2	LOS A	10.6	74.2	0.46	0.43	0.46	43.7
12	R2	17	0.0	17	0.0	* 0.579	10.0	LOS A	10.2	71.5	0.47	0.44	0.47	42.9
Approach		1680	0.0	1680	0.0	0.579	5.3	LOS A	10.6	74.2	0.46	0.43	0.46	43.7
All Vehicles		2555	0.0	2555	0.0	0.579	5.4	LOS A	10.6	74.2	0.45	0.42	0.45	43.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Access											
P1	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	204.7	208.6	1.02
East: River Road											
P2	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	209.8	215.2	1.03
All Pedestrians		105	44.3	LOS E	0.1	0.1	0.94	0.94	207.3	211.9	1.02

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

▽ Site: 3 [River Road & St Vincents Road (Site Folder: AM Peak Existing)] **Network: 1 [AM PEAK (Network Folder: Existing)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: St Vincents Road														
1	L2	45	0.0	45	0.0	0.110	8.7	LOS A	0.2	1.4	0.70	0.72	0.70	19.9
2	T1	1	0.0	1	0.0	0.110	28.3	LOS B	0.2	1.4	0.70	0.72	0.70	30.3
3	R2	6	0.0	6	0.0	0.110	37.0	LOS C	0.2	1.4	0.70	0.72	0.70	31.7
Approach		53	0.0	53	0.0	0.110	12.5	LOS A	0.2	1.4	0.70	0.72	0.70	22.6
East: River Road														
4	L2	44	0.0	44	0.0	0.537	20.4	LOS B	1.7	12.0	0.36	0.06	0.46	37.1
5	T1	779	0.0	779	0.0	0.537	3.9	LOS A	1.7	12.0	0.36	0.06	0.46	37.1
6	R2	47	0.0	47	0.0	0.537	23.0	LOS B	1.7	12.0	0.36	0.06	0.46	40.3
Approach		871	0.0	871	0.0	0.537	5.8	NA	1.7	12.0	0.36	0.06	0.46	37.3
North: St Vincents Road														
7	L2	34	0.0	34	0.0	0.164	9.2	LOS A	0.3	1.9	0.75	0.77	0.75	30.2
8	T1	2	0.0	2	0.0	0.164	28.4	LOS B	0.3	1.9	0.75	0.77	0.75	20.6
9	R2	14	0.0	14	0.0	0.164	37.7	LOS C	0.3	1.9	0.75	0.77	0.75	20.6
Approach		49	0.0	49	0.0	0.164	17.9	LOS B	0.3	1.9	0.75	0.77	0.75	28.0
West: River Road														
10	L2	48	0.0	48	0.0	0.443	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.8
11	T1	1524	0.0	1524	0.0	0.443	1.0	LOS A	1.1	7.4	0.12	0.04	0.14	47.3
12	R2	68	0.0	68	0.0	0.443	12.7	LOS A	1.1	7.4	0.26	0.06	0.31	39.8
Approach		1641	0.0	1641	0.0	0.443	1.6	NA	1.1	7.4	0.12	0.04	0.15	47.2
All Vehicles		2614	0.0	2614	0.0	0.537	3.5	NA	1.7	12.0	0.22	0.08	0.27	43.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1 [River Road & West Access (Site Folder: PM Peak Existing)] **Network: 2 [PM PEAK (Network Folder: Existing)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Access														
1	L2	11	0.0	11	0.0	0.149	49.3	LOS D	0.9	6.0	0.94	0.72	0.94	23.0
3	R2	20	0.0	20	0.0	* 0.149	49.3	LOS D	0.9	6.0	0.94	0.72	0.94	6.0
Approach		31	0.0	31	0.0	0.149	49.3	LOS D	0.9	6.0	0.94	0.72	0.94	14.0
East: River Road														
4	L2	2	0.0	2	0.0	0.001	7.0	LOS A	0.0	0.1	0.24	0.55	0.24	29.6
5	T1	1345	0.0	1345	0.0	* 0.896	16.0	LOS B	8.6	60.0	0.81	0.82	0.88	36.0
Approach		1347	0.0	1347	0.0	0.896	16.0	LOS B	8.6	60.0	0.81	0.82	0.88	35.9
West: River Road														
11	T1	849	0.0	849	0.0	0.311	5.3	LOS A	4.8	33.3	0.38	0.34	0.38	43.7
12	R2	6	0.0	6	0.0	0.311	11.8	LOS A	4.8	33.3	0.45	0.40	0.45	41.4
Approach		856	0.0	856	0.0	0.311	5.3	LOS A	4.8	33.3	0.38	0.34	0.38	43.6
All Vehicles		2234	0.0	2234	0.0	0.896	12.4	LOS A	8.6	60.0	0.65	0.64	0.69	38.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Access											
P1	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	204.7	208.6	1.02
East: River Road											
P2	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	209.8	215.2	1.03
All Pedestrians		105	44.3	LOS E	0.1	0.1	0.94	0.94	207.3	211.9	1.02

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

▽ Site: 3 [River Road & St Vincents Road (Site Folder: PM Peak Existing)] **Network: 2 [PM PEAK (Network Folder: Existing)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: St Vincents Road														
1	L2	43	0.0	43	0.0	0.188	18.5	LOS B	0.4	2.6	0.83	0.91	0.83	13.6
2	T1	4	0.0	4	0.0	0.188	29.2	LOS C	0.4	2.6	0.83	0.91	0.83	23.4
3	R2	8	0.0	8	0.0	0.188	36.8	LOS C	0.4	2.6	0.83	0.91	0.83	25.3
Approach		56	0.0	56	0.0	0.188	22.1	LOS B	0.4	2.6	0.83	0.91	0.83	17.0
East: River Road														
4	L2	17	0.0	17	0.0	0.724	13.7	LOS A	0.7	4.7	0.09	0.02	0.11	47.3
5	T1	1339	0.0	1339	0.0	0.724	0.5	LOS A	0.7	4.7	0.09	0.02	0.11	47.3
6	R2	23	0.0	23	0.0	0.724	16.0	LOS B	0.7	4.7	0.09	0.02	0.11	46.7
Approach		1379	0.0	1379	0.0	0.724	0.9	NA	0.7	4.7	0.09	0.02	0.11	47.3
North: St Vincents Road														
7	L2	23	0.0	23	0.0	0.218	6.6	LOS A	0.4	2.6	0.74	0.76	0.74	27.0
8	T1	1	0.0	1	0.0	0.218	29.3	LOS C	0.4	2.6	0.74	0.76	0.74	17.4
9	R2	26	0.0	26	0.0	0.218	38.2	LOS C	0.4	2.6	0.74	0.76	0.74	17.4
Approach		51	0.0	51	0.0	0.218	23.5	LOS B	0.4	2.6	0.74	0.76	0.74	22.7
West: River Road														
10	L2	19	0.0	19	0.0	0.246	4.6	LOS A	0.0	0.0	0.00	0.02	0.00	48.0
11	T1	768	0.0	768	0.0	0.246	3.4	LOS A	1.1	7.4	0.20	0.05	0.20	43.4
12	R2	40	0.0	40	0.0	0.246	22.6	LOS B	1.1	7.4	0.49	0.09	0.50	26.7
Approach		827	0.0	827	0.0	0.246	4.3	NA	1.1	7.4	0.21	0.05	0.21	42.9
All Vehicles		2313	0.0	2313	0.0	0.724	3.2	NA	1.1	7.4	0.17	0.07	0.18	43.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1 [River Road & West Access (Site Folder: AM Peak Future)] **Network: 3 [AM PEAK (Network Folder: Future)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Access														
1	L2	13	0.0	13	0.0	0.124	49.1	LOS D	0.7	4.9	0.93	0.71	0.93	23.1
3	R2	13	0.0	13	0.0	*0.124	49.1	LOS D	0.7	4.9	0.93	0.71	0.93	6.1
Approach		25	0.0	25	0.0	0.124	49.1	LOS D	0.7	4.9	0.93	0.71	0.93	16.7
East: River Road														
4	L2	23	0.0	23	0.0	0.016	7.1	LOS A	0.2	1.1	0.24	0.58	0.24	29.5
5	T1	847	0.0	847	0.0	0.564	4.9	LOS A	8.6	60.0	0.44	0.41	0.44	44.6
Approach		871	0.0	871	0.0	0.564	5.0	LOS A	8.6	60.0	0.44	0.41	0.44	44.5
West: River Road														
11	T1	1663	0.0	1663	0.0	0.589	5.5	LOS A	10.9	76.5	0.47	0.44	0.47	43.4
12	R2	23	0.0	23	0.0	*0.589	10.5	LOS A	10.6	74.0	0.49	0.46	0.49	42.5
Approach		1686	0.0	1686	0.0	0.589	5.6	LOS A	10.9	76.5	0.47	0.44	0.47	43.4
All Vehicles		2582	0.0	2582	0.0	0.589	5.8	LOS A	10.9	76.5	0.46	0.43	0.46	43.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Access											
P1	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	204.7	208.6	1.02
East: River Road											
P2	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	209.8	215.2	1.03
All Pedestrians		105	44.3	LOS E	0.1	0.1	0.94	0.94	207.3	211.9	1.02

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1 [River Road & West Access (Site Folder: PM Peak Future)] **Network: 4 [PM PEAK (Network Folder: Future)]**

97-115 River Road, Greenwich
Site Category: Greenwich Hospital
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Access														
1	L2	22	0.0	22	0.0	0.314	50.5	LOS D	1.8	12.9	0.96	0.75	0.96	22.8
3	R2	42	0.0	42	0.0	*0.314	50.5	LOS D	1.8	12.9	0.96	0.75	0.96	5.9
Approach		64	0.0	64	0.0	0.314	50.5	LOS D	1.8	12.9	0.96	0.75	0.96	13.7
East: River Road														
4	L2	9	0.0	9	0.0	0.007	7.1	LOS A	0.1	0.4	0.24	0.57	0.24	29.5
5	T1	1345	0.0	1345	0.0	*0.896	16.0	LOS B	8.6	60.0	0.81	0.82	0.88	36.0
Approach		1355	0.0	1355	0.0	0.896	16.0	LOS B	8.6	60.0	0.81	0.82	0.87	35.9
West: River Road														
11	T1	849	0.0	849	0.0	0.311	5.3	LOS A	4.8	33.3	0.38	0.34	0.38	43.7
12	R2	6	0.0	6	0.0	0.311	11.8	LOS A	4.8	33.3	0.45	0.40	0.45	41.4
Approach		856	0.0	856	0.0	0.311	5.3	LOS A	4.8	33.3	0.38	0.34	0.38	43.6
All Vehicles		2275	0.0	2275	0.0	0.896	12.9	LOS A	8.6	60.0	0.65	0.64	0.69	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Access											
P1	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	204.7	208.6	1.02
East: River Road											
P2	Full	53	44.3	LOS E	0.1	0.1	0.94	0.94	209.8	215.2	1.03
All Pedestrians		105	44.3	LOS E	0.1	0.1	0.94	0.94	207.3	211.9	1.02

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Appendix G

ITE Trip Generation Rates

Nursing Home
(620)

Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

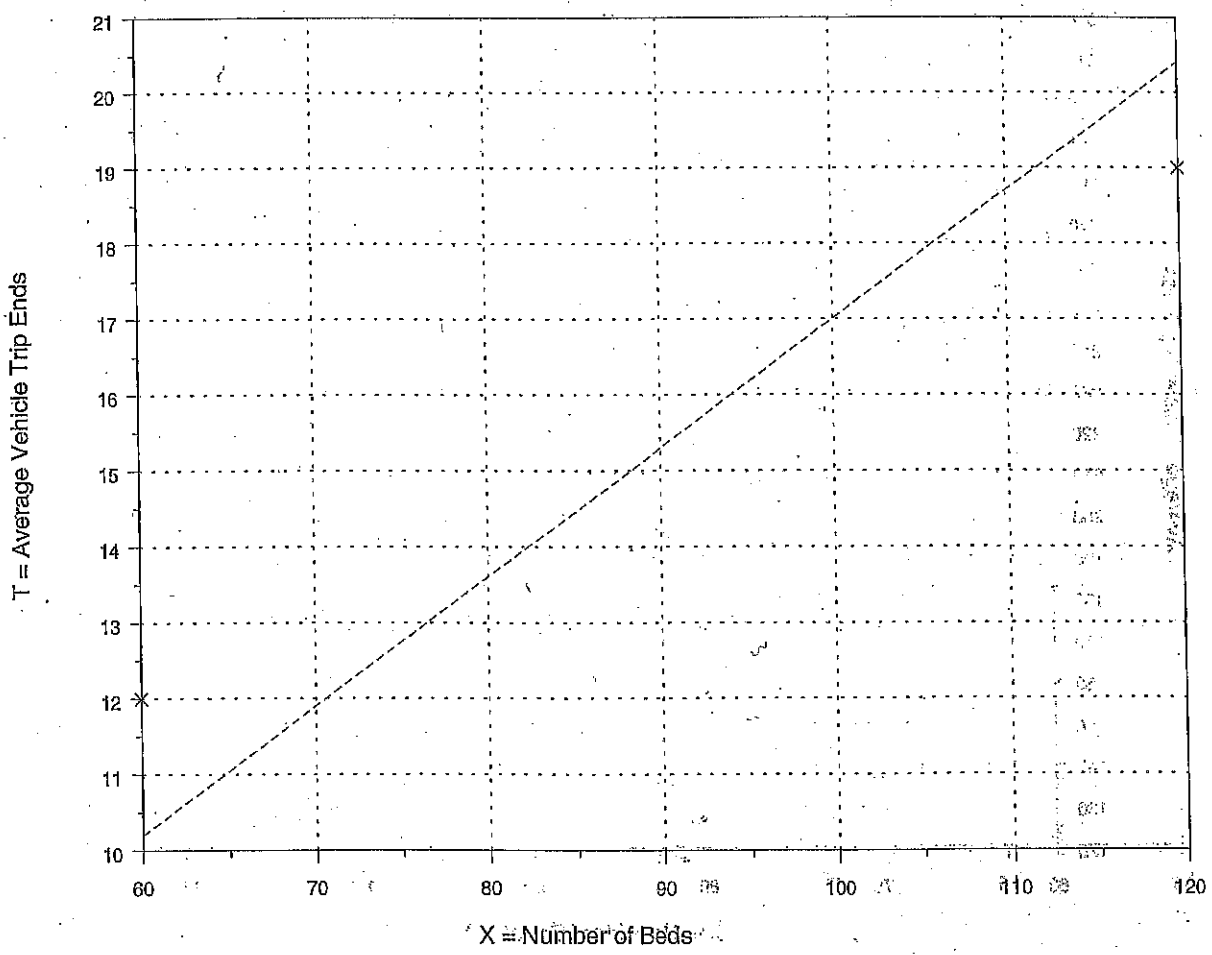
Number of Studies: 2
Average Number of Beds: 90
Directional Distribution: Not available

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.17	0.16 - 0.20	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× **Actual Data Points** — **Average Rate**

Fitted Curve Equation: Not given R^2 =

Nursing Home
(620)

Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

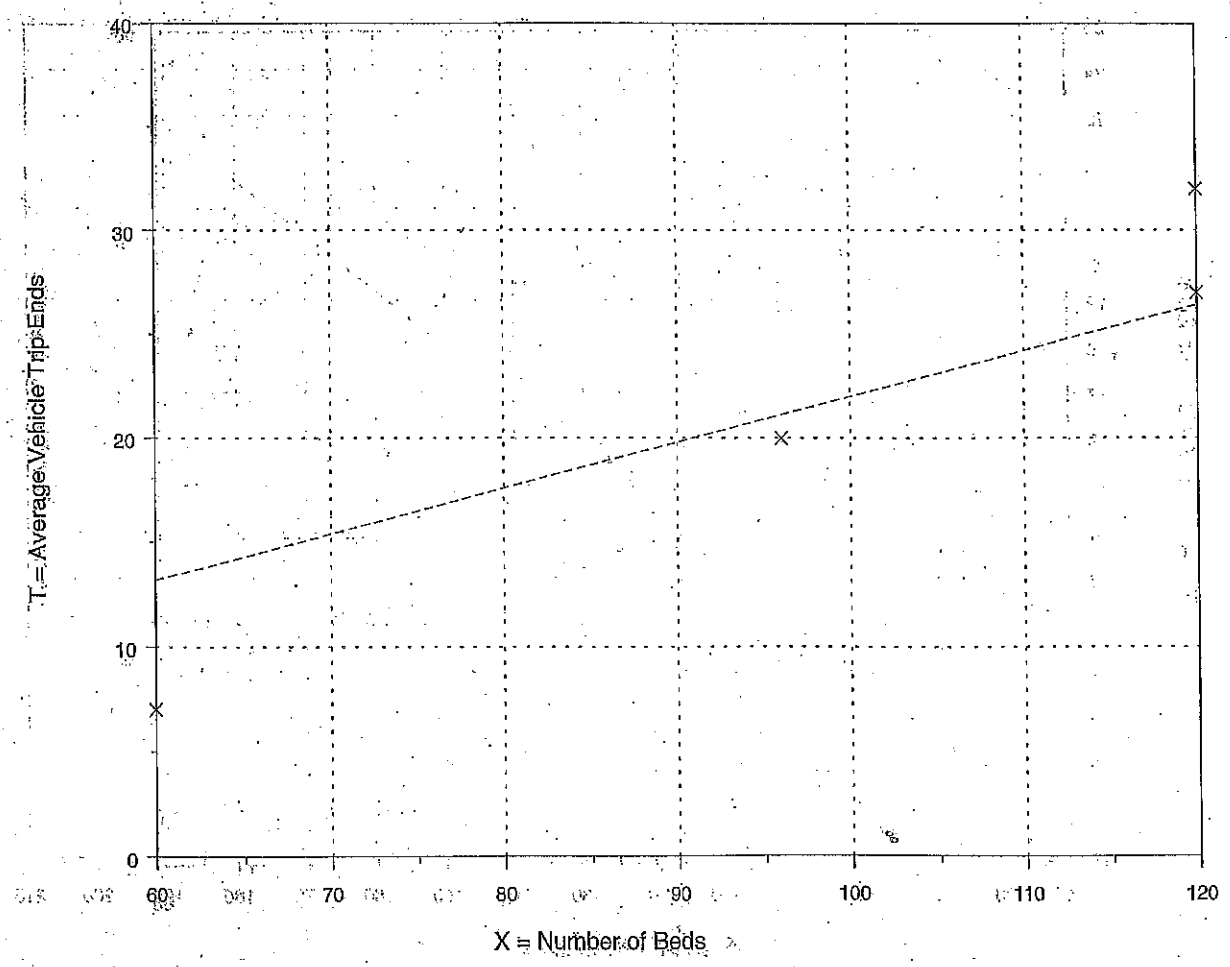
Number of Studies: 4
Average Number of Beds: 99
Directional Distribution: 33% entering, 67% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.22	0.12 - 0.27	0.47

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× Actual Data Points

Average Rate

Fitted Curve Equation: Not given

R^2 = ****

Senior Adult Housing - Attached
(252)

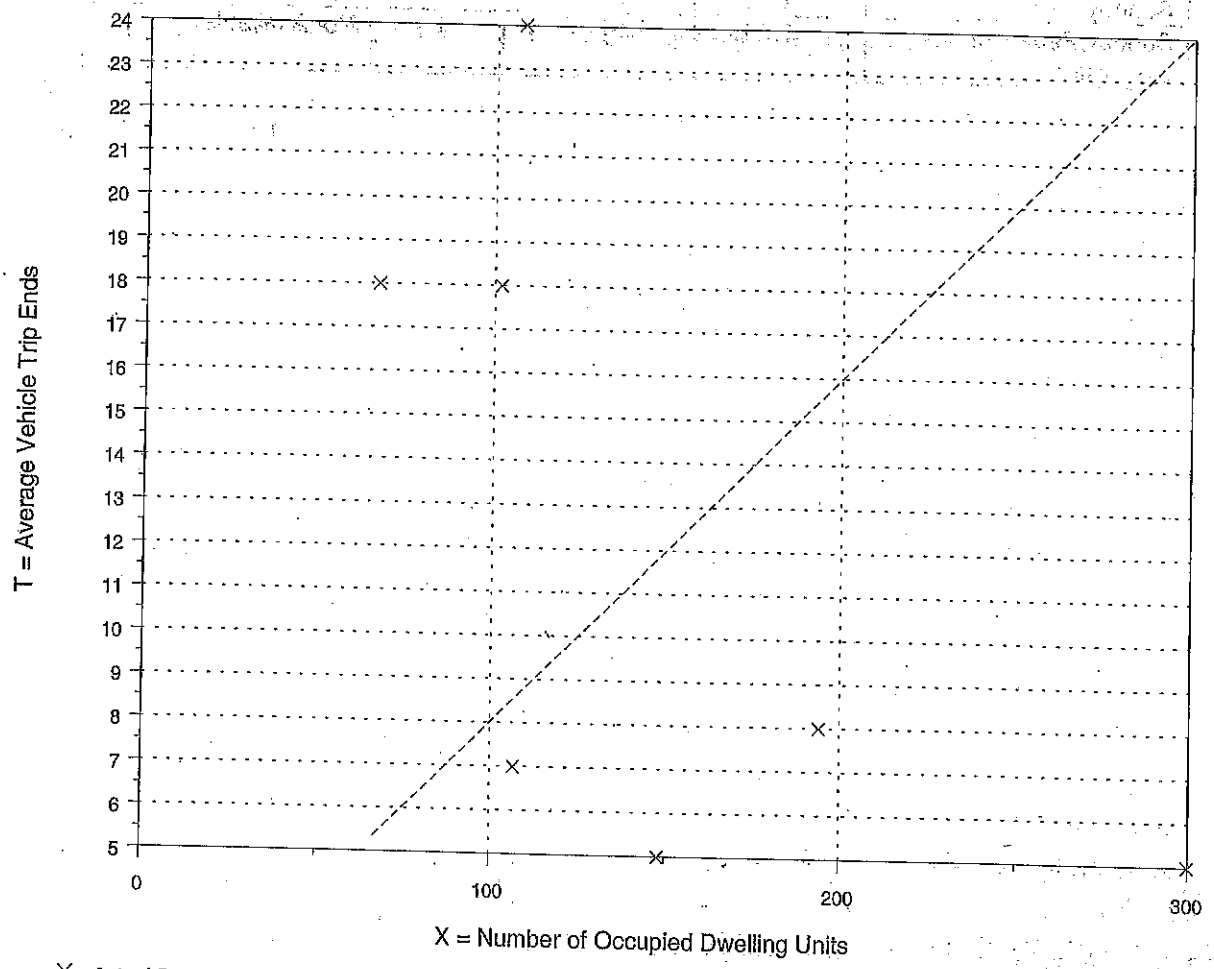
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 7
Avg. Num. of Occupied Dwelling Units: 147
Directional Distribution: 45% entering, 55% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.08	0.02 - 0.27	0.30

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Senior Adult Housing - Attached
(252)

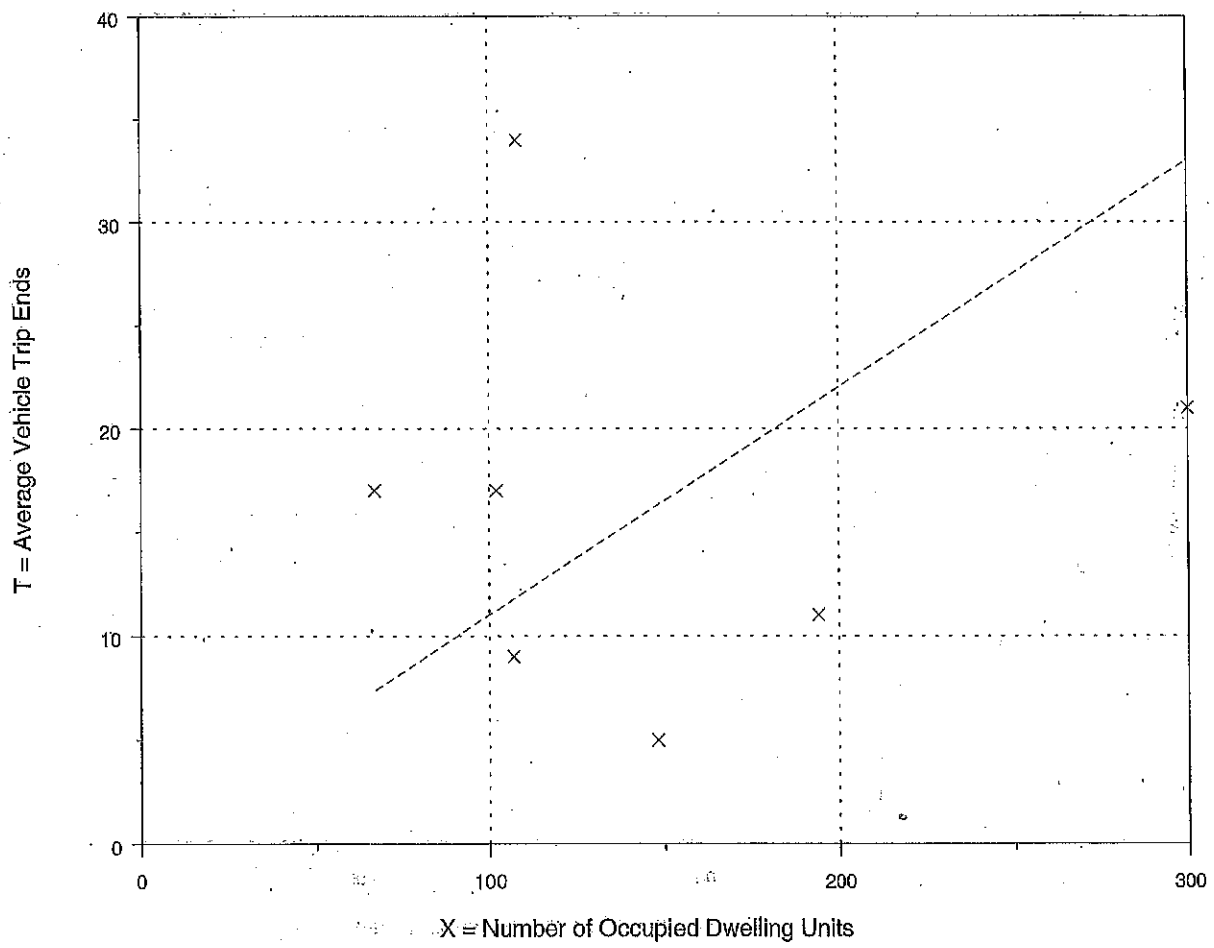
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 7
Avg. Num. of Occupied Dwelling Units: 147
Directional Distribution: 61% entering, 39% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.11	0.03 - 0.31	0.34

Data Plot and Equation



× Actual Data Points

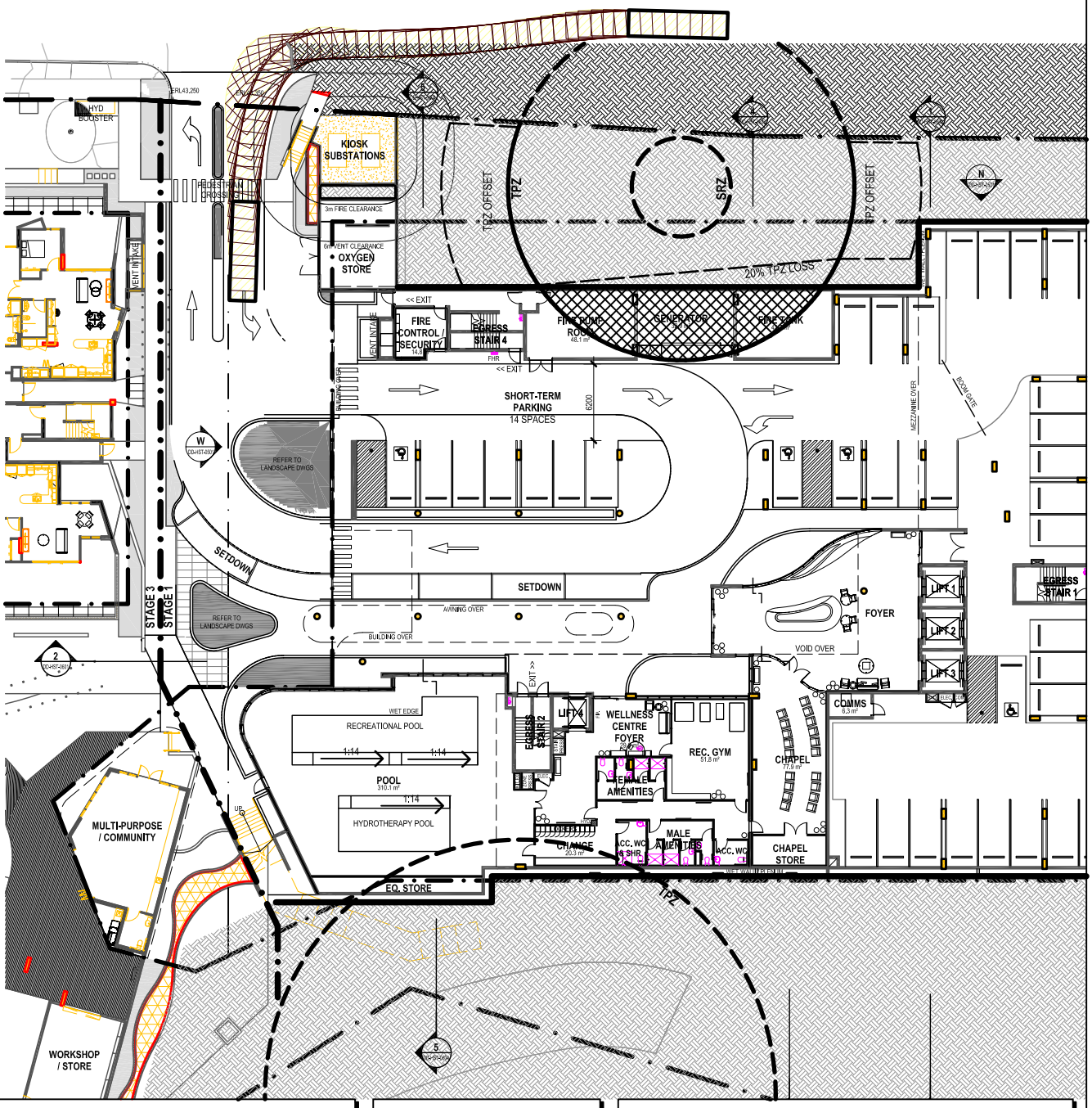
------ Average Rate

Fitted Curve Equation: Not given

R^2 = ****

Appendix H

Turning Path Assessment



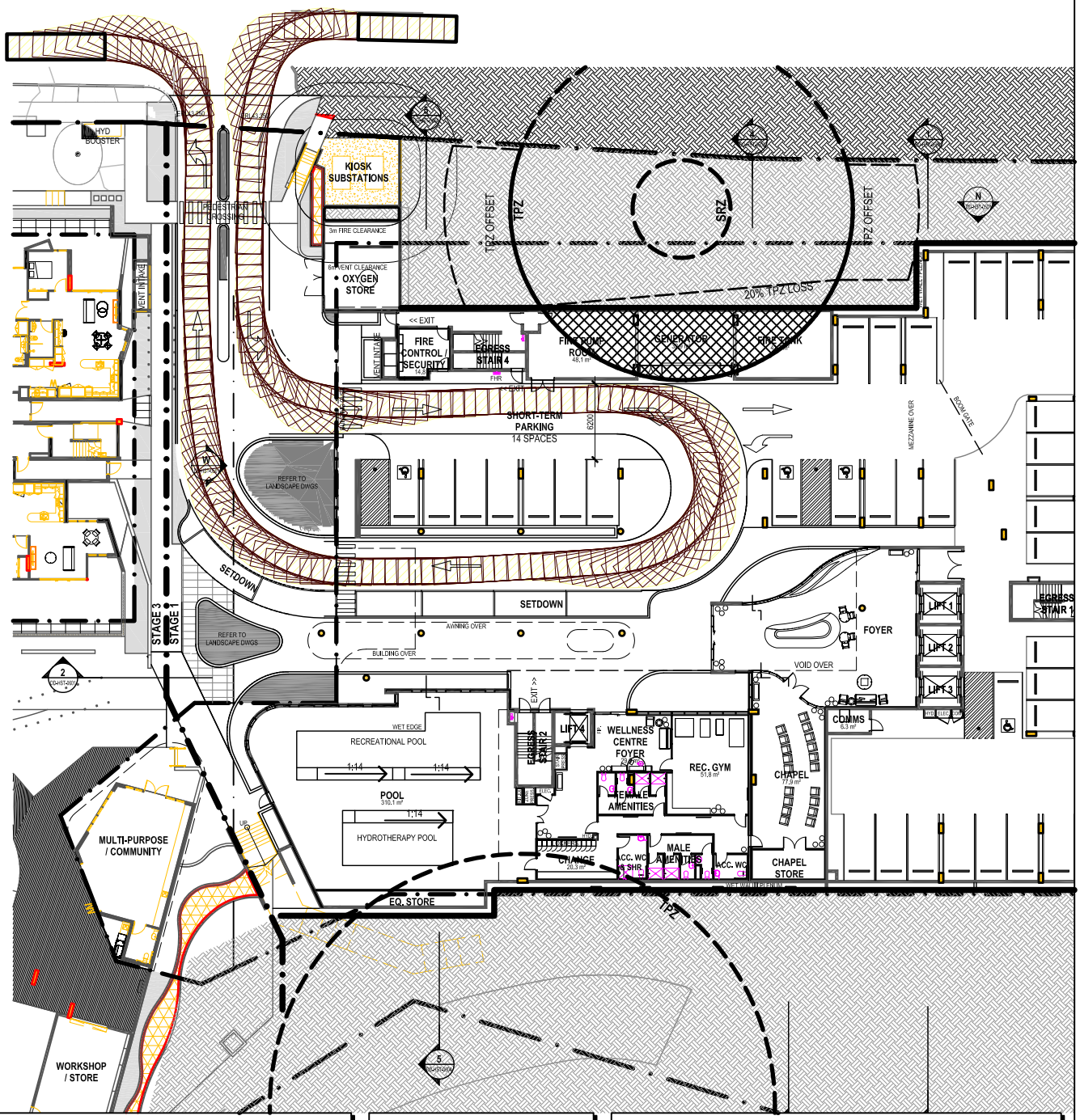
NOTE

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 AN 8.0m RIGID VEHICLE ENTERING THE SITE

SP 1



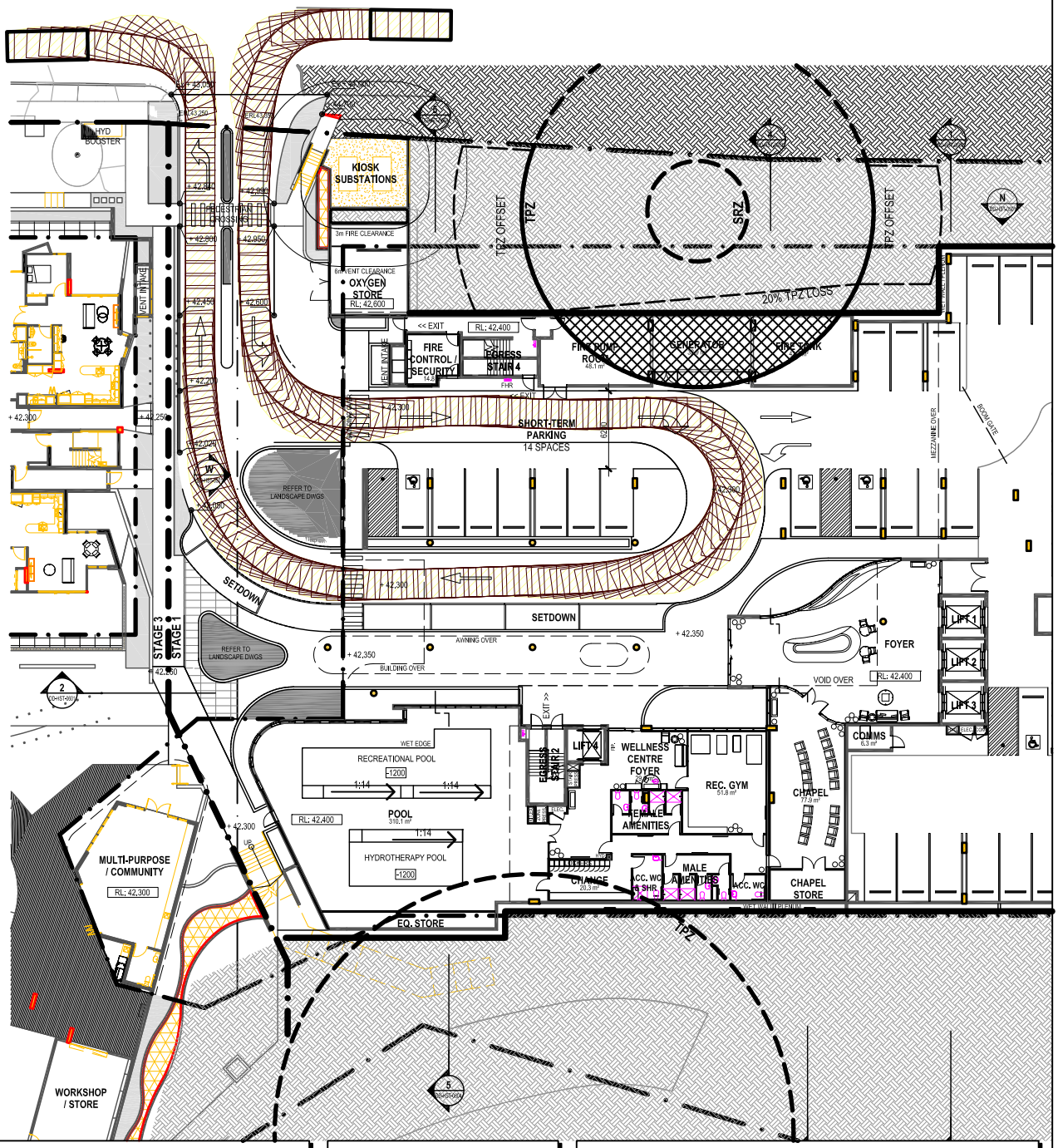
NOTE

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 8.0m RIGID VEHICLE ACCESSING THE SITE

