

GPV Property Pty Ltd
PO Box 1021
WARNERS BAY NSW 2282

Project 81563.05
27 June 2022
R.001.Rev0
JPS:kd

Attention: Ian Gill

Email: ian.gill@gpvproperty.com.au

Contamination Status Report
Proposed Medical Facility
31-33 Smith Street, Charlestown

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by GPV Property Pty Ltd to provide a report on the contamination status in regard to the proposed medical facility located at 31-33 Smith Street, Charlestown, NSW (the Site). This report references background information and provides an updated status of the contamination conditions since the previous DP investigations, remediation and validation undertaken on the site and comments on the suitability of the site for the proposed development with regards to contamination.

It is understood that the site is currently proposed for a private hospital and medical facility (commercial land use). The previous DP contamination investigations on the site were undertaken for the former proposed high density residential development which was never constructed. We understand that due to the new proposed development, approval is required through Planning Secretary's Environmental Assessment Requirements (SEARs) in which the contamination status of the site must be confirmed to assess the site suitable for the proposed development.

2. Scope of Works

The scope of works for the contamination status report regarding the proposed medical facility at the site comprised the following:

- Review of existing reports for the site prepared by DP;
- Updated aerial photo review from the time DP undertook the previous investigations and remediation works to present;
- Discussions with site personnel;
- Site inspection to assess current site conditions; and
- Preparation of this brief letter report, presenting the results of the review, site observations and an assessment of the suitability of the site from a contamination perspective for the proposed land use.

3. Site Identification

The site is located on the north-eastern corner of the intersection of Pacific Highway and Frederick Street, Charlestown with a frontage to Smith Street as shown on Figure 1 below. The site is a rectangular parcel of land of approximately 8,000 m².



Figure 1: Aerial image showing the site (sourced from MetroMap, April 2021)

The street address of the site is 31 to 33 Smith Street, Charlestown and comprises Lots 1 and 2 in DP 877977.

4. Proposed Development

The proposed commercial development comprises a private hospital and medical facility. The concept plans (drafted by Archadia Projects, attached) indicate the development will comprise a multi-storey building along with an on-grade carpark and separate multi-storey carpark facility. The development appears to be below the existing ground level along the eastern boundary (Smith St) grading to the existing ground levels along the western and southern boundaries (Pacific Hwy and Fredrick St, respectively). It was indicated that excavations of 1 m to 3 m will be required for the proposed development.

Site personnel indicated surface fill materials, previously classified in the previous investigations by DP as General Solid Waste, are proposed to be stripped and disposed to a licensed waste facility Site personnel also indicated portions of the natural materials below the fill, previously classified as Virgin Excavated Natural Material (VENM), is proposed to be excavated and exported offsite for re-use, subject to a concurrent VENM assessment undertaken by DP.

5. Background

5.1 Previous Reports

The site history review undertaken as part of the Preliminary Geotechnical and Site Investigation (Contamination) (DP, 2014a) indicated that the site had been used as a school prior to 1954 up until about 2006. From 2006 to 2009, the majority of former site buildings were subject to demolition with the remaining buildings in the southern part of the site removed mid-2014. The current carpark was constructed from late 2009 to 2010.

Several potentially contaminating activities were identified at the site and comprised the following:

- Presence of filling (source unknown) evidenced by the existing fill batter and raised site area, and car park development; Fill materials, which may have been imported to site, may contain a range of potential contaminants depending on the source;
- Former demolition of site structures including old school buildings (possible presence of hazardous building materials (HBM) including asbestos); and
- Localised opportunistic dumping of materials (surface bound and less than 5 m²) within the western area of the site. These areas were observed to contain metal, concrete, tyres, plastic and fabric and a range of potential contaminants may be present.

No significant potential off-site sources of contamination were identified.

A 'Detailed Site Investigation' (DSI) was undertaken by DP in November 2014 (DP, 2014b) for the purposes of assessing geotechnical conditions and contamination status at the site for the proposed multi-storey residential development. An 'Additional Investigation for Contamination' was also undertaken in August 2016 (DP, 2016a) to further assess the possible extent of contaminated slag/ash fill containing Polycyclic Aromatic Hydrocarbons (PAH) which exceeded the adopted land use assessment criteria for the previously proposed residential development.

Based on the combined results of the PSI (DP, 2014a), DSI (DP, 2014b) and Additional Subsurface Investigation for Contamination (DP, 2016a), a total of 33 bores were drilled for the assessment of site contamination. The majority of test locations focused on the northern part of the site (area of contamination risk) based on the site history. The results of the assessment generally indicated the absence of gross contamination to soils at the locations and depths tested.

The subsurface conditions generally comprised:

- Fill to depths of 0.3 m to 0.9 m in the northern car park area of the site (average 0.7 m depth);
- Fill to depths of 0.3 m to 1.1 m in the southern grassed part of the site (average 0.6 m depth);
- Clayey sand or clay beneath fill from 0.3/0.8 m to 0.7/2.2 m;
- Clayey sand in selected bores from 0.7/1.9 m to 0.95/3.5 m (high blow counts suggesting extremely weathered sandstone);
- Sandstone bedrock becoming conglomerate bedrock from depths of 0.55/3.5 m to termination depths of 10.15/11.6 m.

The fill in the northern car park area of the site varied from the fill in the southern grassed areas. Beneath the asphalt seal, the materials typically comprised the following:

- Grey fine to medium grained gravelly sand fill with trace cobbles (subgrade fill);
- Yellow and dark grey/grey silty sandy clay fill with ash/slag inclusions.

The results of laboratory testing for a range of potential contaminants in soil indicated the absence of gross contamination. Seven out of the 33 bore locations contained elevated PAHs exceeding the adopted human health investigation level (HIL) for the previous proposed future land use (i.e. consistent with 'HIL B' – residential land use with minimal access to soils). The bores were located in the northern car park area and the exceedances were considered to be due to ash/slag inclusions in the grey or red-brown fill materials which may have been imported during pavement construction.

The assessment indicated that remediation of the PAH impacted soils in the northern portion of the site would be required to render the site suitable for the previously proposed residential development.

