Review of Environmental Factors

D14 Precinct Works

UNSW Kensington Campus
University of New South Wales

UNSW SYDNEY

Ethos Urban

Prepared by Ethos Urban

27 September 2022 | 2220253

'Gura Bulga'
Liz Belanjee Cameron

'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.

By using the green and blue colours to represent NSW, this painting unites the contrasting landscapes. The use of green symbolises tranquillity and health. The colour cyan, a greenish-blue, sparks feelings of calmness and reminds us of the importance of nature, while various shades of blue hues denote emotions of new beginnings and growth. The use of emerald green in this image speaks of place as a fluid moving topography of rhythmical connection, echoed by densely layered patterning and symbolic shapes which project the hypnotic vibrations of the earth, waterways and skies.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We acknowledge the Gadigal people, of the Eora Nation, the Traditional Custodians of the land where this document was prepared, and all peoples and nations from lands affected.

We pay our respects to their Elders past, present and emerging.

Foreword

This Addendum Review of Environmental Factors (REF) has been prepared for the University of New South Wales (UNSW) and assesses the potential environmental impacts which could arise from the carrying out of the proposed works within the D14 Precinct and adjacent Alumni Park at the University's Kensington campus, comprising site establishment, demolition works, installation and/or upgrade of services infrastructure and minor landscaping works.

A previous REF for the demolition, site establishment and enabling works was endorsed by UNSW on 31 January 2019 within this site. The subject REF represents an addendum to the previous REF.

This REF has been prepared in accordance with the relevant provisions of the *Environmental Planning and Assessment Act 1979* (EPA Act), the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP).

This REF provides a true and fair review of the activity in relation to its likely impact on the environment. It addresses to the fullest extent possible, all the factors listed in clause 171 of the EP&A Regulation and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

On the basis of the information presented in this REF, it is concluded that by adopting the recommended mitigation measures it is unlikely there would be any significant environmental impacts associated with the activity. Consequently, an Environmental Impact Statement (EIS) is not required.

Certification

This REF provides an accurate review of the proposal in relation to its potential effects on the environment.

Endorsed by:

DRAFT FOR CONSULTATION ONLY

To be signed for final issue.

Approved by:

DRAFT FOR CONSULTATION ONLY

To be signed for final issue.

Contact			
Michael Rowe	Director	mrowe@ethosurban.com	0403 043 345

This document has been prepared by:		**This document has been reviewed by:**	
			
Renee Stavroulakis	27 September 2022	Daniel Howard	27 September 2022

Version No.	**Date of issue**	**Prepared By**	**Approved by**
2.0 - DRAFT	27 August 2022	RS	DH

Contents

Table of Figures

Table of Tables

Appendices

A Site Survey

Project Surveyors

B Site Plan

Lendlease

C Demolition Plan

Tzannes Architects

D Arboricultural Impact Assessment

The Ents Tree Consultancy

E Aboriginal Heritage Advice

Coast History & Heritage

F Contamination Assessment

Douglas Partners

G Demolition, Refurbishment and Hazardous Materials Risk Assessment

Greencap

H Traffic Management Plan

ARUP

I Construction Management Plan

Lendlease

J Civil Works Plan

GCC Consultancy

K Electrical Services Plan

Lendlease

L Heritage Impact Statement

Tanner Kibble Denton Architects

M Notification to Randwick City Council

UNSW

1.0 Introduction

This Review of Environmental Factors (REF) has been prepared by Ethos Urban on behalf of the University of New South Wales (UNSW) to assess the potential environmental impacts that could arise from the proposed works within the D14 Precinct and adjacent Alumni Park (the site) within UNSW Kensington's lower campus.

This proposal exclusively relates to specific works including site establishment, demolition works, installation and/or upgrade of services infrastructure and minor landscaping works. It is noted a previous REF for the demolition, site establishment and enabling works within the site was endorsed by UNSW on 31 January 2019. The subject REF represents a replacement of the previously endorsed REF.

This REF identifies that the proposed activity can be carried out under provisions of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP), with specific reference to clauses 2.3(3), 2.44(1), 2.75(2), 2.126(6), 2.137(1), 2.141(1) and 3.47(1), which enable the proposed demolition of structures, services upgrade works, and minor landscaping works to be undertaken as 'Development without Consent'. This REF considers the requirement of Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as well as clause 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

The purpose of this REF is to describe the site, its environs, the proposed activity and provide an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

The description of the revised scope of works are outlined at **Section 3.0**, an assessment of the planning context is addressed at **Section 4.0** and a description and assessment of the associated environmental impacts has been undertaken at **Section 5.0**.

The REF helps to fulfil the requirements of section 5.5 of the EP&A Act, which requires that UNSW examine, and take into account to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of the proposed activity.

The Project, comprising demolition, remediation, services and landscaping works, are proposed to be undertaken from October 2022 to July 2023, enabling the rejuvenation of the site.

2.0 Site Analysis and Description

2.1 Site Context

The site is located within the UNSW Kensington campus which is situated within the Randwick Local Government Area (LGA). The UNSW Kensington campus lies to the south of the Royal Randwick Racecourse, to the west of the Prince of Wales Hospital Campus / Randwick Health Precinct, and between the Kensington and Kingsford town centres on Anzac Parade. The campus is located 8km south of the Sydney CBD and about 6km north-east of Sydney Airport.

The UNSW Kensington Campus is bounded by Anzac Parade to the west, High Street to the north, Botany Street to the east and Barker Street to the south. The site's locational context is shown at **Figure 1**. Frequent bus routes service Anzac Parade and High Street as well as the Kingsford and Randwick light rail services.

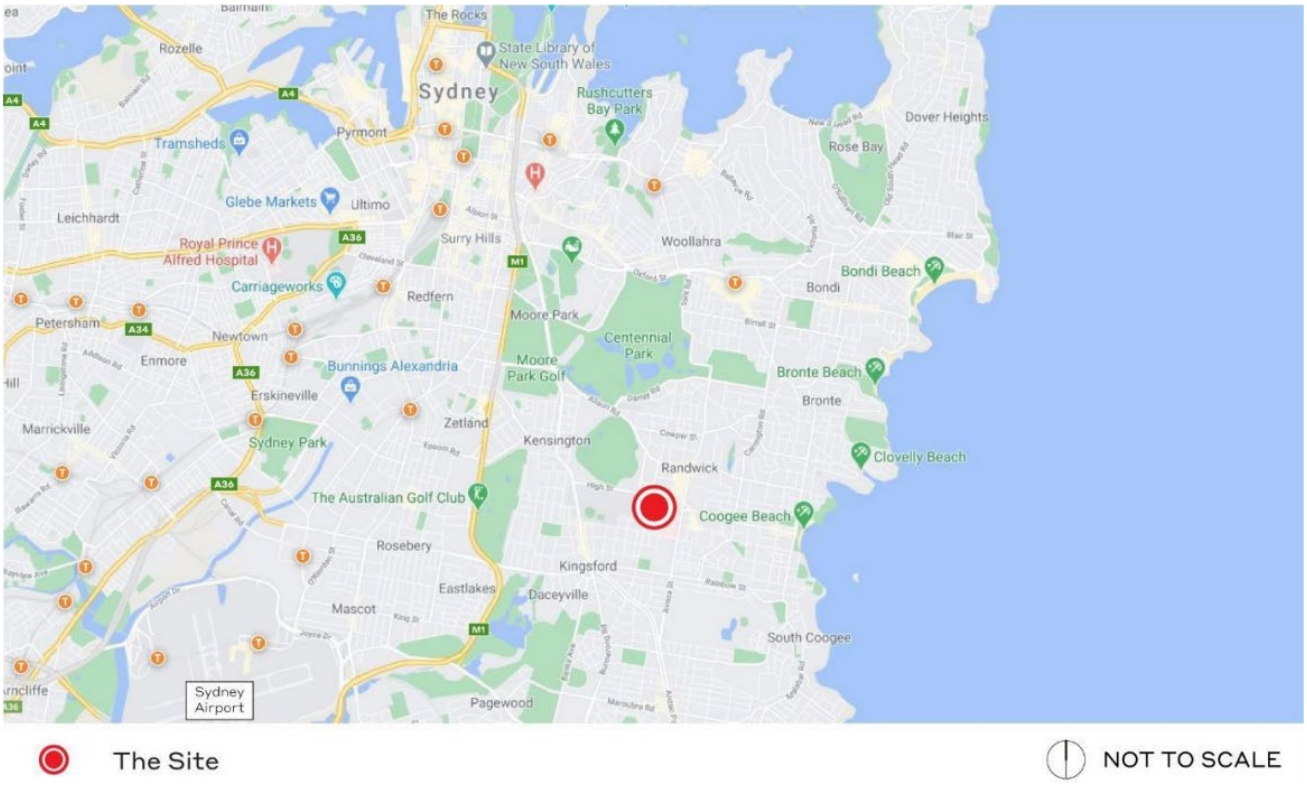

Figure 1 Site locational context

Source: Google Maps / Ethos Urban

2.2 The Site

Within the campus, the site is located centrally, within an area identified as the Lower Campus area. Specifically, the site is situated between Alumni Park (west), the Fig Tree Theatre (north), the UNSW Quadrangle (south) and Fig Tree Lane and Goldstein Hall (east). A site location map identifying the site within the context of the wider campus is shown at **Figure 2**.