SP 2



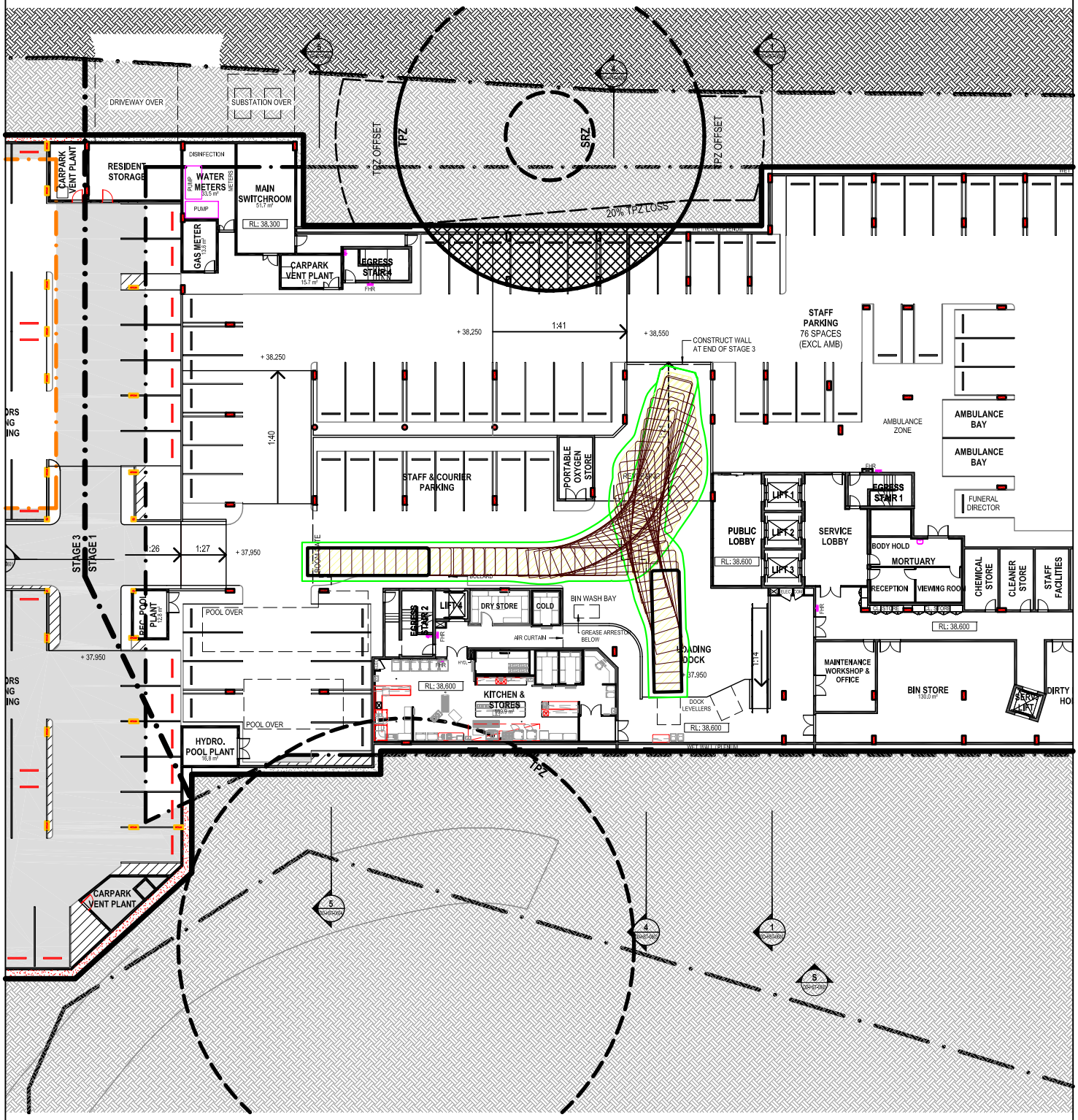
NOTE

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 A 6.4m RIGID VEHICLE ACCESSING THE SITE

SP 3



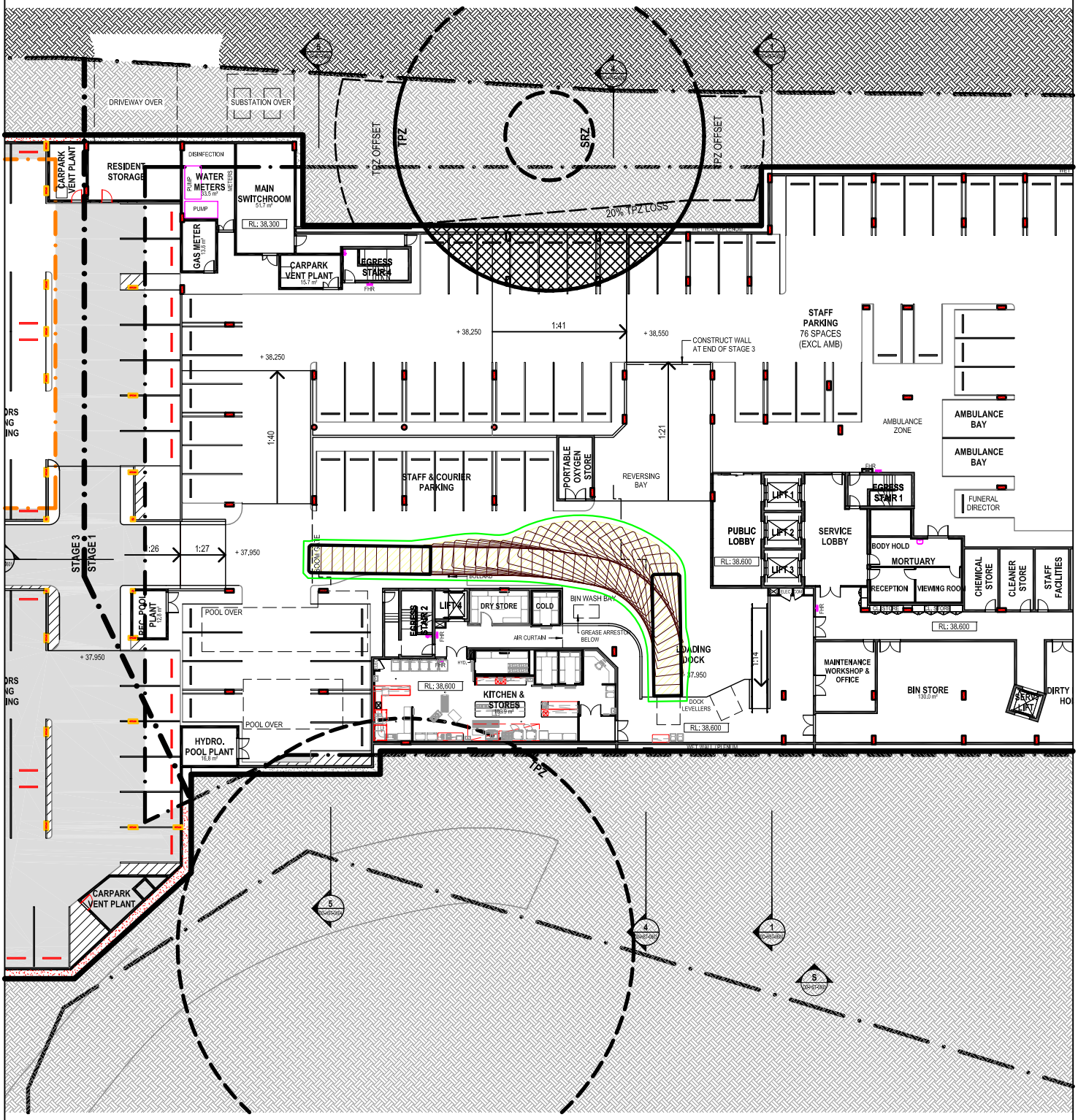
NOTE

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 11m RIGID VEHICLE ENTERING THE SITE

SP 4



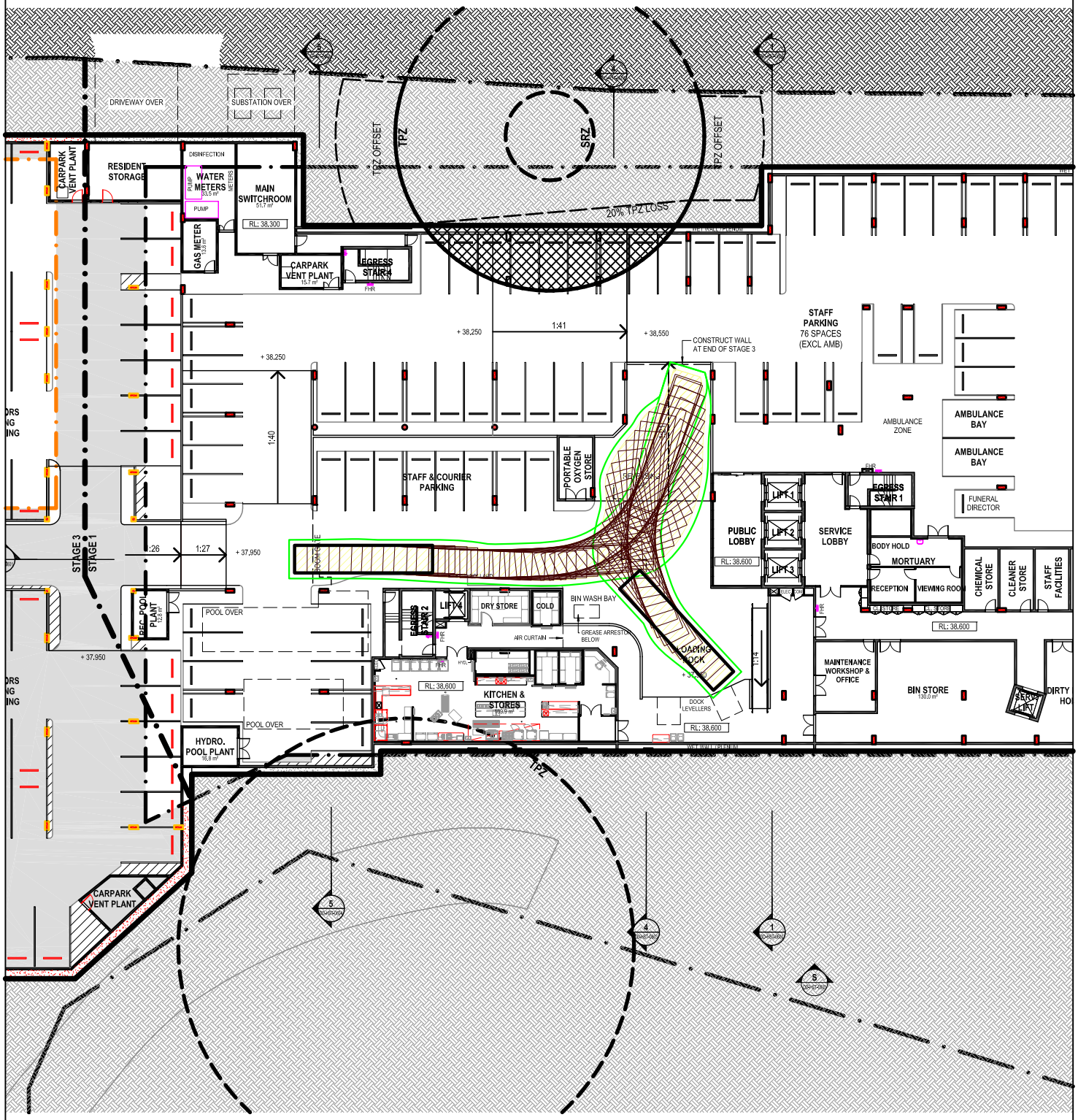
NOTE

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 11m RIGID VEHICLE EXITING THE SITE

SP 5



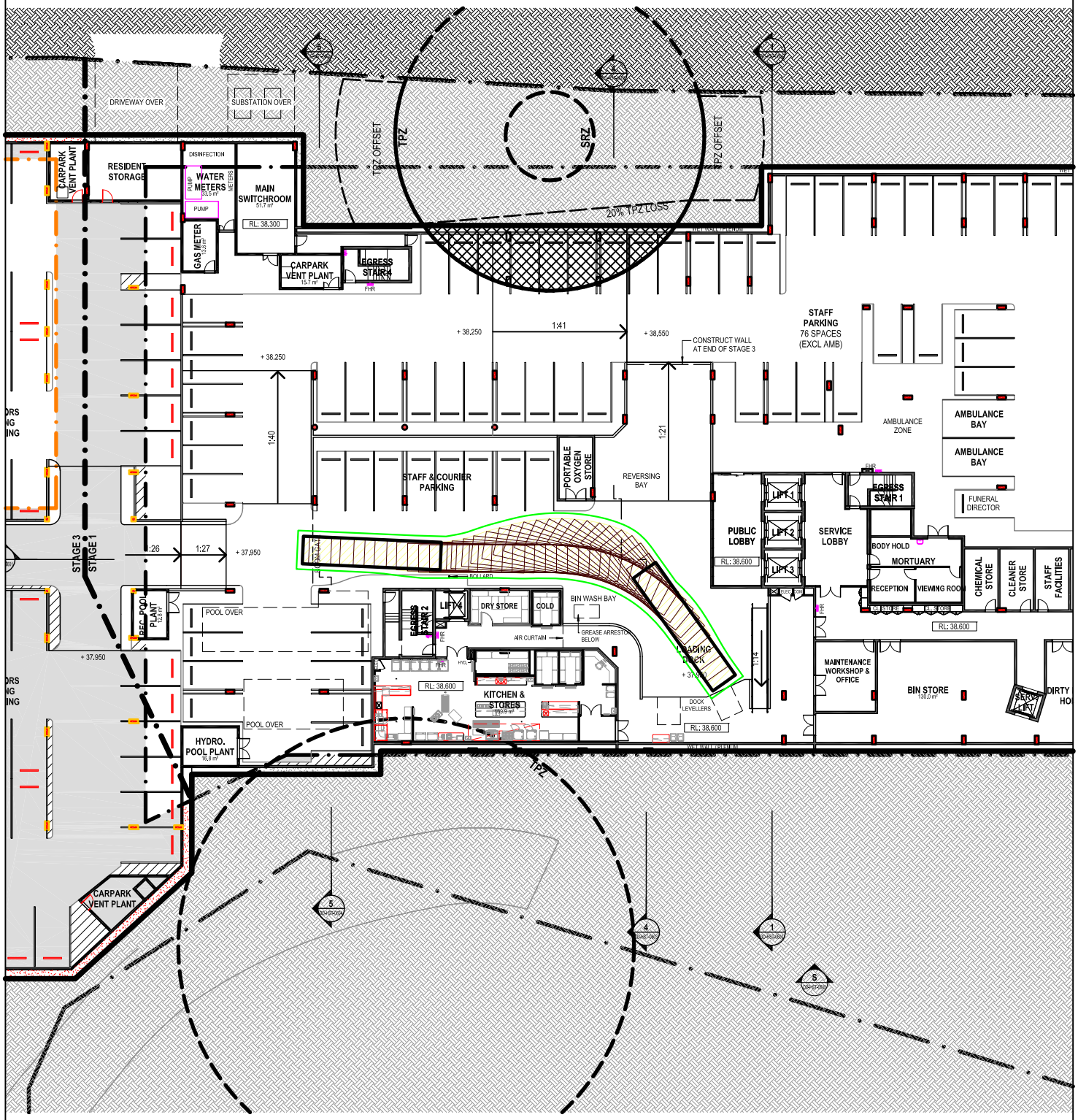
NOTE

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 A 12.5m RIGID 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.

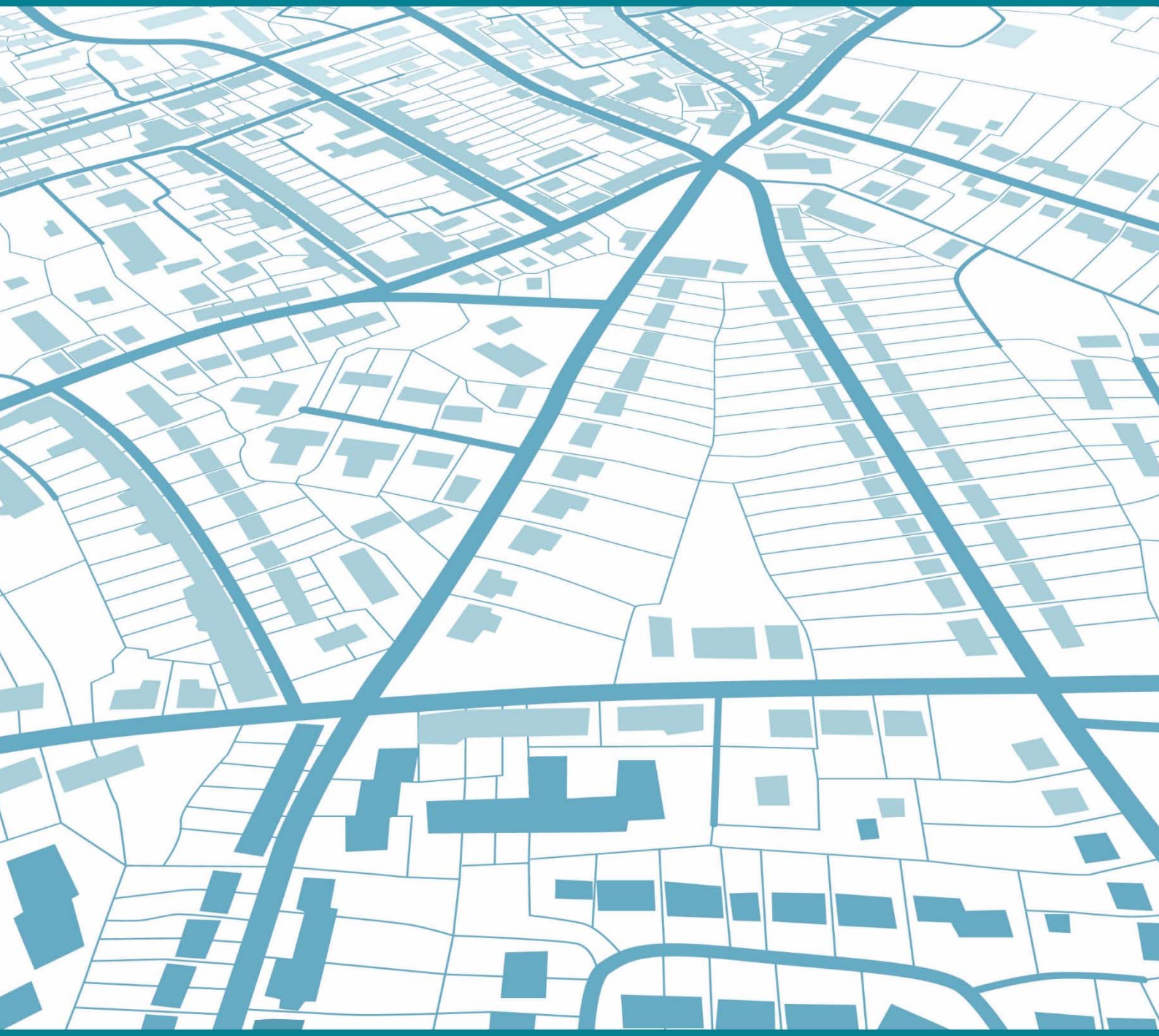
N

SWEPT PATH ANALYSIS OF A 12.5m RIGID VEHICLE EXITING THE SITE

SP 7

ttpa TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Established 1994

Suite 502, Level 5, 282 Victoria Avenue
Chatswood NSW 2067
T (02) 9411 5660 | F (02) 9904 6622
E info@ttpa.com.au | ttpa.com.au



Greenwich Hospital
Proposed Seniors Health Campus
97 – 115 River Road, Greenwich

Appendix I – Preliminary Construction Traffic Management Plan

Ref: 20352
Date: May 2022
Issue: B

Table of Contents

1.0 INTRODUCTION 1

2.0 STAGING AND TIMING 2

3.0 METHODOLOGY AND PROCESSES 3

4.0 PROPOSED CTMP 4

4.1 Construction Vehicle Routes 4
4.2 Truck Movements 4
4.3 Construction Hours 4
4.4 Materials Handling and Cleaning 5
4.5 Site Induction 5
4.6 Traffic Control Plans 5
4.7 Traffic Management Plans 5
4.8 On-Site Parking 5

List of Appendices

Appendix A Staging Plans
Appendix B Traffic Management Plans
Appendix C Construction Management Plan

1.0 Introduction

This Preliminary Construction Traffic Management Plan has been prepared to supplement an SSD Application for redevelopment of the existing Greenwich Hospital in River Road at Greenwich.

Consent Conditions will inevitably require a detailed CTMP to be prepared and approved for the Construction Certificate and this will be facilitated by more detailed advice from a builder at that time.

The subject proposal is for the detailed design and construction of the facility following its concept approval under SSD-8699, specifically, SSD-13619238 seeks approval for the following:

- Demolition of the existing hospital building and associated facilities at the site;
- Construction of a new hospital facility and integrated healthcare campus comprising of hospital, residential aged care, seniors housing, overnight respite, comprising:
    - A new main hospital building up to RL 80.0;
    - Two new seniors living buildings, Nth to RL 56.36, Sth to RL 60.65;
    - A new respite care building up to RL 56.9.
- Construction of associated site facilities and services, including pedestrian and vehicular access and basement parking;
- Site landscaping and infrastructure works; and
- Preservation of Pallister House which will continue to host dementia care and administrative functions.

2.0 Staging and Timing

The proposed staging of the work is provided on the plans in Appendix A and it is envisaged that the following Staging and Timing will apply:

Stage 1 & 2

- Site Establishment - 6 weeks
- Demolition - 5 weeks
- Excavation - 18 weeks
- Construction & Fitout - 114 weeks

Stage 3

- Site Establishment - 3 weeks
- Demolition - 8 weeks
- Excavation - 6 weeks
- Construction & Fitout - 65 weeks

Stage 4

- Site Establishment - 2 weeks
- Demolition - 6 weeks
- Excavation - 7 weeks
- Construction - 60 weeks

Stage 5

- Site Establishment - 2 weeks
- Earthworks - 2 weeks
- Construction & Fitout - 30 weeks

3.0 Methodology and Processes

The proposed processes for the various stages are identified on the plans provided in Appendix B while the methodology is described in the Construction Management Plan reproduced in Appendix C.

4.0 Proposed CTMP

4.1 Construction Vehicle Routes

The proposed routes for construction vehicles for Stages 1 and 2, 3 and 4 and 5 are provided on the diagrams overleaf.

4.2 Truck Movements

The envisaged truck movements will be:

	Truck Visitations			
	Bulk Excavation	Structure	Fitout	Landscaping etc.
Per Day	30 – 40*	25 – 30**	30***	20**
Per Hour	6 – 8	5	6	4

* Truck and Dog units

** Semi Trailer (maximum)

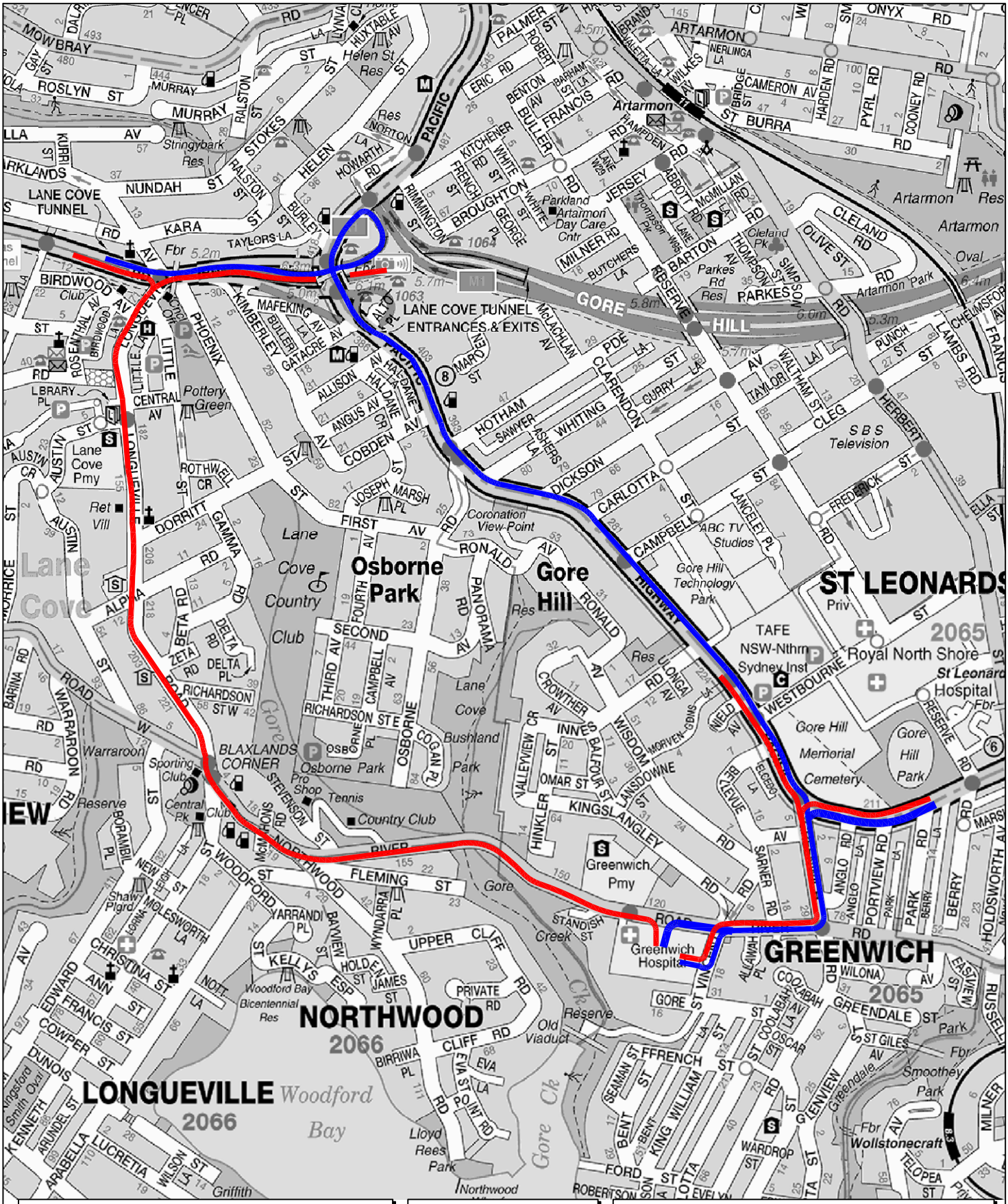
*** HRV

The access movement of heavy vehicles will be minimised during school arrival/departure times (8.0 am – 9.0 am and 2.30 pm – 3.30 pm) and the delivery/dispatch of heavy plant will occur outside of normal commuter peak times.

4.3 Construction Hours

The envisaged construction hours are:

7:30 am to 5:30 pm	Monday to Friday
7:30 am to 5:30 pm	Saturday
No work	Sunday and Public Holidays



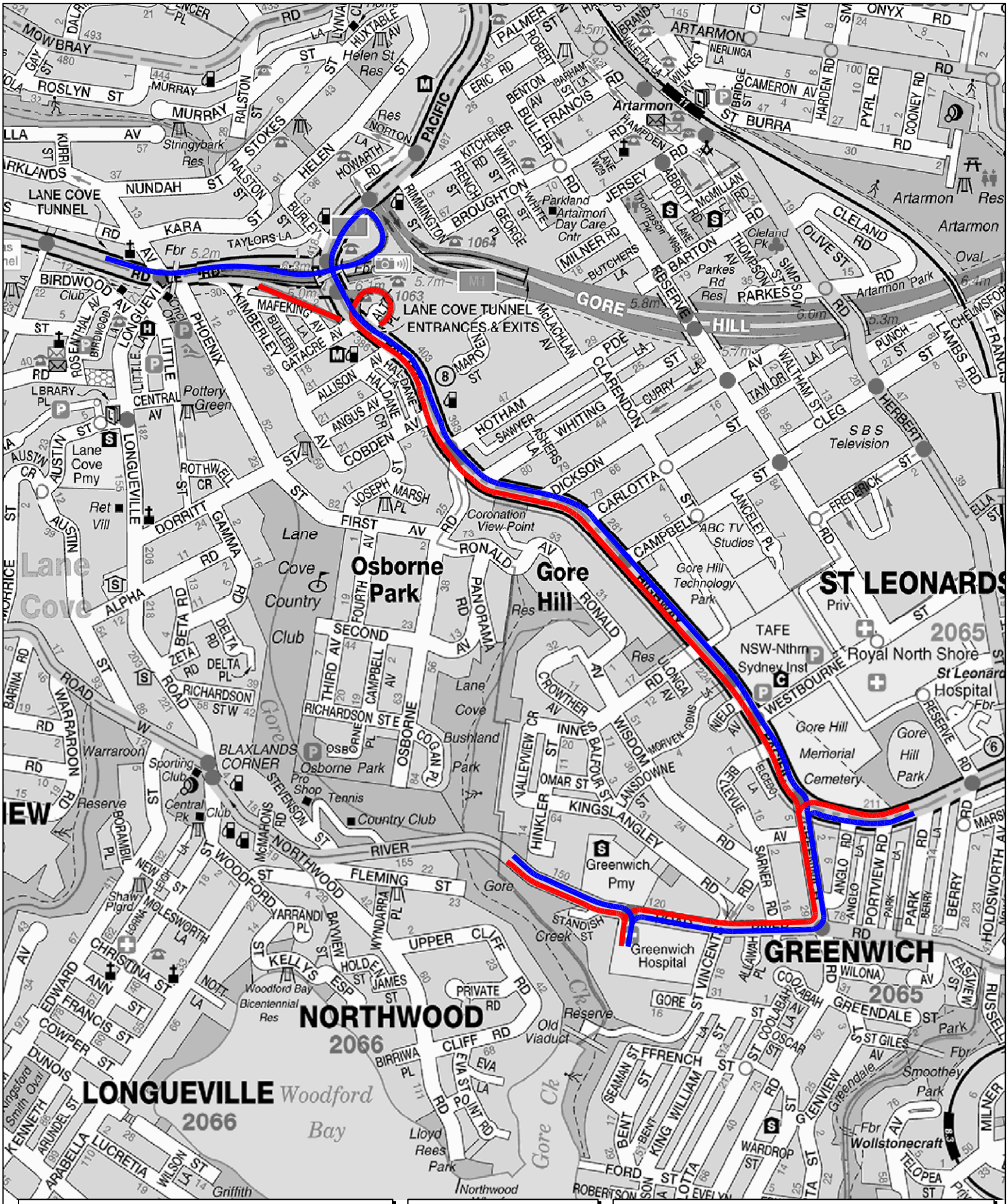
LEGEND

ARRIVAL

DEPARTURE

N

TRUCK ROUTES (STAGES 1 & 2)



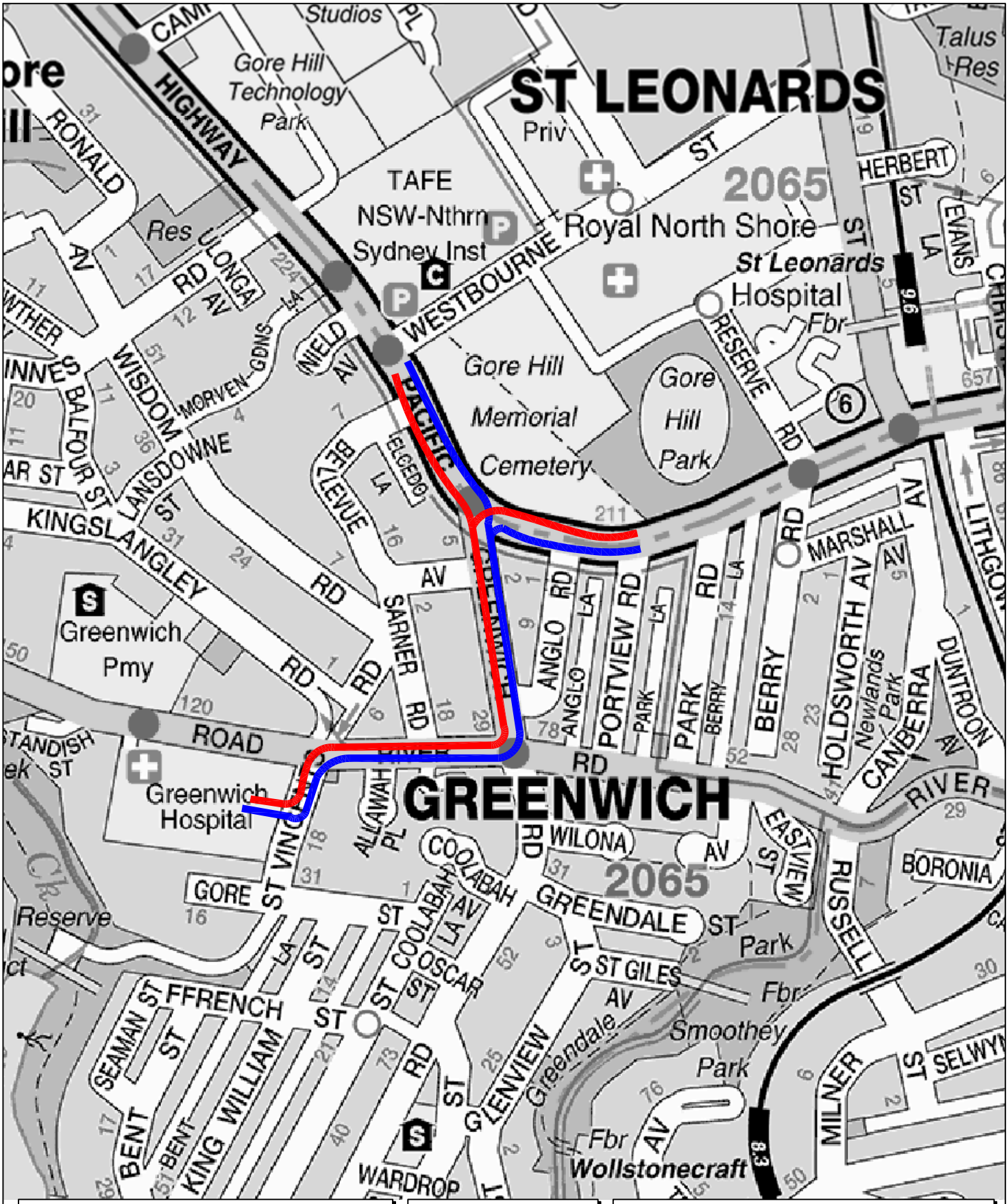
LEGEND

ARRIVAL

DEPARTURE

N

TRUCK ROUTES (STAGES 3 & 4)



LEGEND

ARRIVAL

DEPARTURE

N

TRUCK ROUTES (STAGE 5)

4.4 Materials Handling and Cleaning

Shaker grids and brush clean will be employed to prevent/rectify any wheel tracking or spoil spillage on the public road.

Site cranes will be erected and used to unload/load trucks standing within the works areas with all materials stored within the areas.

4.5 Site Induction

All workers and visitors on the site will be subject to a formal 'site induction' process and all the inductions will be performed specific to each trade according to Workcover OH & S requirements and will include instruction in regard to the requirements of the CTMP and specified construction vehicle routes.

4.6 Traffic Control Plans

Traffic control plans will be prepared and submitted to Council for approval similar to the plans provided in Appendix B.

Traffic controllers will be in place at the site entry/exit points to control heavy vehicle movements in order to maintain the safety of pedestrians and other road users.

Pedestrian and cyclist access along the footway areas will be maintained at all times.

4.7 Traffic Management Plans

The indicative Traffic Management Plans are provided in Appendix B.

