

**Wee Hur Redfern Student Village**  
**13-23 Gibbons Street, Redfern**  
**Civil Engineering Design Report**  
19 December 2018 | 18-205

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# Document control

Rev No	Date	Revision details	Approved	Verified	Prepared
P1	6/12/18	Draft Issue			JC
A	11/12/18	Final Issue	JC	SETB	JC
B	14/12/18	Final Issue	JC	SETB	JC
C	19/12/18	Final Issue	JC	SETB	JC

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# 1.0 Introduction

Woolacotts Consulting Engineers are engaged by The Trust Company Australia (Limited) ATF WH Gibbons Trust C/- Allen Jack + Cottier to provide civil engineering consultancy services (including public domain works), for the proposed new Student Village on Gibbons Street, Redfern. Refer Site Plan below.



Figure 1 – Site Plan

This report has been prepared on the basis of current architectural drawings to assist with the design and development approval of the proposed works.

## 2.0 Civil Works

### 2.1 Site conditions

The site has an area of approximately 1,365 square metres with frontages to Gibbons Street and Margaret Street, where the current council infrastructure consists of concrete footpaths and a grass verge along Gibbons Street. William Lane is located to the rear of the property (north east corner), however terminates, with no direct access through to Margaret Street or Gibbons Street.

The site falls from the north west corner at the Gibbons Street boundary to the south east corner at the Margaret Street boundary.

### 2.2 Proposed Works

It is proposed that a Through Site Link of William Lane be implemented across the western side of the site, which will provide potential outdoor activity spaces for the general public.

The Through Site Link will be a shared environment which will enable service vehicles to occasionally access the space if required (including private garbage truck collection), however it will be primarily occupied by pedestrians and cyclists.

No proposed works are planned for areas external to the site boundary along Gibbons Street and Margaret Street, with the exception of two new street trees along Margaret Street (to mitigate wind impact) and the localised kerb works associated with the William Lane Through Site Link.

### 2.3 Design Parameters

The civil works, where applicable, will be designed in accordance with The City of Sydney Council's *2030 Sydney Streets Technical Specifications* manual, with the proposed works being:

- Concrete kerb and gutter (Dwg No. 1.1.2)
- Reinstatement of concrete kerb and gutter
- Concrete mountable kerb (Dwg No. 1.1.2)
- Concrete unit paving (Dwg No. 2.3.1, 2.3.4, 2.3.5)
- Concrete footpath pavement (Dwg. No. 2.6.1, 2.6.3, 2.6.4, 2.6.8)
- Permeable paving (equal to that supplied by Hydropavers. Refer Landscape Architect's documentation).
- Modification of existing stormwater pits to remove lintels (refer stormwater engineer's documentation).
- Concrete hob / upstand
- Asphaltic concrete road restoration (Dwg No. 1.1.16)

### 2.3.1 Design loads

The design loads are to satisfy the following:

#### General Footpath

- Loading vehicle: City of Sydney Footpath Cleaning Machine (5 tonne, gross), fully loaded with cleaning liquid;

#### Driveways / Through Site Link

- Loading vehicle: 8 tonne (gross) truck, fully loaded.

### 2.3.2 Pavement grades

External pavements will be graded at the following falls to assist with stormwater drainage and comply with the requirements of the *Disability Discrimination Act* (DDA) and AS 1428.1 *Design of access and mobility Part 1: New Building Work*:

- 1 in 100 (1%) minimum
- 1 in 40 (2.5%) maximum

It is proposed to introduce a one-way cross fall within the Through Site Link, which will drain into a proposed garden bed along the eastern boundary. This will assist in achieving the required minimum flood depths (refer to stormwater engineer's report).

For proposed pavement types and locations, refer Appendix A *Civil Works Concept Plan*. Final design levels to be confirmed.

### 2.3.1 Permeable paving

Permeable paving, equal to that supplied by Hydropavers, is proposed for the Through Site Link with the anticipated traffic load of one garbage truck (8 tonne gross) per week. A structural analysis of the existing basement roof slab, located beneath the Through Site Link, will need to be undertaken to ensure the proposed loads (traffic and site backfilling) are accounted for.