The remediation action plan (RAP) (DP, 2016b) was developed based on available standards and guidelines prepared by the relevant authorities, and the results of geotechnical and contamination investigations conducted by DP for the proposed development as described above.

In 2017 remediation of the impacted fill within the northern portion of the site was undertaken by Lake Macquarie City Council (LMCC) who at the time were the site owners. Remediation involved the progressive stripping and off-site disposal of the impacted materials and validation inspections, sampling and testing by DP.

Based on the results of the validation inspections and testing as presented in the validation of remediation report (DP, 2018), the identified areas of contamination were appropriately remediated in general accordance with the RAP. Soils found to contain contaminant concentrations exceeding the remediation action criteria (i.e. HIL B) were removed from the site as part of the remediation works. As a result, DP determined the Site was suitable for proposed multi-storey residential development. Figure 2 below shows the stripped and remediated surface of the northern portion of the site along with consolidated stockpiles of materials within the previous remediation action criteria (RAC).

A recent DP investigation undertaken in April 2022 involved the waste classification of several stockpiles (shown below) comprising upper fill 'clean' materials stockpiled during previous remediation works in 2017. The waste classification confirmed materials were classified as Recovered Aggregate with reference to NSW EPA (NSW EPA, 2014c).



Figure 2: Majority of the remediated site, with the consolidated stockpiles of the excavated upper 'clean' fill and deeper fill within the RAC in the background, looking south west (11 December 2017).

5.2 Updated Aerial Photo Review

A review of aerial photos since the completion of remediation and validation to present (December 2018 to January 2022) indicates the site has remained vacant. The aerial photos indicate there is no evidence of site activities or the observations of new potentially contaminating activities across the site in the past four years (ie. no importation of filling, opportunistic dumping or machinery was evident).

6. Site Inspection

6.1 Discussion with Site Personnel

DP interviewed Paul Connaughton (Director of Archadia Construction Pty Ltd which are a subsidiary of GPV Property Pty Ltd (client)) on 9 June 2022. Paul Connaughton identified the following during the interview:

- GPV acquired the site in early 2022;
- The site has remained vacant since remediation and validation in 2018;
- Minor quarried gravel has been imported and placed in the central / north eastern portion as an access track for proposed machinery;
- The stripping and stockpiling of surface fill has commenced within the southern portion of the site;
- The site has remained locked and is inaccessible to the general public;
- Surface fill materials previously classified in the previous investigations as General Solid Waste are to be stripped and disposed to a licensed facility;

- Portions of the natural materials previously classified as VENM, below the fill, is proposed to be excavated and exported offsite, subject to a concurrent VENM assessment undertaken by DP.

6.2 Observations

A site walkover was undertaken by an environmental engineer on 9 June 2022. The following key site features pertinent to this assessment were observed (refer to photographs below):

- The Site appeared vacant with similar site conditions observed during the remediation and validation works undertaken in 2018 (Figure 3);
- Remnants of fill stockpiles originating from the remediation works in 2018 were observed in the north western portion of the site (Figure 4). The previous reports classified the stockpiles as fill within the concentrations of the then proposed development (HIL B) which can remain onsite from a contamination perspective;
- A stockpile of quarried gravel and cobbles were piled and spread in the central south eastern portion of the site for use as an access track (Figures 3 and 5). The gravel and cobbles comprised natural ballast material and showed no signs of contamination;
- Stockpiles of stripped surface fill were observed in the south western and south central portions of the site (Figures 3 to 7);
- The stockpiled fill comprised intermixed building materials (brick, concrete, ceramics and metal) (Figure 6);
- Portions of the northern and south western sections of the site comprised natural clay and sandstone at the surface (Figures 3, 4 and 7).



Figure 3: Site conditions, looking south west, 9 June 2022.



Figure 4: Northern portion and remnants of fill stockpiles from remediation works in background looking east, 9 June 2022.



Figure 5: Central portion, showing imported quarry gravel and cobbles, looking south west, 9 June 2022.



Figure 6: Stockpile of stripped surface fill comprising some brick and concrete, 9 June 2022.



Figure 7: Exposed natural soils in south western portion and surrounding stockpiles of stripped fill materials, looking south west 9 June 2022.

7. Conclusion

In regards to the review of previous DP investigations, results of the updated site history, site inspection and proposed development, the following is noted:

- The results of the previous investigations, remediation and validation rendered the site suitable for the then proposed high density residential development in 2018;
- The results of the updated aerial photo review and site inspection indicate no new sources of potentially contaminating activities on the site since the previous remediation and validation works to present;
- The previous proposed development was assessed against the high density residential land use criteria (HIL-B/HSL-B) which is more conservative than the new proposed commercial development (HIL-D/HSL-D).

Based on the above, the previous contamination investigations, remediation and validation conducted by DP along with the updated aerial photo review and site inspection, the site is considered suitable for the proposed commercial development with regards to contamination. Further investigation is therefore not warranted.

8. References

- DP. (2014a). *Report on Preliminary Geotechnical and Site Investigation (Contamination), Proposed Multi-Storey Development, 31 to 33 Smith St.* Charlestown: Douglas Partners Pty Ltd.
- DP. (2014b). *Report on Detailed Site Investigation (Contamination), Proposed Multi-Storey Development, 31 to 33 Smith St.* Charlestown: Douglas Partners Pty Ltd.
- DP. (2016a). *Report on Additional Investigation for Contamination, Proposed Multi-Storey Development, 31 to 33 Smith St.* Charlestown: Douglas Partners Pty Ltd.
- DP. (2016b). *Remediation Action Plan, Proposed Multi-Storey Development, 31 to 33 Smith St.* Charlestown: Douglas Partners.
- DP. (2018). *Report on Validation of Remediation, Proposed Multi-Storey Development, 31 to 33 Smith St.* Charlestown: Douglas Partners Pty Ltd.
- NSW EPA. (2014c). *Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014, The recovered aggregate exemption 2014.* NSW Environment Protection Authority.