4.8 On-Site Parking

Limited on-site parking will be provided for construction workers and they will be:

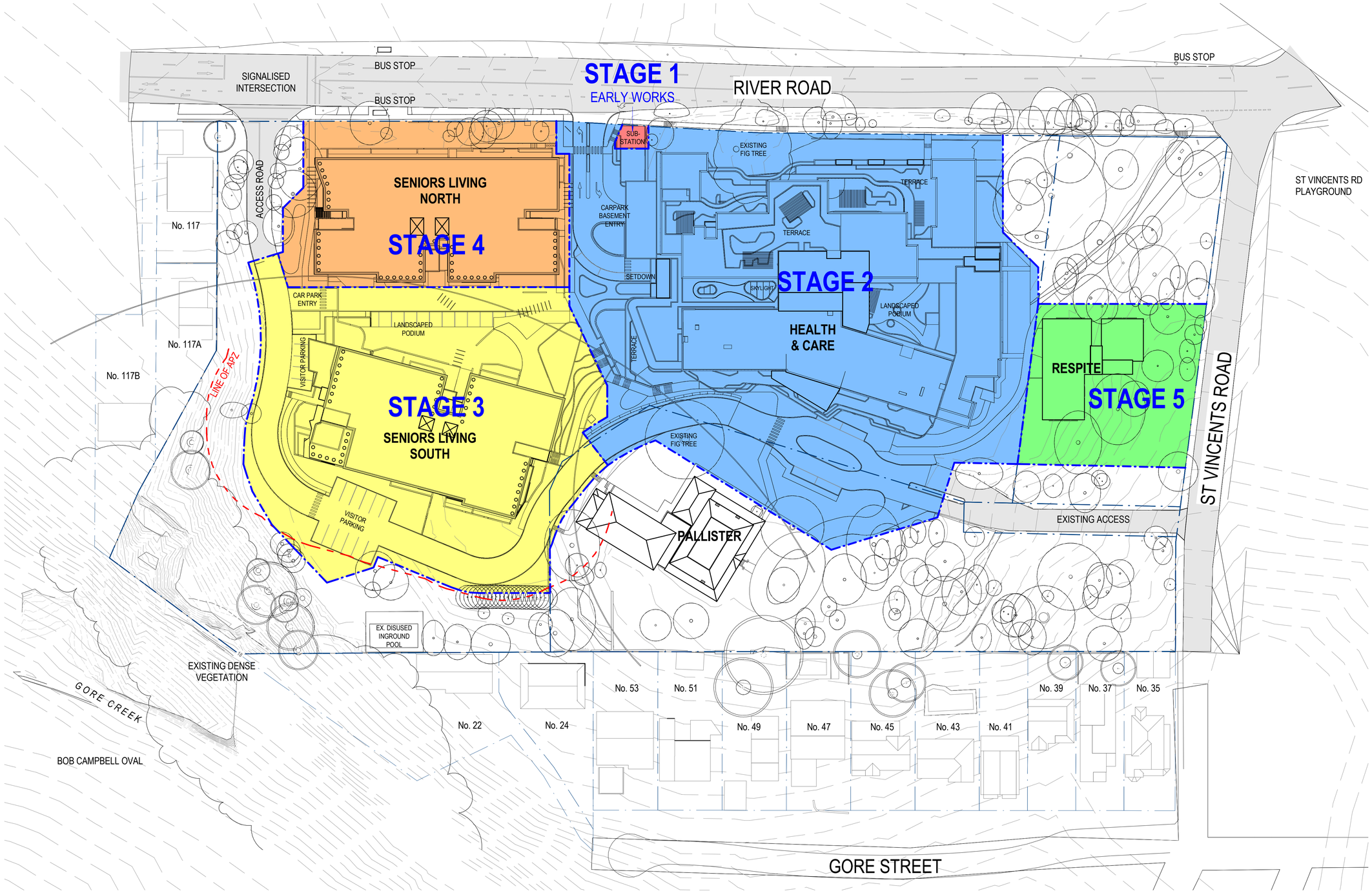
- encouraged to utilise public transport or car pool
- provided with secure on-site storage for their tools and materials.

Parking for hospital staff and visitors will be reduced in Stage 1 and 2 however, this will be offset by the temporary transfer of hospital elements (e.g. Hydrotherapy) and the reduction of some elements.

Following the completion of Stage 1 and 2, there will be some 200 parking spaces available for the new Hospital.

Appendix A

Staging Plans



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

APPROVAL ISSUE
NOT FOR CONSTRUCTION

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

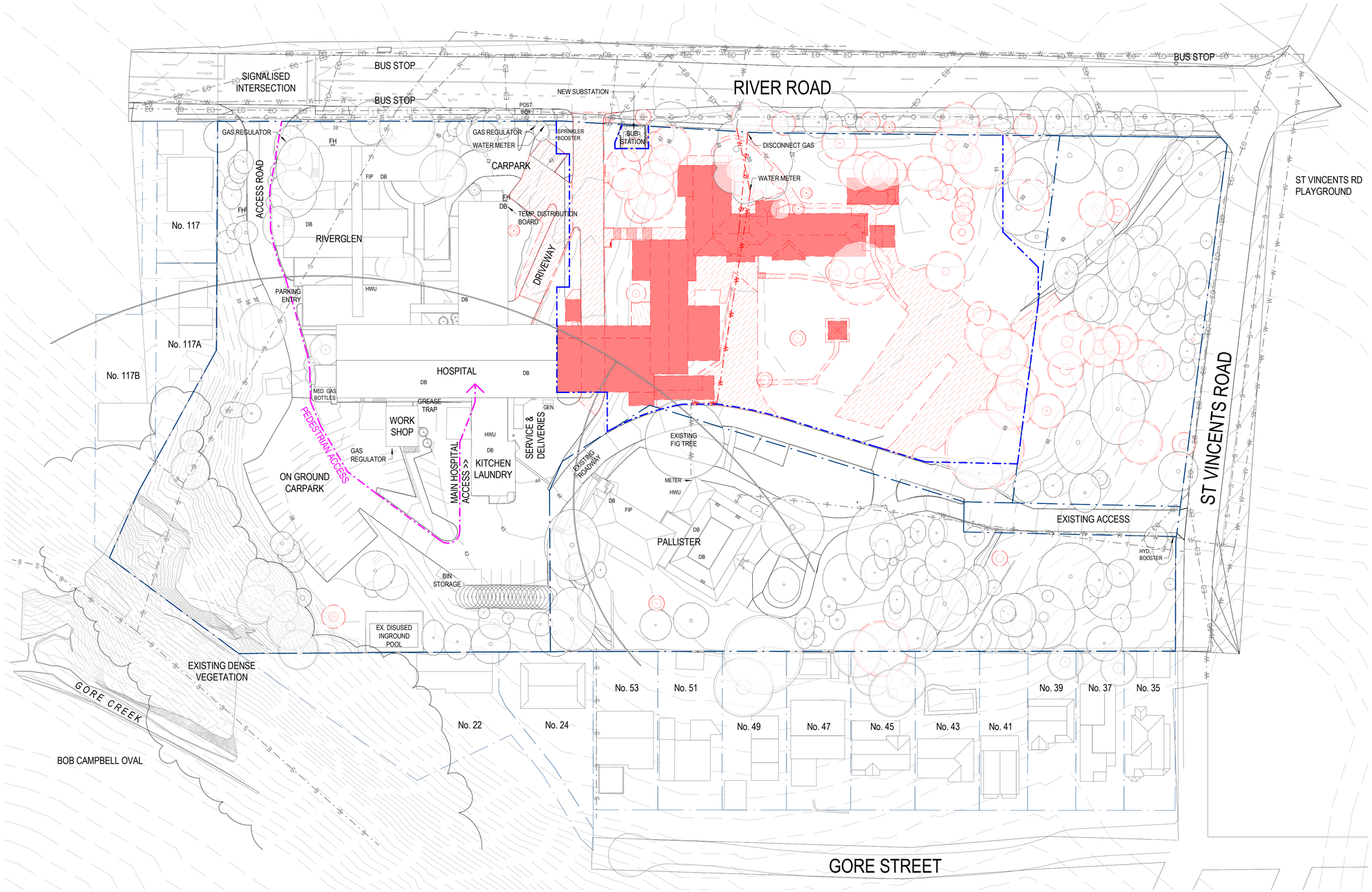
REVISION: P10
DATE: 01/15/21
DRAWING TITLE: STAGING PLAN

DRAWING No: DD-SW-0120

DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:21:59 PM



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFORDEMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0121

DRAWING TITLE: STAGE 1 PLAN - EARLY WORKS

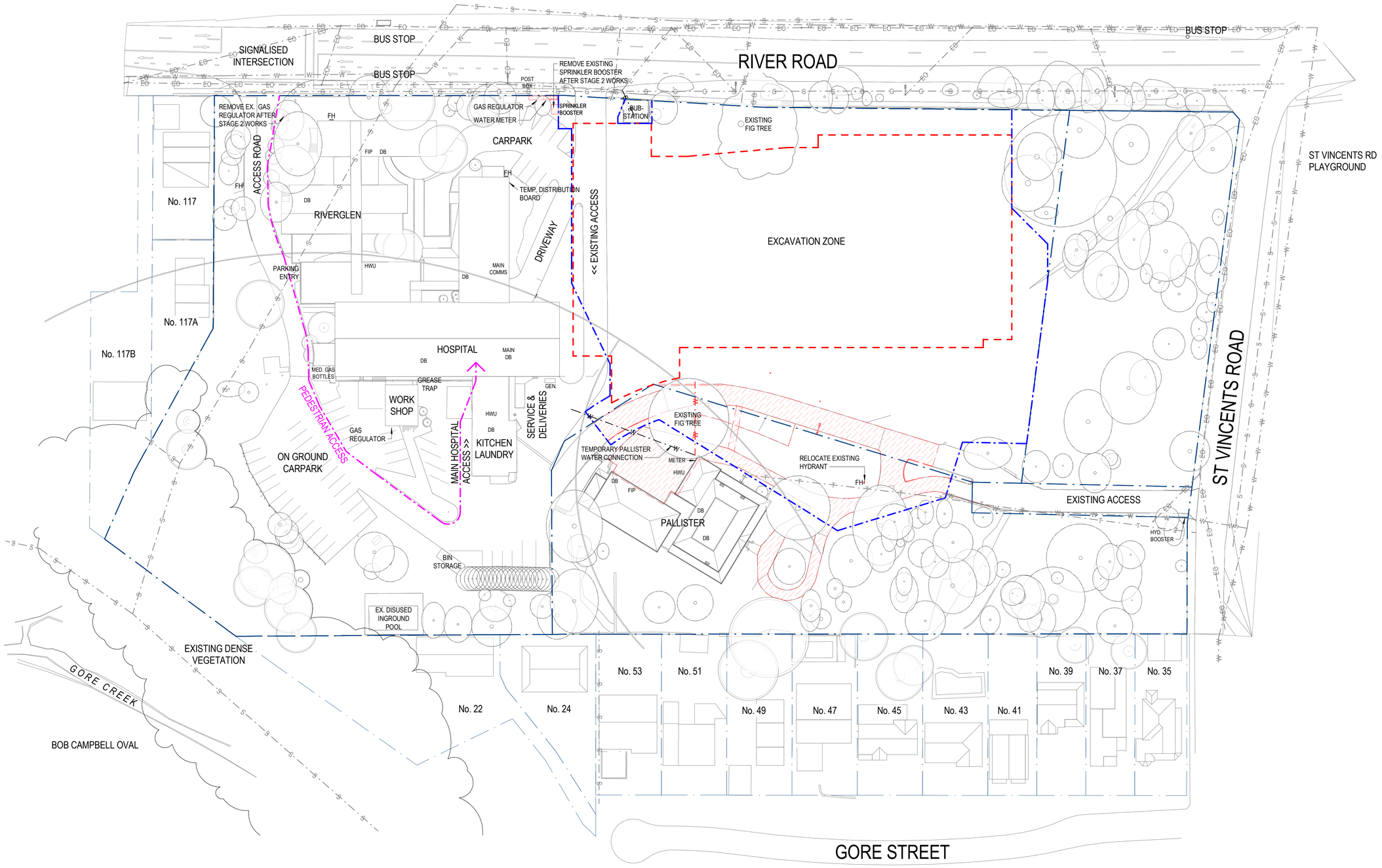
DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:25:06 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

APPROVAL ISSUE
NOT FOR CONSTRUCTION



APPROVAL ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

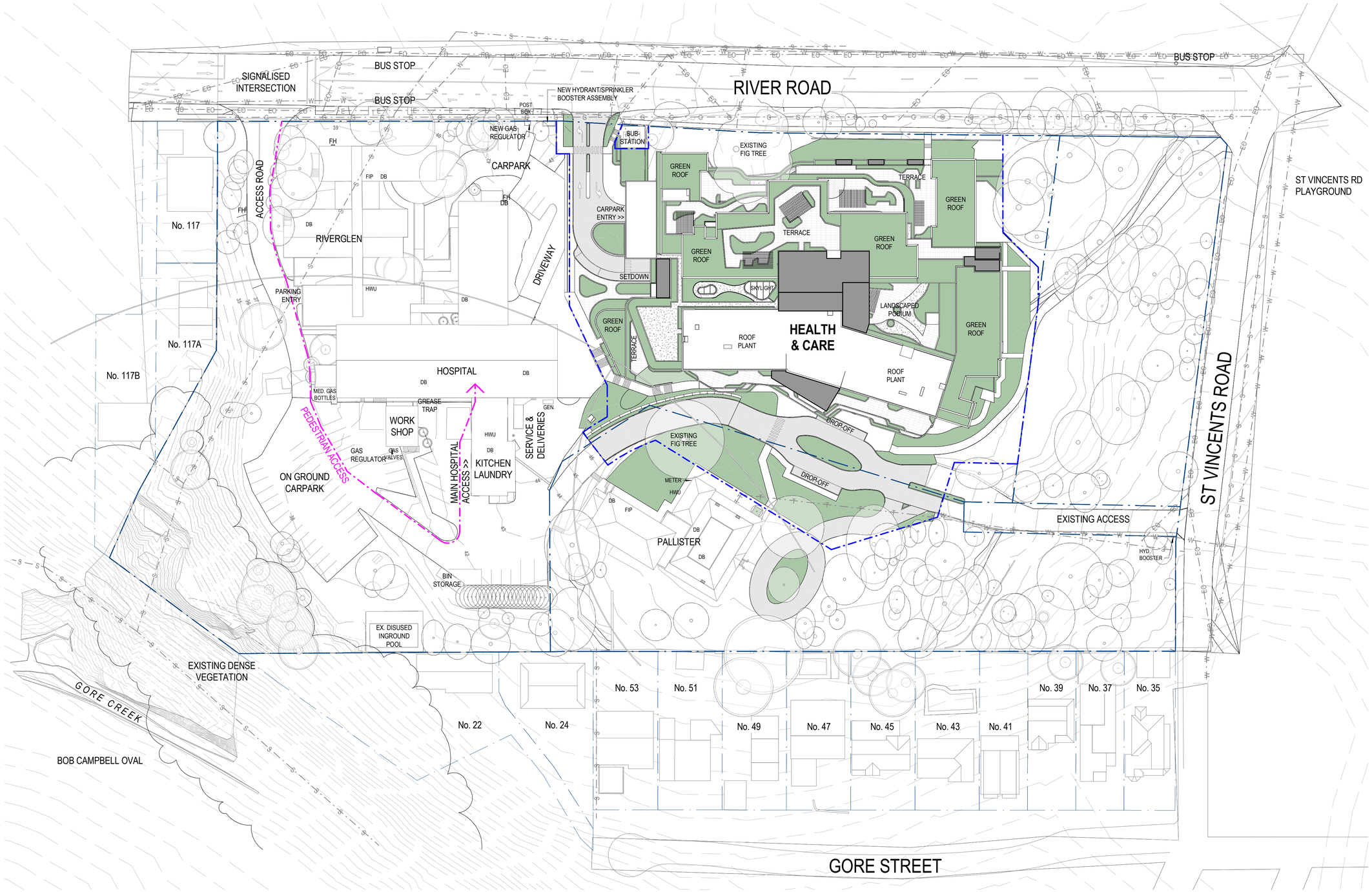
REVISION: P10
DATE: 01/18/21
DRAWING TITLE: STAGE 2.1 PLAN - DEMOLITION
DRAWING No: **DD-SW-0122**

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:26:23 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0123

DRAWING TITLE: STAGE 2.2 PLAN - CONSTRUCTION

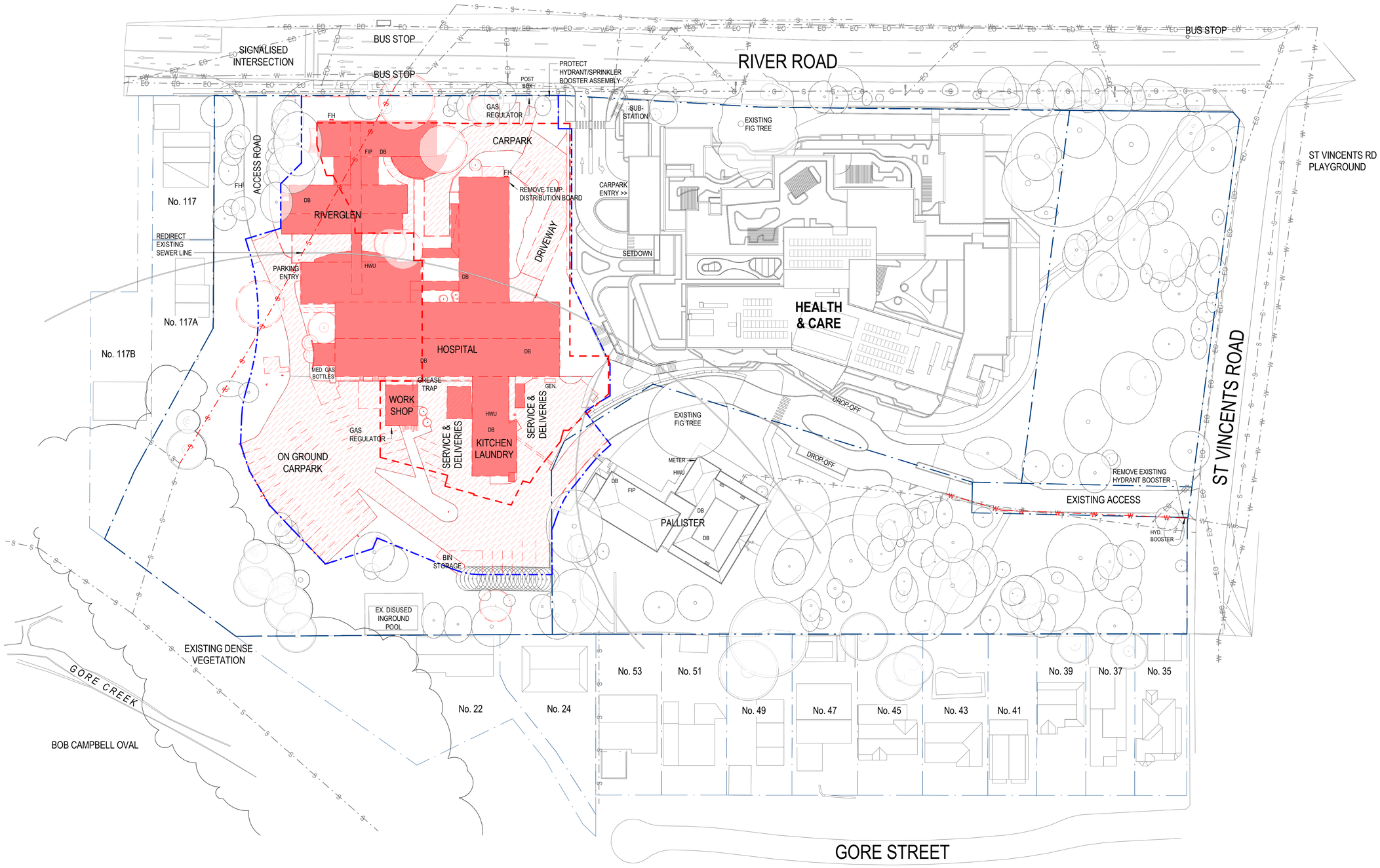
DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:27:49 PM

APPROVAL ISSUE

NOT FOR CONSTRUCTION



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0124

DRAWING TITLE: STAGE 3.1 PLAN - DEMOLITION

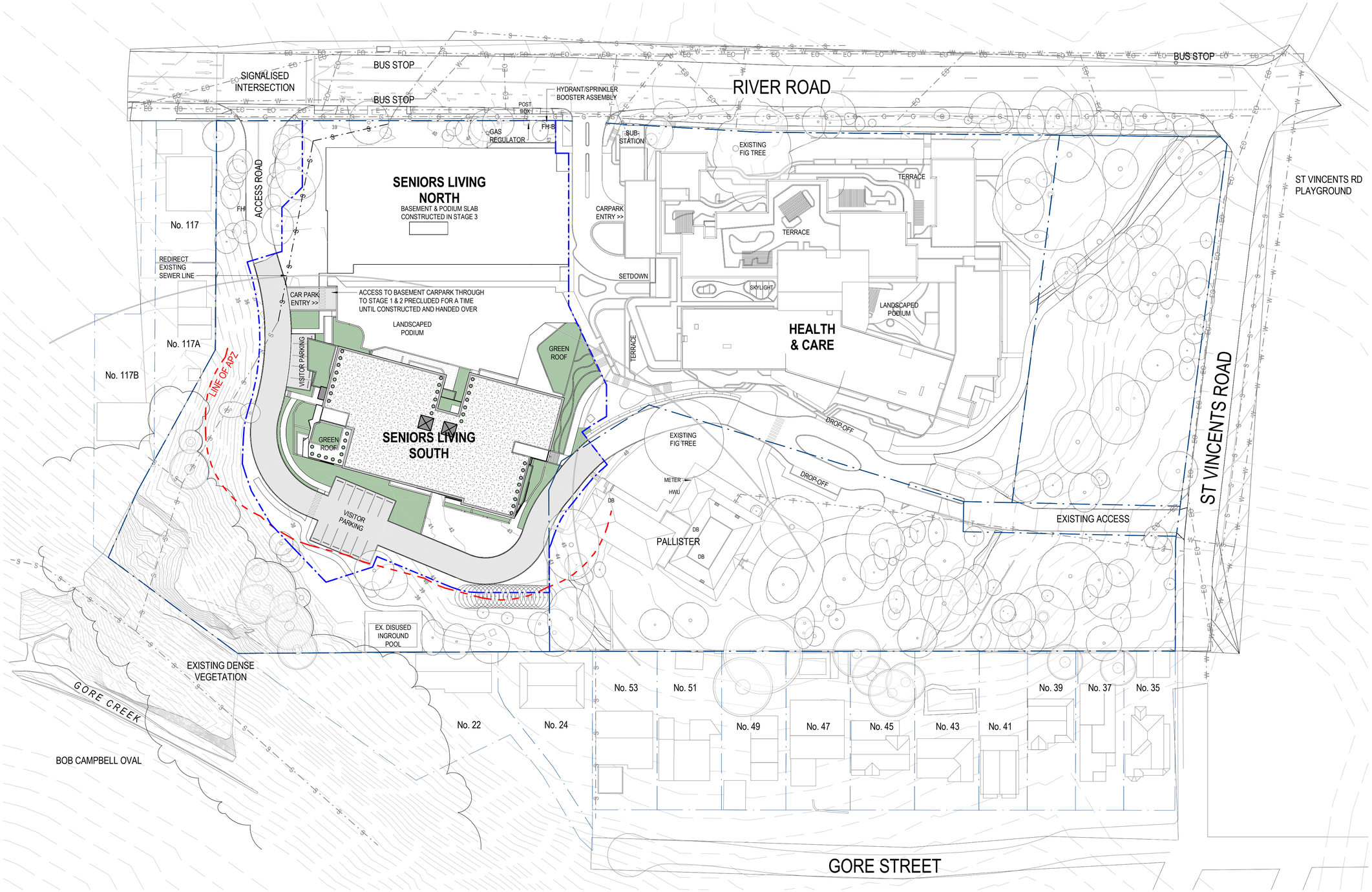
DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:29:21 PM

APPROVAL ISSUE

NOT FOR CONSTRUCTION



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

APPROVAL ISSUE
NOT FOR CONSTRUCTION

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

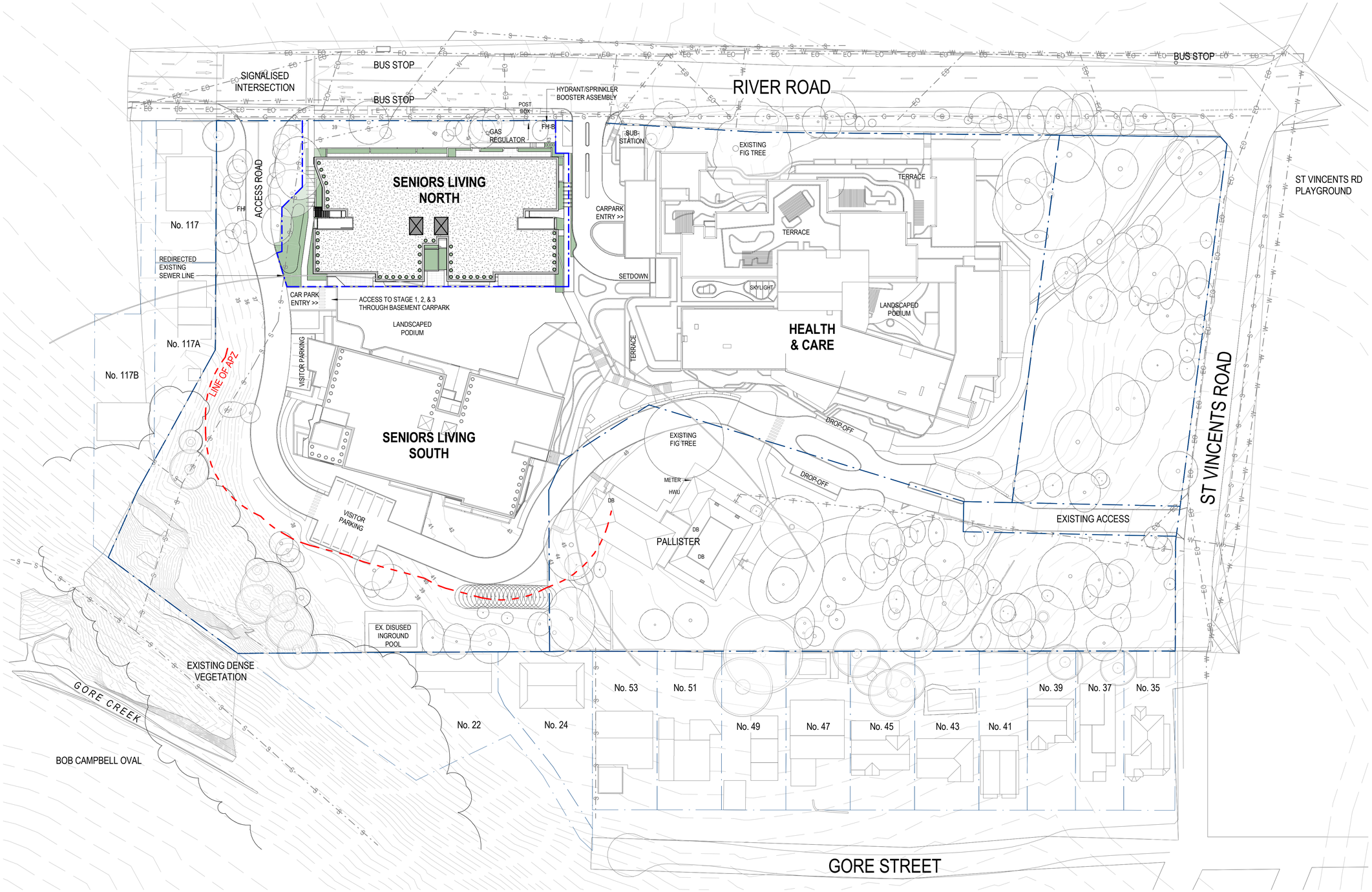
REVISION: P10
DATE: 01/18/21
DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION

DRAWING No: DD-SW-0125

DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:30:40 PM



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 02/10/22
DRAWING TITLE: STAGE 4 PLAN - CONSTRUCTION

DRAWING No: DD-SW-0126

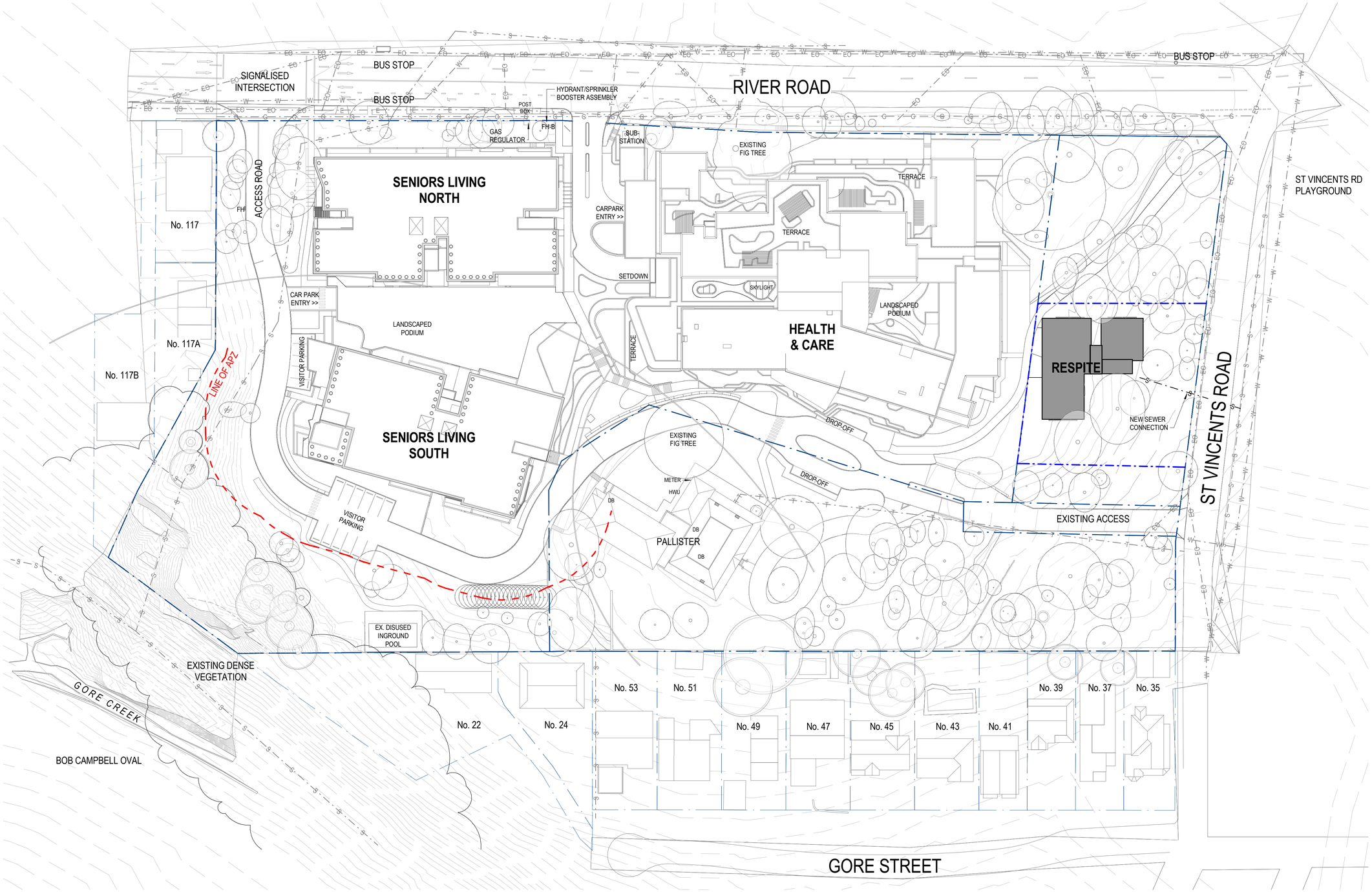
DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:32:00 PM

APPROVAL ISSUE

NOT FOR CONSTRUCTION



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

APPROVAL ISSUE
NOT FOR CONSTRUCTION

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21
DRAWING No: DD-SW-0127
DRAWING TITLE: STAGE 5 PLAN - CONSTRUCTION

DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

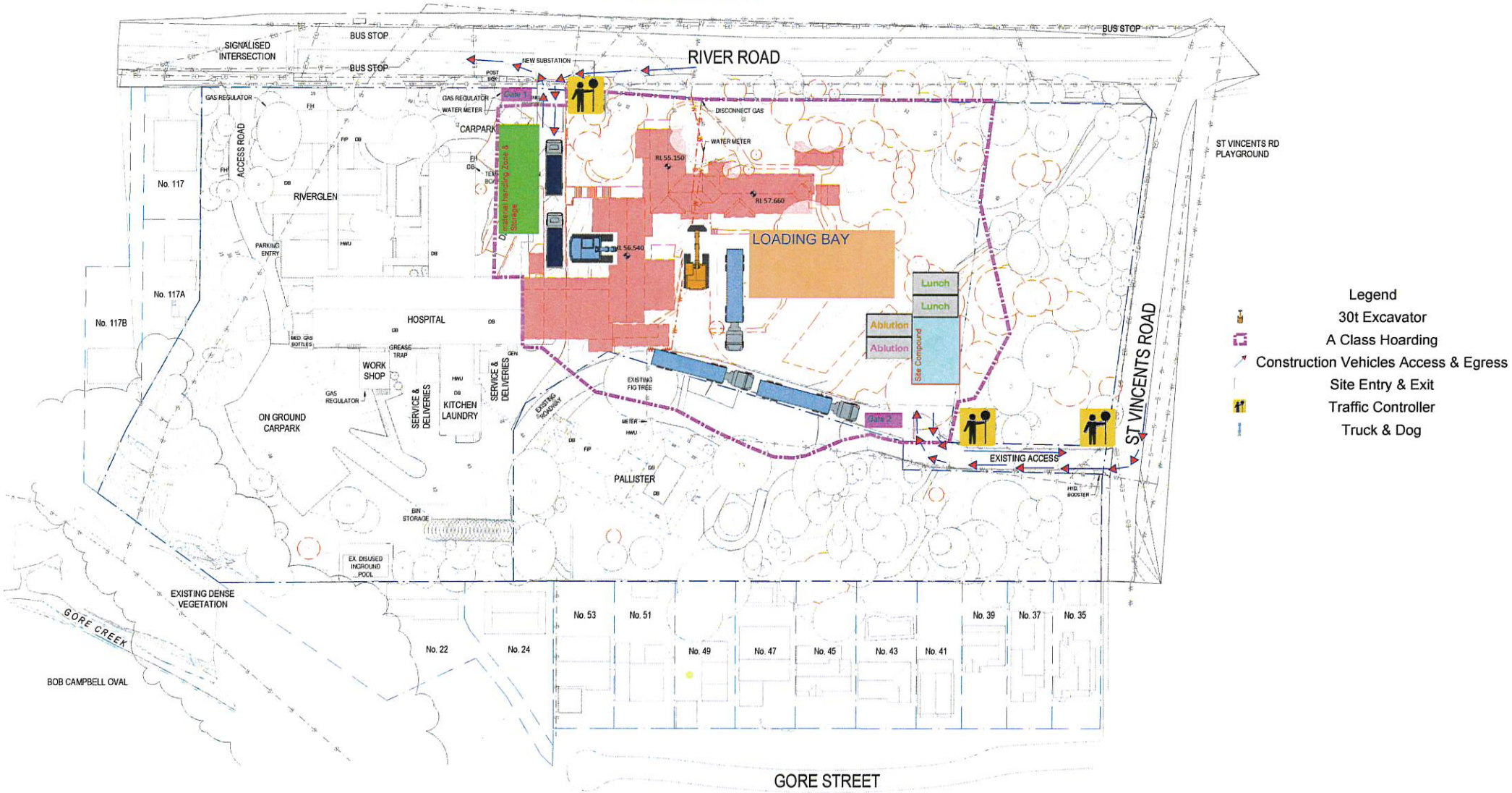
NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:33:19 PM

Appendix B

Traffic Management Plans

STAGE 1 & 2
DEMOLITION



Legend

- 30t Excavator
- A Class Hoarding
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller
- Truck & Dog

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BH HEDE PTY LTD (ACN 618 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:_Revit Projects\SW-AR-GREENWICH_andrewmacl.RYHR.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.06	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SITE DEMOLITION PLAN LEGEND

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 8051 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