Figure 3 provides an aerial map of the site and its immediate surrounds. The site currently comprises the UNSW Hall Building, which is one of the many student accommodation buildings on campus and a portion of Alumni Park.

Figure 2 Site Location

Source: Google Maps / Ethos Urban

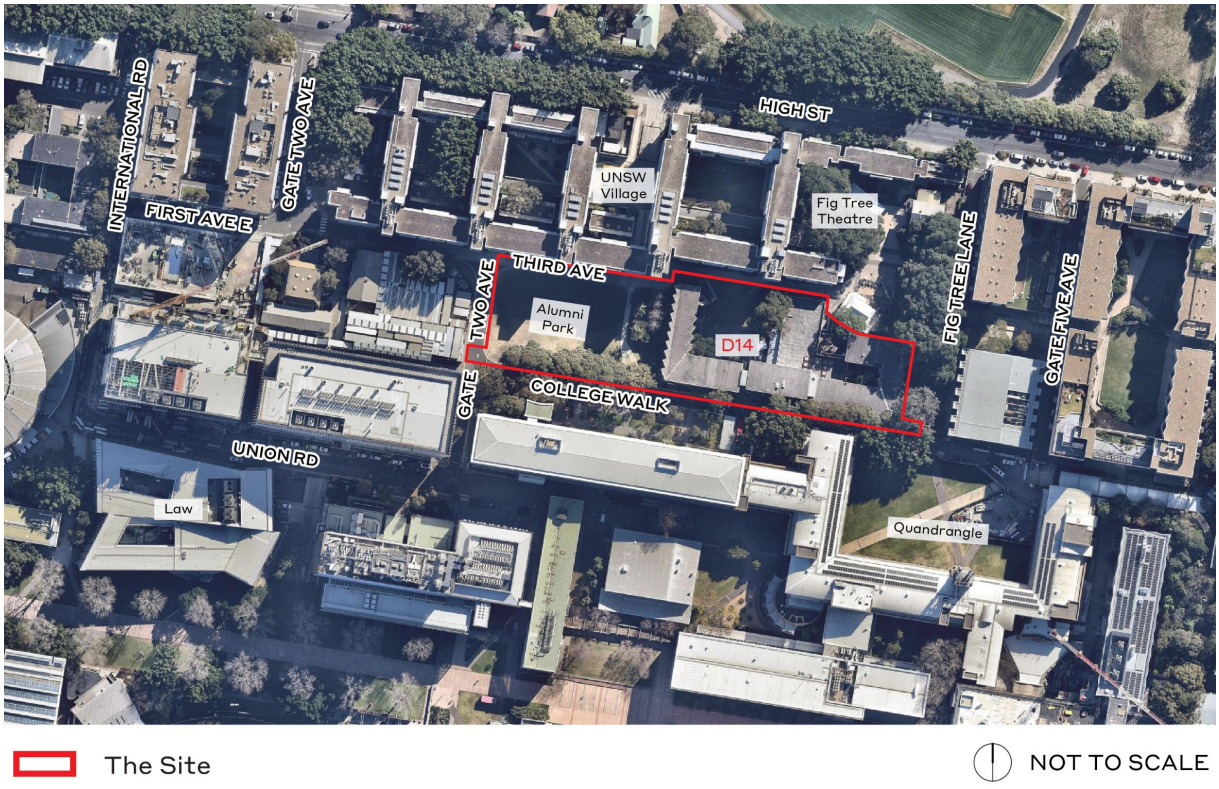

Figure 3 Aerial map of the site and its immediate surrounds

Source: Google Maps / Ethos Urban

The existing building was constructed in 1966 as on-campus student housing accommodation. The building is now nearing the end of its economic life span. The existing building is a part 3 and part 4 storey masonry building comprising 208 rooms with shared facilities including bathrooms and kitchen and other common areas. The built form presents a continuous edge to the south (College Walk) and a courtyard style appearance to the north with linear extensions to the west and east.

An outdoor courtyard is provided adjacent to Alumni Park. Photographs of the site is shown at **Figure 4** and **Figure 5**.

View looking east to the existing UNSW Hall building across Alumni Park (left image); View of the UNSW Hall interface to Fig Tree Lane looking towards the south-west (right image).

Figure 4 Existing built form within the site

Source: Ethos Urban

View of UNSW Hall along College Walk (left image); View of the outdoor courtyard of the UNSW Hall Building with trees lining the perimeter (right image).

Figure 5 Existing built form and landscaping within the site

Source: Ethos Urban

Legal Description

The broader UNSW Kensington campus consists of five separate allotments. The site, in its full extent, is situated within a single allotment legally described as Lot 3 in Deposited Plan 1104617. The site area of the existing UNSW Hall building and primary works area (i.e. hoarding zone) is approximately 7,000m^2. The overall area of the site (including all in-ground works) is approximately 8,300m^2.

Topography and Vegetation

The site has a gradual east to west cross-fall of approximately 4m. The site gradient is relatively level across the north-south plane (refer **Figure 6** and the Site Survey by Project Surveyors at **Appendix A**).

The site contains a row of trees along the length of the southern site boundary fronting College Walk (refer to **Figure 5, left**). A cluster of trees is also located within the outdoor courtyard space of UNSW Hall. Alumni Park does not contain any trees (besides the row of trees along its frontage to College Walk) and consists of a green lawn with some seating benches (refer to **Figure 4**, left and the Arboricultural Impact Assessment provided at **Appendix D**).

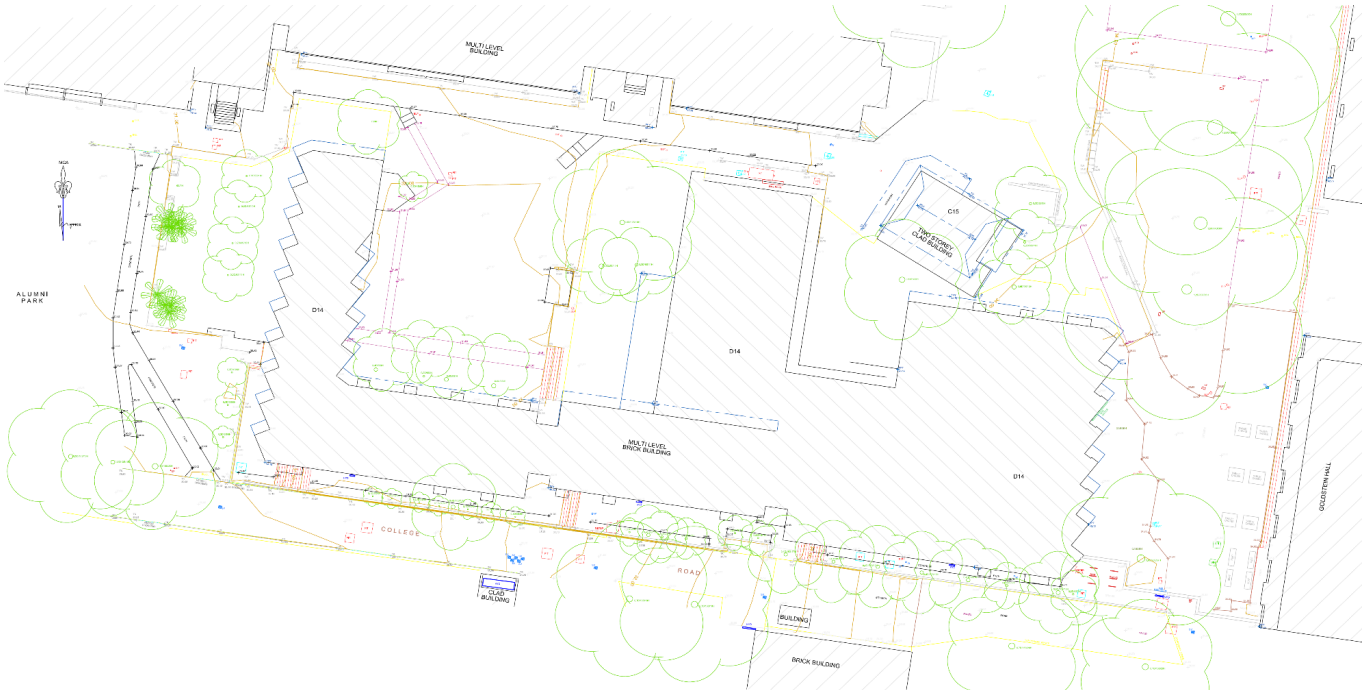

Figure 6 Extract of the existing survey of the UNSW Hall site

Source: Project Surveyors

Access and Parking

The site does not accommodate any at grade or basement car parking spaces.