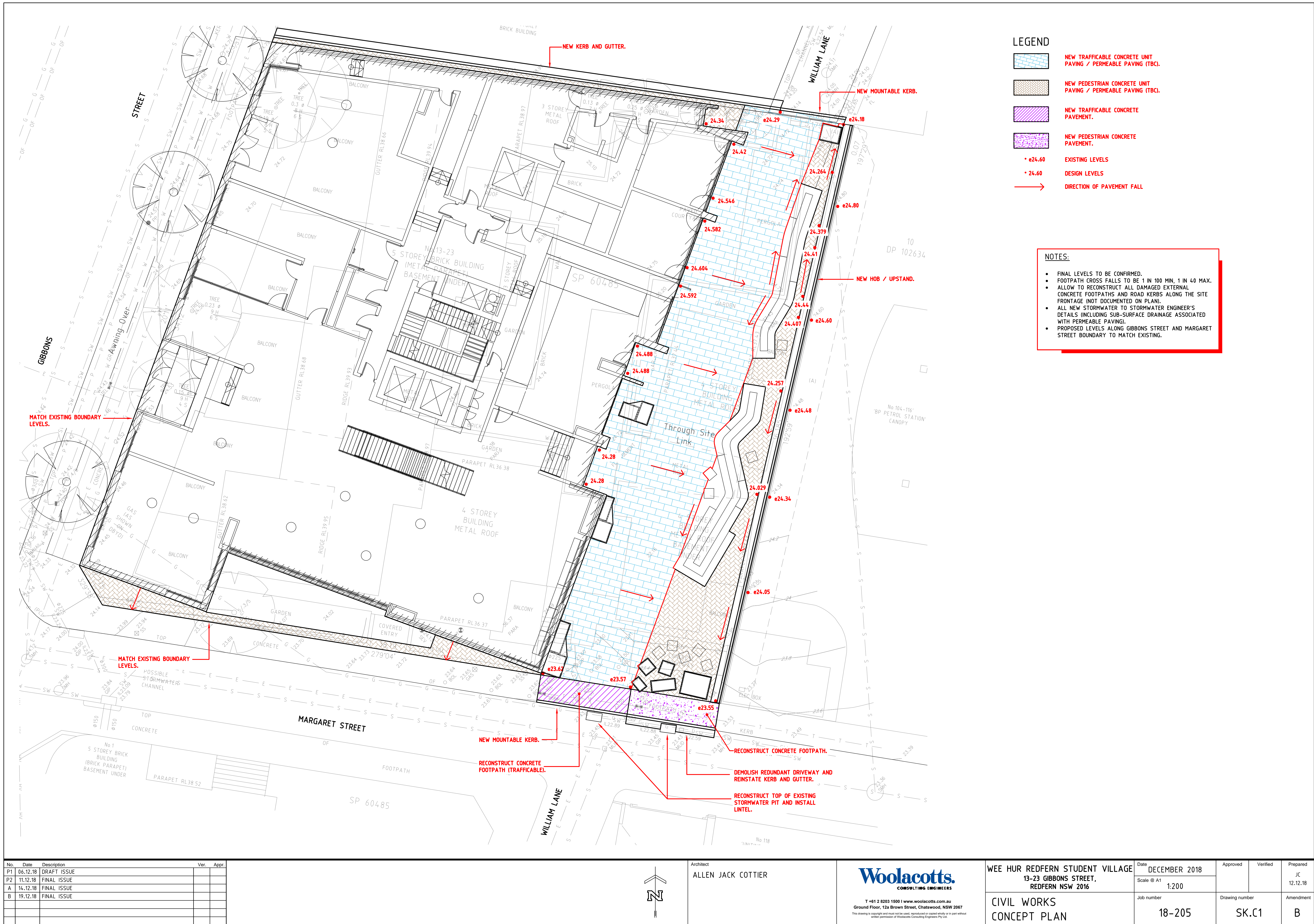
The base for the permeable pavers will be made up of a 30mm bed of crushed stone (4-6mm) or course sand / gravel (2-3mm) on 150mm thick compacted DGB20 basecourse material.

The presence of the existing basement roof slab will result in the need for sub-surface drainage once the above run-off has infiltrated the pavers (refer to Hydraulic engineer's plans).

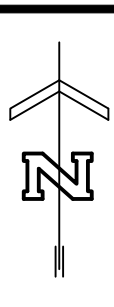
## **Appendix A**

# **Civil Works Concept Plan**





No.	Date	Description	Ver.	Appr.
P1	06.12.18	DRAFT ISSUE		
P2	11.12.18	FINAL ISSUE		
A	14.12.18	FINAL ISSUE		
B	19.12.18	FINAL ISSUE		



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WEE HUR REDFERN STUDENT VILLAGE  
13-23 GIBBONS STREET,  
REDFERN NSW 2016  
**CIVIL WORKS  
CONCEPT PLAN**

Date DECEMBER 2018	Approved	Verified	Prepared JC 12.12.18
Scale @ A1 1:200			
Job number 18-205	Drawing number SK.C1	Amendment B	