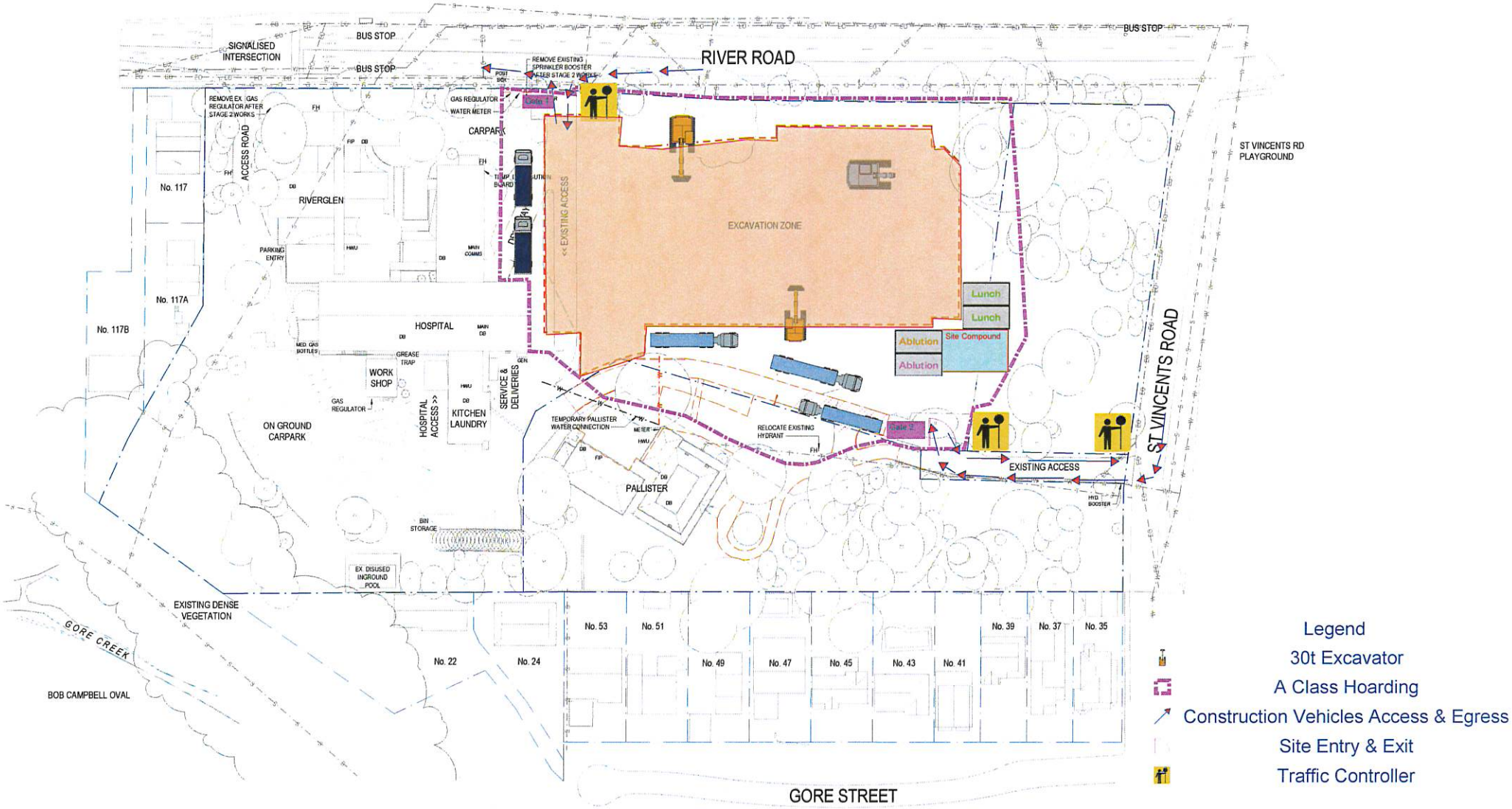
REVISION: P7
DATE: 01/10/21
DRAWING No: DD-SW-0121
DRAWING TITLE: STAGE 1 PLAN - EARLY WORKS

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW I MASTERS (6937)

5/04/2022 5:15:48 PM

STAGE 1 & 2
EXCAVATION



Legend

- 30t Excavator
- A Class Hoarding
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 149 215 149) T/A BICKERTON MASTERS AND BIM HEDE PTY LTD (ACN 638 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SITE DEMOLITION PLAN LEGEND

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 01/18/21
DRAWING TITLE: STAGE 2.1 PLAN - DEMOLITION

DRAWING No: **DD-SW-0122**

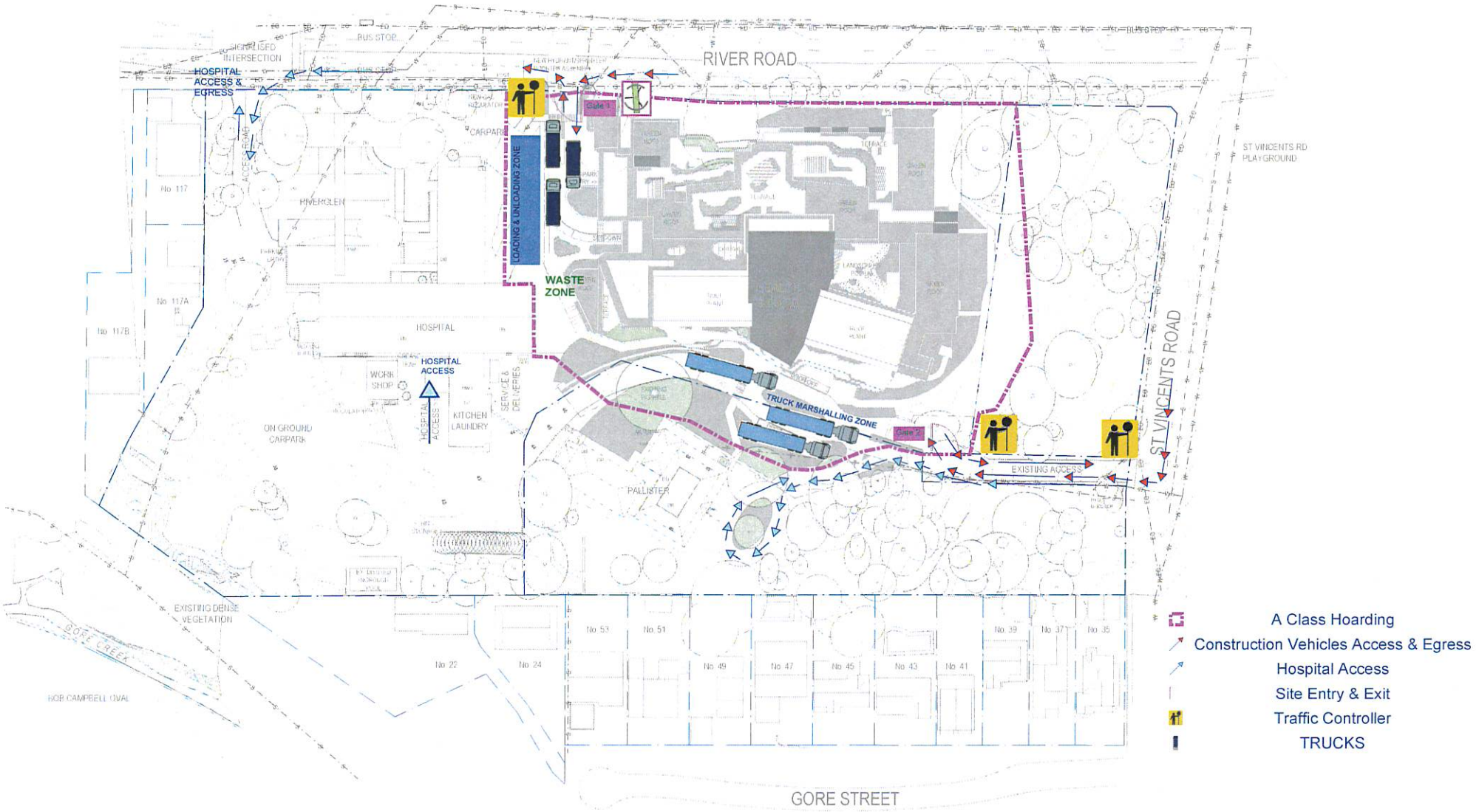
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

C:_Revit Projects\SW-AR-GREENWICH_andrewmacHRYHN.rvt

NSW NOMINATED ARCHITECT: ANDREW HASTERS (9437)

8/04/2022 5:17:12 PM

STAGE 1 & 2 CONSTRUCTION TRAFFIC PLN



1 : 500 @ A1

REV	DATE	DETAILS	INITIALS
P7	[illegible]	[illegible]	[illegible]
P6	[illegible]	[illegible]	[illegible]
P5	[illegible]	[illegible]	[illegible]
P4	[illegible]	[illegible]	[illegible]
P3	[illegible]	[illegible]	[illegible]
P2	[illegible]	[illegible]	[illegible]

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: GREENWICH HOSPITAL REDEVELOPMENT RIVER RD, GREENWICH

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

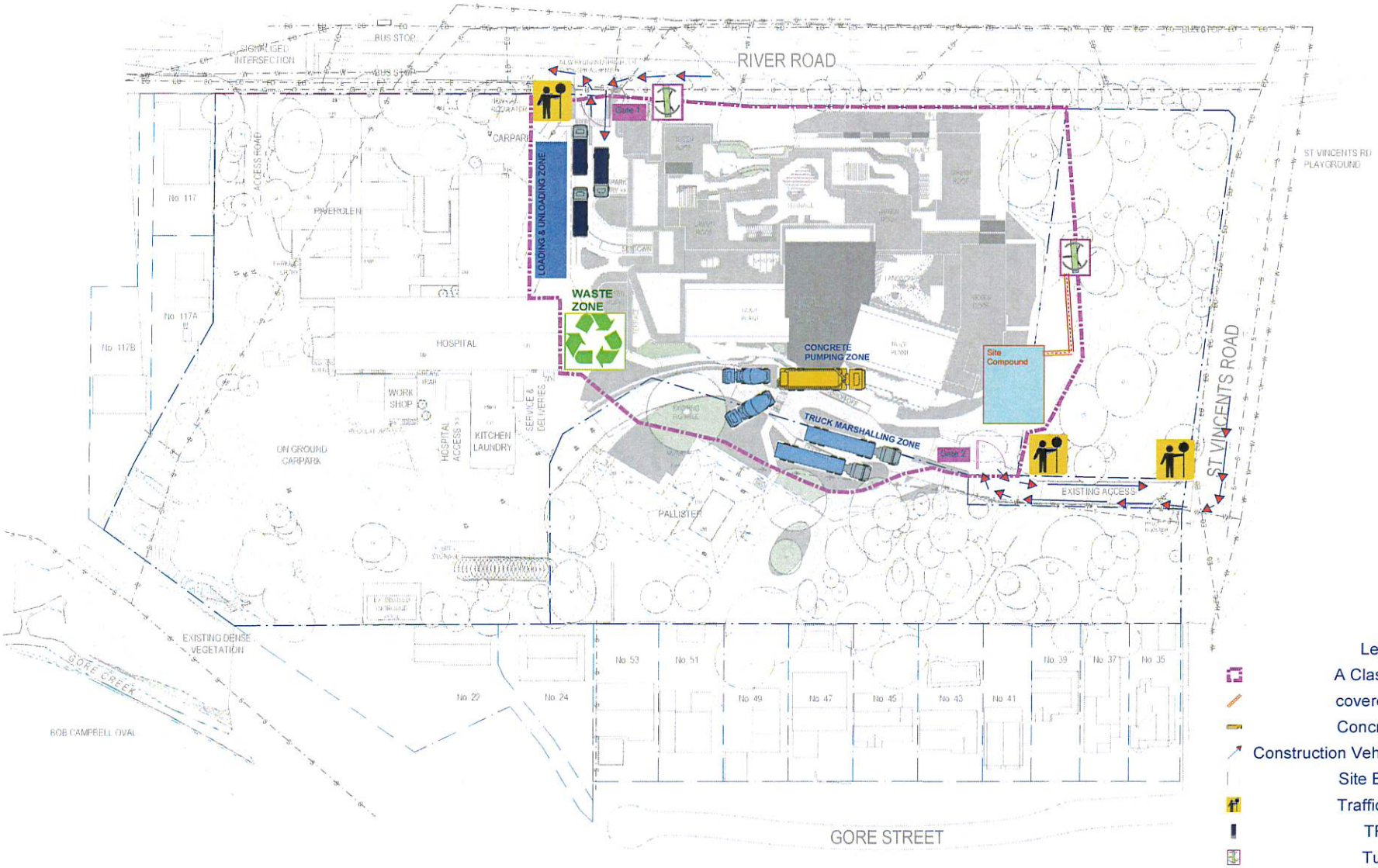
REVISION: P7

DRAWING No: DD-SW-0123

DRAWING TITLE: STAGE 2.2 PLAN - CONSTRUCTION

DRAWN: [illegible] CHECKED: SCALE: [illegible]

STAGE 1 & 2 SITE MANAGEMENT - facade, structure & finishes



Legend

- A Class Hoarding
- covered walkway
- Concrete Pumps
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller
- TRUCKS
- Turnstiles

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

REV	DATE	DETAILS	INITIALS
P7	30/09/21	COORDINATED WITH REPORT (NOTE P7)	ABW
P6	29/09/21	ISSUE DRAFT PRELIMINARY ISSUE	ABW
P5	27/09/21	ISSUE TO CONSULTANTS	NRH
P4	20/09/21	ISSUE TO CONSULTANTS	NRH
P3	20/09/21	CATESSA	NRH
P2	13/09/21	WORK IN PROGRESS	NRH

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT
HammondCare Champion Life

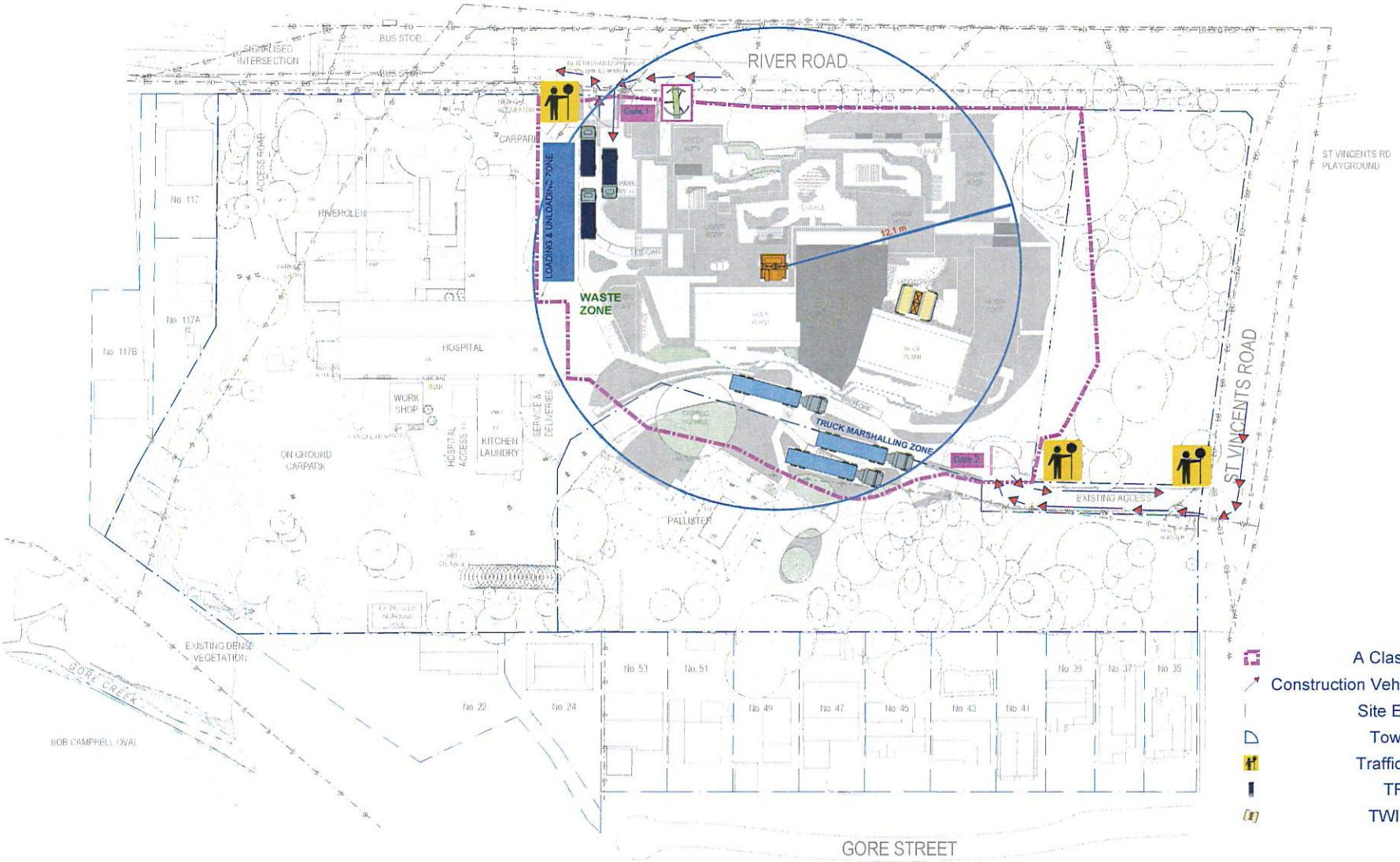
PROJECT
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

REVISION P7
DATE
DRAWING No **DD-SW-0123**
DRAWING TITLE
STAGE 2.2 PLAN - CONSTRUCTION

DRAWN
CHECKED
SCALE

STAGE 1 & 2 MATERIAL HANDLING



A Class Hoarding
Construction Vehicles Access & Egress
Site Entry & Exit
Tower Crane
Traffic Controller
TRUCKS
TWIN HOIST

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

REV	DATE	DETAILS	INITIALS
P7	[illegible]	[illegible]	[illegible]
P6	[illegible]	[illegible]	[illegible]
P5	[illegible]	[illegible]	[illegible]
P4	[illegible]	[illegible]	[illegible]
P3	[illegible]	[illegible]	[illegible]
P2	[illegible]	[illegible]	[illegible]

NORTH

SYDNEY
(02) 9261 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.tickertonmasters.com.au

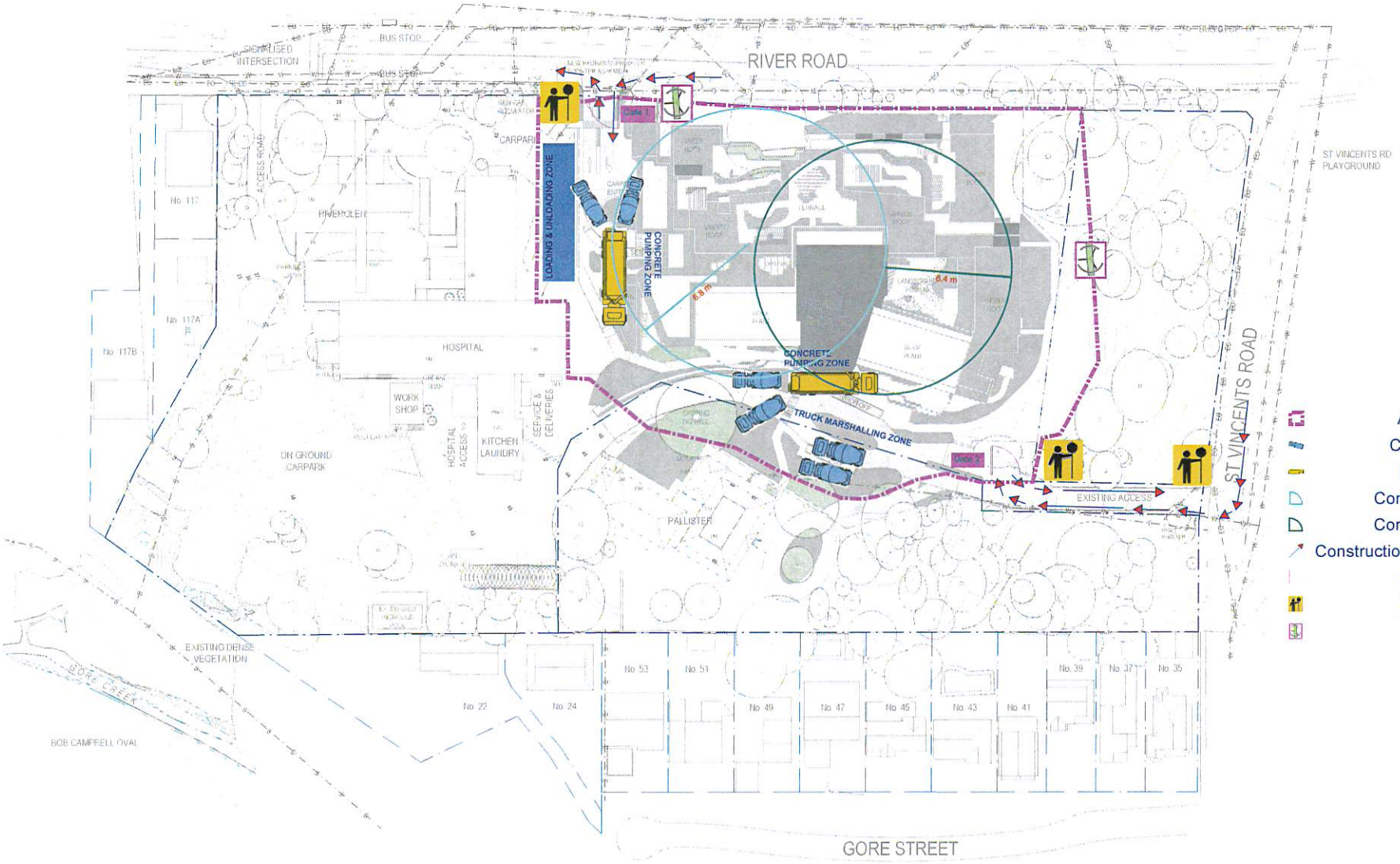
CLIENT
HammondCare Champion Life

PROJECT
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

REVISION P7
DATE
DRAWING No **DD-SW-0123**
DRAWING TITLE STAGE 2.2 PLAN - CONSTRUCTION
DRAWN
CHECKED
SCALE

STAGE 1 & 2 SITE MANAGEMENT - facade, structure & finishes



A Class Hoarding
Concrete Agi trucks
Concrete Pumps
Concrete Tower Boom 1
Concrete Tower Boom 2
Construction Vehicles Access & Egress
Site Entry & Exit
Traffic Controller
Turnstiles

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

REV	DATE	DETAILS	INITIALS
P5	[illegible]	[illegible]	[illegible]
P4	[illegible]	[illegible]	[illegible]
P3	[illegible]	[illegible]	[illegible]
P2	[illegible]	[illegible]	[illegible]
P1	[illegible]	[illegible]	[illegible]

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

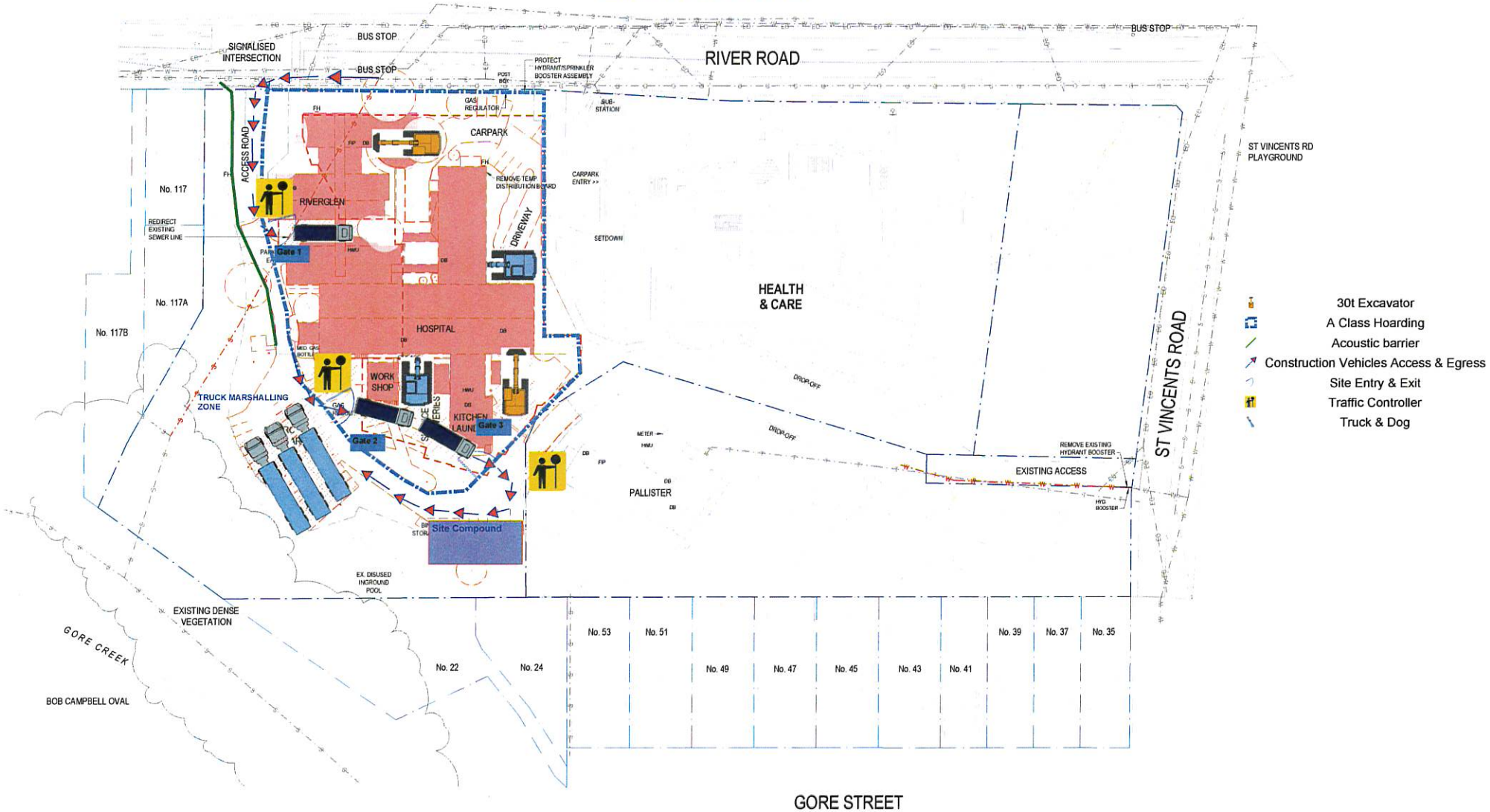
CLIENT
HammondCare Champion Life

PROJECT
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

REVISION P7
DATE
DRAWING No DD-SW-0123
DRAWING TITLE STAGE 2.2 PLAN - CONSTRUCTION
DRAWN
CHECKED
SCALE

STAGES 3 & 4 DEMOLITION AND EXCAVATION PLN



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 108 225 149) T/A BICKERTON MASTERS AND BH HEDE PTY LTD (ACN 628 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:\Revit Projects\SW-AR-GREENWICH_andrewmacRYHH.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SITE DEMOLITION PLAN LEGEND

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

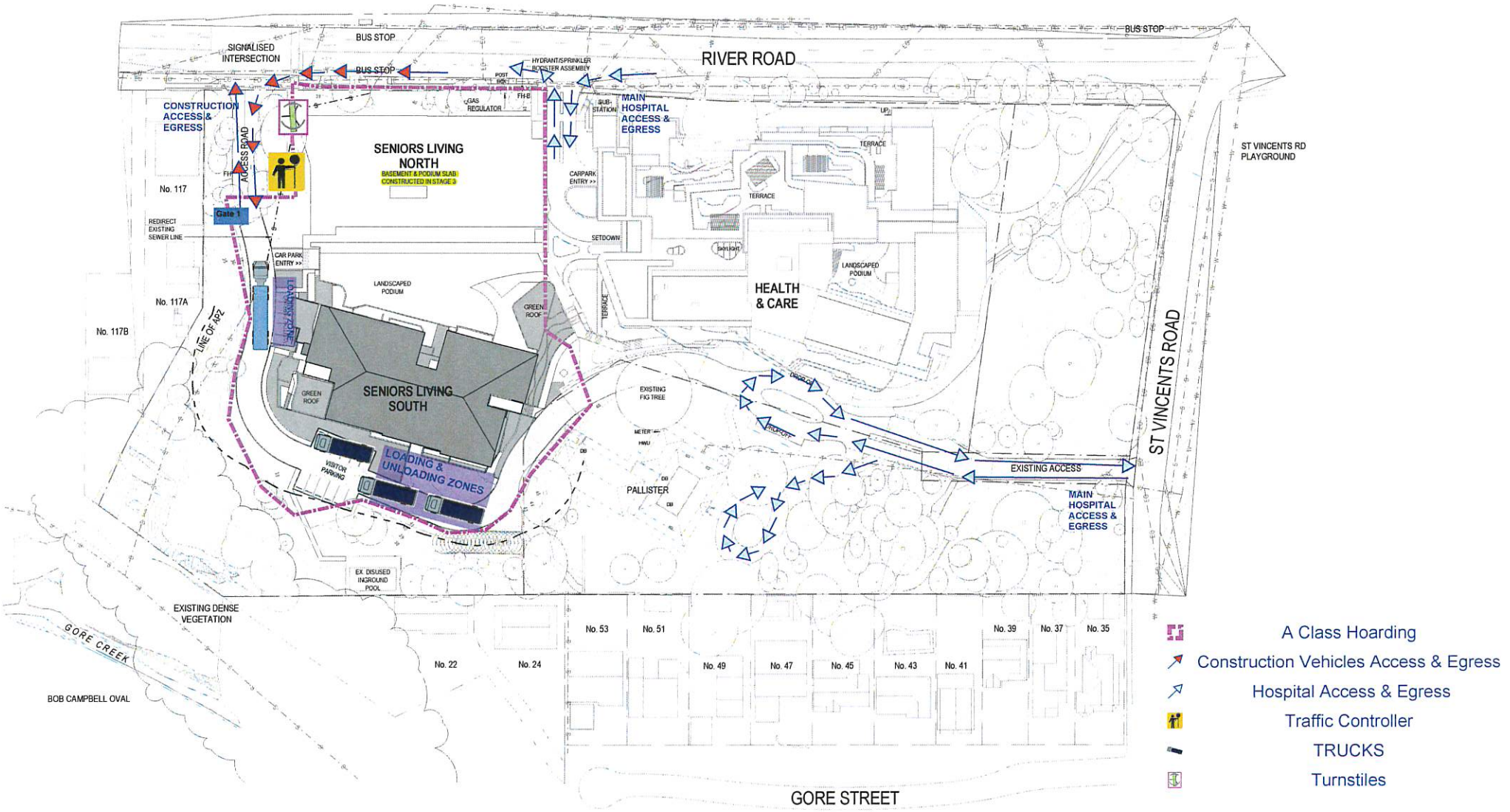
REVISION: P7
DATE: 01/10/21
DRAWING No: DD-SW-0124
DRAWING TITLE: STAGE 3.1 PLAN - DEMOLITION

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MACRAE (6337)

8/04/2022 5:20:35 PM

STAGE 3 CONSTRUCTION TRAFFIC



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 108 225 146) T/A BICKERTON MASTERS AND BH HEDE PTY LTD (ACN 638 149 994) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

C:\Revit Projects\SW-AR-GREENWICH_andrewmacNRYHRI.rvt

SYDNEY
(02) 9281 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

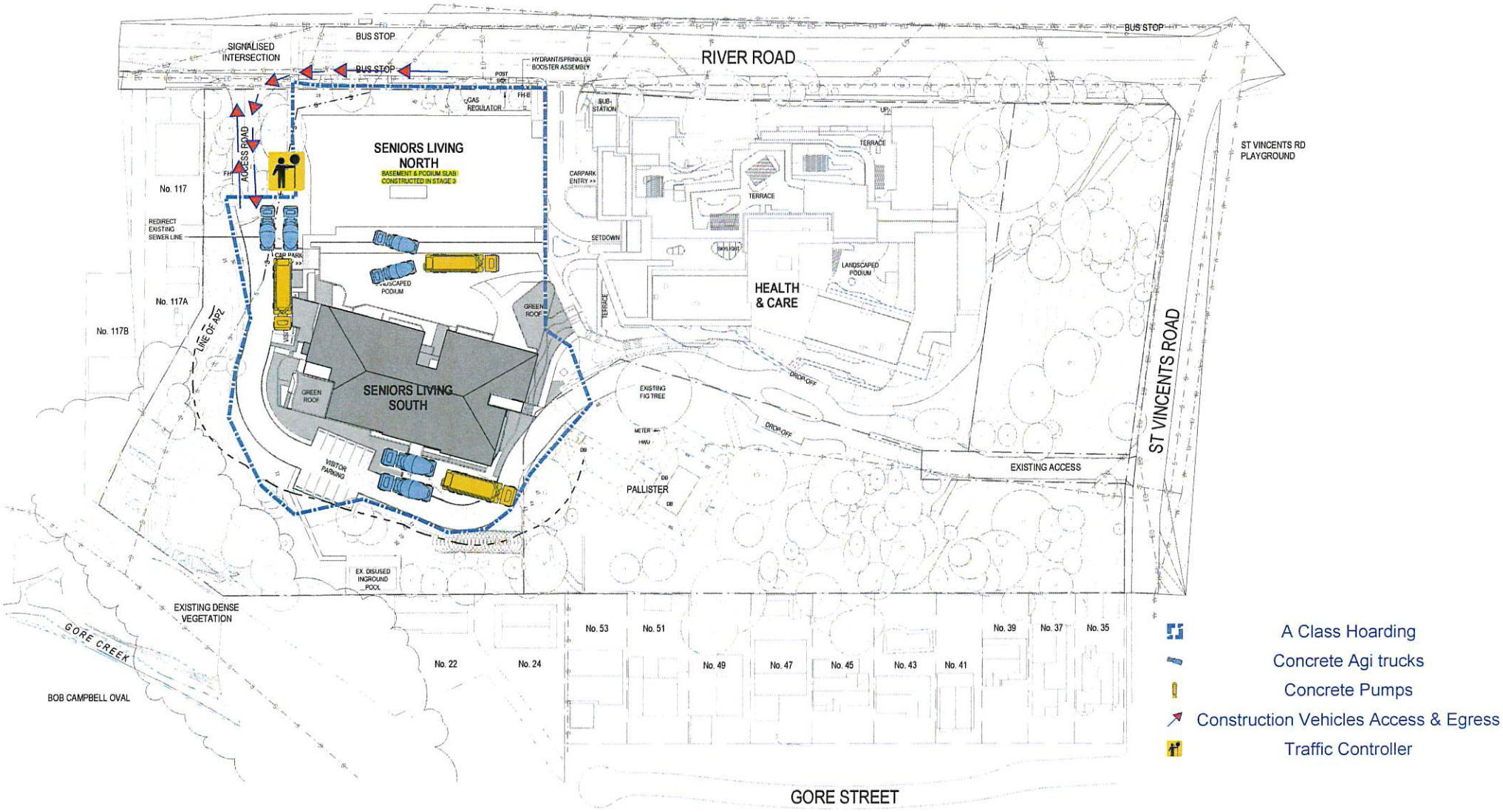
CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 01/10/21
DRAWING No: DD-SW-0125
DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9437) 8/04/2022 5:22:06 PM

STAGE 3 CONCRETE PUMPING ZONES



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 139 225 148) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 638 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHH.rvt

SYDNEY
(02) 9281 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

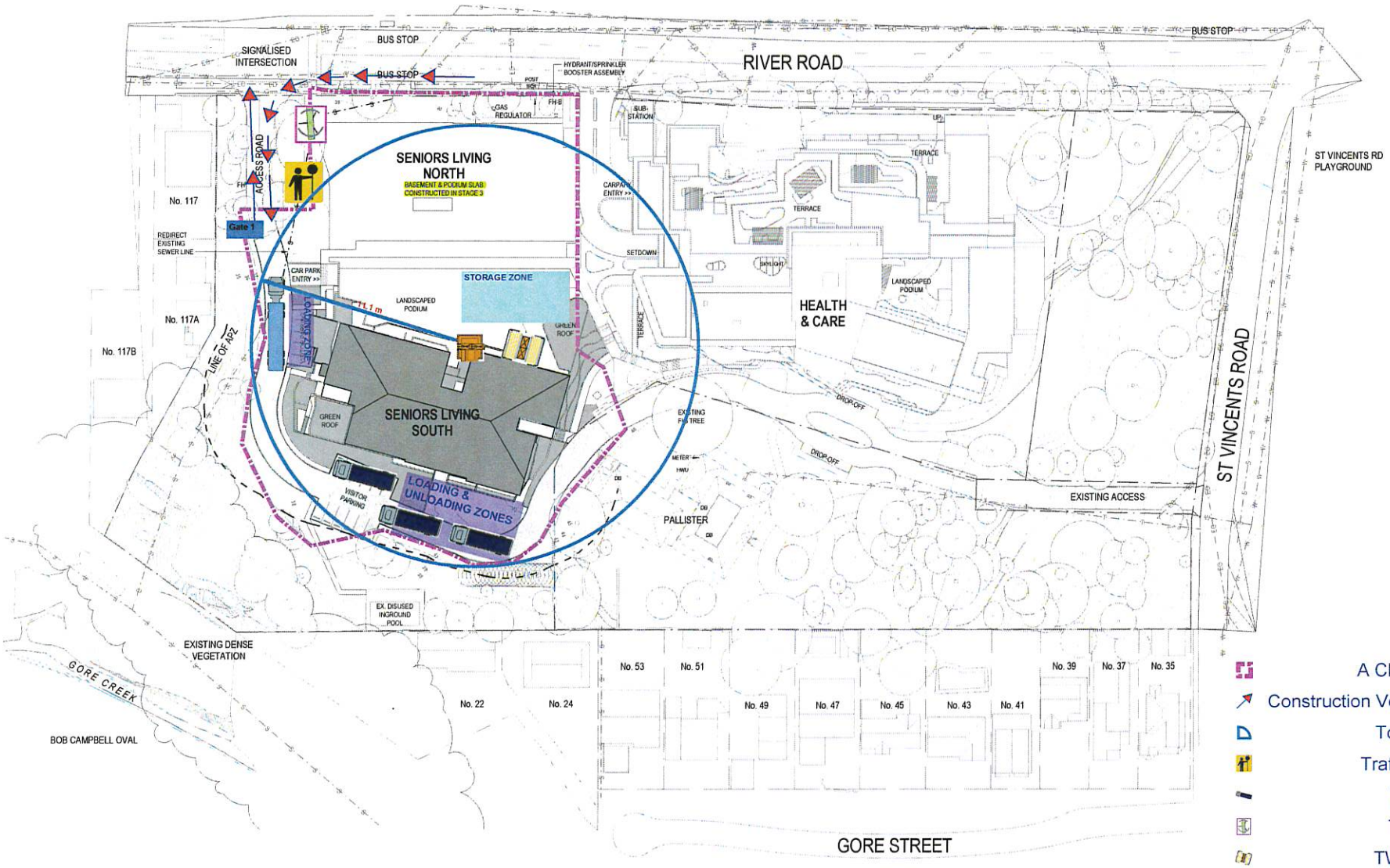
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 01/10/21
DRAWING No: DD-SW-0125
DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037) 8/04/2022 5:22:06 PM