Heritage and Archaeology

Neither the site nor UNSW Hall (Building D14) is heritage listed, but a part of the site (to the north-east) falls within the extent of the mapped 'Old Tote and Fig Tree Theatre' Heritage Conservation Area (refer to **Figure 7** below). A Heritage Impact Statement (refer to **Appendix L**) has been provided to assess any potential heritage impacts of the proposed development. For greater detail, refer to **Section 5.2.6**.

Figure 7 Heritage Context

Source: Google Maps / Ethos Urban

The site sits on top of a natural sand layer between about 3 and 15 metres thick, under which is sandstone bedrock. This is located at the base of a high dune to the east and the swampy flats of Lachlan Stream to the west (draining into Botany Bay from the Centennial Parklands to the north). Aboriginal people have been known to have lived within this dune landscape for many thousands of years. Refer to further detail provided within Aboriginal Cultural Heritage Assessment provided at **Appendix E** and further assessment at **Section 5.2.8**.

Soils and Contamination

An investigation was undertaken with respect to soil contamination, with the following potential sources of contamination and associated contamination of potential concern (or known as CoPC) identified:

- Filling and demolition rubble associated with site redevelopment including, metals, total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), phenols, and asbestos;
- Previous activities related to Kensington Racecourse which may include metals, TPH, PAH etc;
- Chemical Stores (particularly with former chemistry building to the south) including metals, VOC, TPH, BTEX, PAH and phenols; and
- Substations within the site including metals, asbestos, OCP and PCB.

For further assessment, refer to **Section 5.2.2** and the Report on Contamination Assessment prepared by Douglas Partners and provided at **Appendix F**.

2.3 Surrounding Development

The site is bound by College Walk to the south, Alumni Park to the west, the UNSW Village to the north with the Whitehouse and Figtree Tree Theatre to the north-east. To the east, across Fig Tree Lane, is the Goldstein Hall. Photographs of the surrounding campus buildings are shown at **Figure 8** and **Figure 9**.

View of the two storey Whitehouse building that is located immediate to the north of the site (left image); The Fig Tree Theatre and heritage conservation area located to the north-east of the site (right image).

Figure 8 Surrounding development

Source: Ethos Urban

View looking west from Third Avenue with the UNSW Village to the north (right image); View looking south of the Goldstein Hall Building and the arched wall.

Figure 9 Surrounding development

Source: Ethos Urban

3.0 Scope of Works

The scope of works relates to specific works to demolish the existing D14 Building and enhance the landscaping of a portion of Alumni Park (the site) within UNSW Kensington's lower campus. Proposed activities to be undertaken include the following:

- Installation of site hoarding, scaffolding and temporary fencing;
- Installation of temporary site accommodation and truck loading/laydown areas;
- Demolition of the existing Building D14 and associated ancillary structures, including hazmat removal and potential ground remediation works;
- Removal of selected trees and vegetation;
- Removal of redundant in-ground hydraulic, stormwater and electrical services;
- Installation and/or upgrade of in-ground hydraulic, stormwater and electrical services;
- Minor regrading/resurfacing to selected access pathways, College Walk and landscaped areas; and
- Minor landscaping works comprising:
  - General turf across the entirety of the site;
  - Dedicated seating area with pedestrian pathway behind the Whitehouse Building;
  - Scattered seating throughout the site; and
  - Relocation and protection of key trees/planting throughout.

3.1 Site Establishment Works

Site establishment works and installation of temporary site buildings are proposed to be carried out in accordance with the Construction Management Plan (CMP), a copy of which is provided at **Appendix I**. **Figure 10** illustrates the proposed full extent of the site (refer blue boundary) and the site layout while undertaking the activities discussed under this REF. The site establishment works include:

- Erection of Class A and Class B hoarding structures around the site (refer to red boundary within Site Plan at **Appendix B**);
- Set up of temporary site building structures and facilities on Alumni Park including temporary footpath and signage for pedestrian redirection; and
- Set up a separate temporary hoarding zone for the demolition works to arched wall comprising temporary fencing structures.

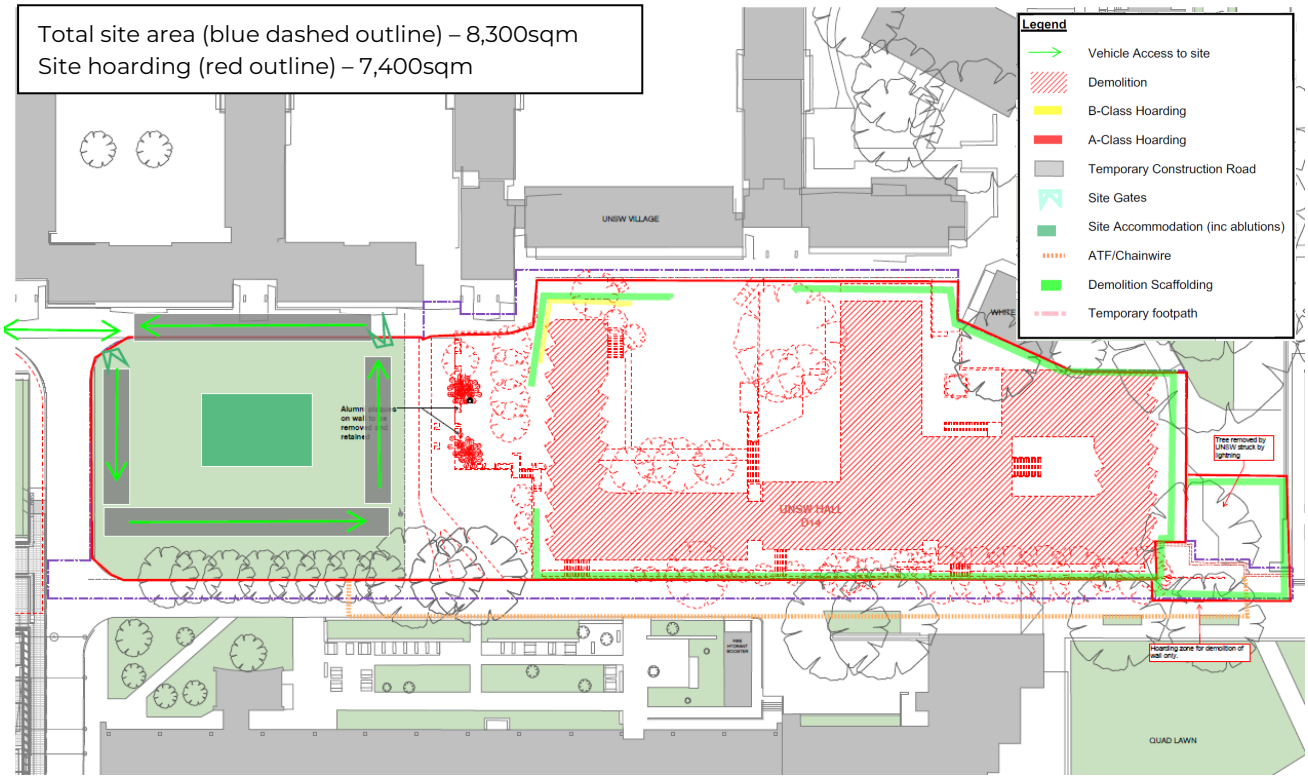

Figure 10 Site extent and layout

Source: Construction Management Plan

3.2 Demolition

The proposed works involve demolition of the existing UNSW Hall building and associated structures as identified by the Demolition Plan at **Appendix C** prepared by Lendlease. For reference, an excerpt of the demolition plan is provided at **Figure 11**. The alumni plaques on the western wall of the building are proposed to be removed and safely stored. The walled archway to the west of the site boundary is proposed to be removed.

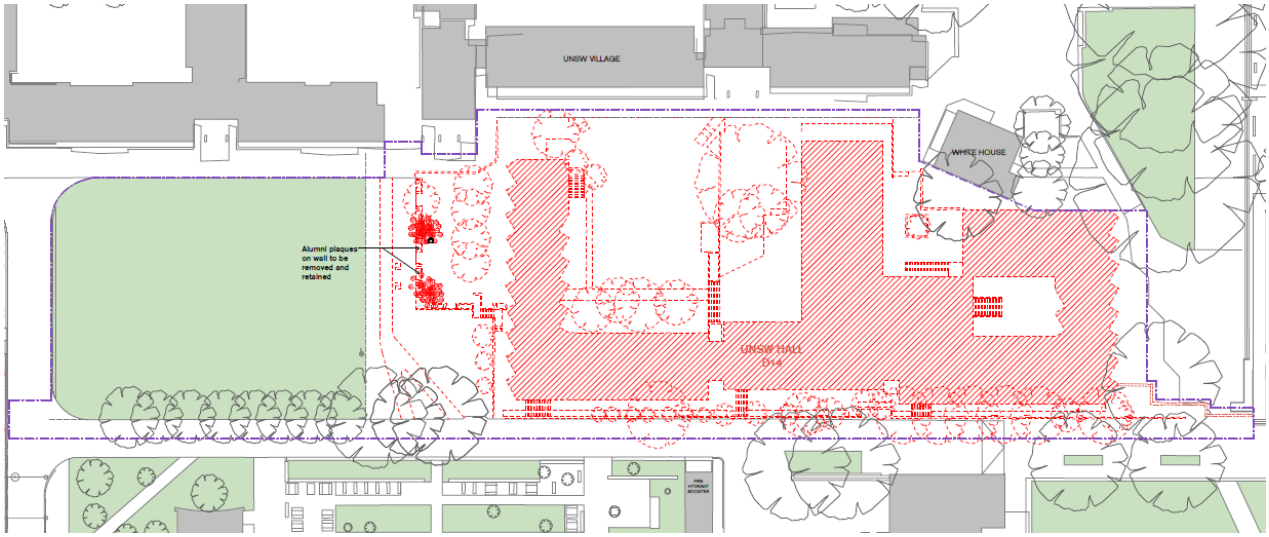

Figure 11 Demolition plan

Source: Construction Management Plan

Demolition works also include removal of some landscaped and hardstand areas within eastern end of Alumni Park in addition to the steps, kerbing, landscaping and retaining wall along the southern site boundary (as identified at **Figure 11**). Prior to any demolition work, the building will be clad in scaffolding as required. The demolition is proposed to be carried out from starting from Alumni Park and working towards the east.