9. Limitations

Douglas Partners (DP) has prepared this report for this project at 31-33 Smith Street, Charlestown with reference to DP's email proposal dated 14 March 2022 and acceptance received from Ian Gill (GPV Property Pty Ltd) dated 4 April 2022. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of GPV Property Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the (environmental) components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in fill materials at the test locations sampled and analysed. Building demolition materials, such as concrete, brick, were, however, located in previous below-ground fill and/or above-ground stockpiles and these are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for inspection/sampling, or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully

Douglas Partners Pty Ltd



Paulo Sebastian

Associate

Reviewed by



Matthew Blackert

Senior Associate

Attachments: About this Report
 Proposed Development Plans (Archadia Projects)

About this Report

Douglas Partners



Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;

- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

CONCEPT PLANNING

FEBRUARY 2022 v13.4

PROPOSED HEALTHCARE DEVELOPMENT
31-33 SMITH STREET / CHARLESTOWN

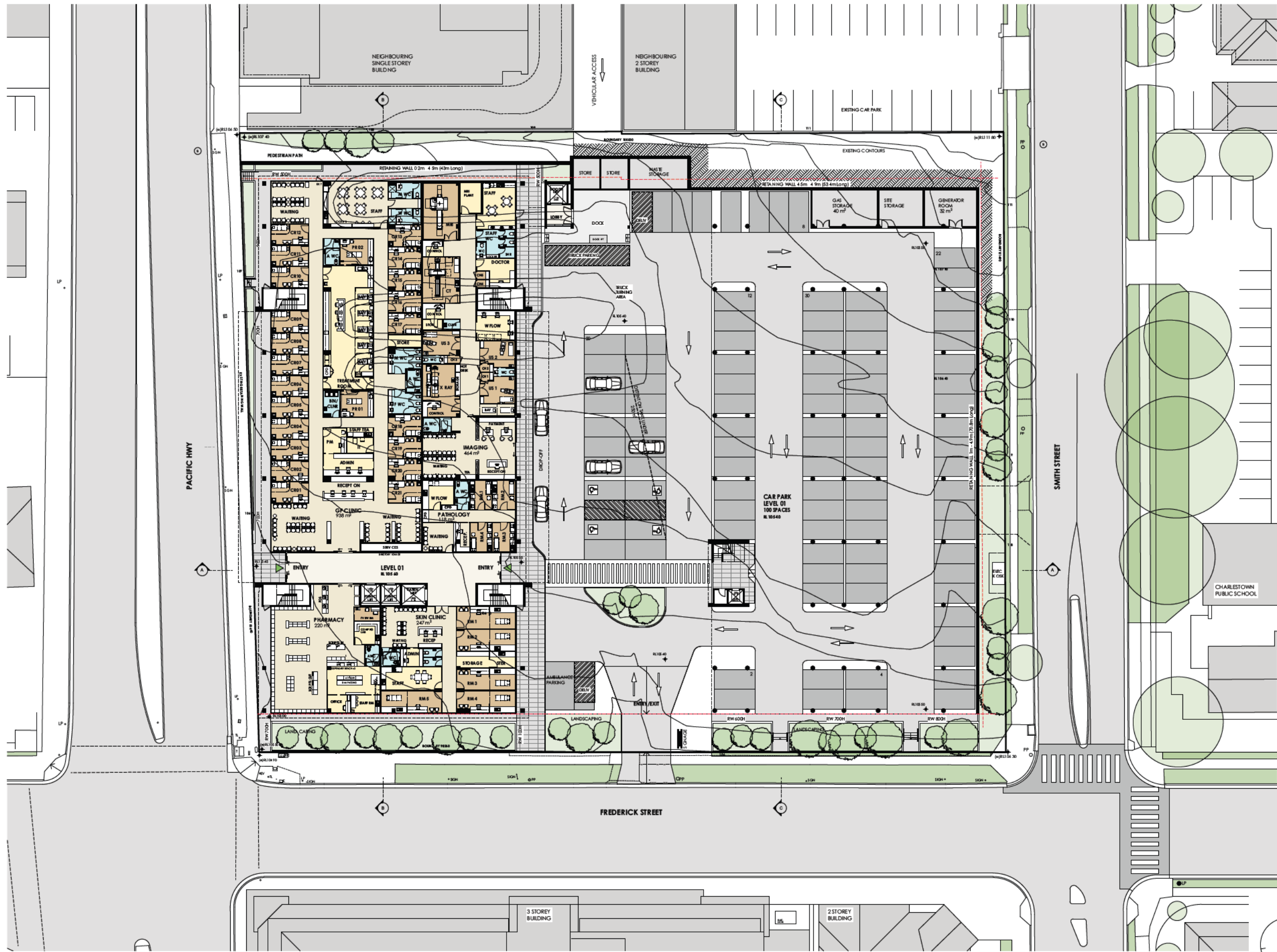
PREPARED BY

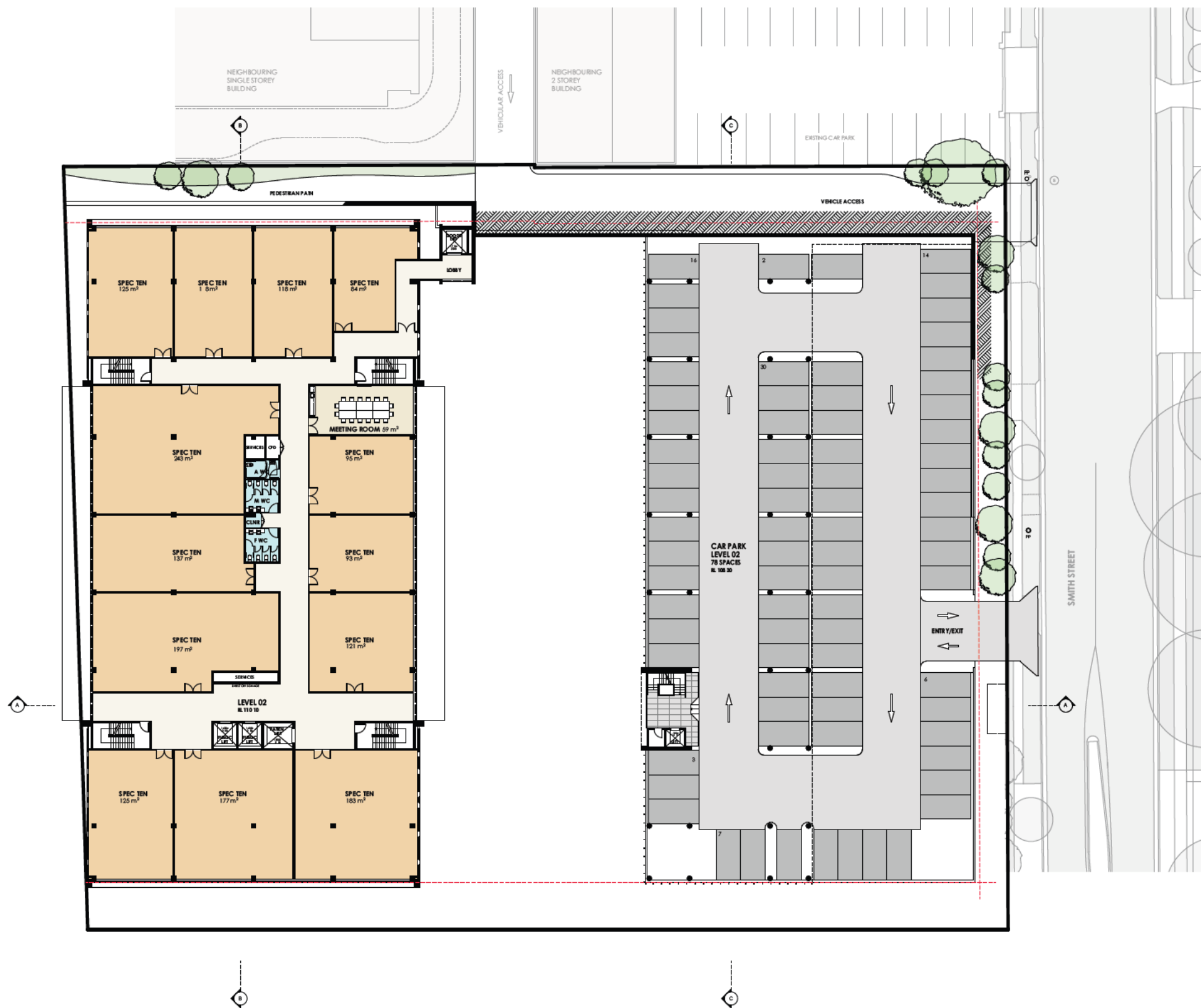
ARCHADIA PROJECTS PTY LTD

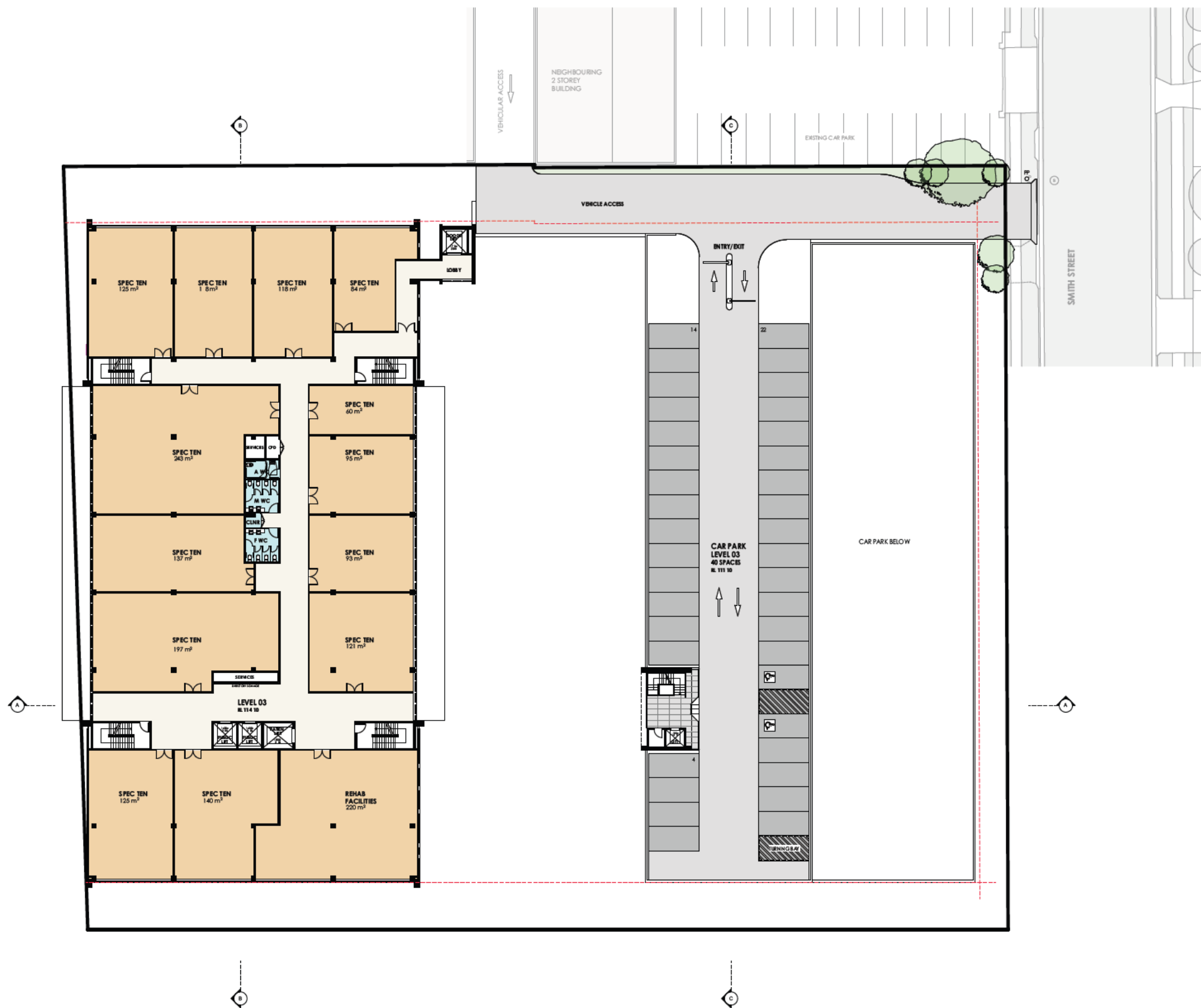
ABN: 88 148 163 357

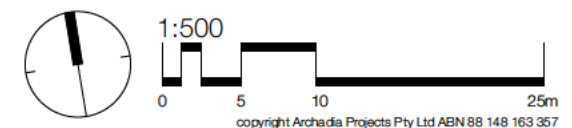
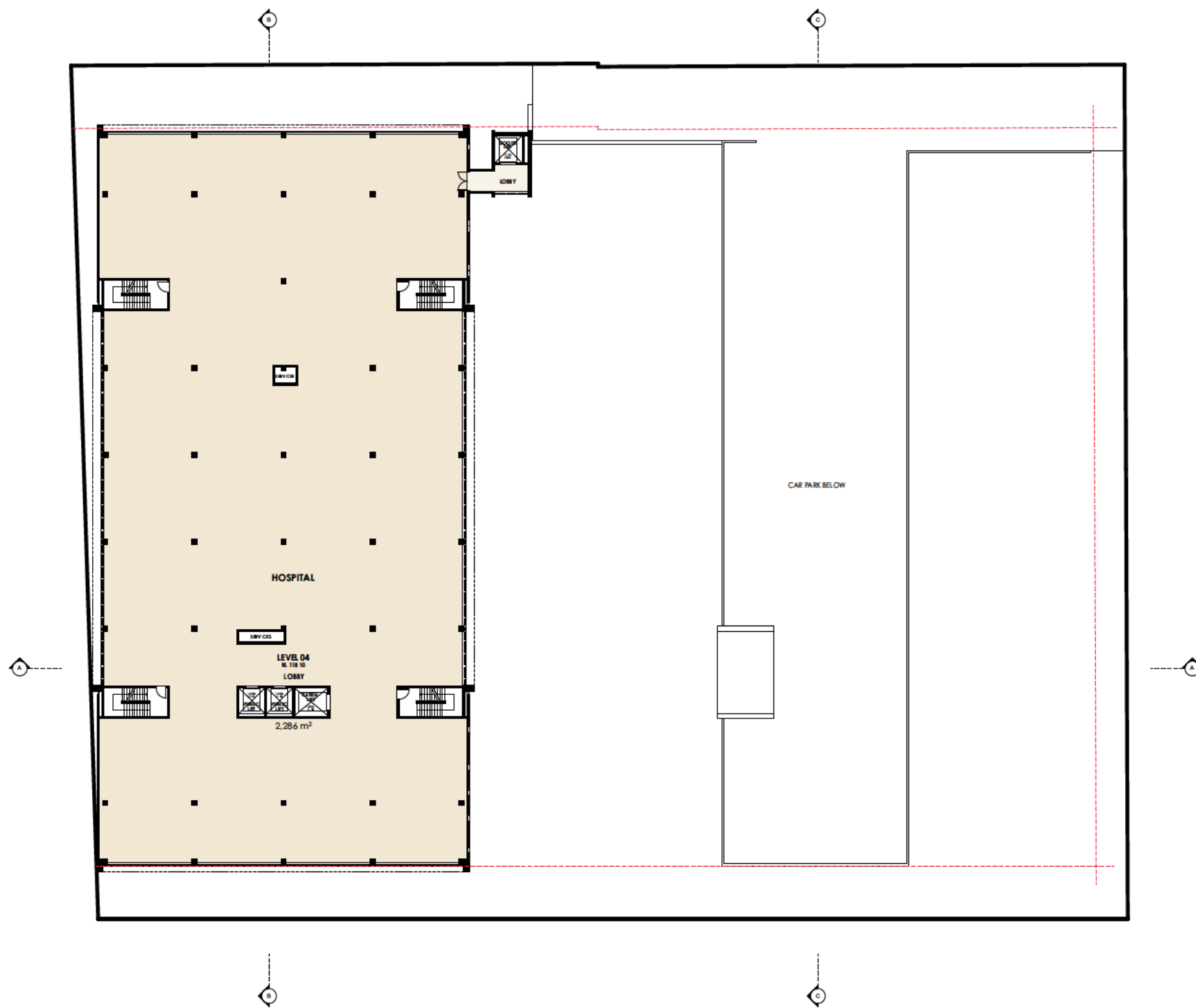