STAGE 3 MATERIAL HANDLING



- A Class Hoarding
- Construction Vehicles Access & Egress
- Tower Crane
- Traffic Controller
- TRUCKS
- Turnstiles
- TWIN HOIST

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

©1 COPYRIGHT
THESE DRAWINGS AND DESIGNS ARE THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 108 225 149) T/A BICKERTON MASTERS AND BIM HEDE PTY LTD (ACN 628 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE

C:_Revit Projects\SW-AR-GREENWICH_andrewmacHRYHH.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SYDNEY
(02) 9281 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

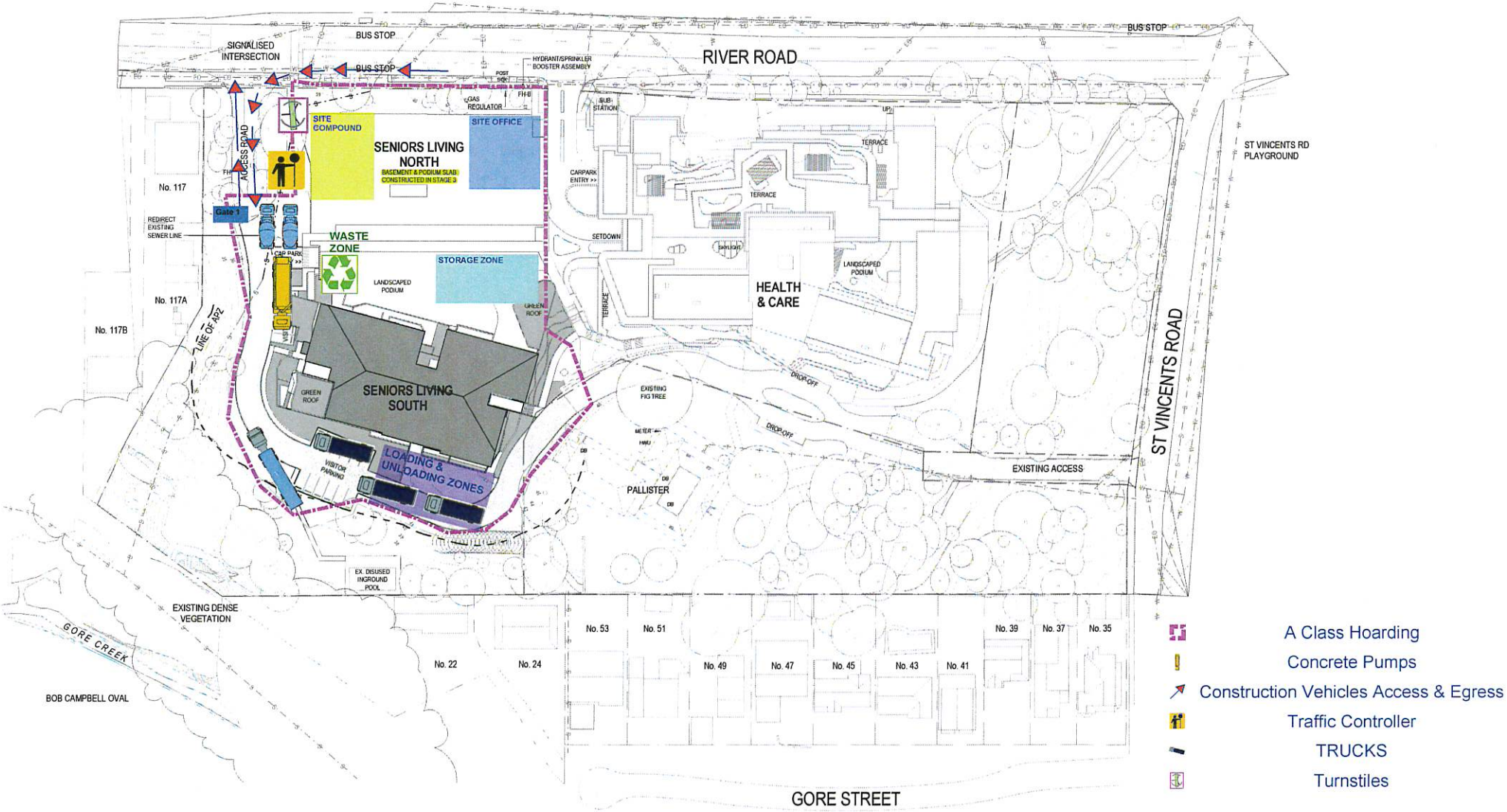
CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 01/10/21
DRAWING No: DD-SW-0125
DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MACFARLANE (6637)
8/04/2022 5:22:06 PM

STAGE 3 SITE MANAGEMENT



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BH HEDE PTY LTD (ACN 638 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:_Revit Projects\SW-AR-GREENWICH_andrewmacHRYHH.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SYDNEY
(02) 9281 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

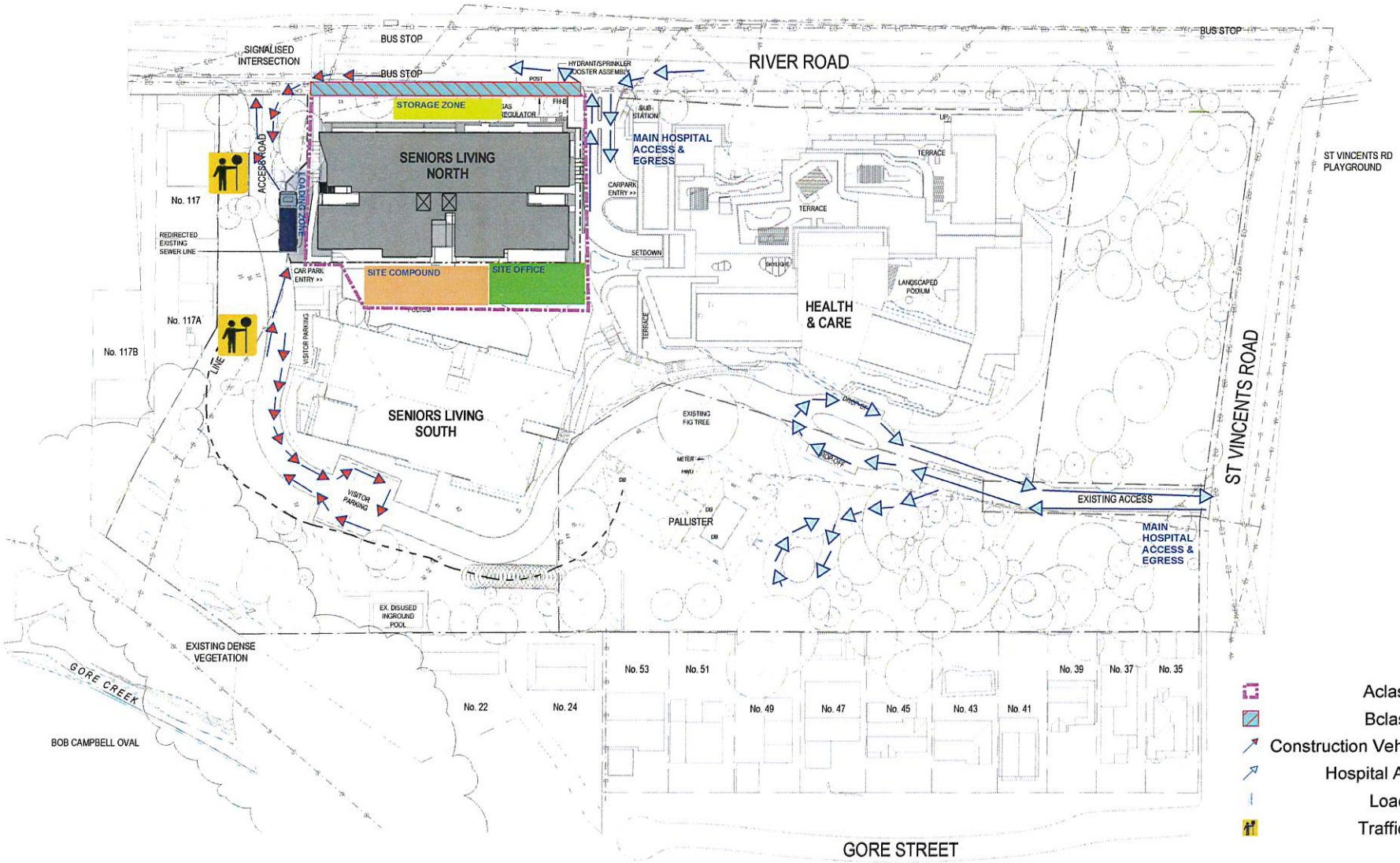
CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 01/18/21
DRAWING No: DD-SW-0125
DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9637) 8/04/2022 5:22:06 PM

STAGE 4 SITE MANAGEMENT



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 100 225 146) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 638 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE

C:_Revit Projects\SW-AR-GREENWICH_andrewmacHRYHfl.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

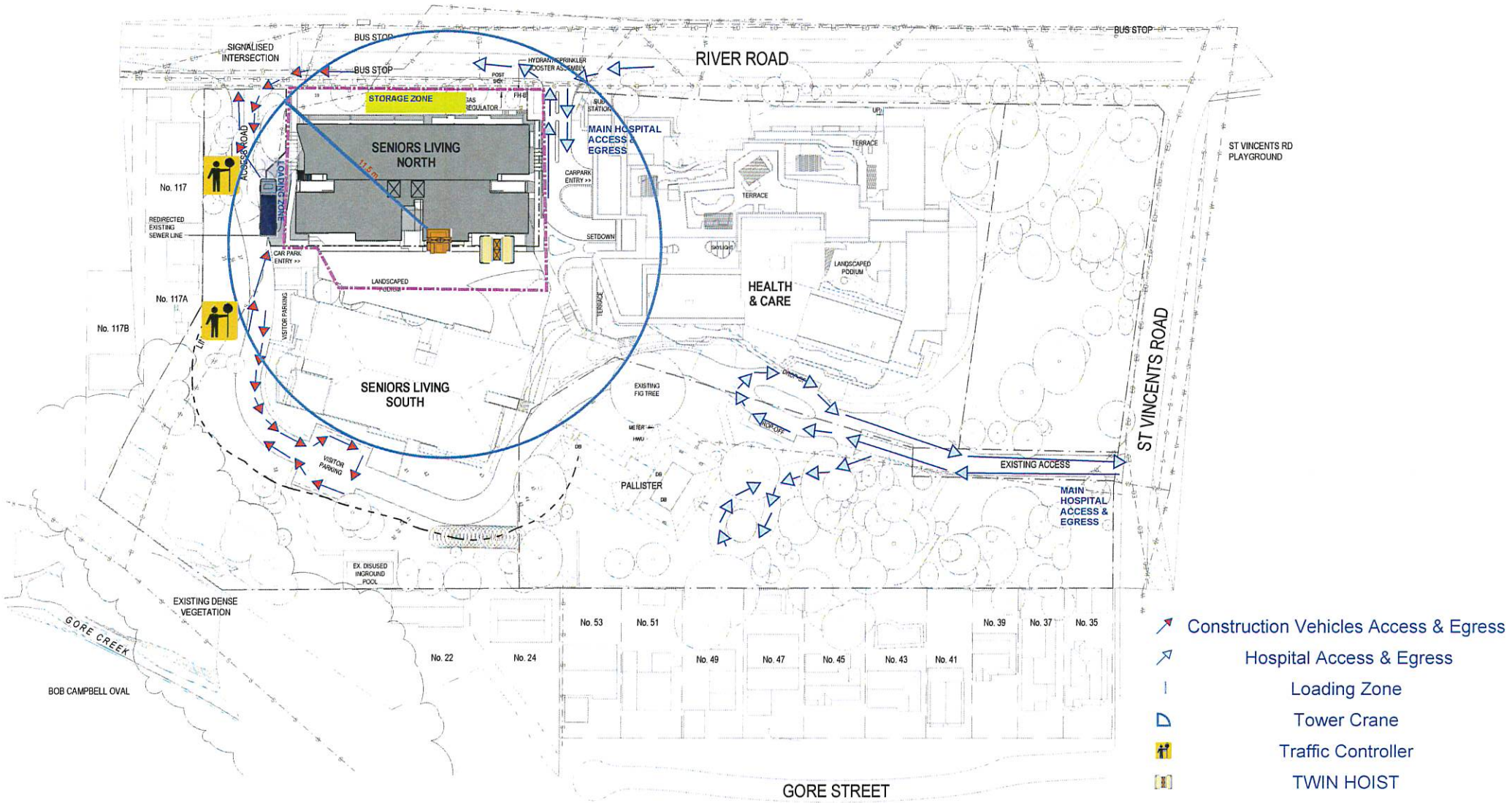
SYDNEY
(02) 9281 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 02/10/22
DRAWING No: DD-SW-0126
DRAWING TITLE: STAGE 4 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9837) 8/04/2022 5:23:33 PM

STAGE 4 MATERIAL HANDLING



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 108 225 149) T/A BICKERTON MASTERS AND BIX HEDE PTY LTD (ACN 638 149 990) T/A HEDE ARCHITECTS AND MAY NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:\Revit Projects\SW-AR-GREENWICH_andrewmacRYHN.rvt

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

SYDNEY
(02) 9261 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

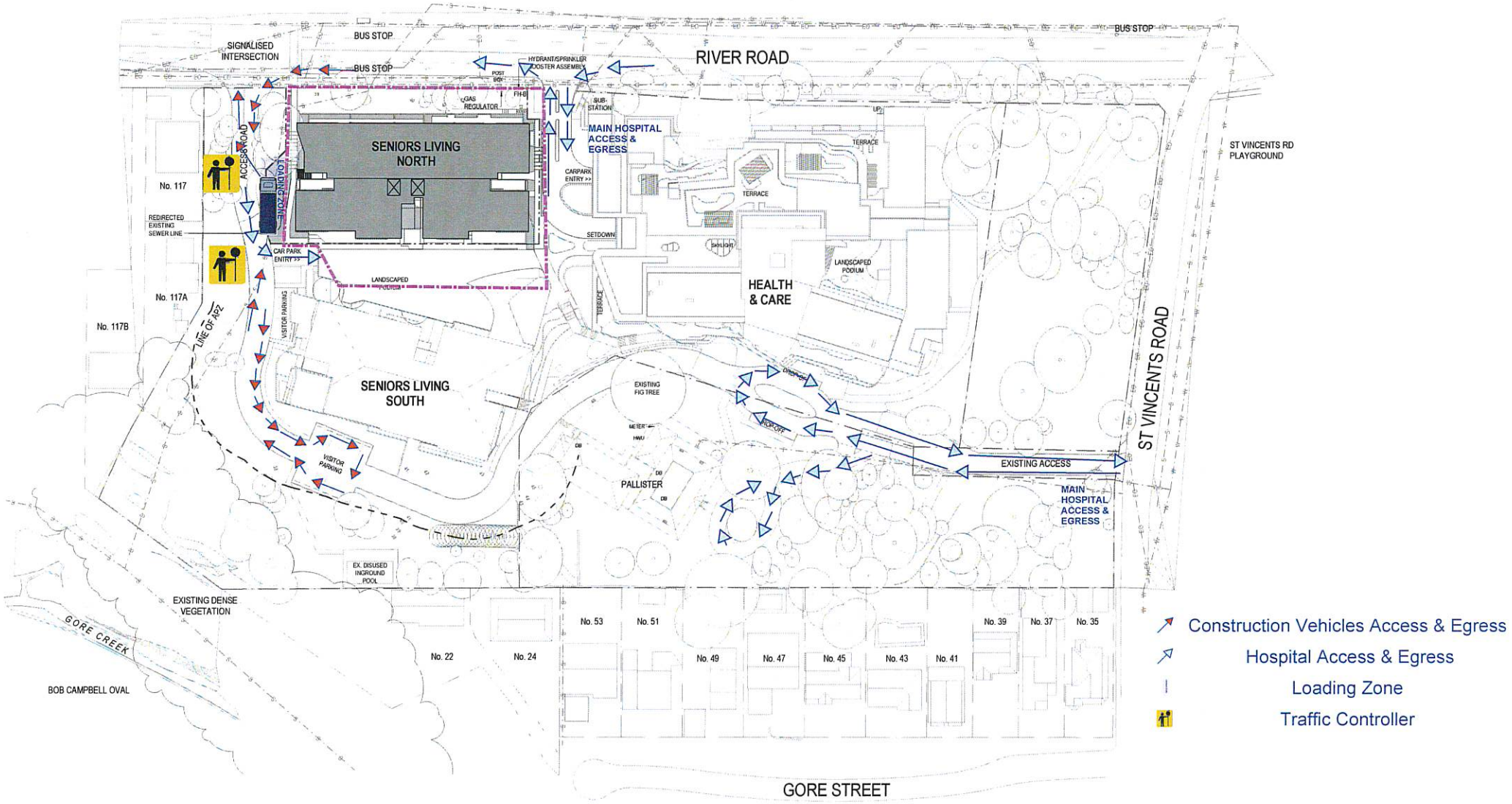
CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 02/10/22
DRAWING No: DD-SW-0126
DRAWING TITLE: STAGE 4 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (6937)
8/04/2022 5:23:33 PM

STAGE 4 CONSTRUCTION
TRAFFIC PLN



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

(c) COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BH+HEDE PTY LTD (ACN 638 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES
BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac
P5	2021.09.01	ISSUE TO CONSULTANTS	NAH
P4	2021.08.09	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH
P2	2021.04.08	ISSUE TO CONSULTANTS	NAH

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacHRYHH.rvt

SYDNEY
(02) 9281 5333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P7
DATE: 02/10/22
DRAWING No: DD-SW-0126
DRAWING TITLE: STAGE 4 PLAN - CONSTRUCTION
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (8637)
8/04/2022 5:23:33 PM

Appendix C

Construction Management Plan

Construction Management Plan
Greenwich Hospital Redevelopment

05/05/2022

Document Details

Title	Construction Management Plan
Client	Hammondcare
Document Reference Number	RCO-CMP-PLN-001
Principal Contractor	Roberts Co (NSW) Pty Ltd.
Roberts Co Project No.	21002
ABN	61 620 108 483
Project Address	97-115 River Road, Greenwich

Document Authorisation

PROJECT MANAGER	**SITE MANAGER**	**EHS MANAGER / COORDINATOR**
Date	**Date**	**Date**

TABLE OF CONTENTS

1 DOCUMENT CONTROL 4
1.1 Revision History 4
1.2 Management reviews 4
1.3 Controlled copies 4

2 PROJECT UNDERSTANDING 5
2.1 Proposed Project 5
2.2 The Site 5
2.3 Project Challenges 6
2.3.1 Demolition and Excavation 6
2.3.2 Vibration & Ground Surface Movement Risks 8
2.3.3 Existing Ausgrid Substation 8

3 PRE-CONSTRUCTION 9
3.1 Mobilisation and Kick-off Meeting 9
3.2 Industrial Relations 10
3.2.1 Overview 10
3.2.2 Compliance 11
3.2.3 Workplace Relations Management Plan 11
3.3 Procurement 12

4 CONSTRUCTION STRATEGY 14
4.1 Site Establishment 14
4.1.1 Site Boundaries 14
4.1.2 Traffic Management 16
4.1.3 Scaffold 19
4.1.4 Materials Handling 20
4.2 Project Sequencing 24
4.3 Site Management 24
4.3.1 Work Hours 24
4.3.2 Site Security 24
4.3.3 Subcontractor Management Strategy 24
4.3.4 Stakeholder Management Strategy 25
4.3.5 Risk Management 25
4.3.6 Health, Safety, Environment and Quality 26

5 APPENDIX A - STAGES 1 & 2 SITE MANAGEMENT PLANS 34

6 APPENDIX B - STAGE 3 SITE MANAGEMENT PLANS 35

7 APPENDIX B - STAGE 4 SITE MANAGEMENT PLANS 36

1 DOCUMENT CONTROL

All changes made to the Construction Management Plan are recorded in the amendment table below. The version number and date of revision for the current document revision are shown in the page 01-footer of the document.

1.1 Revision History

Revision	Date	Description of changes	Prepared by	Approved by
01	30/3/2022	Issue for review	PA	
02	11/4/2022	Show hospital traffic	PA	
03	14/04/2022	Amend Staging plans	PA	
04	05/05/2022	Amend - EU comments	PA	

1.2 Management reviews

Review date	Details	Reviewed by

1.3 Controlled copies

Name	Position	Date	Revision

2 PROJECT UNDERSTANDING

2.1 Proposed Project

2.2 The Site

This Construction Management Plan is submitted to the Department of Planning, Industry and Environment (DPIE) in support of a State Significant Development Application (SSD-13619238) for the redevelopment of Greenwich Hospital into an integrated hospital and seniors living facility on land identified as 97-115 River Road, Greenwich (the site). The extent of the site is shown below.

Figure 1 Proposed Site View

The subject proposal is for the detailed design and construction of the facility following its concept approval under SSD-8699. Specifically, SSD-13619238 seeks approval for the following:

- Demolition of the existing hospital building and associated facilities at the site;
- Construction of a new hospital facility and integrated healthcare uses and services, including:
  - A new 7 storey main hospital building.
  - Two new 5-6 storey serviced self-care housing buildings (serviced seniors living);
  - A new 2-3 storey respite care building.

- Construction of associated site facilities and services, including pedestrian and vehicular access and basement parking.
- Site landscaping and infrastructure works; and
- Preservation of Pallister House which will continue to host dementia care and administrative functions

2.3 Project Challenges

Our construction methodology has been developed with the mitigation of project challenges in mind, to maintain ongoing safety and managing day to day operations of the project, minimising disruption to the existing hospital operations, the public and site construction personnel.

From our review of the documentation and completed site visits we have identified the following key project challenges.

2.3.1 Demolition and Excavation

The project is divided into 5 stages and to facilitate the construction of Stages 1 & 2 (Main Hospital) the existing structures shown in red in the image below will need to be demolished first and will take up to 6 weeks to complete the scope.

Figure 2 Demolition for stages 1 &2

Once the main hospital is complete (stages 1 & 2), the remaining existing structures will need to be demolished in a live hospital environment to facilitate the construction of Seniors Living South and North (Stages 3 & 4) and Stage 5; construction of respite care building

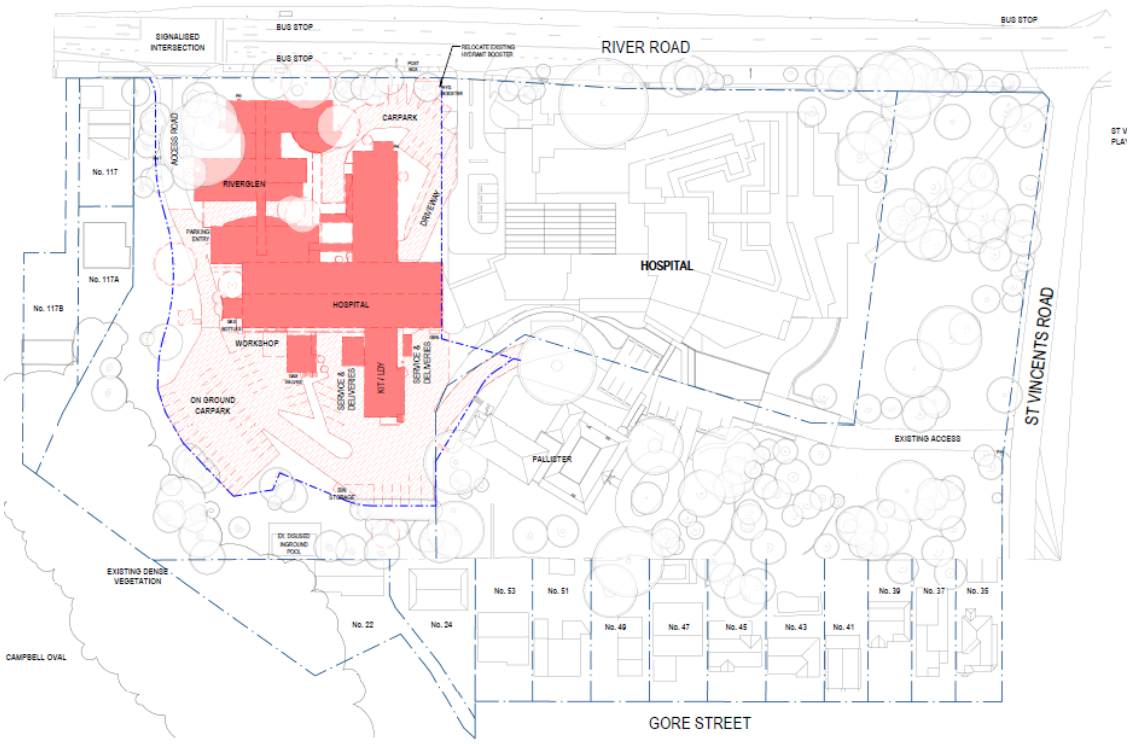


Figure 3 Demolition for Stages 3 & 4

Prior to demolition and excavation commencing, detailed dilapidation reports will be compiled on the neighbouring residences to the west. Consideration may also be given to compiling a similar dilapidation report on Pallister House. The dilapidation survey reports can be used as a benchmark against which to set vibration limits for rock excavation, and for assessing possible future claims for damage arising from the works. As dilapidation survey reports are relied upon for the assessment of potential future damage claims, they must be carried out thoroughly with all defects rigorously described (i.e. defect type, defect location, crack width, crack length etc) and defects photographed where practical.

Demolition and excavation will need to be carefully sequenced and completed in order to maintain the stability of the adjacent sections of existing buildings and structures within the site that will remain during the staged construction, the neighbouring buildings and structures and the fill batter slope over the western end of the site. This work will need to be completed using suitably experienced contractors. In this regard, we note that the excavations may extend below the base of adjacent footings supporting existing buildings and structures. We assume that the buildings and structures have generally been founded on bedrock. However, this must be confirmed during demolition by excavating test pits in order to expose the existing footings and confirm the foundation materials.

Based on inspection of these test pits by the structural and geotechnical engineers, the need and extent of underpinning, propping and/or wall strengthening measures can then be determined and detailed. Any underpins that will be supporting the soil profile will need to be designed to resist lateral loading. During construction, plant, equipment or stockpiles of material must not operate and/or be located west of an exclusion zone defined by a theoretical failure plane line projected up from the toe of the fill batter slope at an angle no steeper than 1V in 2H. On the basis of the investigation results, following demolition, the proposed excavations will encounter the soil profile and penetrate weathered sandstone bedrock over the central and eastern portions of the proposed basement.

Due to the presence of poorly compacted fill, which may extend below Pallister House, its not recommend the use of rock breakers during demolition or rock excavation in close proximity to the building due to the potential for transmission of vibrations which could cause damage, unless the building is founded on, or underpinned to, bedrock. Based on the results of the test pit inspections described above, underpinning of the building may be required. The excavation of the soil profile and extremely weathered bedrock to be readily completed using bucket attachments to tracked excavators. We expect that excavation of low and higher strength bedrock will require small to medium size rock breakers and ripping attachments to the tracked excavators and possibly dozers with ripping tyne attachments. Alternative excavation techniques to reduce vibrations and therefore reduce vibration monitoring could include using a rock grinder on the excavator, or a large excavator mounted rock saw to grid saw the bedrock into blocks that could then be removed using a ripping tyne attachment to the excavator, or locally using drill and split techniques. We also note that 'dropping' of large sections of existing structure during demolition should also be avoided to prevent the generation of potentially damaging vibrations. (Content provided by JKGeotechnics 32507R2rpt)

2.3.2 Vibration & Ground Surface Movement Risks

There is a possibility that vibrations from excavation equipment and other site activities may cause damage to adjoining structures within or neighbouring the site if these adjoining structures are not founded on bedrock. The preference is to underpin any adjacent structures to rock. Where adjoining structures are founded on and/or underpinned to rock, the limit for vibrations provided below should be assessed by the structural engineer following review of the dilapidation reports.

Where rock breakers are used during demolition and to excavate bedrock, continuous quantitative vibration monitoring of the neighbouring buildings and structures to the west will be required, to confirm that the peak vibration velocity (Vi, max) falls within acceptable limits. Subject to review of the dilapidation reports described above, and assuming adjoining structures are founded and/or underpinned on bedrock, the Geotech engineer recommend that the Vi, max does not exceed 5mm/sec during bedrock excavation using rock breakers, subject to confirmation by the structural engineer.

JK Geotechnics also recommend that consideration be given to similar vibration monitoring of the adjacent sections of hospital buildings that will remain during bedrock excavation using rock breakers. Subject to confirmation by the structural engineer, they recommend that Vi, max's do not exceed 3mm adjacent to Pallister House and 10mm/sec for the remaining hospital buildings. Should higher vibrations be measured they should be assessed against the Vibration Emission Design Goals as higher vibrations may be acceptable depending on the vibration frequency. JK Geotechnics note that the vibration limits recommended above will reduce the risk of vibration damage to the neighbouring and/or adjacent buildings and structures. However, these vibrations may still result in perceived discomfort or concern to occupants of the neighbouring buildings and/or the hospital buildings. (Content provided by JKGeotechnics 32507R2rpt)

2.3.3 Existing Ausgrid Substation

The site is currently being serviced by an existing substation (2386). The figure below shows the AUSGRID network map for this substation and the surrounding area.

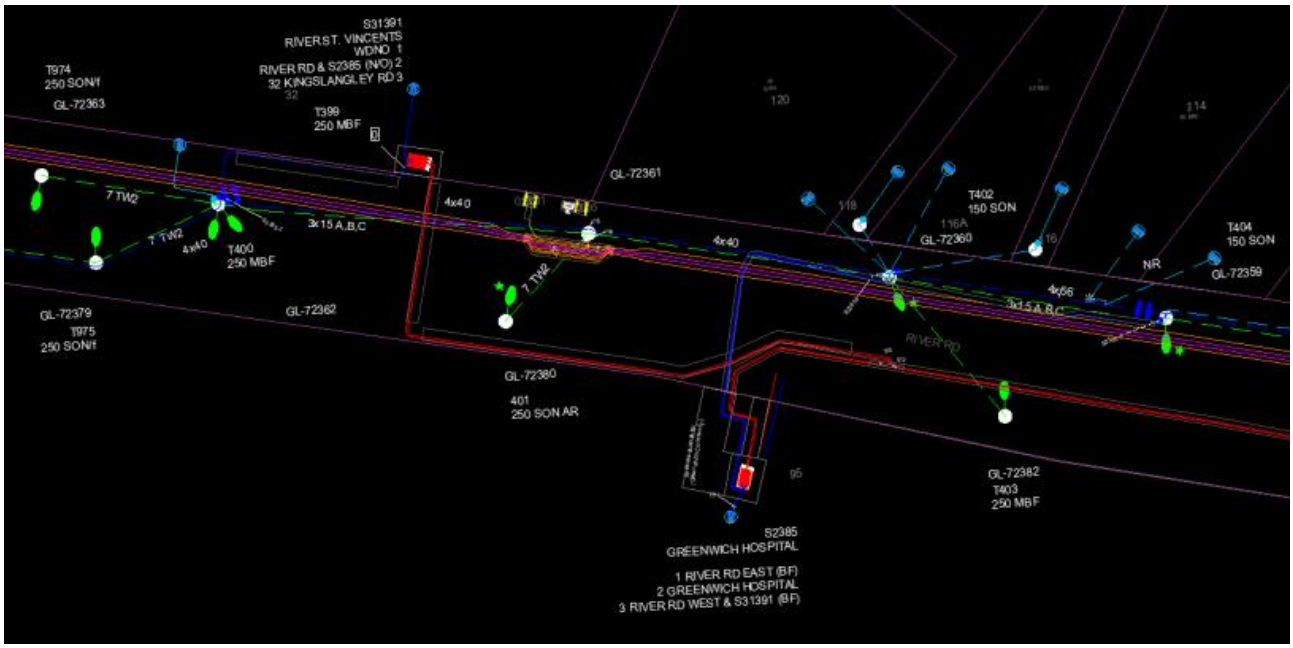


Figure 4 Exisitng HV Network

Exisitng High Voltage Endeavour Energy network reticulates along River Road and into the current Greenwich site to supply the existing kiosk substation. We can also see that the substation on HammondCare's land also supports the LV street network on River Road. This LV provides power to street lights and residential houses on the opposite side of the road. When this substation is removed and new substation/s are provided for future works, it will be required as part of the certified Level 3 design to either support the existing LV electrical supplies off another substation or support them off the new substation. This will be part of the design process, staging arrangements, and co-ordination with AUSGRID.

There is also an existing electrical easement that encompasses both the existing kiosk substation and the Ausgrid cables that reticulate within HammondCare's property. These easements will require relinquishment as part of the Ausgrid coordination works with the new substations

3 PRE-CONSTRUCTION

3.1 Mobilisation and Kick-off Meeting

A start-up workshop will be held and chaired post contract award to meet all project stakeholders and to introduce the RCo team. The workshop will establish an interpersonal framework of integrated goals, roles and processes to encourage cooperation and collaboration which will ultimately result in a successful project. We will also use this meeting to review the risks and mitigation strategies as well as discuss any opportunities for innovation.

We will review preparation, submission and approval of RCo's project-specific plans including:

- Work, Health & Safety management plan
- Workplace Relations management plan
- Quality management plan

- Design management plan
- Environmental management plan
- Training management plan
- Traffic & pedestrian management plan
- Noise & vibration management plant
- Contract construction program
- Waste management plan
- Risk Management plan

Following the kick-off meeting, a regular monthly Project Control Group Meeting will be held to discuss matters including:

- Onsite work, health and safety matters
- Anticipated completion date
- Design and Construction works completed to date
- Construction status against the contract programme
- Matters affecting the Project deliverables
- Potential delays
- Current or pending variations to the Contract
- Progress claims
- Weekly programme reports
- Site instructions required from the Principal.

3.2 Industrial Relations

3.2.1 Overview

Roberts Co is committed to the effective and proactive management of industrial relations and we recognise that this, coupled with employee and contractor engagement, is a key contributing factor to the successful completion of the project.

We encourage greater flexibility and productivity with the aim of ensuring our Clients get maximum value from the projects we deliver. To achieve this, we will establish a positive and stable industrial relations environment from the start of the project by identifying requirements and providing guidance for Roberts Co and all participants on the project.

Our project team have experience of successfully managing industrial and employee relations on projects. At a minimum, the Company, our subcontractors undertaking works on the project, suppliers and consultants will be managed in accordance with the requirements of the WRMP.

The plan will do this by ensuring a constant focus on the following:

- Consistent and regular communication
- Implementation of initiatives that positively engage the workforce, our stakeholders and the community
- Ensuring the stakeholder relationships are based on transparency, respect and trust;
- Strong Environmental, Health and Safety (EHS) performance
- Provide and foster a work environment that supports cooperative working relationships and reduces the potential for workplace conflict

- Clear and concise processes and procedures that adhere to the legislation governing Industrial Relations, that foster stakeholder understanding and encourage the right behaviours.

This approach is supported by our Industrial Relations Policy.

3.2.2 Compliance

Roberts Co will comply with:

- The NSW Code of Practice for Procurement January 2005 ('NSW COP');
- New South Wales Industrial Relations Guidelines, Building and Construction Procurement, September 2017 ('Guidelines'); and
- Code for the Tendering and Performance of Building Work 2016 ('Code'), as amended from time to time.

Roberts Co has a current code compliant Enterprise Bargaining Agreement with our workers and the CFMEU that came into effect in October 2020.

The Project Manager has overall responsibility for ensuring compliance with the WRMP as part of our obligations in relation to contractual requirements, applicable legislation, industrial instruments, Codes and guidelines.

We will:

- Ensure on-site practices and procedures comply with the NSW COP and Guidelines, the Code, the health and safety management plan and WRMP
- Ensure that our subcontractors comply with the NSW COP and Guidelines, the Code and the WRMP; including reviewing their responses to the invitation to tender documentation
- Comply with any reasonable request for access and information from the Construction Compliance Unit (CCU)
- Report all suspected breaches of the Guidelines, or Code, to the CCU and the client agency within 24 hours of becoming aware of the suspected breach
- Allow the CCU to monitor and investigate compliance by interviewing any person, inspect any work, material, machinery, appliance, article or facility; or inspect and copy any record relevant to the project
- Require subcontractors to demonstrate they are meeting their obligations under the WRMP.

The nominated project team have experience in successfully delivering projects with no delays or industrial issues through developing positive working relationships with clients, stakeholders, employees, subcontractors and their representatives. Roberts Co are currently delivering all our live projects in compliance with the Code and Guidelines and are well aware of the requirements in our works.