3.3 Tree Removal

Tree removal is proposed as part of this application and is required given the location of the trees within the area of proposed works. A survey of the existing trees within the site was undertaken by The Ents Tree Consultancy to recommend removal or retention of the trees or the required setbacks to ensure the viability of the trees to be retained. The report will also provide assessment for any potential impacts for trees nominated to be retained and attempt to remove or minimise them where possible. These findings are presented within the Arboricultural Impact Assessment (**Appendix D**).

A total of 3 trees are proposed to be removed, identified as NR2, NR3 and NR4, to facilitate the activities described under the scope of works. The trees identified for removal are either within the part of the site undergoing works or located in proximity to the works. In addition, the remaining trees will be retained with varying tree protection measures as described in the Arboricultural Impact Assessment and **Section 7.0**.

Refer to **Figure 12** for a visual representation of the trees to be removed and protected within the site.

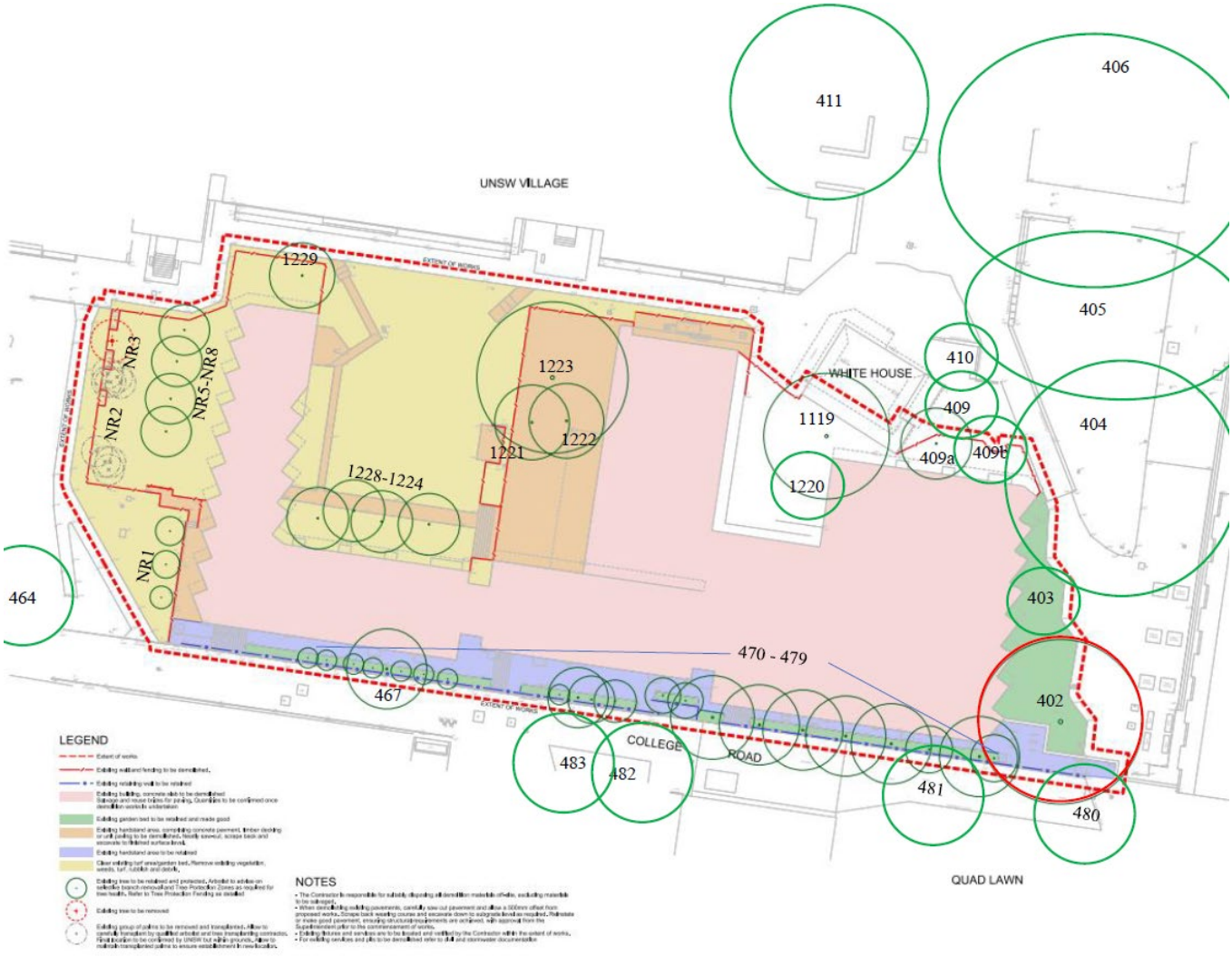

Figure 12 Tree Removal and Protection Plan

Source: The Ents Tree Consultancy

3.3.1 Excavation

Some minor excavation is required to remove the existing structural foundation in addition to carrying out necessary services upgrade, capping or extension of essential services facilities.

3.4 Upgrade to Infrastructure and Services

Works under this REF includes capping and/or removal and the upgrade and/or installation and augmentation of site infrastructure services including:

- Low voltage electrical services;
- Water (hydraulic) and fire hydrant services;
- Natural gas services;
- Sewerage; and
- Telecommunications.

3.4.1 Civil Works

The Civil Works Package prepared by Warren Smith & Partners is provided at **Appendix J**. The proposed civil works include disconnection and removal of all stormwater pipes within the extent of the identified site boundary (confirmed to all be UNSW assets) as well as intercepting any affected stormwater connections of nearby buildings and appropriately re-routing it around the site boundary to nearby stormwater outlets.

Other civil works include installation of erosion and sediment control measures in accordance with the latest edition of the 'Blue Book – Managing Urban Stormwater' and the Randwick City Council guidelines 'Do it Right on Site'. The Civil plans identify the proposed erosion and sedimentation strategy for the site including the sediment fence type, sediment traps and vehicle shaker grids systems. All civil works will be carried out in accordance with the Civil plans.

3.4.2 Traffic, Access and Parking

The REF is accompanied by a Traffic Management Plan (TMP), prepared by Arup at **Appendix H**. The TMP identifies the proposed construction vehicle travel route, site access plan, traffic generation and parking demand as a result of the proposed works.

External Construction Vehicle Travel Route

Heavy vehicles associated with the proposed works will be restricted to collector and arterial roads, with movements along local residential streets prohibited. It is envisaged the key traffic routes for construction vehicles would be via Southern Cross Drive/Eastern Distributor, Dacey Avenue, Anzac Parade and High Street. **Figure 13** identifies the proposed route of travel for inbound and outbound construction vehicles. All vehicles will enter and exit via Gate Two Avenue and High Street (Gate 2). Swept path analysis of construction vehicles entering and exiting the site is provided at **Figure 14**.