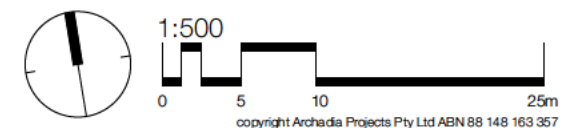
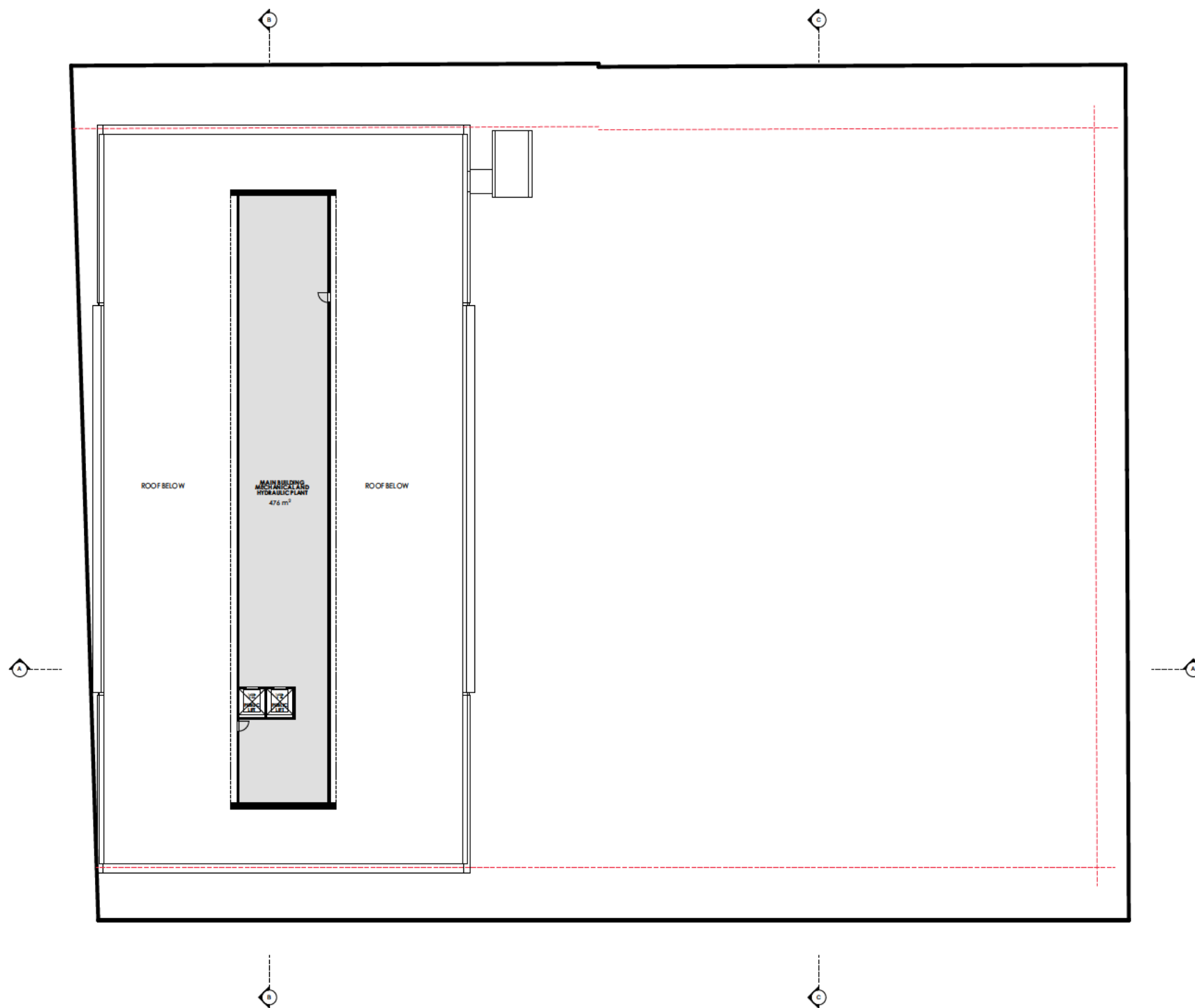
ARCHADIA
P R O J E C T S