3.2.3 Workplace Relations Management Plan

Project works will be undertaken in accordance with a site specific WRMP (RCo's internal document and not part of this EIS) . The WRMP provides the framework for successful delivery of the project with no delays or industrial issues. The framework includes:

- Clear project roles and responsibilities
- Workplace Relations Risk Assessment and Management
- Site Establishment guidelines
- Subcontractor Management standards and procedures
  - Tender evaluation process and review (discussed in more detail within the Procurement Plan section)

  - Contract documentation
  - Subcontractor compliance
  - Managing subcontractor non-compliance
  - Productivity measurement
  - Direct labour management
- Inductions and Mobilisation
- Labour Productivity and Fatigue Management
- Freedom of Association
- Right of Entry
  - Training of staff in right of entry
  - Site security and access
  - Managing right of entry
  - Monitoring right of entry
  - Employee Representatives
- Grievance Management
- Management of unlawful industrial action

3.3 Procurement

To ensure program compliance is maintained at the level of quality required for the proposed hospital redevelopment it is essential the right subcontractors are selected to perform the works who can meet the demands of the project.

Critical packages identified for this project include:

- **Jumpform** – the procurement and erection of the jumpform is critical to achieving the programme dates. As the jumpform will be one of the first elements required on site following hand over of an excavated site, quick design finalisation and procurement of the jumpform will be required. We will award this separately to the Jumpform supplier to secure the system and then novate to the formworker.
- **D&C Services trades** – these will need to be selected prior to Contract award and engaged immediately upon contract award. Services trades will be required to review, verify and develop design to allow core designs to be finalised. Services trades are also critical for finalising inground hydraulic services and basement plantrooms designs.
- **Civil & Retention structures**– the design of the site retention systems and method of excavation is crucial to commence quite early
- **Post Tension** the final design of the structure and have shop drawings coordinated with the services trades is important to maintain program
- **Façade** – early procurement will be key to ensure there is sufficient time to design, prototype and procure the façade elements.

We will adopt a range of approaches in the procurement and subcontractor management phases of the project. These include:

- Preferred trade partners who can bring expertise, value and market experience to the design and delivery of the project will be selected on the basis of their experience, corresponding expertise, safety performance, quality, capacity (both in design and on site) and value for money.

- Key subcontractors that have the capacity and capability to deliver the balance of the trade packages will be invited to tender the works in a competitive environment. These subcontractors will be assessed and only invited to tender if we believe they have the capacity to undertake the works.

Our procurement programme is derived from lead times determined from the overall construction program. Initial focus will be on D&C service subcontractors, structure and façade packages with this early procurement critical to ensure and secure the best fit subcontractor for the respective trade packages.

Procurement of all consultant and subcontractors will be completed in accordance with Roberts Co Procurement Procedure and Procurement Guidelines. Conformance with these guidelines will ensure that subcontractors and suppliers meet the safety, environmental and quality requirements determined by the organisation. We recognise that a robust supplier, service provider and subcontractor network is a key element of a successful and safe business.

Roberts Co has a process for early engagement with the supply chain, including subcontractors. To increase certainty of performance, we will select subcontractors who have been proven on projects and shown their capacity to comply with the relevant legislation and the NSW Code and Guidelines.

The assessment process includes a detailed review of the subcontractor's:

- Track record of industrial relations management on previous projects
- Administration processes and capability (payroll etc)
- Status in relation to any industrial instrument(s)
- Ability to allocate adequate resources that will ensure timely delivery of works on the project
- Experience in delivering the type of project that is being tendered
- History of engagement with employees and their representatives
- Ability to manage employee grievances and industrial relations disputes
- Plan to drive productivity gains on their projects
- Management of their workforce while providing a high quality of work
- History of compliance with applicable legislation, codes and guidelines, as well as any industrial arrangements in place that covers their workers terms and conditions

All potential subcontractors are required to complete a Subcontract Tender Details (STD) form in addition to setting out scope of work requirements that forms part of the Invitation to Tender (ITT) documents issued for each package of works. This is designed so that we can assess compliance with:

- The New South Wales Code and Guidelines
- Employment obligations under the Fair Work Act
- Any industrial instrument(s)
- Work Health and Safety requirements and legislation, as well as past performance
- Contractual obligations as prescribed in the standard forms of contract
- Workforce capacity
- Level of insurances
- Current project workload

The STD document consists of:

- Invitation to Tender Letter (Conditions of tendering, including the NSW model tender and contract documentation)
- Technical scope of works
- Subcontractor Tender Details document that requires tenderers to answer questions relating to:

  - Organisational structure
  - Project and company insurances
  - Types of management plans in place
  - Current workload
  - Workplace health and safety, environmental, quality and industrial relations
  - Permission to allow financial auditing by Roberts Co
- Conditions of contract
- Questions relating to workplace health and safety, environment and quality

4 CONSTRUCTION STRATEGY

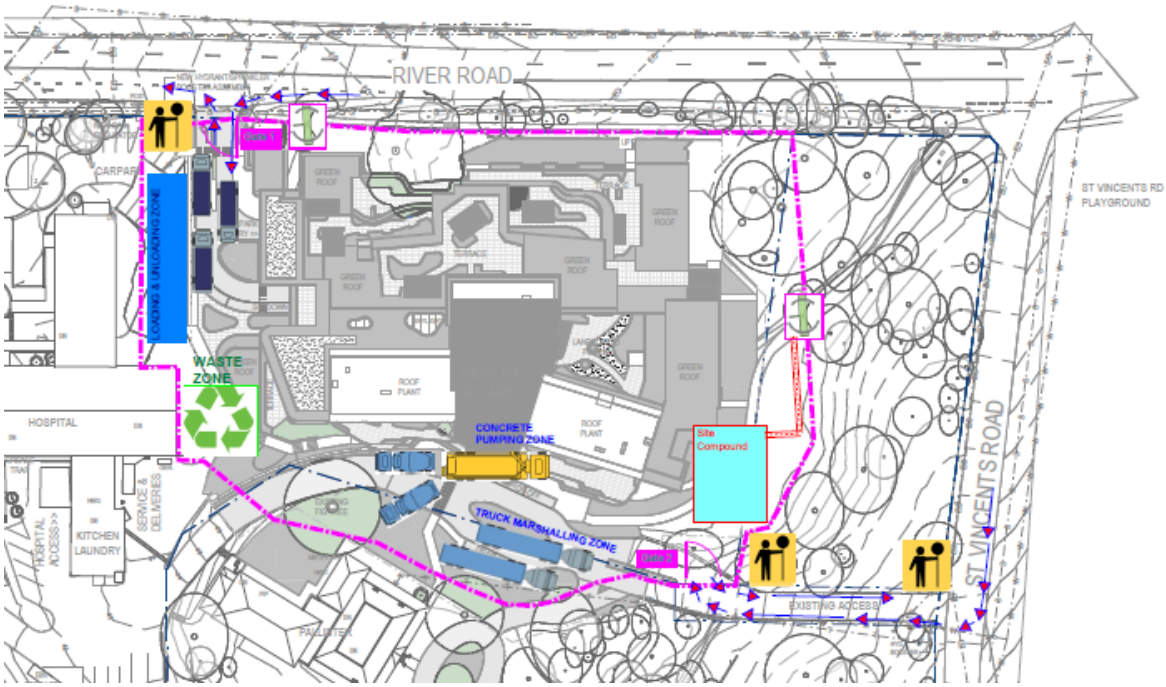
4.1 Site Establishment

4.1.1 Site Boundaries

The site compound will fully enclose the works using a combination of A class and B Class Hoardings, as shown on the Site Establishment drawings for all the stages.

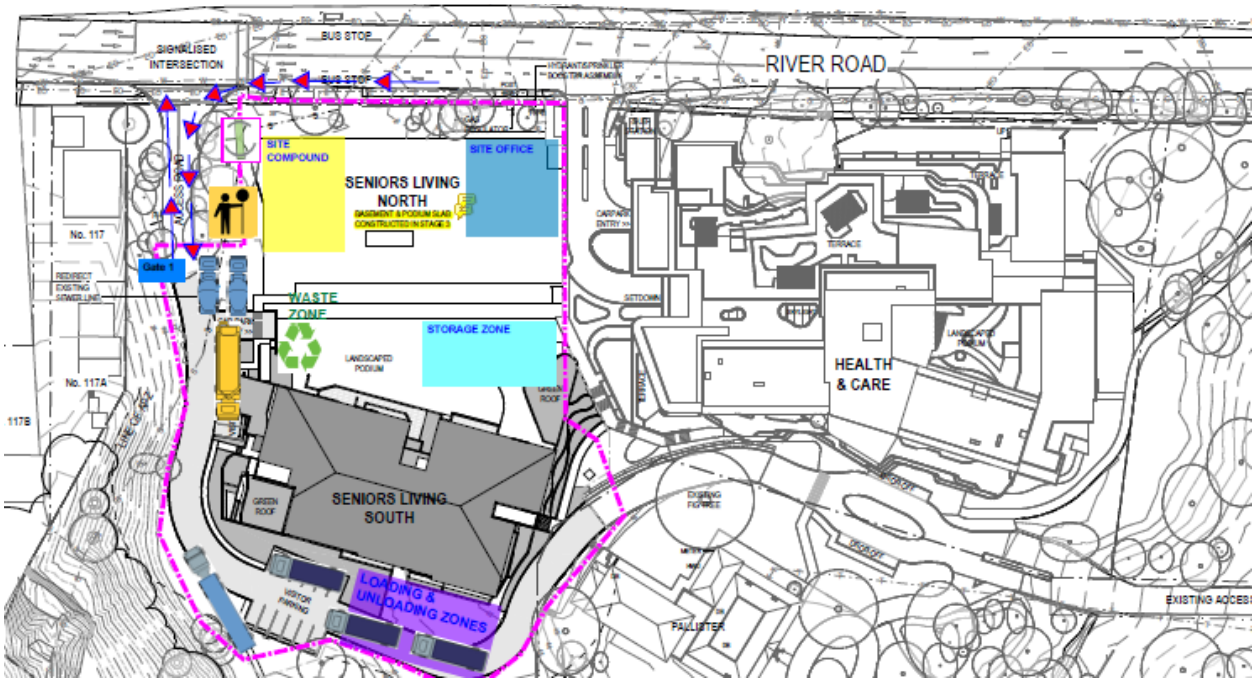
Prior to the installation of A Class Hoardings, we will install temporary fencing. This will be used to demarcate required exclusion zones during the demolition of the structures. Once the demolition of the existing buildings is complete, A Class Hoardings will be erected.

4.1.1.1 Stages 1 & 2



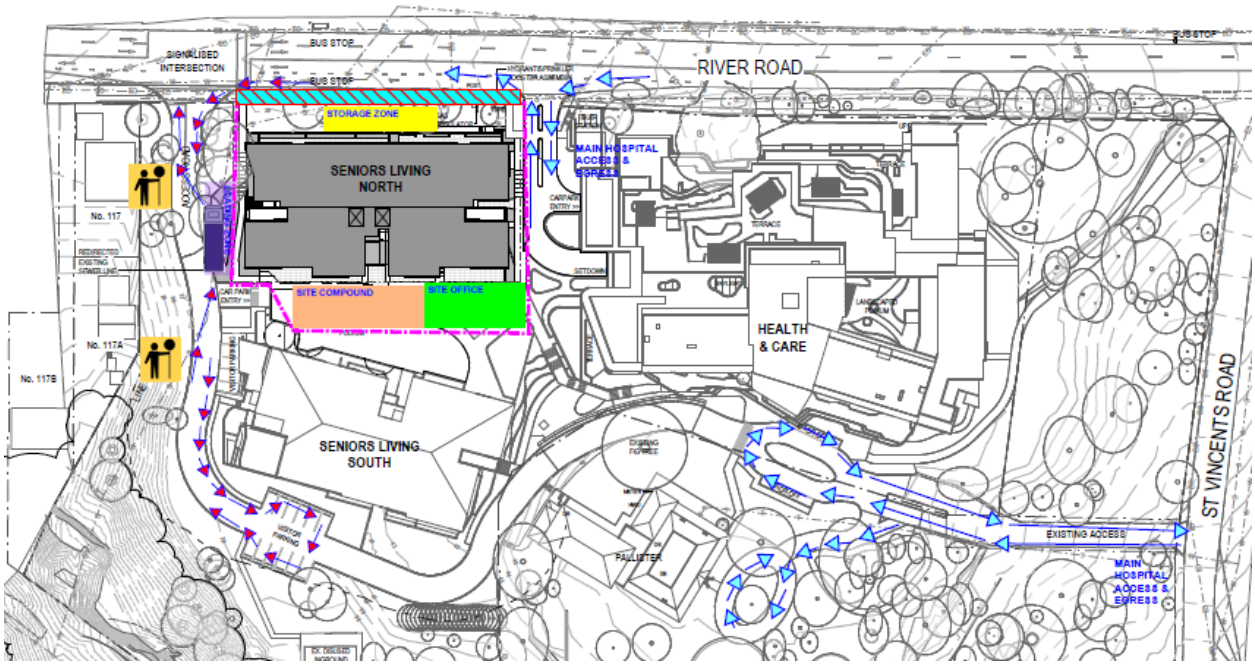
The image above shows the site boundary for stages 1 &2 which includes 2 access gates for construction vehicles and 2 turnstile gates for workers.

4.1.1.2 Stage 3



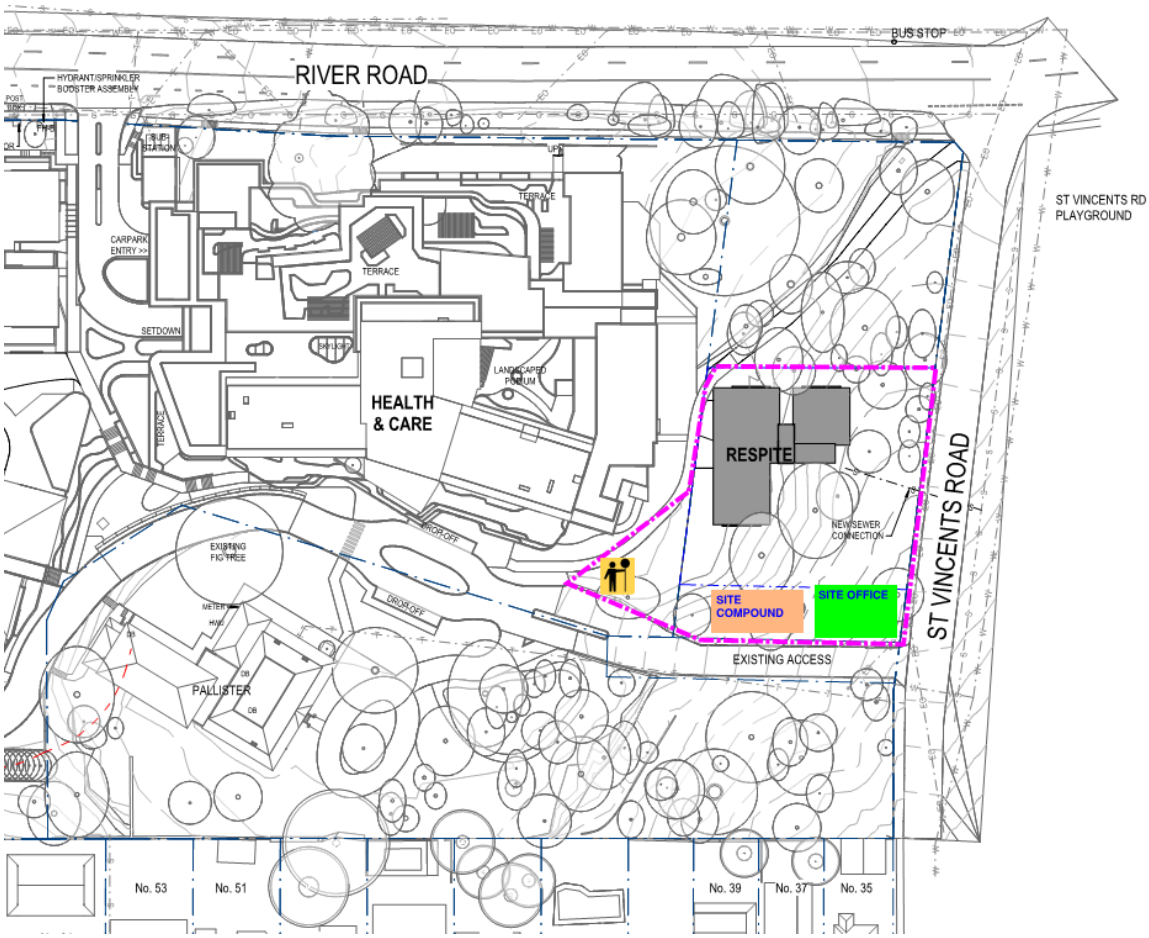
Stage 3 boundary will encapsulate the future stage 4 site and provide an area for material handling and storage.

4.1.1.3 Stage 4



Stage 4 boundary is set by River rd and the completed stages.

4.1.1.4 Stage 5



4.1.2 Traffic Management

We understand the importance of providing a seamless transport management strategy to ensure construction works do not impede the operation of the Hospital and the public with the following construction vehicle impacts have considered:

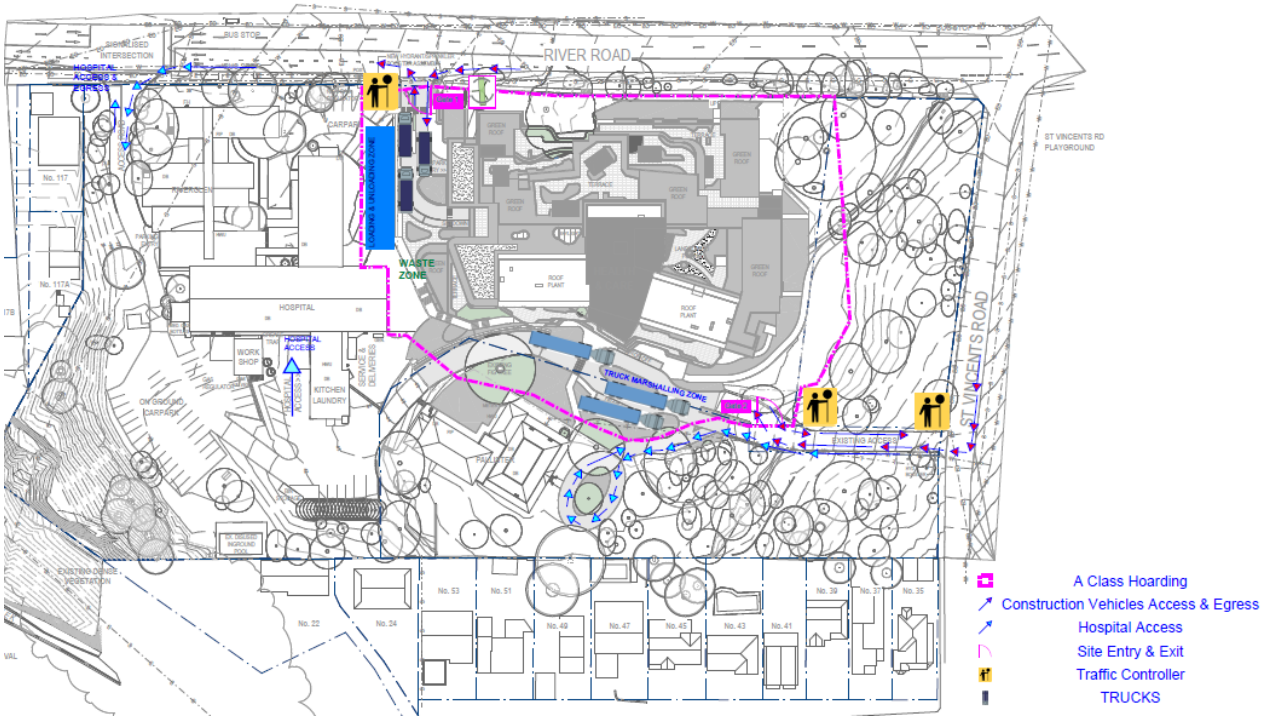
- Reducing impacts to residents on surrounding streets.
- Maintaining vehicle and pedestrian access along St Vincent Rd and River Rd.

A Construction Traffic Management Plan will be included as part of the final CMP outlining all requirements for construction vehicles during construction works. The Construction Traffic Management Plan will highlight approach and exit routes for construction vehicles to the site as well as confirm swept paths for all construction vehicles within the site. The CMP will be in accordance with TTPA Greenwich Traffic and Parking Assessment, ref 20352

Subject to Traffic Engineer's input and approval, RCo are considering the following traffic management routes for each stage:

4.1.2.1 Stages 1 & 2

STAGE 1 & 2 CONSTRUCTION TRAFFIC PLN



For Stages 1 & 2, during all phases of construction, access for construction vehicles will be via St Vincent's Rd and River Rd.

Based on the scale of the development and the proposed construction programme, the following number of vehicles are expected as summarised in the table below. These construction vehicle volumes are indicative only and would be confirmed following the procurement of subcontractors.

Description	Stage			
	Bulk Excavation	***Structure***	***Fitout and finishes***	***Landscaping / external works***
Deliveries per day	30-40 per day	25-30 per day	30 per day	20 per day
Deliveries per hour	6 - 8 per hour	5 per hour	6 per hour	4 per hour

The following vehicle types as outlined in Australian Standards AS2890.2 are expected to be used during the project for all the 4 stages:

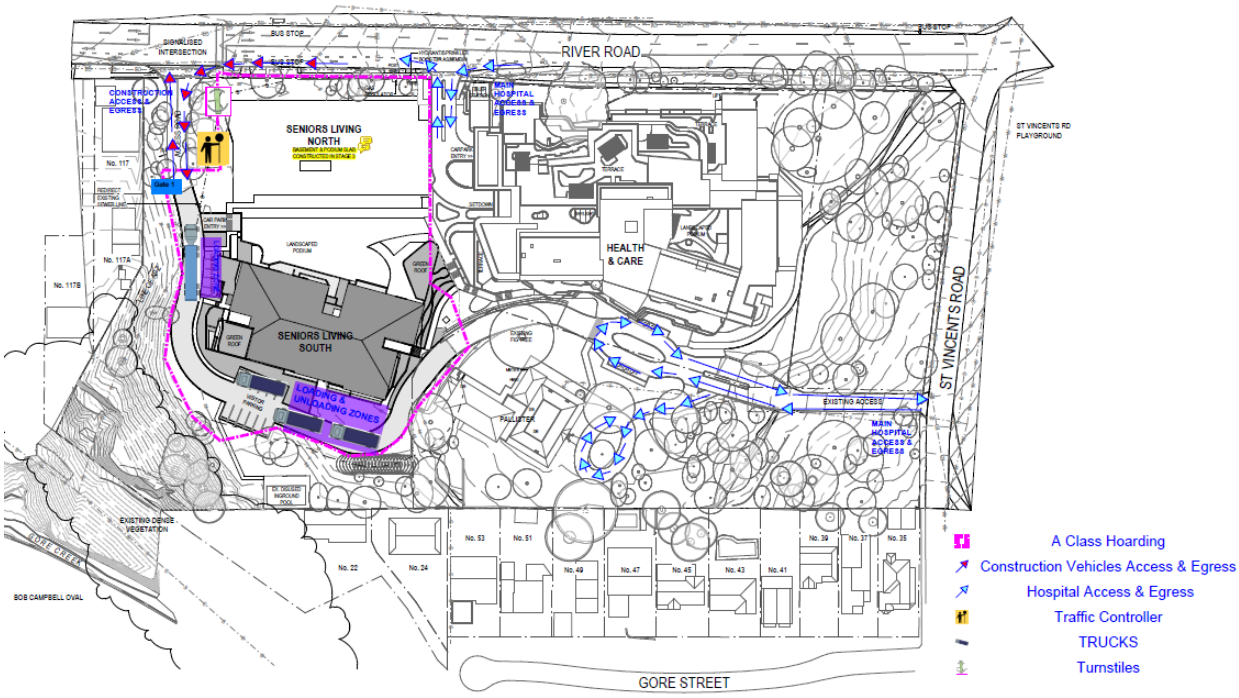
- 19m Single Articulated Vehicles (AVs) or truck and dogs;
- 12.5m Heavy Rigid Vehicles (HRVs)
- 8.8m Medium Rigid Vehicles (MRVs)
- 6.5m Small Rigid Vehicles (SRVs);
- Utes/vans

The maximum truck size that will likely access the site is a 19m Articulated Vehicle which will carry large construction material. There is provision on-site for these vehicles to turn around and so they will be able to access the site directly and will not require a Works Zone on the adjacent public road system.
All heavy goods such as machinery plant will need to be delivered outside of peak traffic hours.

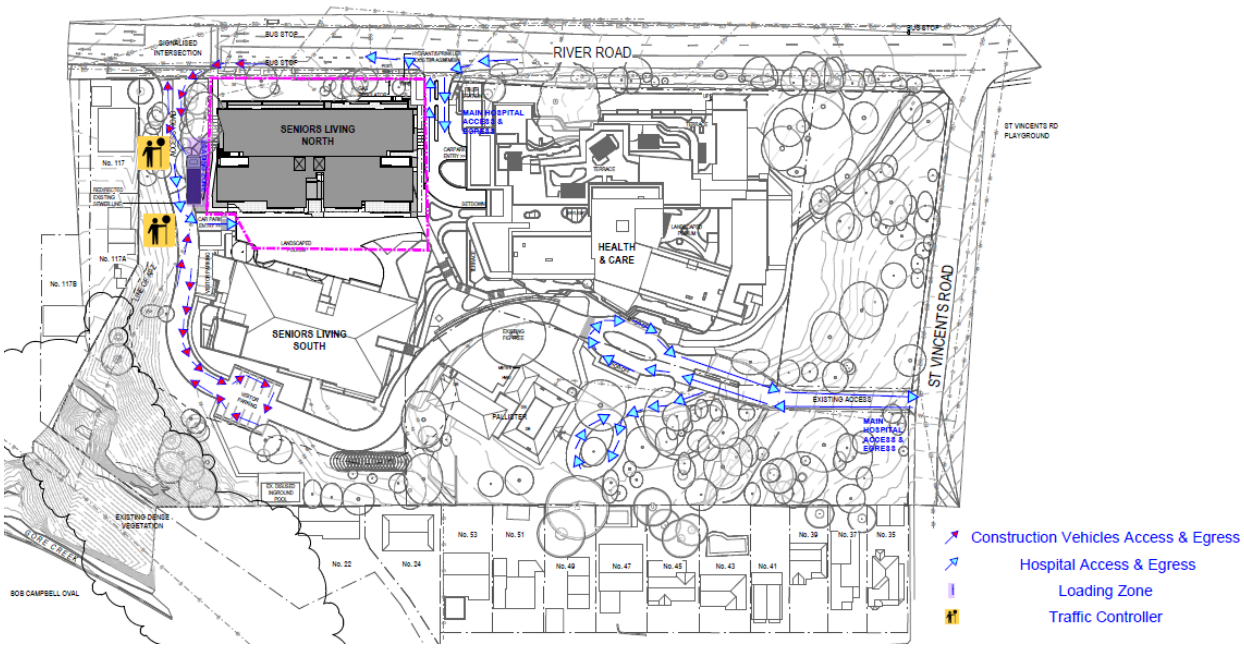
4.1.2.2 Stage 3 & 4

Subject to approval from Hammondcare, the construction traffic access and egress to construct Stage 3 & 4 will be Via River Rd and St Vincent's Rd as noted below.

STAGE 3 CONSTRUCTION TRAFFIC



STAGE 4 CONSTRUCTION
TRAFFIC PLN



4.1.2.3 Construction Vehicle Interface with the Public

There will be multiple occasions where construction vehicles will require interface with the public. RCo have developed a site plan and staging to minimise these interfaces and where unavoidable will have strategies in place to ensure there is clear separation between construction and public zones. These strategies include:

1. **Traffic Control**
   The primary control for all construction vehicles will be traffic control including traffic controllers and signage. Through a well-planned an effective traffic management strategy we can manage all vehicles entering and existing the site. Traffic Controllers will manage the site gates on River Rd and St Vincent's Rd

2. **Timing of Deliveries**
   Deiveries will be scheduled during off peak times where possible to minimise the impact of construction on public traffic.

3. **Slip Lane**
   Concrete Pumping activities will be completed from within the site boundary which will further reduce the interface of construction activities with the public.

4.1.3 Scaffold

The leading-edge protection will predominately be provided through implementation of perimeter captive scaffold for all the stages, main hospital, and senior living buildings.

4.1.4 Materials Handling

4.1.4.1 Cranage

A crane analysis has been undertaken to ensure the model, position of the cranes and jib radii are the most efficient solution for the building. The tower cranes will have a max radius of 60m will be erected from the main hospital entry off River Rd using a mobile crane.

The exact type of the cranes and the capacity at max radius is yet to be determined once the design has progressed further towards the 50%

No lifting of loads will take place over adjacent properties. The bases of the tower cranes will be secured with a non-climbing screen, preventing the potential for any member of public accessing the cranes. The machine deck access hatches shall be secured at the end of each day and motion detectors shall be installed within the towers with a back to base alarm notifying of any unauthorised persons gaining access to the towers.

The below images show the location of the tower crane for each stage. The erection and dismantling position for the crane for all stages will be using the Hospital Main entry suspended slab.

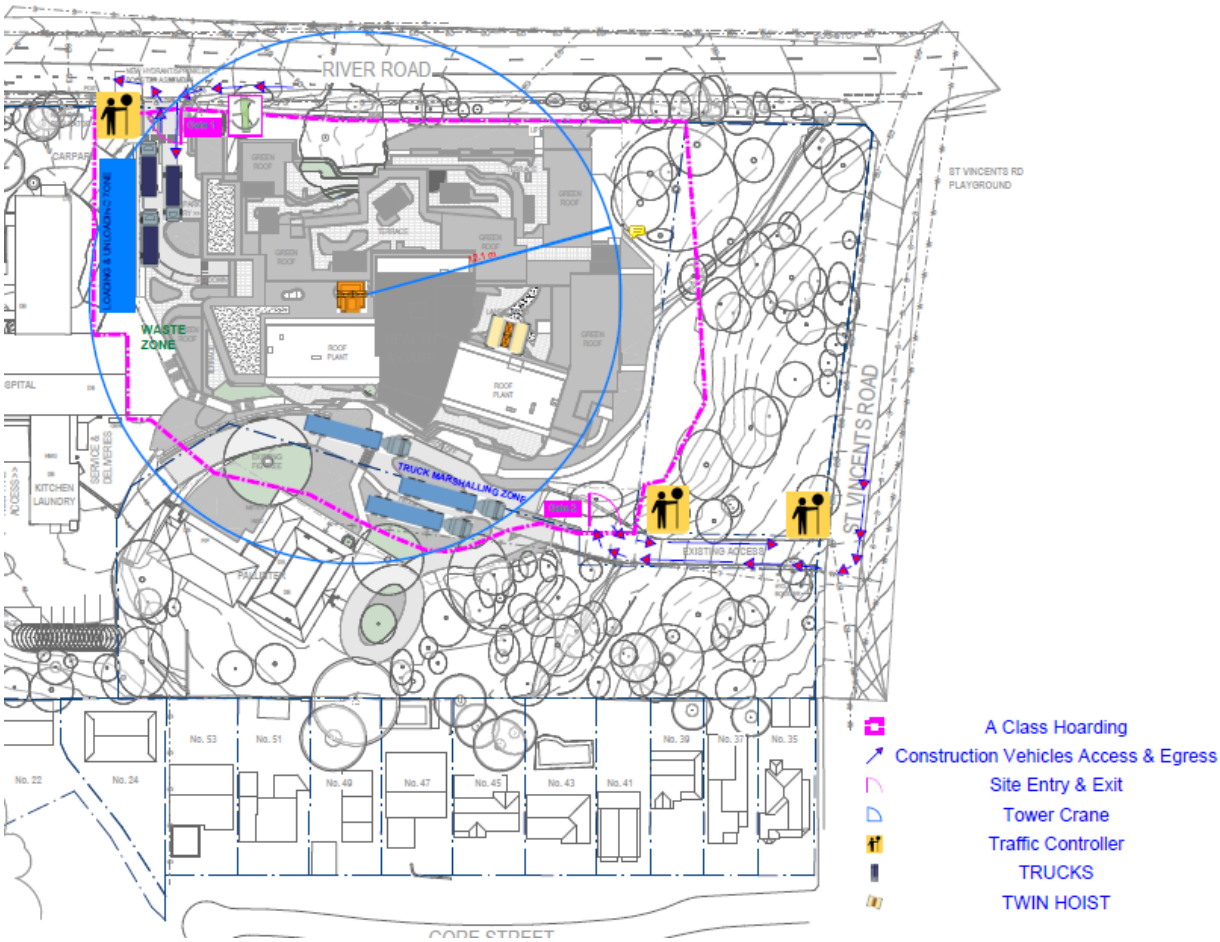


Figure 5 Stage 1 & 2 Tower crane location

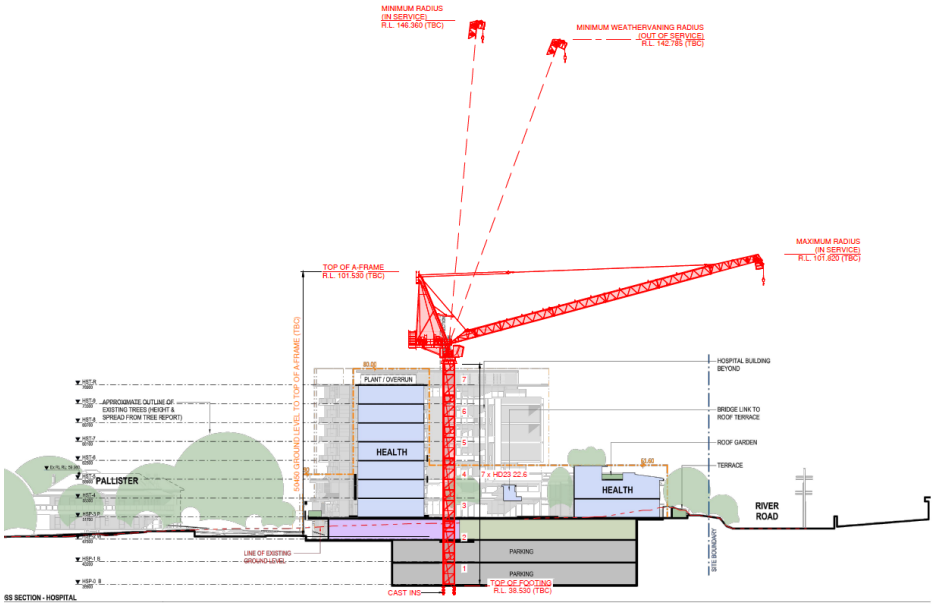


Figure 6 Stage 1 & 2 crane elevation

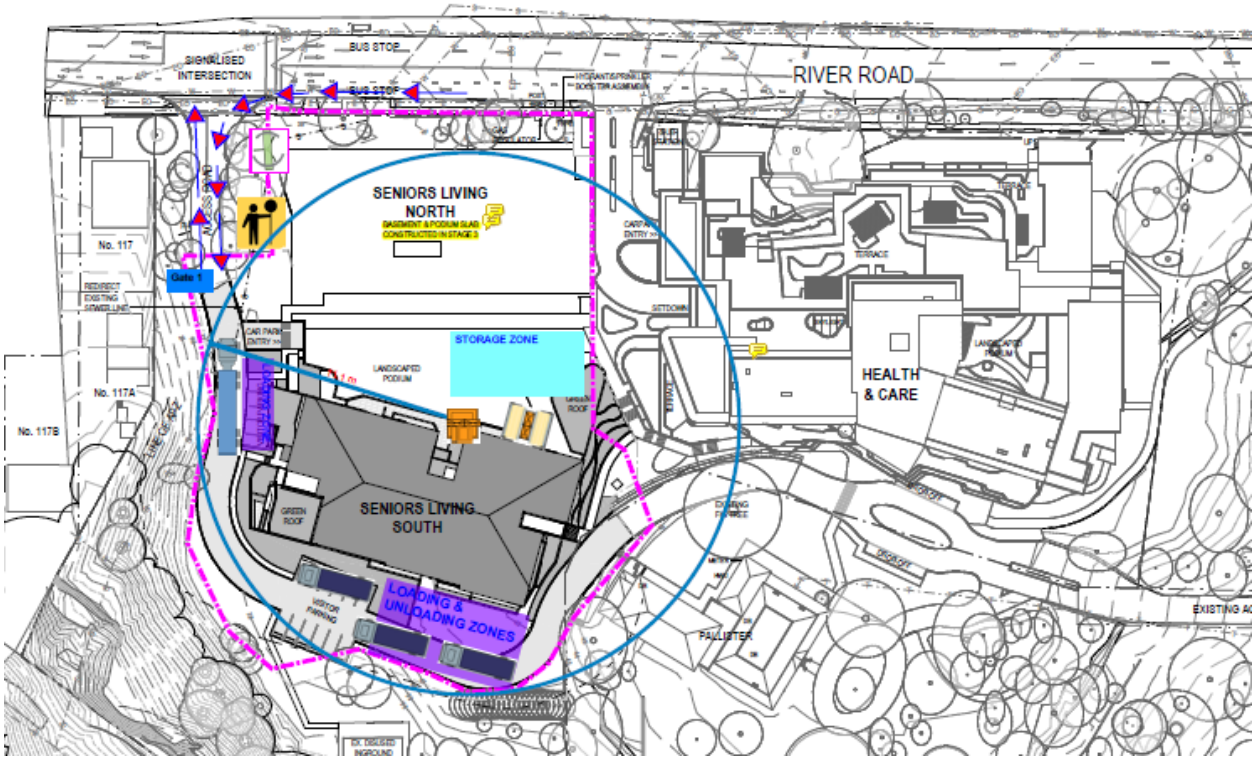


Figure 7 Stage 3 TC location

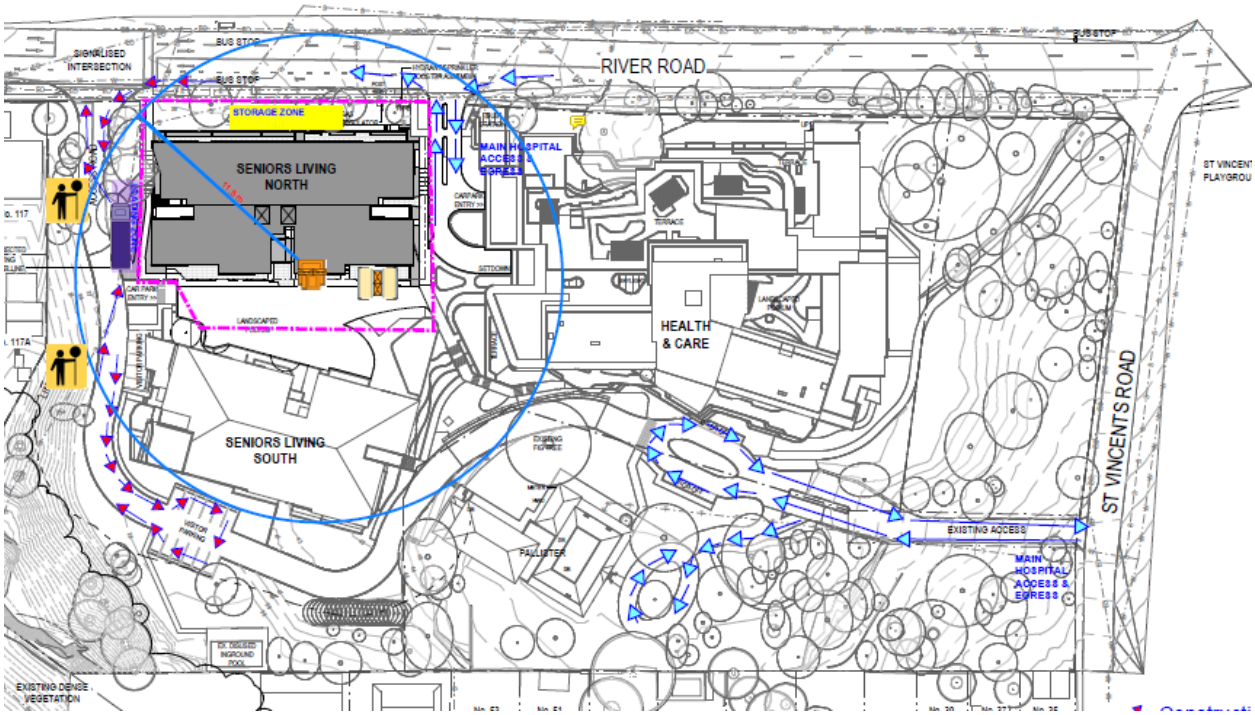


Figure 8 Stage 4 TC location

4.1.4.2 Loading Platform

To feed the project with materials, we will install industry standard retractable loading platforms. They will initially be used to crane formwork, falsework and materials from the floors as the structure is completed. They will then be used to pre-load services trade materials (i.e. duct, pipework, cable tray and the like) and finishing trades materials including the unitised curtain wall façade panels.