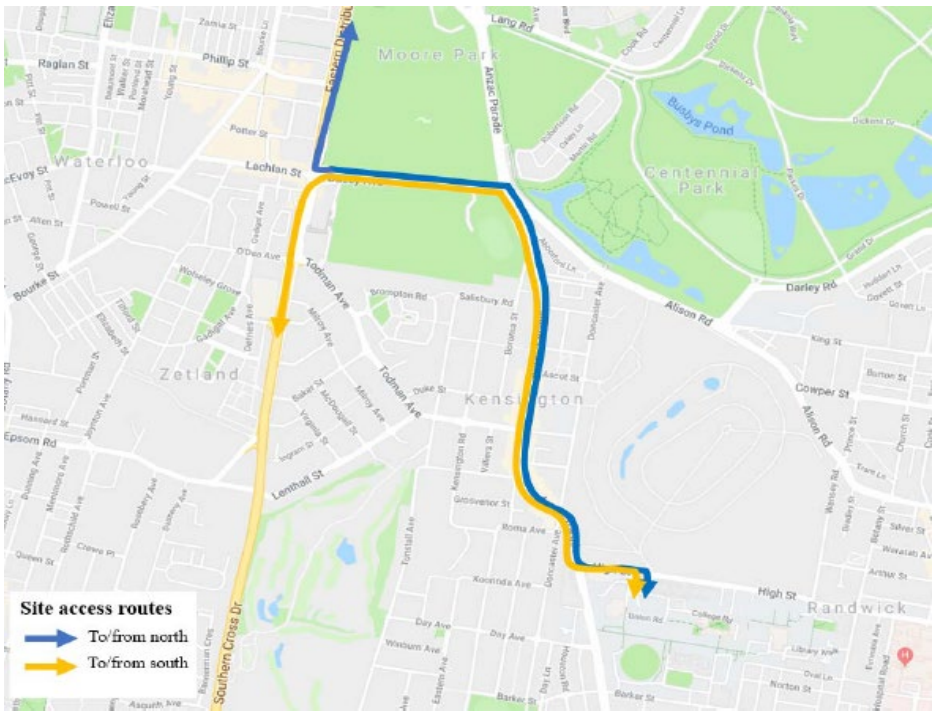

Figure 13 Proposed works heavy vehicle route

Source: Arup

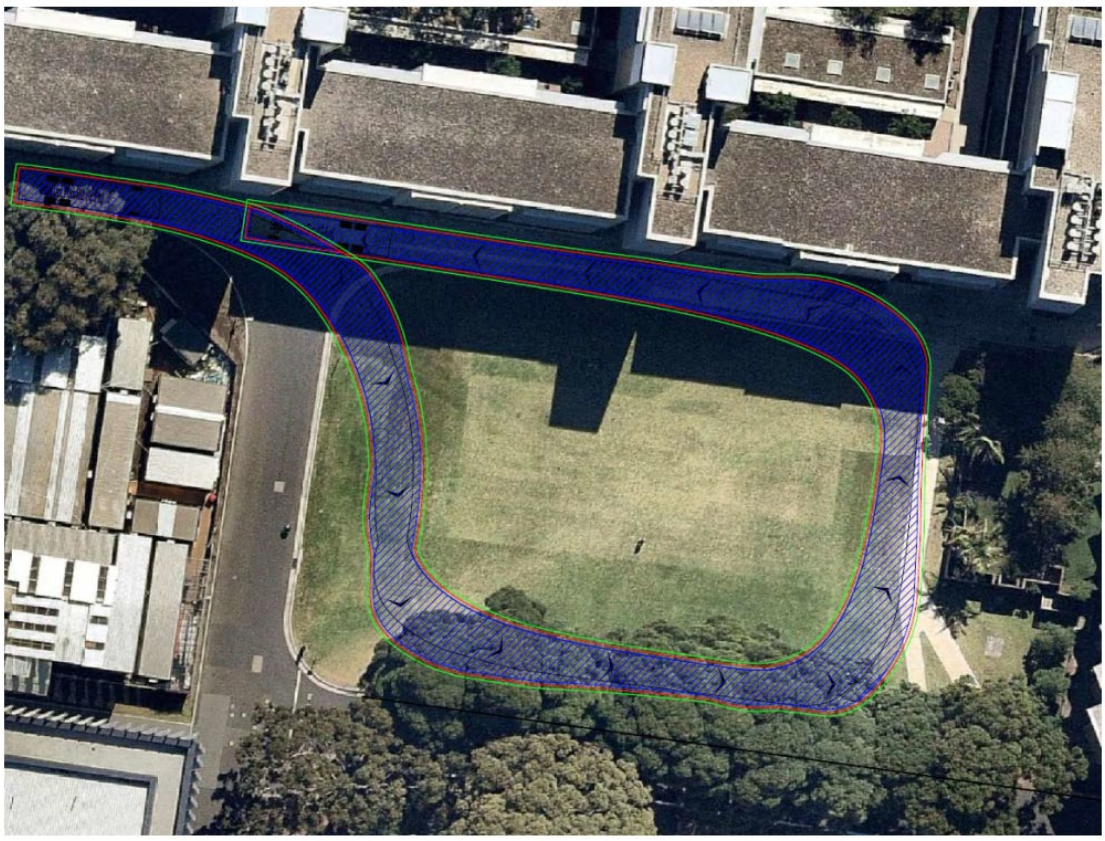

Figure 14 Swept path analysis – site circulation loop

Source: Arup

3.4.3 Internal Access

Vehicular Access

All internal access and loading for other UNSW buildings will be maintained and facilitated by on-site traffic marshals to coordinate works traffic access/egress and to ensure safe access for other vehicular traffic. There will be no change in UNSW's level of activities during the works program. There are no proposed road closures or road changes external to the campus as a result of the development. On-going access for a 19m long articulated vehicle, and an 11m fire truck will be ensured in accordance with the *'UNSW - Fire Truck Access Master Plan'*.

Pedestrian Access

Provision for continued pedestrian and cyclist access, including accessible travel options to the lower campus will be addressed as part of the final Traffic and Pedestrian Management Plan that shall be prepared prior to the commencement of works.

Existing UNSW Village entries will generally remain accessible during the works to enable pedestrian access. Further, UNSW Village entries in proximity to the REF site will be managed as necessary in coordination with UNSW management and the contractors.

Worker Trip Generation and Parking

The primary demolition works are predicted to generate a total of 30 (heavy vehicle) trips per day, which equates to approximately 6 vehicles per hour. Workers will generate additional traffic to the site. At peak times there would be in the order of 50 staff on site during the works period.

Staff and workers are anticipated to rely on active travel modes to access the site, given the frequency and availability of several bus and light rail route options that currently service the university campus. The CMP outlines measures to reduce any demand on existing off-street or on-campus car parking spaces by encouraging all workers and contractors to use active travel options to access the site.

3.5 Justification and Consideration of Alternatives

The alternative to the proposed works is to maintain the disused and dilapidated buildings within the site. The proposed demolition and services upgrade are required as part of a scheduled program for renewal and revitalisation of the site. Importantly, the works will allow for orderly renewal in a staged, coordinated and safe manner within a busy and operational university campus.

Justification

The proposed works will provide immediate and significant improvements to the delivery of existing services by:

- Removing redundant/life expired buildings and infrastructure;
- Improving the amenity and visual quality of the Residential and Wellness Precinct;
- Removing an existing building that is no longer consistent with spatial orientation and design integration of the desired future character of the campus;
- Providing a space in which students can relieve stress through engagement in physical or social activities; and
- Expanding the capacity of existing services infrastructure.

Consideration of Alternatives

The proposed works allow the delivery of these infrastructure and campus upgrade works in a timely fashion and deliver benefits that will allow revitalisation to occur in a coordinated and safe manner. By undertaking the proposed works, a number of positive outcomes and efficiencies will be achieved, as outlined above.

4.0 Planning Context

The proposed activities qualify as 'Development without Consent' under the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP). As a result, development consent under Part 4 (Development Assessment) of the EP&A Act is not necessary, however, an assessment under Part 5 – Infrastructure and Environmental Impact Assessment of the EP&A Act is required, and as such, this REF has been prepared. Further consideration of the 'Development without Consent' provisions are provided at **Section 4.5** of this REF.

4.1 Environmental Planning and Assessment Act 1979

Duty to Consider Environmental Impacts

This REF considers the requirements of sections 5.5 and 5.6 of the EP&A Act and clause 171(2) of the EP&A Regulation.

For the purposes of attaining the objects of the EP&A Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of the Act or the provisions of any other Act or of any instrument made under the EP&A Act or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity (refer to sub-section 1 of section 5.5).

With regards to sub-section 3 of section 5.5, the site is not located within or in the vicinity of a wilderness area as defined under the Wilderness Act 1987. Further, under clause 171(2) of the EP&A Regulation, UNSW is a public authority for the purpose of the application of SEPPs, within the meaning of Part 5 of the EP&A Act. Refer to **Section 5.1** for explanation of how the proposed works meets the required matters to be considered under clause 171 of the EP&A Regulation

4.2 Local Environmental Plan

Randwick Local Environmental Plan 2012 (RLEP 2012) is the primary environmental planning instrument controlling development on the Kensington campus. Under the LEP, the entire Kensington Campus is zoned SP2 – Infrastructure (Educational Establishment). The objectives of this zone are:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*
- *To facilitate development that will not adversely affect the amenity of nearby and adjoining development.*
- *To protect and provide for land used for community purposes.*

Development for the purpose *"shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose"* is permissible with consent in the zone. The proposed works are being provided by and for the University as works ancillary to an 'Educational Establishment' and are therefore permissible in the SP2 Infrastructure zone.

Notwithstanding the proposed planning pathway of 'Development without Consent' under the TISEPP, with specific reference to clauses 2.3(3), 2.44(1), 2.75(2), 2.126(6), 2.137(1), 2.141(1) and 3.47(1), the relevant provisions of RELP 2012 as applying to the subject land are addressed below at **Table 1**.