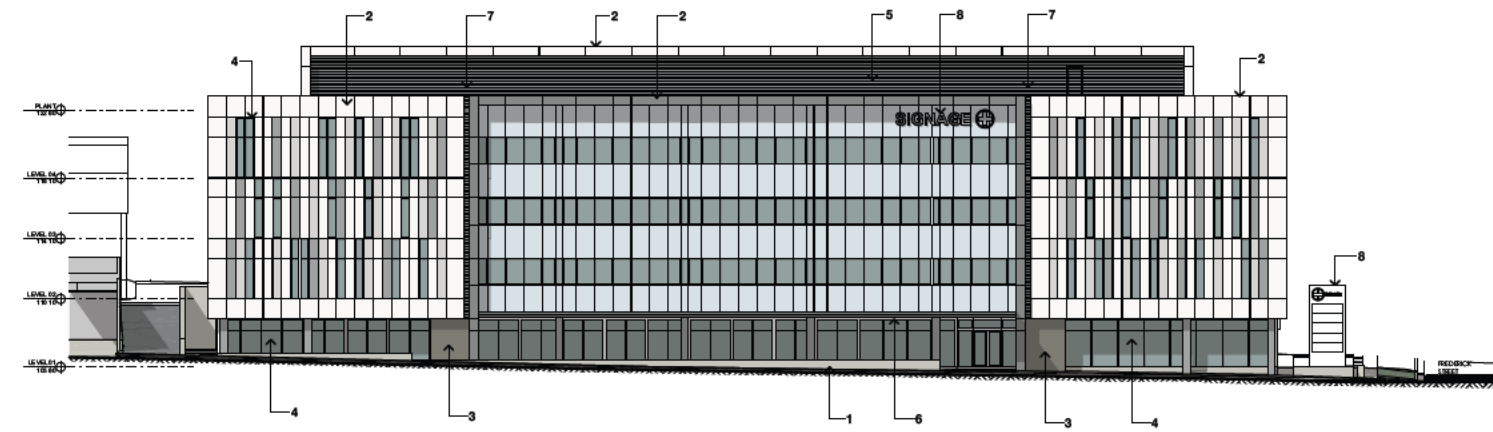




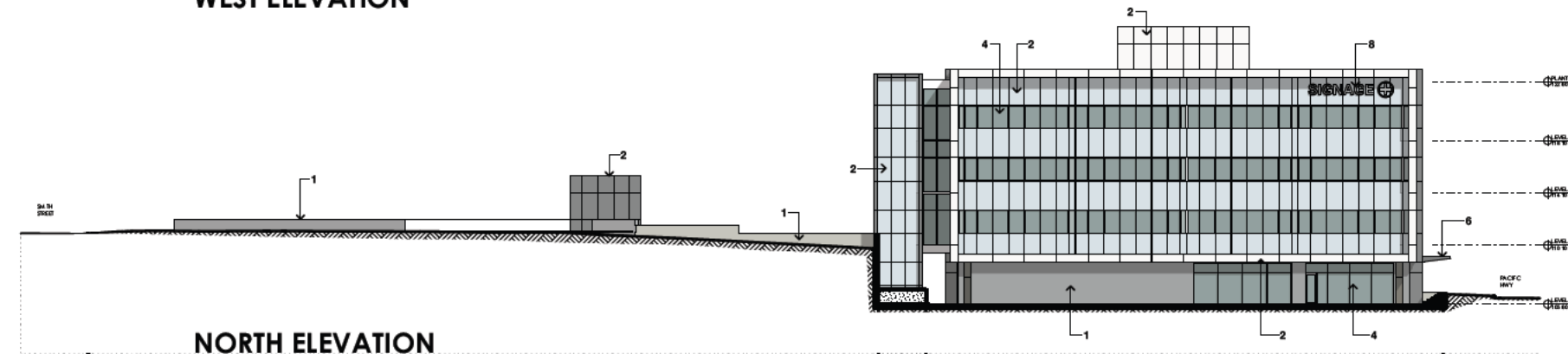




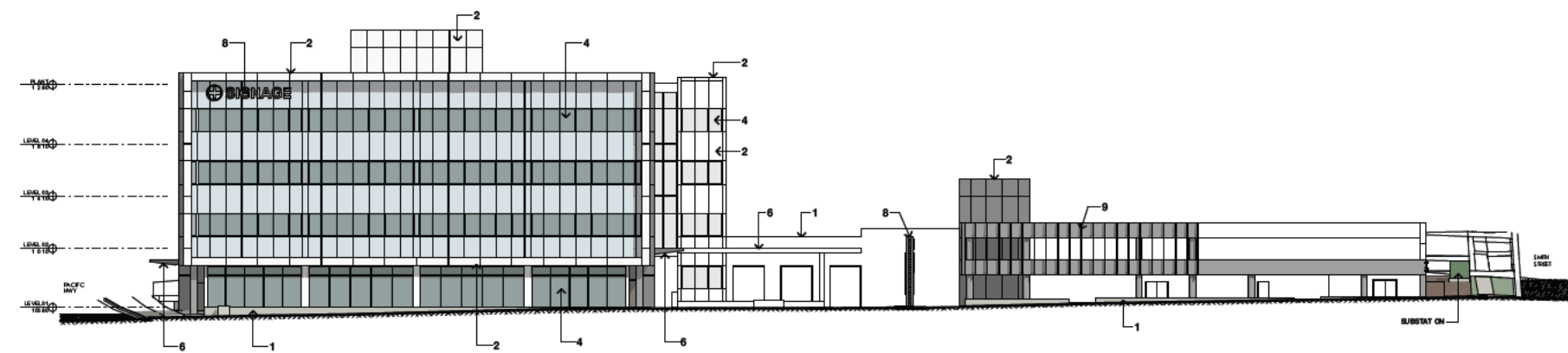




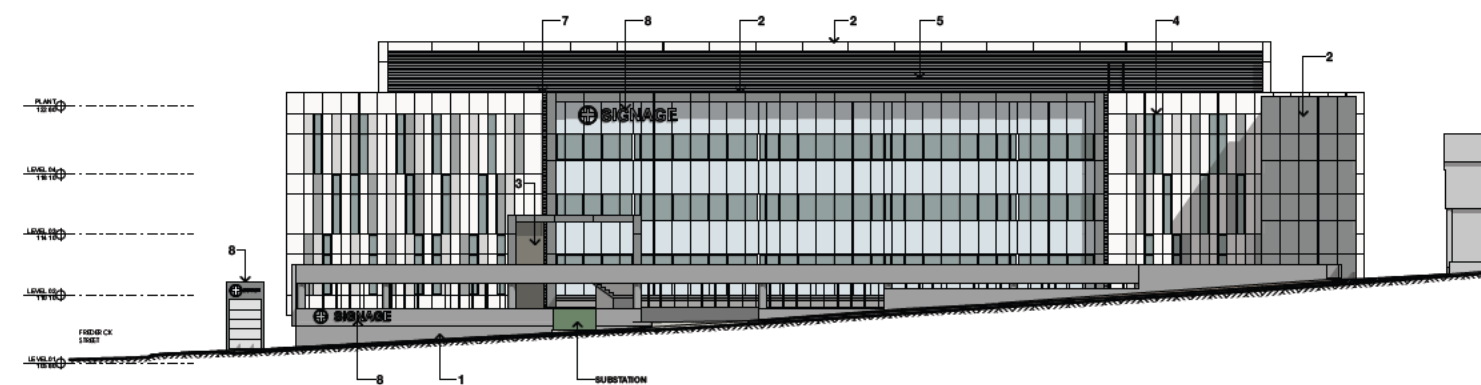
WEST ELEVATION



NORTH ELEVATION



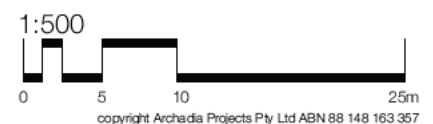
SOUTH ELEVATION

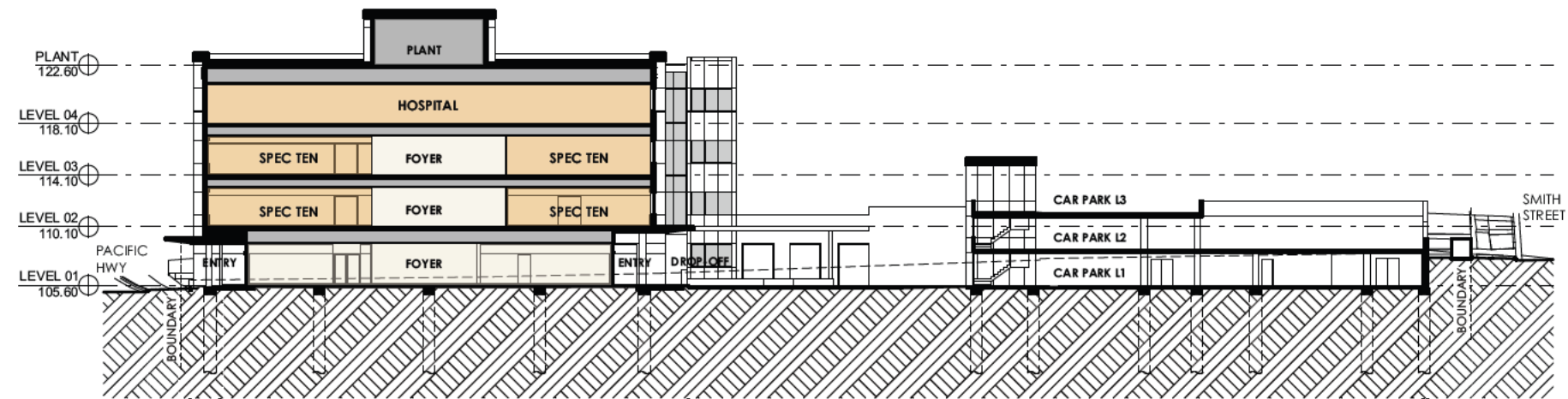


EAST ELEVATION

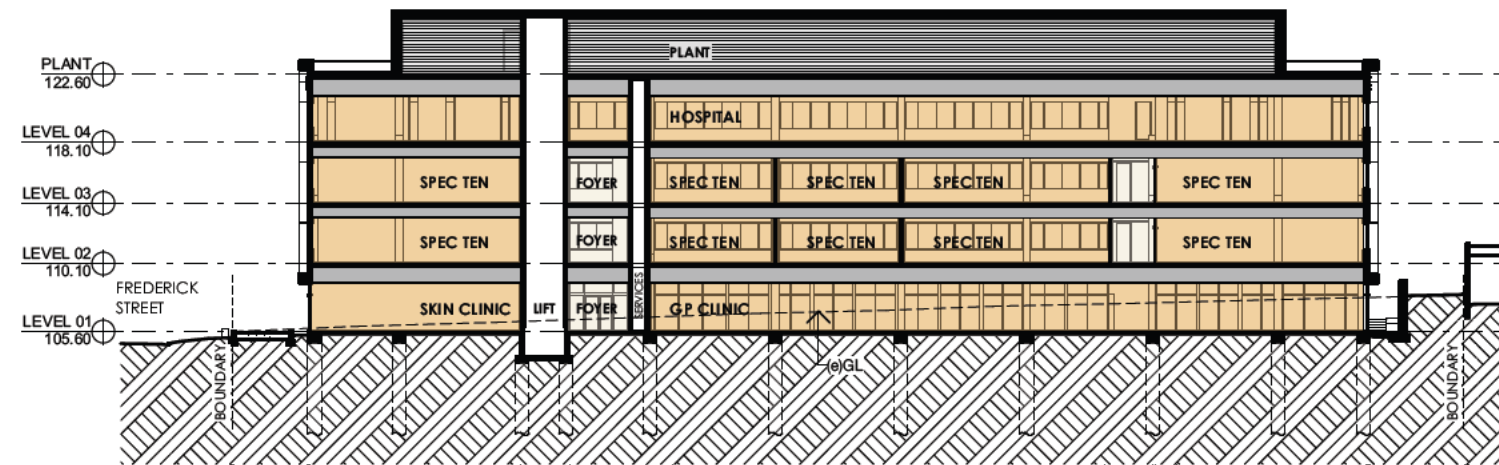