Loading platforms will be placed on each level past level 5 of the main hospital.

4.1.4.3 Hoists

One Twin Hoists will be provided on the project servicing the main hospital stages 1 & 2 with one single hoists servicing stages 3 & 4 each. These hoists will be to service the movement of construction workers throughout the project. The hoist will be high-speed ensuring efficiency throughout the floors. At each hoist location there will be temporary interconnecting scaffold bridges joining both buildings which will also help streamline the movement of workers across the job.

4.1.4.4 Concrete Deliveries & Placement

The suspended slabs and structure will be poured using two 36m Static boom pumps which will be installed on the project. There will be one static boom for each tower which will enable flexibility across the project and enable both vertical and horizontal structural elements to be poured on the same day. The concrete pumps that feed the static tower booms will be set up within the site which will allow full utilisation of the pump's capacity. Each Pump will be arranged so that both pumps can run a two-truck feed whilst maintaining the other loading zone for other critical deliveries. Refer to image below

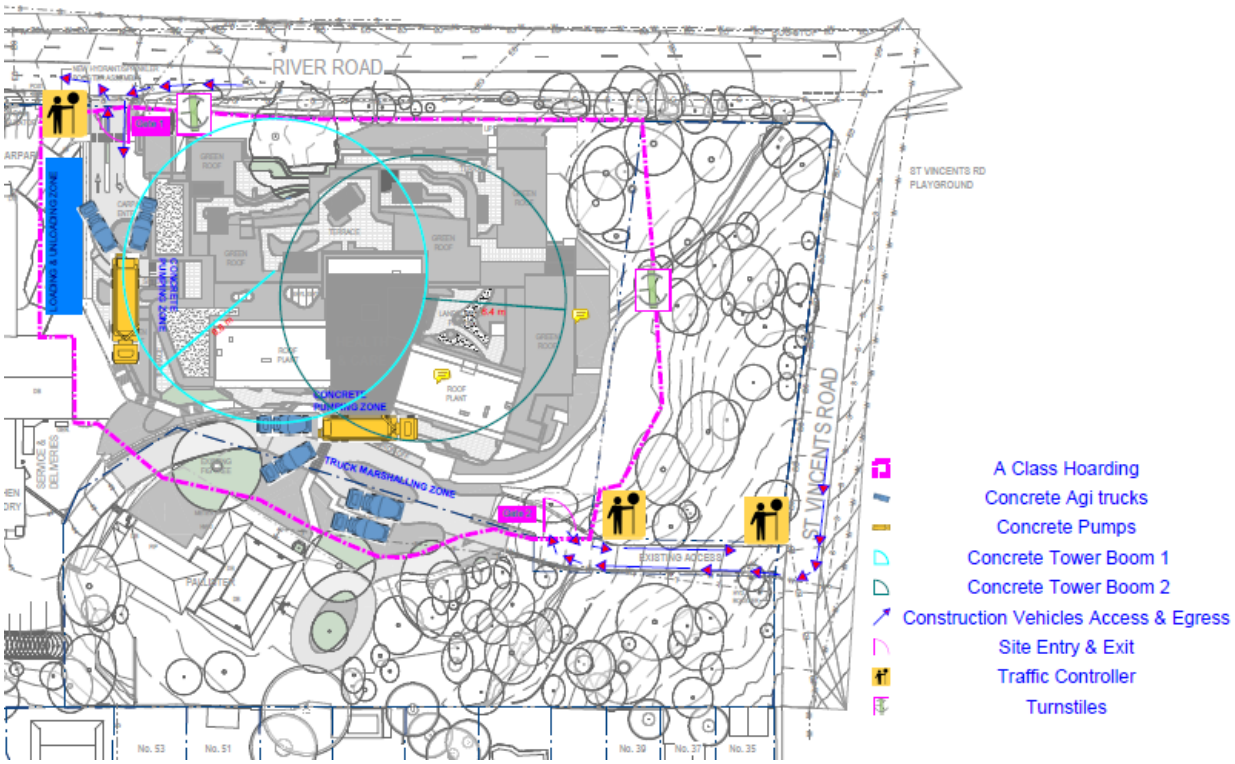


Figure 9 Concrete Placing Booms and Zones

As for stages 3 & 4, the concrete placement will be placed using a 48m concrete boom truck.

4.1.4.5 On Site Storage

On site storage of materials and equipment will be kept to a minimum. Materials and equipment required for site will be delivered to site when required to be incorporated into the construction works. Materials and equipment that do need to be stored on site for a short period shall be stored within the site compound, be neatly stacked and securely strapped. Laydown areas within the job will be nominated and managed.

4.1.4.6 Site Amenities

Temporary site accommodation and amenities for the construction workforce will be provided according to the project staging. The site amenities will include:

- Site accommodation including lunch and change rooms
- Male and female ablution facilities
- Multi-purpose induction, training and meeting rooms
- First Aid facility
- Parent nursing room
- Covered walkways and access stairs.
- Roberts Co Office facilities.

4.2 Project Sequencing

The detailed project sequencing for each stage will be described once the design has progressed further into 30% design. In future iterations of this CMP, the sequencing will describe and explain RCo's approach to

- Additional investigation and site acceptance
- Treatment and protection of existing trees
- Early works
- Site Establishment Demolition
- Site retention and excavation
- Substructure
- Superstructure
- Façade
- Services
- Fitout & Finishes
- External works

4.3 Site Management

4.3.1 Work Hours

We will ensure strict compliance with approved working hours during construction activities. Any requirement for works to take place outside of the approved hours will be sought through the relevant authorities in conjunction with communication protocols for stakeholders and the community. Working hours for the project are:

– from 7.30am to 5.30pm Monday to Friday and 7.30am to 3.30pm Saturday.

– No work is to be carried out on Sunday or public holidays without prior approval.

The delivery programme for the works has incorporated the above time constraints and forms the basis of the proposed construction methodologies and overall construction sequencing. Where specific works require extensions of the above times, we will identify works early and communicate with the PCA and Council to ensure all necessary approvals are obtained.

4.3.2 Site Security

Roberts Co will ensure there is controlled and secure access to all areas of the site, at all times throughout the duration of the project.

The site will be secured, and access will only be via the turnstiles which operates via a QR code. No one will be able to enter the site without a QR code which is issued after undertaking a site induction via the RCO Subbie App; this includes visitors sign-in. The data we have from the app is very accessible and informative, so we know exactly who is on site and when.

Out of normal hours, we have allowed for regular drive by security inspections of the site. For the last few months of the project, we have allowed for a night-time security guard to protect the Site. We will also have security measures installed around the base of the tower crane to prevent any unauthorised personnel climbing the crane.

4.3.3 Subcontractor Management Strategy

Effective subcontractor management is a critical factor in the successful delivery of the project's objectives and outcomes. We will implement our commercial, contractual and risk management procedures providing

governance necessary to manage subcontractors that are engaged for the project. These procedures coupled with the allocation of experienced resources will ensure subcontractors are appropriately selected and managed to achieve the required project outcomes.

Jobpac will be the commercial ERCO system we use to manage subcontractors and the administration of projects commercial functions. Jobpac is a critical software package that will assist the team to manage subcontractor contracts, commitments, progress claims, variations and compliance with administrative requirements. Aconex will manage all correspondence and drawing transmittals on the project.

4.3.4 Stakeholder Management Strategy

Roberts Co appreciate the importance of open and effective communication required to successfully deliver Greenwich Hospital Redevelopment. Communications will be built on the principle of cooperative contracting, enhanced communication, clear definition of roles, responsibility for outcomes, and promoting best practice.

Communication between Roberts Co and the Principal will be honest and sincere and built on respect and trust. With a foundation of effective communication between us and TSA Project Management, communication with stakeholders and the community will prosper.

Our strategic principles for Greenwich Hospital Redevelopment include acting as a good neighbour and ensuring business continuity for surrounding neighbours. We recognise that any works which may impact neighbours and greater community must be communicated early and, in a manner that non construction individuals will be able to understand to enable an informed response.

As part of our planning of the works, the team will identify any disruptive works which will require notification to neighbours and the community. These works may include but are not limited to HV consumer mains works, stormwater connection to existing Sydney Water Assets to the North of the site, authority connections in River Rd and installation and removal of tower cranes. In addition, our engineers will assess impact of works on a case-by-case basis while developing Work Packs for individual activities. As part of the development of Work Packs, the site team will be required to assess impact on neighbours and whether notification is required.

4.3.5 Risk Management

Roberts Co understand the challenges associated with the project. The project has critical construction and services interfaces and requirements that must be understood and managed to successfully deliver the project while providing continuity of surrounding businesses.

Roberts Co will manage risks by implementing our Safety, Quality and Environmental Risk Management processes and will work collaboratively with the TSA and HammondCare in planning construction activities so that any impact, disruption, and potential risk is identified, reviewed, mitigated, planned and communicated as required.

Roberts Co will take the lead role on the disruption risks with site coordination managed by a formal meeting framework comprising of Project Review Group Meetings, Project Meetings, Stakeholder meetings, weekly coordination meetings and specific Risk Workshop Meetings.

As previously highlighted in this document, we have identified the following activities that have the potential to significantly impact the surrounding precinct if not managed effectively and communicated proactively with stakeholders:

- Ausgrid Substation Works
- Authority Mains connections
- Demolition and Excavation

– Tower crane installation and Removal

A formalised Risk Register will remain a live document updated and reviewed throughout the course of the project.

4.3.6 Health, Safety, Environment and Quality

4.3.6.1 WHS Management Plan

Roberts Co considers health and safety as the number one priority on all projects. Our policies and procedures provide a framework to manage risk and accident prevention at the company's workplaces. The Health, Safety and Environment Management System (HSEMS) identifies the positions within the company that are responsible for designing, developing, implementing and enforcing health, safety and welfare in accordance with legislation.

Our team has reviewed the construction activities required for the Project works and have identified high risk construction work activities as defined in the NSW WHS Regulations:

– Risk of a person falling more than 2 metres
– Work likely to involve disturbing asbestos
– Work in or near a shaft or trench deeper than 1.5 m or a tunnel
– Work on or near energised electrical installations or services
– Work in an area with movement of powered mobile plant
– Temporary load-bearing support structures
– Work on or near pressurised gas pipes or mains
– Work on, in or adjacent a road or other traffic corridor in use by traffic other than pedestrians

As an essential step in successfully managing these high-risk constructions activates, our team will create and maintain a Project Risk Register to ensure risks are monitored and catered for at any time. Following the review of our initial risk assessment during tender, our experienced site management team and our EH&S Manager will invite the selection of subcontractors to discuss their Safe Work Method Statement (SWMS) and arrangements to be put in place to make sure the high-risk construction work is performed safely in accordance with the SWMS. Our site team will then monitor the implementation of the SWMS 'on the ground'.

4.3.6.2 Environmental Management

As part of our commitment to acting as a good neighbour on behalf of HammondCare, Roberts Co is committed to ensuring our site activities do not impact negatively on the environment in the project area.

Upon award, will prepare a fully detailed Site Environmental Management Plan that outlines the processes for managing environmental aspects and impacts in accordance with ISO 14001:2015, Protection of Environment Operations Act 1997 and the Protection of Environment Operations (Noise Control) Regulation 2008.

We have identified the following key environmental concerns along with their management strategies to ensure the successful delivery of the works:

Identified Environmental Concern	Management Strategy
Dust & Airborne Contaminates – During Excavation Works	Use water suppression during demolition, cutting and removal of materials from site Cover stockpiles and using water to prevent dust generation

	Use tarpaulins or equivalent on trucks arriving and leaving the site
Noise and Vibration – During Construction	Select and apply the best work practices to minimise noise impacts, including choice of plant, construction methodologies, timing of activities Identify noise impacts at sensitive land uses Monitor noise and vibration during high decibel activities
Sediment and run off – During Excavation	Develop and implement Site Erosion and Sediment Control Plans (ESCP) Use sand bagging and geo fabric cloth over drains, silt-traps, along with a sediment basin if required, wheel wash/ cattle grid Implement stormwater contamination management plan
Dewatering	Develop Early Works contractor Dewatering Management Plan to collect, treat and remove water from within the excavation
Pollution and / or contaminants (Paint or Solvents) – During Construction	Apply wash out drums, small trade waste bins, overflow bunds, proper storage of chemicals in cupboards and, as a last resort, spill kits
Waste Disposal – During Construction	Implement waste management plan throughout project Minimise waste, separate materials, reuse and recycle.
Hazardous Materials – Prior during trenching excavation works	Remove and dispose of all hazardous materials, including Asbestos Containing Materials in accordance with Safe Work NSW and EPA NSW requirements with minimum impact to the surrounding areas Prepare and implement hazardous waste management plan
Site Entry Environmental Control – Pedestrian management and plant/ person separation	Provide dedicated pedestrian walkways, exclusion zones and staging zones to separate plant and person and lower risk of flammable atmospheres, and artificial extreme temperatures Maintain detailed public and construction pedestrian access routes for site.

An Environmental Control Plan will be developed which includes but is not limited to defining:

- Site layout and boundary, including entry/exit points, pedestrian access ways, internal roads, and clearing limits
- Nearest noise sensitive buildings
- Location and type of sediment and erosion control measures, including size / capacity of detention basins, and wheel wash facilities (specifically during demolition works)
- Identification and management of HAZMAT materials through a contaminated management plan including inspection, sampling, treatment and disposal
- Location of spill containment and clean-up equipment
- Location of worksite waste management facilities
- Hours of work applicable to the worksite (including deliveries, any restrictions on high noise generating activities).
- Location of environmentally sensitive areas (e.g. threatened species, critical habitat, contaminated areas, heritage zones, etc)
- Vegetation and trees to be protected as identified in the Arborist Report
- Location of stormwater drainage and watercourses
- Specific environmental management requirements from licenses, approvals or permit conditions

– Key environmental risk issues and the specific mitigation measures.

The plan will be used in inductions and support site set-up, to review ongoing environmental performance, will be included as information in tender documents to subcontractors (where applicable) and applied in support of ancillary environmental approvals.

Key site entry environmental controls include:

– Security site access gates
- Shaker bays at exits
– Class A and B perimeter hoarding for site separation
– Site security cameras
– Traffic management and traffic controllers

Roberts Co will implement a project specific Plant and Equipment Management Plan for all items on site to ensure maintenance checks are conducted appropriately and when required in accordance with both legislative requirements and our IMS procedures and standards. The following requirements apply:

– Plant will be inspected prior to operation on site, particularly fuel lines, hydraulic hoses, or other items with the potential to impact the environment. Items found to be worn, damaged or otherwise degraded are to be replaced prior to operation
– Plant will be serviced, re-fuelled, and washed down only in approved areas where hydrocarbons can be captured and then properly disposed
– Fuelling will be carried out in bunded areas when fuelling from bulk tanks (where applicable)
– Plant and equipment will be maintained to prevent / fix oil leaks
– Plant will be driven and operated only in approved areas
– Plant will have effective pollution control and sound attenuation devices fitted
– Dedicated Cattle Grid and Wash Down Points will be implemented.

The expected plant and equipment required for the delivery of the project works include, but are not limited to:

– Tower cranes
– 40t, 60t, 100t Mobile Crane
– Fork Lift
– Telehandler
– Man and Materials Hoists
– Formwork hoists
– 2 x Concrete tower booms
– 5t, 14t, 20t and 30t excavators
– 1t Maeda Crane

Project wide environmental risks, obligations, and impacts will be identified and assessed prior to the commencement by the Project Manager and project team, and documents as required, including Project Risk Assessment (PRA); Environmental Risk Action Plans (ERAPs); SWMS, Inspection and Test Plans / check sheets (as appropriate), and Work instructions or procedures (e.g. refuelling and servicing).

All plans will be live and adapted to meet the client's requirements to improve the day to day running of the project.

4.3.6.3 Environmental Record

Roberts Co have not had any fines, incidents or investigations over the previous 3 years and pride ourselves on our exemplary Environmental record. This is largely attributed to our focused and planned approach to environmental management on the projects that ensure all project staff take ownership and responsibility of environmental outcomes.

This approach is supported from Senior Management with the implementation of our Environmental Policy.

4.3.6.4 Waste Management

Roberts Co believes that a tidy site is a safe site, and this principle will be maintained throughout the construction duration. Rubbish bins/skips will be provided at strategic positions around the site, where all subcontractors will be required to clear their rubbish as it accumulates. These bins will be brought down the building in the construction hoists or via the tower crane and loaded via forklift into the large skips. The current location of the waste management compound is to the south west corner of the site establishment zone.

A specific Waste Minimisation Plan will be developed in accordance with the Environmental Management Plan to ensure optimum waste management initiatives are implemented.

Our Waste Management Plan (WMP) will be included as a sub plan of the Environmental Management Plan for the Project. The aim of this plan is to work at best practice in minimising the amount of waste produced during the development and manage that waste in order to reduce the amount going to landfill.

The Waste Management Plan will meet regulatory requirements and utilise a waste contractor that has been independently verified for compliance with minimum standards of reporting in accordance with Green Star Benchmarks. In setting standards and to achieve waste re-use and recycling onsite, the site-specific Waste Management Plan will be implemented.

Subcontract trade packages will be prepared and tendered to ensure optimum recycling through waste management achieves the required targets. Due to the restricted site requirements, Roberts Co proposes to have mixed waste bins that will be sorted and recycled off site. This eliminates the potential for comingled waste entering recycling bins. In accordance our Waste Management Plan, detailed recycling programs will be developed for all phases of the works. The site subcontractors will be required to report on extent of recycling achieved and be subject to Environmental Audits.

4.3.6.5 Noise, Dust and Vibration Management

Monitoring of noise emissions, vibration and air quality during the redevelopment works is necessary to maintain the health and wellbeing of people who are involved in the works and of those surrounding the project. In addition, vibration sensitive equipment and assets must also be protected during the works.

Roberts Co's objective is to understand stakeholder's noise and vibration limitations and develop strategies to work within those limits, or where exceedance of the limitations cannot be avoided, investigate with stakeholders' ways to manage planned exceedances at appropriate times. We have identified primary works which will require noise and vibration considerations including demolition and excavation works.

The project team will employ a Noise and Vibration Management Plan which includes:

- Detailed assessment of background conditions to accurately assess noise and vibration impacts of the works
- Provide a direct line of communication between stakeholders to RCo Project Manager
- On site attendance of the Acoustic Engineer to take noise measurements at critical receiver locations

- On site attendance will be conducted during periods of the job expected to generate the most vibration (Inground Works)
- Site attended measurements at key periods will provide a better identification of the noise and any impact to the surrounding environment.

4.3.6.6 Dust Management

Dust shall be suppressed wherever possible to ensure air quality, and to avoid health and safety issues and nuisance to occupants. All waste to be removed from site shall be adequately covered by suitable means to minimize air-borne dust.

The following dust control measures implemented on the project:

- Water hoses during demolition the process for dust suppression
- Regular periodic clean-up of work and staging areas
- Drilling or cutting shall utilise low vibration wet cutting and drilling to further reduce dust emissions
- Other cutting or drilling shall be carried out behind debris screens
- Vacuum attachments to cutting, drilling and grinding tools shall be implemented to further control dust emissions.

4.3.6.7 Air Quality Management

The project team will implement controls to suppress dust and other suspended particles in accordance with legislation and risk management requirements minimising the generation of dust on site and potential emission issues relating to plant and equipment.

The Air Quality Management plan is included within the project EH&S plan. Our strategy would include the installation of air quality monitors where required for civil earthworks. These monitors will record air quality levels. They are also capable of sending a real-time alarm to the project manager to notify of any activities that exceed the limits.

Dust shall be suppressed wherever possible to ensure air quality, and to avoid health and safety issues and nuisance to occupants. All waste to be removed from site shall be adequately covered by suitable means to minimise air-borne dust. Where dust is identified as a risk, strategies to minimise impacts on the public will be used such as additional screening/filters at air intake points to ensure dust does not enter other buildings or residences.

The following dust control measures implemented on the project:

- Clear definition of trafficable and material storage areas to prevent unnecessary vehicle movement into other areas
- Installation of wheel shaker grid and / or wash down facilities at vehicle egress point
- Regular periodic clean-up of work and staging areas
- Drilling or cutting shall utilise low vibration wet cutting and drilling to further reduce dust emissions
- Other Cutting or drilling shall be carried out behind debris screens
- Provide filters to air intake vents
- Road sweepers to maintain the cleanliness of the surrounding roads.

4.3.6.8 Soil and Water Management

We will ensure there is appropriate erosion and sediment control and truck wash facilities for the duration of the demolition and excavation stages. These will be actively managed by the Civils contractor.

In addition, we will ensure dewatering management systems are in place during the construction phase.

4.3.6.9 Hazardous Materials Storage

Some construction materials are classified as hazardous materials, the type of product will determine the method they are to be handled and the storage requirements of the materials.

Roberts Co propose to store all the hazardous materials in a central position that does not pose a threat to the disruption of the surrounding buildings.

Wherever possible alternate materials will be selected that are less hazardous, for instance water-based products in lieu of solvent based products. This is not always practicable and hazardous materials are required to complete the works.

The hazardous material storage area shall be a secure, locked device. It shall include provision for containment of hazardous material as well as spill or leak control – (e.g. bunding to limit the spread of a liquid; warning devices that detect a gas leak). Fire control and emergency response – these are the steps to be taken if containment fails. The hazardous materials storage area will form part of the Site Emergency Plan, in the case of an incident the storage area shall be easily accessible to emergency services and incorporate fire control and monitoring devices relevant to the hazardous materials.

Ventilation of the storage area will be carefully considered in accordance with the requirements of the hazardous material. The location of the storage area shall be located away from any existing building window or intake vent. The area shall be adequately sign posted with warning signs and protected by barriers to prevent inadvertent collisions with vehicle and equipment. The area will undergo regular maintenance, inspections and cleaning to ensure the controls are current for the materials being stored.

The hazardous material storage area shall be in accordance with the Safe Work Australia Code of Practice 2005.

4.3.6.10 Progressive Inspections

To ensure a defect free product is delivered at the completion of the project, Roberts Co will conduct progressive inspections with a range of stakeholders throughout the construction works to ensure any potential defects are identified during construction where they can be rectified efficiently. Progressive inspections will be conducted with:

- TSA
- HammondCare
- Design consultants
- BCA and DDA consultants
- PCA
- F&R NSW
- Authorities including: Ausgrid, Sydney Water, Jemena and Council

RCO's methodology is based on being open and transparent. By engaging stakeholders early and conducting inspection we believe that we can provide the best outcome for the project. Stakeholders are

afforded the opportunity to provide feedback on the works, provide input based on their experience while also generally feeling part of the project team as opposed to walking at the end of the project.

We welcome the client and its representative to visit the site as often as they like and to contact the Project Manager to arrange a time.

4.3.6.11 Defects Management Methodology

Eliminating defects that arise during construction, or at the very best resolving defects in a timely manner prior to completion, requires the application and proven processes designed to identify and resolve defects in real time. To reduce the occurrence of defects and to ensure they are dealt with in an appropriate and timely manner, we will implement a defects management plan that forms part of the overall Handover and Finalisation Plan. (Internal RCo Quality management Document)

The defects management plan will provide the structure for the site team and subcontractors team that will be designed to:

- Ensure defects and quality issues are not allowed to accumulate
- Ensure inspections are carried out by the workface and that links are established with the company's quality assurance systems
- Ensure tradesmen and their direct line of supervisors see quality as their responsibility to enable quality issues to be resolved at the lowest possible level.
- Our defects methodology is designed to eliminate defects rapidly without the need for excessive paperwork and administration. We will undertake the following processes utilising real-time data capture of defects and non-conformances as they occur, mitigating the risk of a substantial number of defects at completion.

This system enables:

- A focus on getting things right first time – eliminating the need for costly revisit and rework, as a Roberts Co representative can undertake inspections and sign offs simply via the application, resulting in greater vigilance
- The option to invite consultants to monitor the quality of workmanship and finishes during the course of construction, provides a third level of inspection and reporting prior and during a defect's resolution.
- Defects and Quality inspections to be administered via the one application, with all information in one central repository
- Notification of defects to the applicable tradesmen and direct line supervisors; identifying the exact defect site location on the relevant drawing, the description, images and documentation, along with the required timeframe for rectification
- Ability to report and close out defects at the defect location via the application, using a lightweight mobile device on site, such as iPad or mobile phone, ensuring the defect is closed out only when rectified (not in a site office)
- Enables Roberts Co and TSA to track the closure of all defects and a defects current status
- Maintains real time history of all actions including when the defect was created, when the responsible party took action, and determine programme and cost impacts
- All defects, whether open or closed to be filtered by trade, location and time frame, to ensure holistic overview and review

The defect methodology process via the Roberts Co defects management application will be rigorously applied to the Project and site level quality awareness will be reinforced with quality inspections by the Design Consultants and this process will be an integral part to the installation, commissioning and handover process.

Zutec Field will be used as Defect Management software for the project. This software allows us to manage defects, handover documentation and in the field fire penetration status to provide a single source of truth.

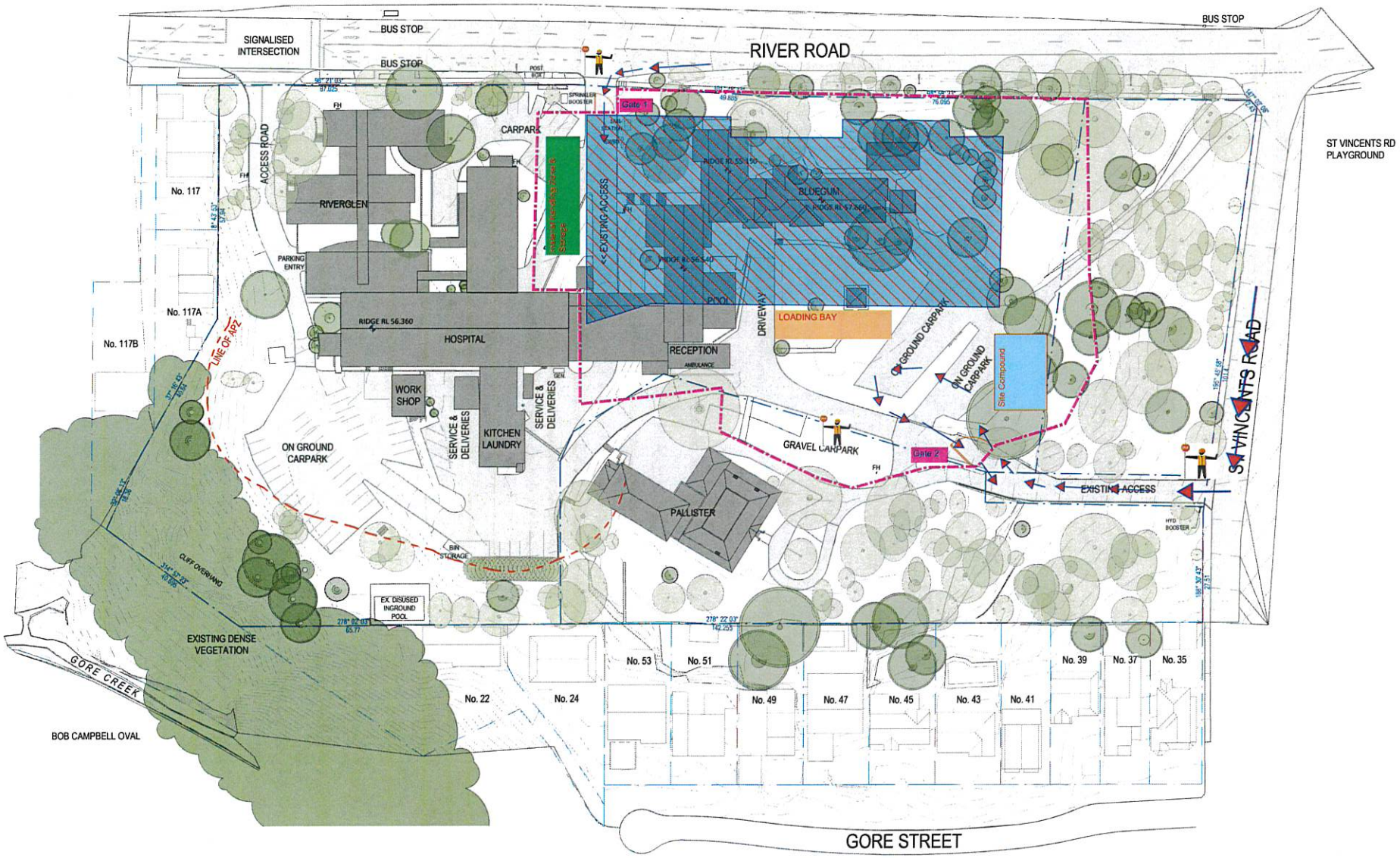
4.3.6.12 Handover Documentation

We will issue the following in hard copies and digital format:

- Draft submission of all Operation and Maintenance Manuals for Principal review – 10 weeks prior to Practical Completion
- Final submission of all Operation and Maintenance Manuals within 4 weeks post Practical Completion
- Draft submission of the Warranties & Spares Register for Principal review – 3 Months Prior to Practical Completion
- Final submission of the Warranties & Spares Register for Practical Completion
- Final BIM model of the Works within 6 weeks of (the later of) Date of Practical Completion and issuance of the Occupancy Certificate

The documentation will be managed using the digital platform Zutec. This software incorporates staged submission of documents as well as a digital workflow process that allows the client and its consultants or representatives to review documentation where required. Handover of the documentation will follow the requirements outlined in the PPR.