Table 1 Relevant provisions from Randwick Local Environmental Plan 2012

Clause	Provision / Standard
Clause 1.9 – Application of SEPPs	Provisions of any State Environmental Planning Policy that prevails over this Plan as provided by section 3.28 of the Act.
Clause 2.2 – Land Use Zoning	SP2 – Infrastructure (Educational Establishment). Refer **Figure 15**.
Clause 2.7 – Demolition requires development consent	Refer Clause 1.9 above.

Clause	Provision / Standard
Clause 4.3 – Height of Buildings	The site is not provided a mapped maximum height of buildings.
Clause 4.4 – Floor Space Ratio	The site is not provided a mapped maximum floor space ratio.
Clause 5.10 – Heritage Conservation	A portion of the Kensington UNSW campus is identified as a Heritage Conservation Area (HCA) under clause 5.10 and Schedule 5 of the LEP. The HCA is identified as area C2 'Old Tote and Figtree Theatre'. The site adjoins the HCA, with a small part of the site area falling within the C2 mapped HCA area. Beyond the campus boundary, across High Street, is the Randwick Racecourse which is also listed as a HCA (C13). Refer Figure 16.
Clause 5.21 – Flood Planning	The site is not affected by flooding.
Clause 6.1 – Acid Sulfate Soils	The site is not identified as containing acid sulfate soils.
Clause 6.2 – Earthworks	The proposed earthworks is not considered to have a detrimental impact on the environment, neighbouring uses, cultural or heritage items or features of the surrounding land.
Clause 6.4 – Stormwater Management	Not applicable in the SP2 land zoning.
Clause 6.10 – Essential Services	Essential services are supplied to the site.

Figure 15 identifies the location of the site within the RLEP 2012 land zoning map.

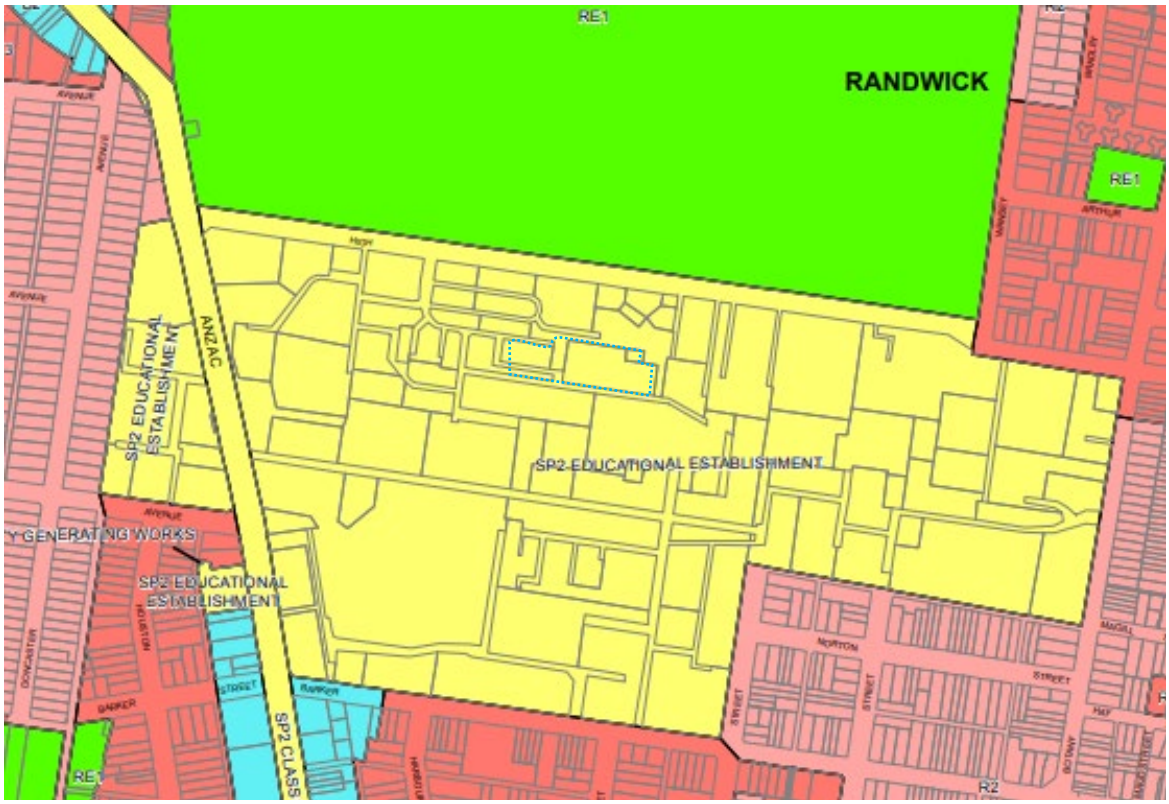

Figure 15 Zoning Map extract

Source: RLEP 2012, Sheet LZN_002

Figure 16 identifies the location of the site in context with Heritage Conservation Areas mapped as C2 and C13.

Figure 16 Heritage context

Source: RLEP 2012, HER_002

4.2.1 Draft Local Environmental Plan 2022

The RLEP 2012 is currently undergoing a comprehensive update, inclusive of amendments to land zoning, floor space ratio, heritage amongst other items. Specifically, the comprehensive planning proposal seeks to amend the boundaries of the Old Tote and Figtree Theatre' HCA, outlined in blue below at **Figure 17**. Subsequently, parts of the site are intended to be removed from the HCA however, parts of the site continue to be mapped within the HCA. In consideration of the proposed reduction in the HCA area and that the proposed works will not encroach onto the area mapped within the HCA, no further consideration of this amendment is deemed as necessary.

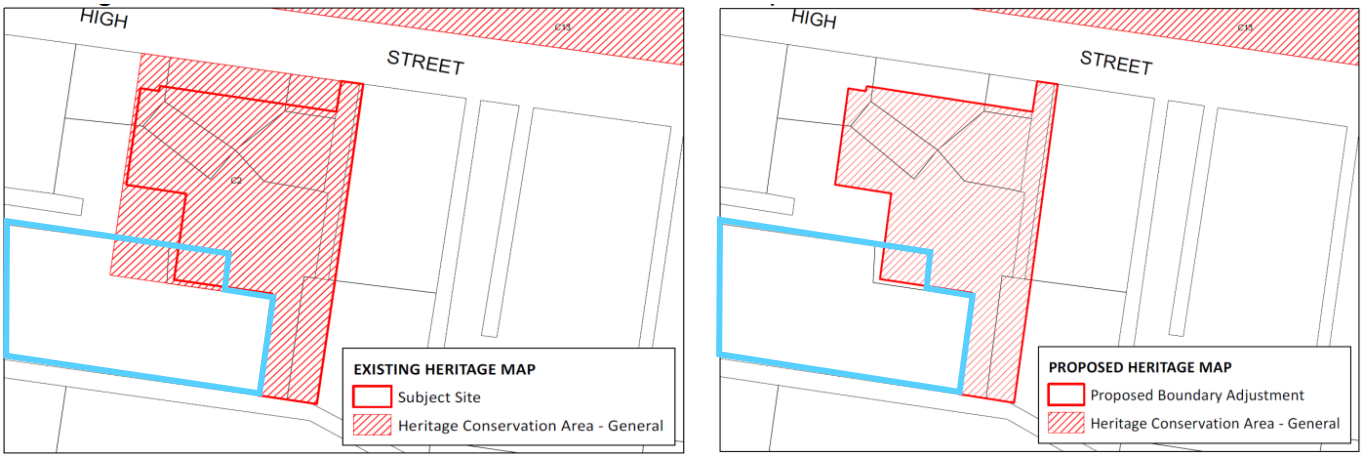

Figure 17 Existing and proposed amendments to the Heritage Conservation Area

Source: Randwick City Council

4.3 Development Control Plan

Site specific provisions apply to the Kensington campus under Part E Specific Site (Randwick Education and Health Specialised Centre) of the Randwick Development Control Plan 2013 (RDCP). The aims of this RDCP are to provide planning and design objectives and provisions which will optimise:

- The physical, social, educational and environmental quality of the Kensington campus;
- The role and environmental 'fit' of the campus within its Randwick City context and its compatibility with the evolving character of adjoining lands; and
- The campus experience.

The DCP contains key control drawings and indicative illustrative principles to be followed for the ongoing development and renewal of the campus. Selected key control drawings with relevance to the REF have been included below in **Figure 18** and **Figure 19**, which inform the movement, open space and landscaping within the campus. The following additional plans also guide development on the campus:

- Building Height;
- Sense of Place, Image and Identity;
- Campus Legibility in the Street Layout;
- Important Public Rooms;
- Hubs;
- Existing Trees;
- Landscape;
- Potential Sections;
- Housing;
- Retail and Child Care; and
- Transport.