LEGEND

1. RENDERED BLOCKWORK PAINT FINISH
2. LIGHT WEIGHT CLADDING
3. MASONRY CLADDING
4. ALUMINIUM FRAMED DOUBLE GLAZED WINDOWS
5. ALUMINIUM LOUVRES POWDER COAT FINISH
6. STEEL FRAMED AWNING
7. ALUMINIUM LOUVRES AIR INTAKE
8. BUILDING SIGNAGE
9. ALUMINIUM BATTENS POWDER COAT FINISH

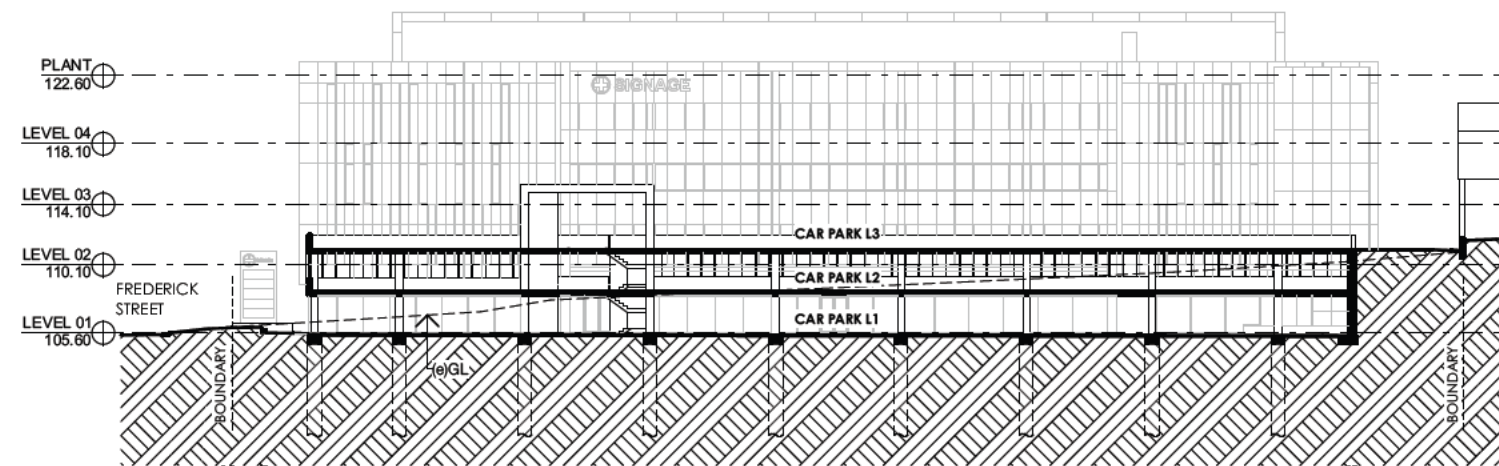




SECTION A



SECTION B



SECTION C