STAGE1&2 SITE MANAGEMENT DEMOLITION, EXCAVATION & STRUCTURE TO PODIUM PHASE



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE, NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P9	2022.02.25	ISSUE TO CONSULTANTS	NAH
P8	2022.02.18	ISSUE TO CONSULTANTS	NAH
P7	2022.02.11	ISSUE TO CONSULTANTS	NAH
P6	2021.09.01	ISSUE TO CONSULTANTS	NAH
P5	2021.08.09	ISSUE TO CONSULTANTS	NAH
P4	2021.06.16	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

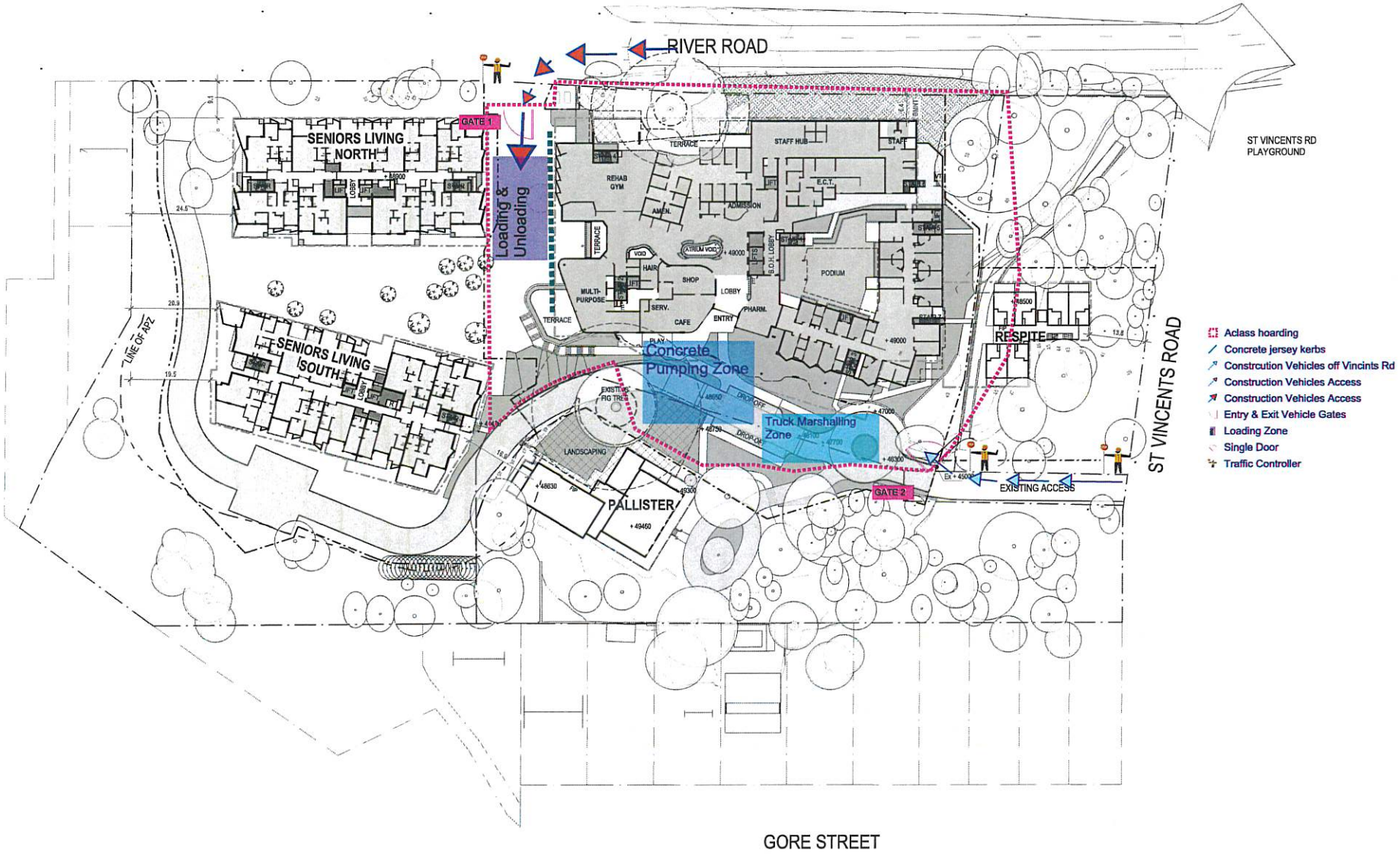
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P9
DATE: 01/06/21
DRAWING No: DD-SW-0100
DRAWING TITLE: EXISTING SITE PLAN

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

Stage 1 & 2 Site Management

Structure, Facade, services and Finishes Phases



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 629 149 986) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P11	2022.02.25	ISSUE TO CONSULTANTS	NAH
P10	2022.02.18	ISSUE TO CONSULTANTS	NAH
P9	2022.02.11	ISSUE TO CONSULTANTS	NAH
P8	2022.01.20	ISSUE TO CONSULTANTS	NAH
P7	2021.09.01	ISSUE TO CONSULTANTS	NAH
P6	2021.08.09	ISSUE TO CONSULTANTS	NAH
P5	2021.07.01	ISSUE TO CONSULTANTS	NAH

NORTH

SITE PLAN LEGEND

- SITE BOUNDARY
- PLANNING ENVELOPE
- STAGING LINE

SYDNEY
(02) 9261 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BM

CLIENT: HammondCare Champion Life

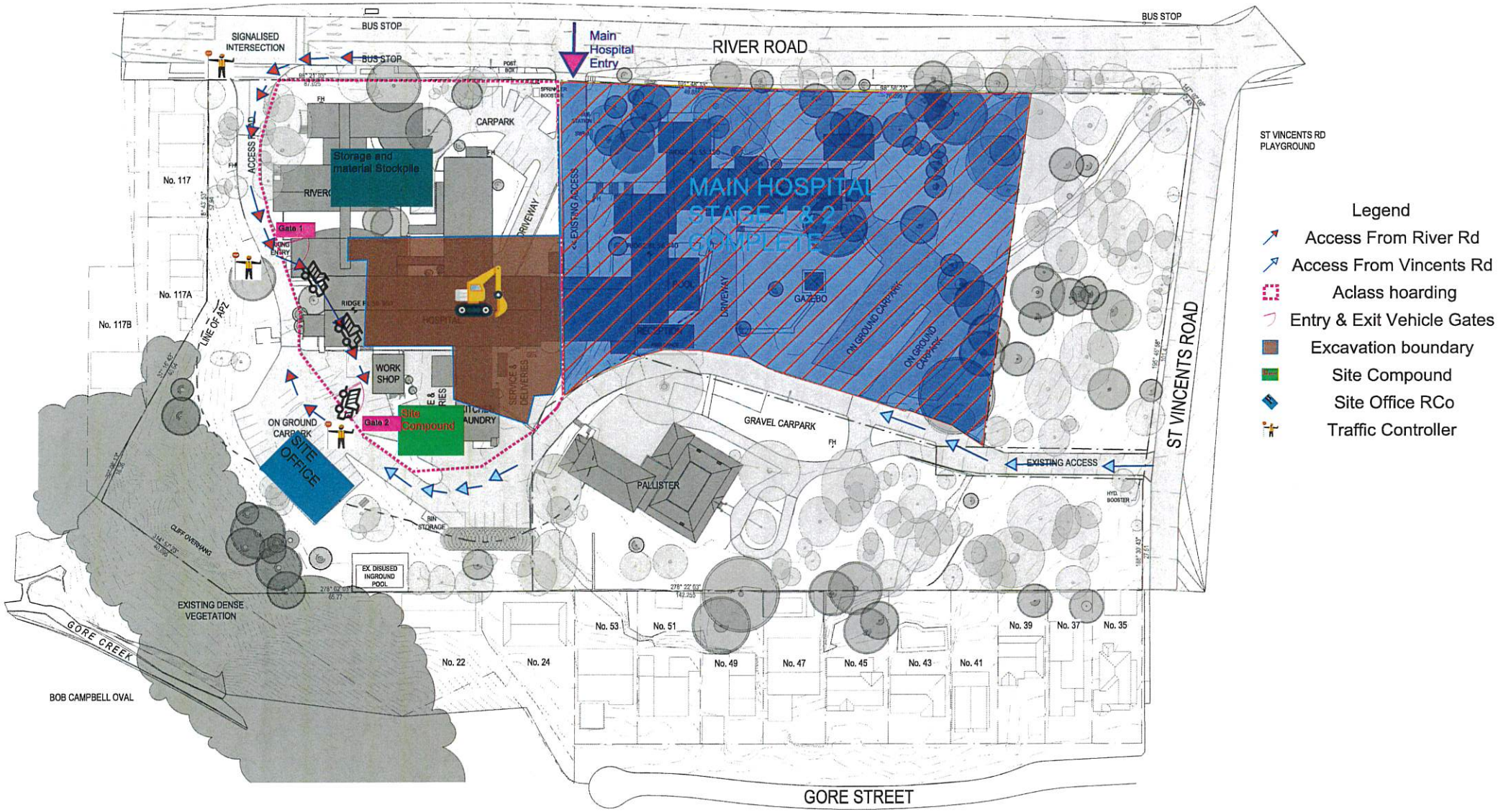
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P11
DATE: 01/11/21
DRAWING No: DD-SW-0203
DRAWING TITLE: SITE LEVEL PLAN - LEVEL 4 (PLAZA)

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

Stage 3 Site Management

Demolition, Excavation & Structure to Podium level



Legend

- Access From River Rd
- Access From Vincents Rd
- Aclass hoarding
- Entry & Exit Vehicle Gates
- Excavation boundary
- Site Compound
- Site Office RCo
- Traffic Controller

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 100 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 148 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P9	2022.02.25	ISSUE TO CONSULTANTS	NAH
P8	2022.02.18	ISSUE TO CONSULTANTS	NAH
P7	2022.02.11	ISSUE TO CONSULTANTS	NAH
P6	2021.09.01	ISSUE TO CONSULTANTS	NAH
P5	2021.08.09	ISSUE TO CONSULTANTS	NAH
P4	2021.06.16	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH

NORTH

SYDNEY
(02) 9261 6333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

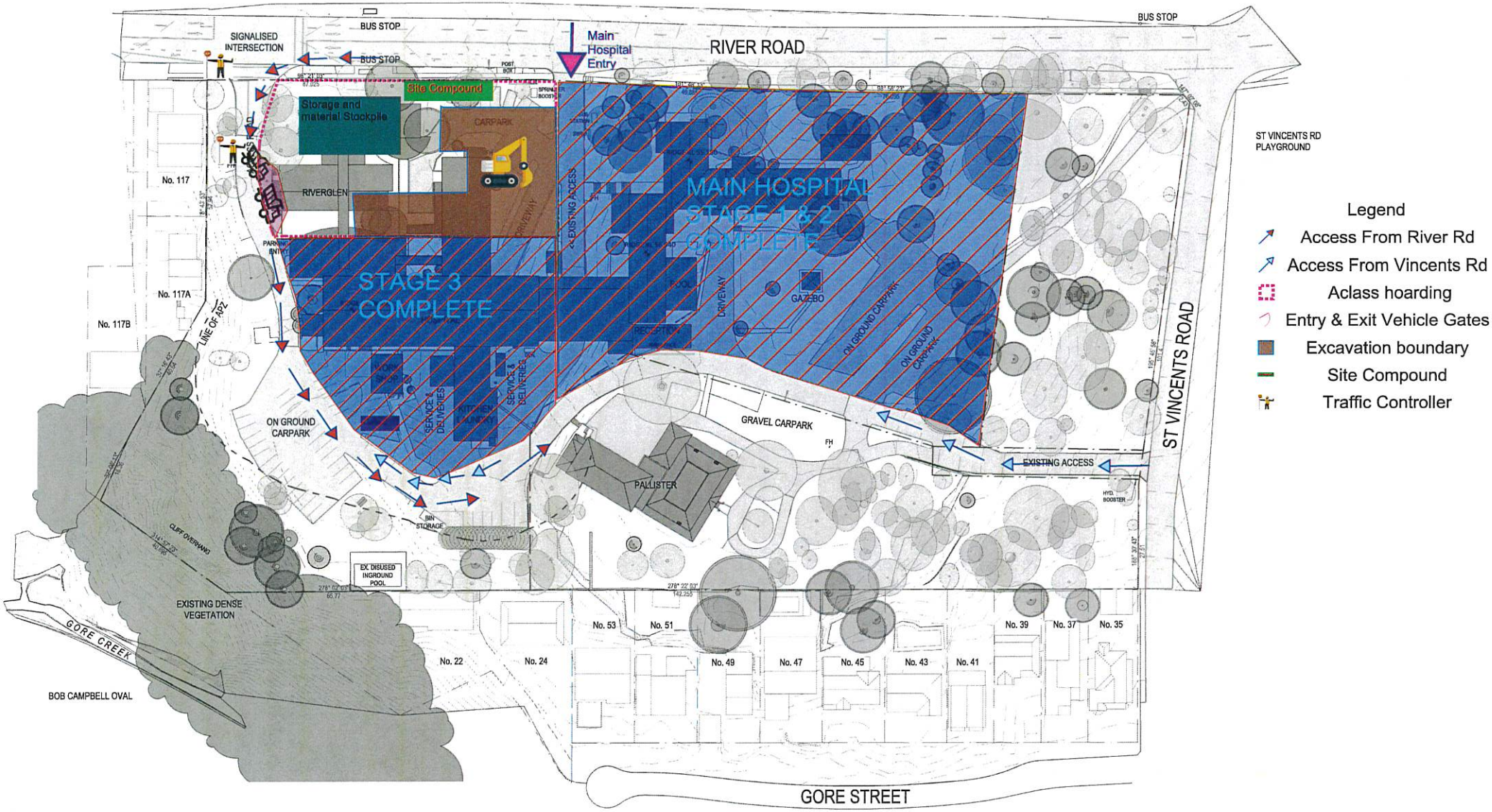
CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P9
DATE: 01/06/21
DRAWING No: DD-SW-0100
DRAWING TITLE: EXISTING SITE PLAN
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

Stage 4 Site Management

Demolition, Excavation & Structure to Podium level



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 100 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 020 149 896) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P9	2022.02.25	ISSUE TO CONSULTANTS	NAH
P8	2022.02.18	ISSUE TO CONSULTANTS	NAH
P7	2022.02.11	ISSUE TO CONSULTANTS	NAH
P6	2021.09.01	ISSUE TO CONSULTANTS	NAH
P5	2021.08.09	ISSUE TO CONSULTANTS	NAH
P4	2021.06.16	ISSUE TO CONSULTANTS	NAH
P3	2021.04.20	CAD ISSUE	NAH

NORTH

SYDNEY
(02) 9361 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

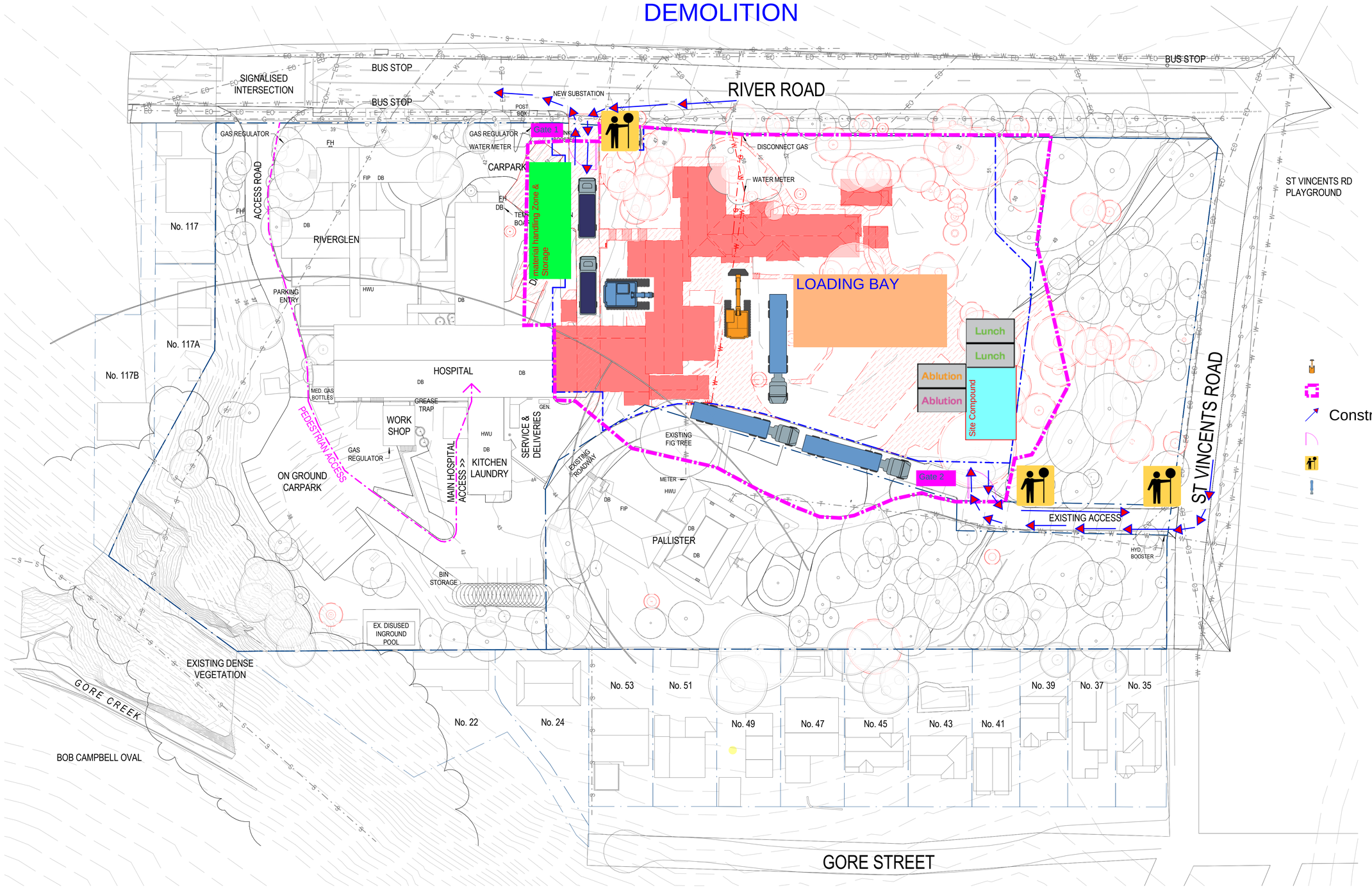
PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P9
DATE: 01/06/21
DRAWING TITLE: EXISTING SITE PLAN
DRAWN: NAH
CHECKED:
SCALE: 1 : 500 @A1

DRAWING No: DD-SW-0100

5 APPENDIX A - STAGES 1 & 2 SITE MANAGEMENT PLANS

STAGE 1 & 2
DEMOLITION



Legend
- 30t Excavator
- A Class Hoarding
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller
- Truck & Dog

APPROVAL ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21
DRAWING TITLE: STAGE 1 PLAN - EARLY WORKS

DRAWING No: **DD-SW-0121**

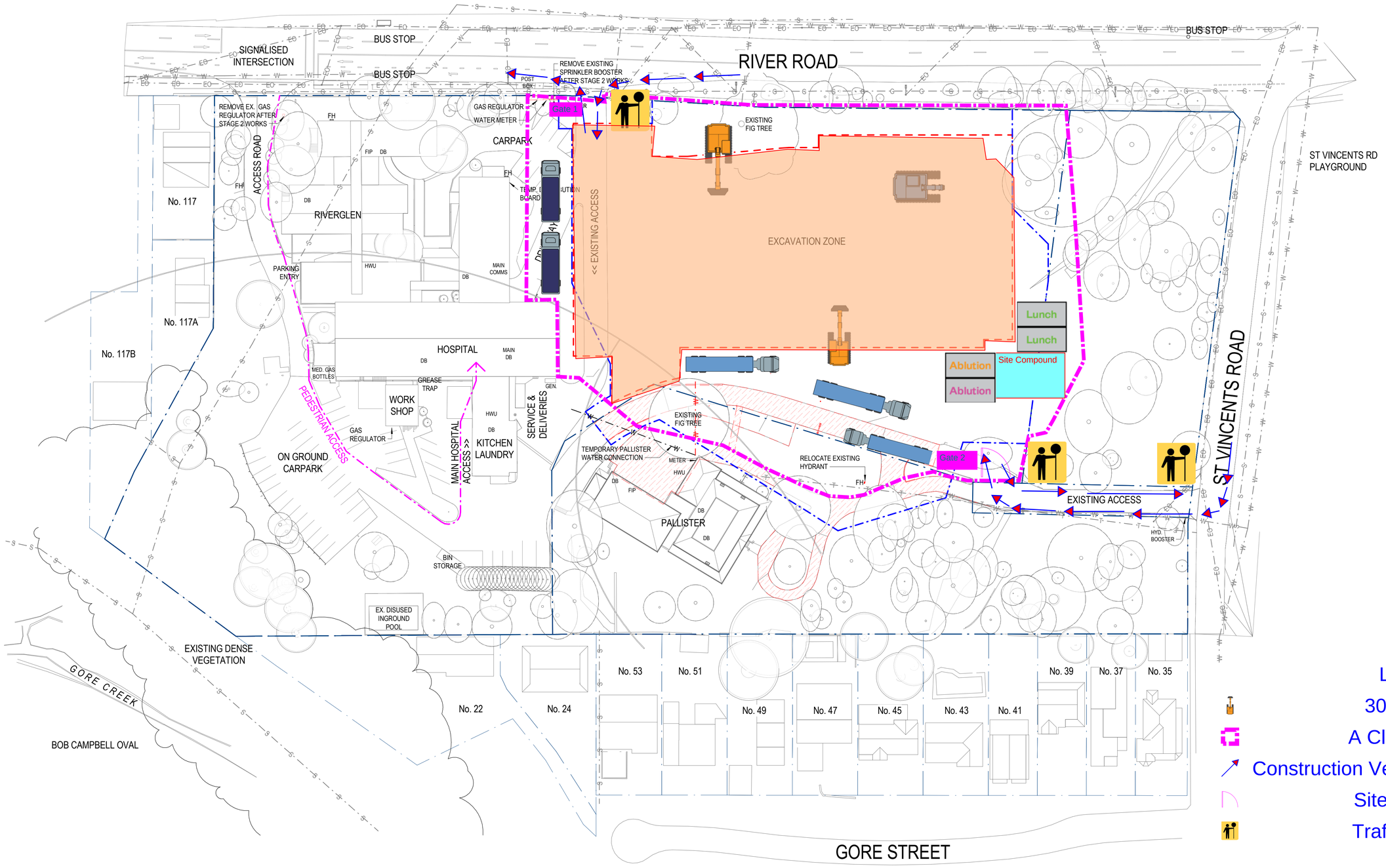
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:25:06 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

STAGE 1 & 2
EXCAVATION



Legend

- 30t Excavator
- A Class Hoarding
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller

APPROVAL ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0122

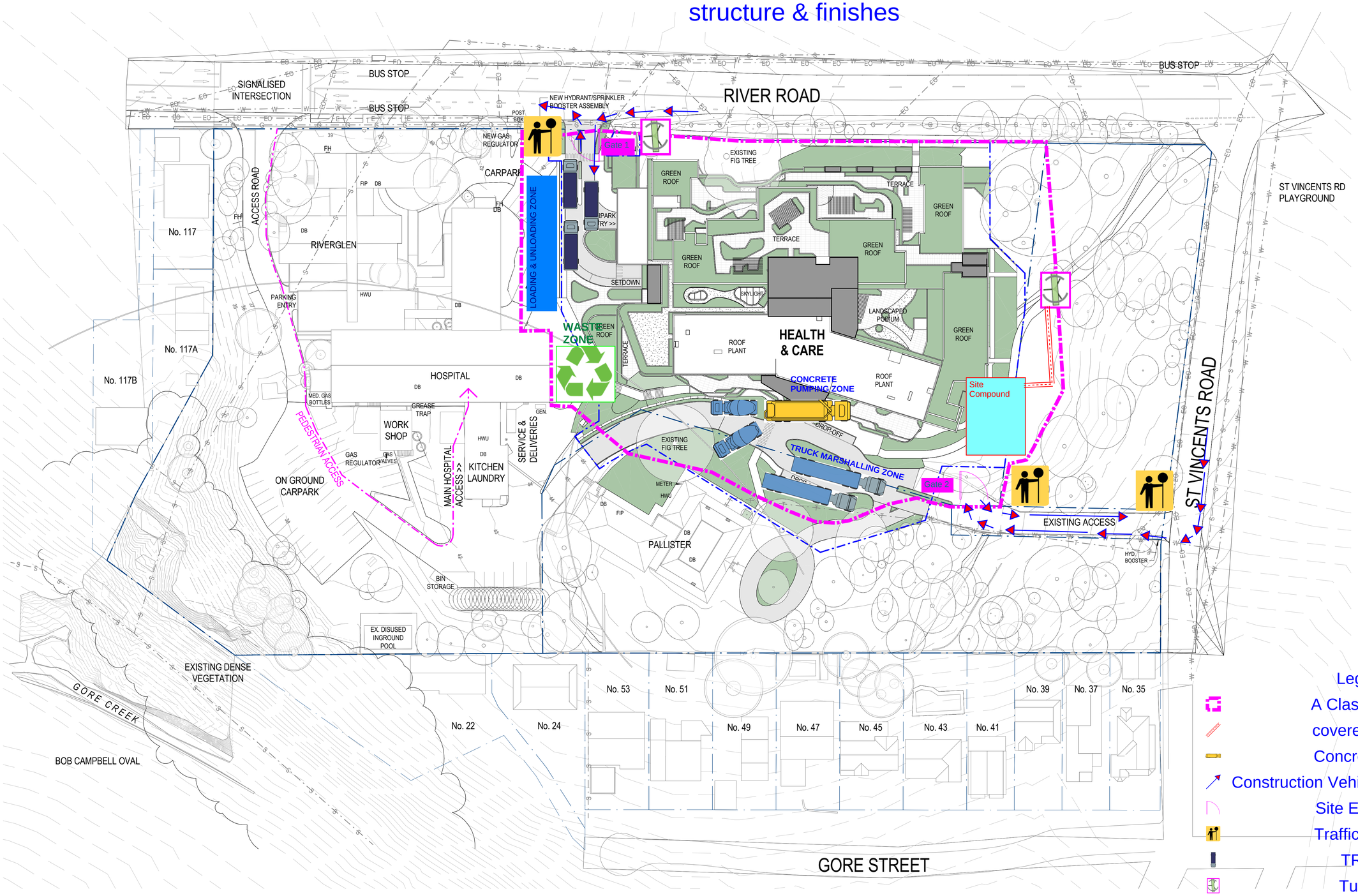
DRAWING TITLE: STAGE 2.1 PLAN - DEMOLITION

DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:26:23 PM

STAGE 1 & 2 SITE MANAGEMENT - facade, structure & finishes



Legend

- A Class Hoarding
- covered walkway
- Concrete Pumps
- Construction Vehicles Access & Egress
- Site Entry & Exit
- Traffic Controller
- TRUCKS
- Turnstiles

APPROVAL ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0123

DRAWING TITLE: STAGE 2.2 PLAN - CONSTRUCTION

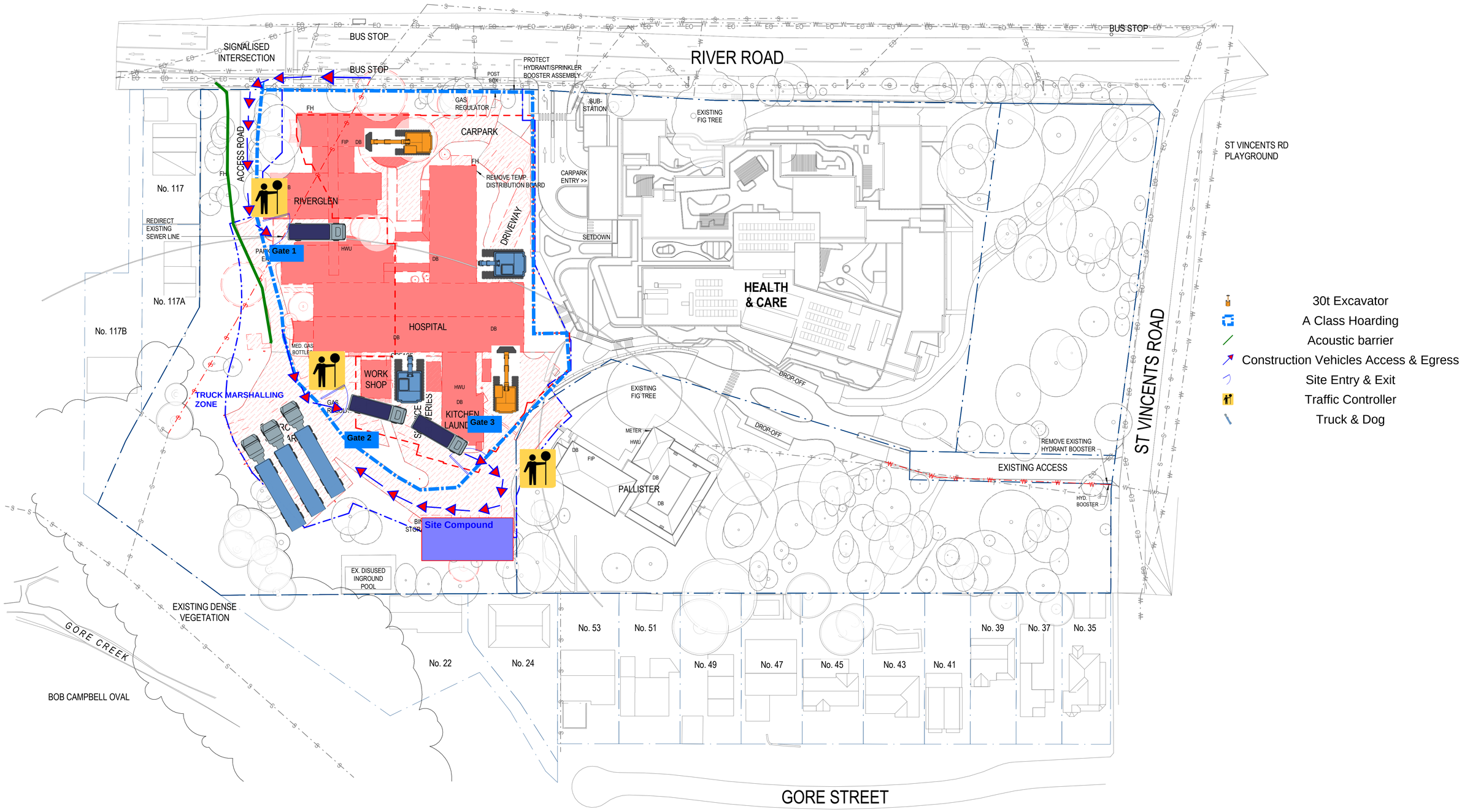
DRAWN: NAH **CHECKED:** **SCALE:** 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:27:49 PM

6 APPENDIX B - STAGE 3 SITE MANAGEMENT PLANS

STAGES 3 & 4 DEMOLITION AND EXCAVATION PLN



APPROVAL ISSUE
NOT FOR CONSTRUCTION

0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT
THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

LEGEND - SITE DEMOLITION PLAN

- SITE BOUNDARY
- STAGING LINE
- EXTENT OF EXCAVATION (APPROXIMATE)
- EXISTING TO REMAIN
- DEMOLISHED (SURFACE)
- DEMOLISHED (BUILDING)
- EXISTING SERVICE TO REMAIN
- EXISTING SERVICE DEMOLISHED (REFER TO CONSULTANT DRAWINGS)

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21
DRAWING TITLE: STAGE 3.1 PLAN - DEMOLITION
DRAWING No: DD-SW-0124

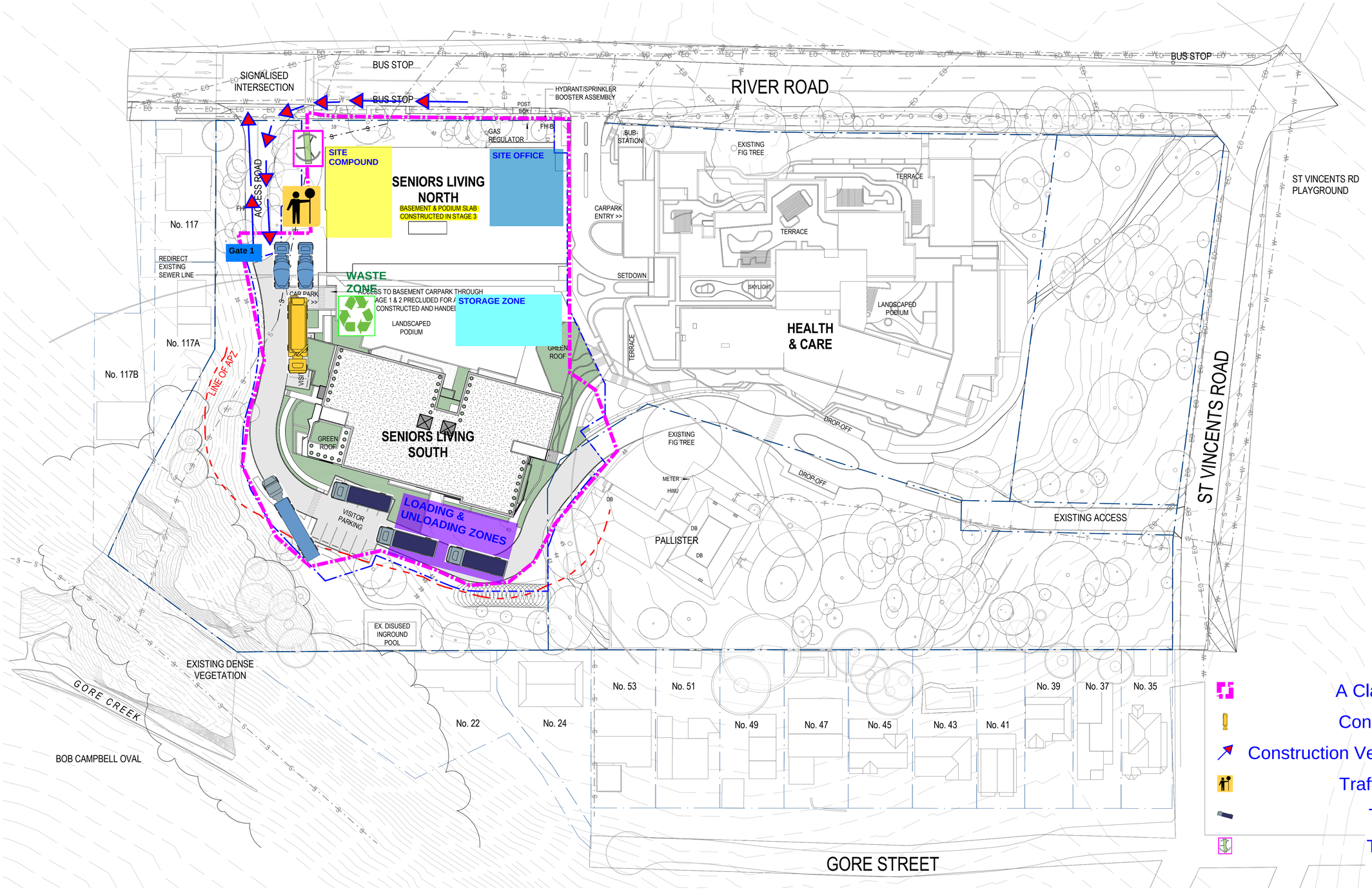
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:29:21 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

STAGE 3 SITE MANAGEMENT



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt

APPROVAL ISSUE
NOT FOR CONSTRUCTION

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

REVISION: P10
DATE: 01/18/21

DRAWING No: DD-SW-0125

DRAWING TITLE: STAGE 3.2 PLAN - CONSTRUCTION

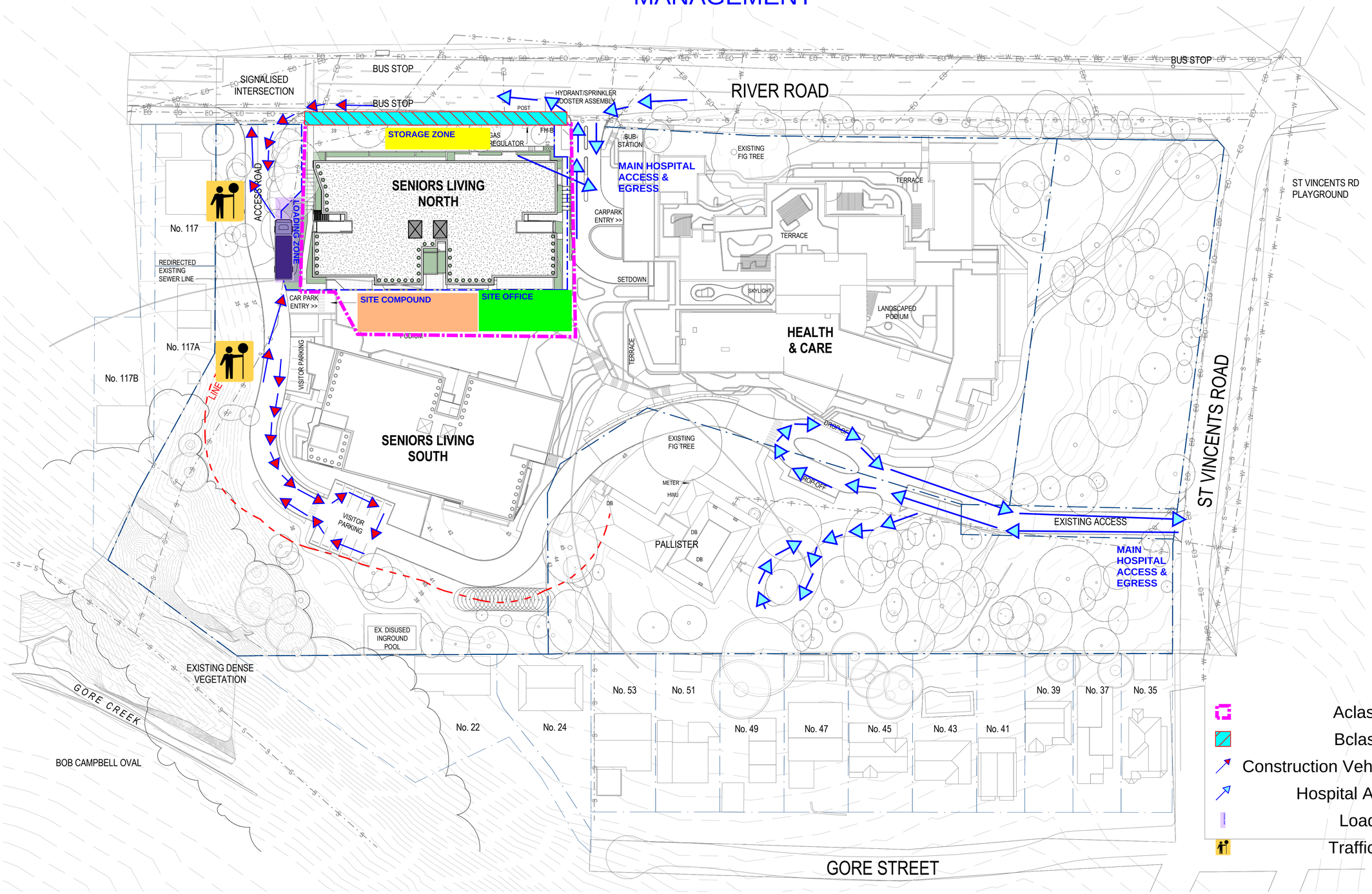
DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:30:40 PM

7 APPENDIX B - STAGE 4 SITE MANAGEMENT PLANS

STAGE 4 SITE MANAGEMENT



0m 10m 20m 30m 40m 50m

1 : 500 @ A1

© COPYRIGHT

THESE DRAWINGS AND DESIGNS AND THE COPYRIGHT THEREOF ARE THE PROPERTY OF BICKERTON MASTERS ARCHITECTURE PTY LTD (ACN 109 225 149) T/A BICKERTON MASTERS AND BM HEDE PTY LTD (ACN 630 149 996) T/A HEDE ARCHITECTS AND MUST NOT BE USED, RETAINED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE AFOREMENTIONED LEGAL ENTITIES.

BICKERTON MASTERS AND HEDE ARCHITECTS ACCEPT NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR ACCURACY OF DATA TRANSFERRED ELECTRONICALLY. RECIPIENTS SHOULD WHEN NECESSARY REQUEST A HARD COPY VERSION FOR VERIFICATION. USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE. ALL DIMENSIONS TO BE VERIFIED ON SITE. IF THIS IS A COLOURED DRAWING AND IS PRINTED IN BLACK & WHITE NOT ALL INFORMATION MAY BE LEGIBLE.

REV	DATE	DETAILS	INITIALS
P10	2022.05.06	EIS LODGEMENT ISSUE	NAH
P9	2022.04.29	EIS LODGEMENT ISSUE FOR CLIENT REVIEW	NAH
P8	2022.04.14	UPDATED DRAFT LODGEMENT PACK	NAH
P7	2022.04.08	LODGEMENT ISSUE FOR CLIENT SIGNOFF	AMac
P6	2022.04.01	FINAL DRAFT LODGEMENT ISSUE	AMac

NORTH

SYDNEY
(02) 9261 8333
STUDIO 3, LEVEL 3
35 BUCKINGHAM STREET
SURRY HILLS 2010, NSW
www.bickertonmasters.com.au

BIM

CLIENT: HammondCare Champion Life

PROJECT: 01605
GREENWICH HOSPITAL REDEVELOPMENT
RIVER RD, GREENWICH

APPROVAL ISSUE
NOT FOR CONSTRUCTION

REVISION: P10
DATE: 02/10/22

DRAWING No: **DD-SW-0126**

DRAWING TITLE: STAGE 4 PLAN - CONSTRUCTION

DRAWN: NAH CHECKED: SCALE: 1 : 500 @A1

NSW NOMINATED ARCHITECT: ANDREW MASTERS (9037)

6/05/2022 4:32:00 PM

C:_Revit Projects\SW-AR-GREENWICH_andrewmacNRYHN.rvt