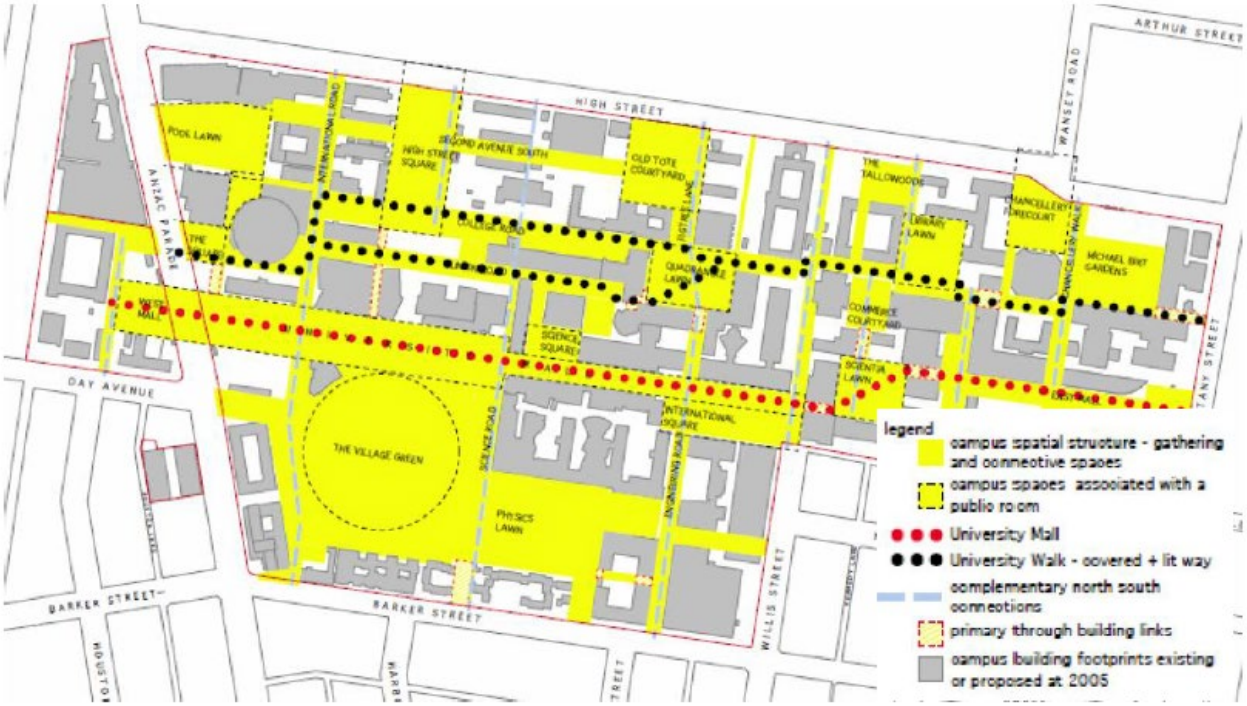

Figure 18 Campus legibility, gathering and connective spaces

Sources: RDCP 2013

Figure 19 Campus Landscape

Source: RDCP 2013

It is noteworthy that the UNSW Kensington campus has significantly evolved in the recent years and the RDCP 2013 key drawings do not necessarily reflect the current campus setting. Notwithstanding, the REF is consistent with both RDCP 2013 and the current UNSW vision for the urban design of the Kensington campus. Further, the works will facilitate the delivery of a landscape consistent with the DCP principles for the campus.

4.4 State Environmental Planning Policies

The following SEPPs apply to the site and location of proposed works, however many apply only by virtue that they apply to the state:

- State Environmental Planning Policy (Planning Systems) 2021
- State Environmental Planning Policy (Biodiversity and Conservation) 2021
- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Transport and Infrastructure) 2021
- State Environmental Planning Policy (Industry and Employment) 2021
- State Environmental Planning Policy (Resources and Energy) 2021
- State Environmental Planning Policy (Primary Production) 2021

The SEPPs that apply to the site and are relevant to the assessment of the activity are outlined below.

4.5 State Environmental Planning Policy (Transport and Infrastructure) 2021

Services Upgrades

The proposed services upgrade (water, gas, electricity, telecommunication and stormwater) works can be carried out as 'Development without Consent', if they are undertaken by or on behalf of a public authority. The University is a public authority for the purposes of this SEPP and so the following provisions are applicable:

- Under Chapter 2 Infrastructure:
  - Under clause 2.3(3), development for a particular purpose that may be carried out without consent includes construction works, the following works or activities are (subject to and without limiting that provision) taken to be construction works if they are carried out for that purpose.
  - Under clause 2.44(1) of the TISEPP, development for the purpose of an electricity transmission or distribution network may be carried out by or on behalf of a public authority without consent on any land.

- Under clause 2.75(2) development for the purpose of a gas pipeline may be carried out by or on behalf of a public authority without consent on any land.
- Under clause 2.126(6), development for the purpose of sewage reticulation systems may be carried out without consent on any land in the prescribed circumstances.
- Under clause 2.137(1) development for the purpose of stormwater management systems may be carried out by or on behalf of a public authority without consent on any land.
- Under clause 2.141(1) development for the purposes of telecommunications facilities (including radio facilities) may be carried out by a public authority without consent on any land.

Demolition of Structures or Buildings

Under Chapter 3 Educational establishments and child care facilities, clause 3.47(1)(d) 'demolition of structures or buildings (unless a State heritage item or local heritage item)' can be carried out as 'Development without Consent' if they are undertaken by or on behalf of a public authority. For reference, clause 3.47(1) of the TISEPP has been replicated below (emphasis added).

> Clause 3.47 Universities—development permitted without consent
>
> ***(1) Development for any of the following purposes may be carried out by or on behalf of a public authority without development consent on land within the boundaries of an existing university—***
>
> ***(a) construction, operation or maintenance, more than 5 metres from any property boundary with land in a residential zone and more than 1 metre from any property boundary with land in any other zone, of—***
>
> *(i) a library or an administration building that is not more than 2 storeys high, or*
> *(ii) a teaching facility (including a classroom or lecture theatre), laboratory, trade facility or training facility that is not more than 2 storeys high, or*
> *(iii) an environmental facility, including a greenhouse or glass house, that is not more than 2 storeys high, or*
> *(iv) an information and education facility that is not more than 2 storeys high, or*
> *(v) a storage or maintenance facility that is not more than 2 storeys high, or*
> *(vi) a car park that is not more than 1 storey high, or*
> *(vii) an outdoor learning or play area and associated awnings or canopies, or*
> *(viii) a kiosk or shop selling university-related goods to students and staff, such as books, stationery or university merchandise, that is not more than 2 storeys high, or*
> *(ix) a cafeteria or canteen that is not more than 2 storeys high and carried out in accordance with AS 4674—2004, Design, construction and fit-out of food premises, published by Standards Australia on 11 February 2004,*
>
> *(b) minor alterations or additions, such as—*
>
> *(i) internal fitouts, structural upgrades, alterations or additions to enable plant or equipment to be installed, or*
> *(ii) alterations or additions to address work health and safety requirements or to provide access for people with a disability, (c) restoration, replacement or repair of damaged buildings or structures,*
>
> *(c) restoration, replacement or repair of damaged buildings or structures,*
>
> ***(d) demolition of structures or buildings (unless a State heritage item or local heritage item).***

Accordingly, under clause 3.47(1)(d) of the TISEPP, *'demolition'* can be carried out as 'Development without Consent' if carried out by a public authority on land within the boundaries of an existing university. The activity will be carried out:

- On behalf of UNSW, a public authority for the purposes of the SEPP (clause 171(2) of the EP&A Regulation);
- Within the boundary of the existing UNSW Kensington campus, which is a university for the purposes of the SEPP (Schedule 1 of the *Higher Education Act 2001*); and
- The activity does not relate to a heritage listed item.

Further, the activity remains compliant with the provisions of Clause 3.47(2) of the SEPP, as:

- The works will not necessitate any alterations to existing traffic or transport arrangements; and
- The works should not contravene the most recent development consent applying to the University with respect to hours of operation, noise, car parking, vehicular movement, traffic generation, loading, waste management, landscaping or student or staff numbers.

As UNSW is a public authority for the purpose of the TISEPP, the land is in a prescribed zone (Special Purpose 2 Infrastructure – Educational Establishment) and the development is in connection with an educational establishment, the proposed works can be carried out as development without consent.

Therefore, development consent under Part 4 (Development Assessment and Consent) of the EP&A Act is not required. Instead, the proposal is required to be assessed as an 'activity' in accordance with Part 5 of the EP&A Act. This provides that the determining authority for an activity must take into account to the fullest extent possible all matters affecting or likely to affect the environment before undertaking the activity itself or granting an approval enabling the activity to proceed.

For this proposal, the University is both the proponent and the determining authority under Part 5 of the EP&A Act. This REF will assist the University in meeting the above obligations prior to deciding whether to proceed with the proposal.

Minor Landscaping Works

Under Chapter 3 Educational establishments and child care facilities, Part 3.5 Universities – specific development controls enables minor landscaping works to be carried out as 'Development without Consent'.

- Under clause 3.49(c) landscaping, including irrigation schemes (whether using recycled or other water) may be carried out by a public authority without consent on any land.
- Under clause 3.49(e) routine maintenance (including earthworks associated with playing field regrading or landscaping, and maintenance of existing access roads) may be carried out by a public authority without consent on any land.

Accordingly, as UNSW is a public authority for the purpose of the TISEPP, the land is in a prescribed zone (Special Purpose 2 Infrastructure – Educational Establishment) and the development is in connection with an educational establishment, the proposed works can be carried out as development without consent.

Therefore, development consent under Part 4 (Development Assessment and Consent) of the EP&A Act is not required. Instead, the proposal is required to be assessed as an 'activity' in accordance with Part 5 of the EP&A Act. This provides that the determining authority for an activity must take into account to the fullest extent possible all matters affecting or likely to affect the environment before undertaking the activity itself or granting an approval enabling the activity to proceed.

For this proposal, the University is both the proponent and the determining authority under Part 5 of the EP&A Act. This REF will assist the University in meeting the above obligations prior to deciding whether to proceed with the proposal.

4.5.1 State Environmental Planning Policy (Resilience and Hazards) 2021

Section 4.6 – 'Contamination and remediation is to be considered in determining development applications, a consent authority must consider whether the land subject of a development application is contaminated and, if the land is contaminated, be satisfied that the land is suitable in its contaminated state for the use proposed.' Subsequently, after the undertaking of contamination investigations across the site and campus, it has been concluded by Douglas Partners that the risk of contamination at the site is generally considered to be low to moderate. For greater detail, refer to **Section 5.2.2** and **Appendix F**.

4.5.2 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

The proposed works cannot be carried out under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* as Exempt or Complying Development due to the scope of the proposed works. Similarly, no provision is available, under the TISEPP for the proposed works as Complying Development. Notwithstanding, Exempt Development is proposed under the TISEPP with specific reference to clauses 2.3(3), 2.44(1), 2.75(2), 2.126(6), 2.137(1), 2.141(1) and 3.47(1), for the purposes of service upgrades and the demolition and minor landscaping works. The specific provisions are outlined at **Section 4.5** of this REF.

4.5.3 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) do not affect the proposed works as it is not development that takes place on or affects Commonwealth land or waters. Further, it is not development carried out by a Commonwealth agency, nor is the proposed development a matter considered to be of national environmental significance and there are no critical habitats or threatened species on the site.

4.6 Other State Legislation

4.6.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* came into effect on 25 August 2017 and replaces the *Threatened Species Conservation Act 1995*. The proposal will involve the removal of 3 trees. This level of removal is below the threshold set out in Part 7 of the *Biodiversity Conservation Regulation 2017* relating to the biodiversity offset scheme threshold (being 10,000m^2 or more). Further, the site is not mapped in the Biodiversity Values Map. As such, this legislation does not apply to the activity. Nevertheless, an Arboricultural Impact Assessment has been prepared (refer to **Appendix D**) which assesses the impact of the tree removal. For greater detail, refer to **Section 5.2.1** and **Appendix D**.

4.6.2 Rural Fires Act 1997

The proposed works do not trigger the requirement to obtain a Bushfire Safety Authority under s100B of the *Rural Fires Act 1997* as the works do not involve the subdivision of land or a special fire protection purpose. The *Rural Fires Act 1997* therefore does not apply to the activity.

4.6.3 Heritage Act 1977

There is no State or locally-listed heritage items located on or in the vicinity of the proposed works. Therefore, the provisions of the *Heritage Act 1977* do not apply to the activity. The works will not impact the HCA identified in RLEP 2012 located to the north-east of the site.

4.6.4 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* relates to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects.

There are no national parks, historic sites, Aboriginal objects or other such sites or objects as legislated for by the *National Parks and Wildlife Act 1974*, that are located on, or in the vicinity of, the subject site of the works. Provisions of the *National Parks and Wildlife Act 1974* therefore do not apply to the activity.

4.6.5 Roads Act 1993

The proposed works do not relate to a public road, nor will the works involve the pumping of water onto a public road or involve the connection of a road to a classified road. Accordingly, consent is not required under s138 of the *Roads Act 1993*.

4.6.6 Water Management Act 2000

The proposed works are not located on 'waterfront land' and as such a Controlled Activity Approval is not required. Accordingly, no approval is required from the Office of Water (Department of Primary Industries) prior to carrying out the works.

4.6.7 Contaminated Land Management Act 1997

The provisions require that the nature and extent of any potential contamination be investigated and demonstrated. The activity involves upgrade works to the façade with no excavation proposed that would trigger consideration of the *Contamination Land Management Act 1997*.

4.6.8 Other Approvals

There are no separate approvals or authorisations required in relation to the proposed development activity prior to determination under Part 5 of the EP&A Act. Certification under section 6.3 of the EP&A Act will be required before certain work commences on site.

Other approvals outside of the EP&A Act may be required for the operation of the permanent uses proposed in this REF.

4.7 Consultation

In accordance with Division 4 of the TISEPP, there are no specific consultation requirements for development carried out by a public authority. In accordance with Division 1 of the EP&A Regulation 2021, there are specific notification requirements for development with a certain capital investment value (CIV)of over $5 million, of which the proposal exceeds.

4.7.1 Government Agency and Other Stakeholder Consultation

Sections 2.10-2.15 of the TISEPP outline the level of consultation required with Council and other public authorities, based on the level of impact arising from the works and for development located on or adjacent to certain land. The proposed works will not give rise to any impact on these items and is not located on land specified in the TISEPP. Therefore, no consultation is required for the proposed works. This is outlined in **Table 2** below.

Table 2 Consultation requirements under the Transport and Infrastructure SEPP

Transport and Infrastructure SEPP Consultation Requirements	Yes	No
Consultation with Council – section 2.10(1), Council related infrastructure or services		
Will the activity:		
(a) Potentially have a substantial impact on stormwater management services provided by the Council?		✓
(b) Be likely to generate traffic that will strain the capacity of the road system in the LGA?		✓
(c) Involve connection to, and have a substantial impact on, the capacity of any part of a sewerage system owned by Council?		✓
(d) Involve connection to and use a substantial volume of water from any part of a water supply system owned by Council?		✓
(e) Involve the installation of a temporary structure on, or enclosing of, a public place that is under the Council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential?		✓
(f) Involve the excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which the Council is the roads authority under the Roads Act 1993 (if the public authority that is carrying out the development, or on whose behalf it is being carried out, is not responsible for the maintenance of the road or footpath).		✓
Consultation with Council – section 2.11(1), local heritage		
Is it likely that the activity will have an impact, that is not minor or inconsequential, on a local heritage item (other than a local heritage item that is also a State heritage item) or a heritage conservation area?		✓
Consultation with Council – section 2.11(2)(b), local heritage		
If yes to section 2.11(1) above, has a copy of the Heritage Impact Statement and a scope of works been provided to the Council?	N/A	
Consultation with Council – section 2.12, flood liable land		
Will the works be located on flood liable land and will they alter flooding patterns more than to a minor extent?		✓
Consultation with State Emergency Service— section 2.13 development with impacts on flood liable land		
Is the activity located on flood liable land and greater than minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance?		✓
Consultation with councils— section 2.14 development with impacts on certain land within the coastal zone		
Is the activity on land that is within a coastal vulnerability area and is inconsistent with a certified coastal management program that applies to that land?		✓

Transport and Infrastructure SEPP Consultation Requirements	Yes	No
Consultation with public authorities other than councils – section 2.15		
Will the activity be located:		
(a) on or adjacent to land reserved under the National Parks and Wildlife Act 1974?		✓
(b) development of land in Zone E1 National Parks and Nature reserves or in a land use zone that is equivalent to that zone, other than land reserved under the National Parks and Wildlife Act 1974		✓
(c) development comprising a fixed or floating structure in or over navigable waters		✓
(d) development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map		✓
(e) development on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument		✓
(f) development of land in a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961		✓

As demonstrated in **Table 2**, no formal notification to adjoining land owners or Council is required under the TISEPP. While the proposal is located in proximity to the Old Tote and Fig Tree Theatre Heritage Conservation Area (HCA), the proposed demolition of the UNSW Hall building will not affect the significance of the conservation area, which is attributed to a group of three buildings comprising the Old Tote, the Whitehouse building and the Fig Tree Theatre building located to the north of the subject site.

Several Fig Trees located within the HCA are also identified to contribute to the overall heritage significance of the HCA. The activity proposed under this REF will have a positive impact the identified buildings within the HCA, as it will remove a building which is unsympathetic in terms of its extent and presentation to the HCA.

However, notification of the proposal to Randwick City Council has been committed to by UNSW and details of this notification is included at **Appendix M**.

Further, suitable measures will be adopted to ensure that the proposed demolition activities within the site will be undertaken to ensure that the existing Whitehouse building and Fig Trees forming the HCA are suitably protected from impacts. Refer to further assessment of tree removal management and mitigation measures presented at **Section 5.2.1**.

4.7.2 General Consultation

As part of the proposed works, general (non-legislated) consultation has been undertaken with the occupants of adjoining University buildings. In addition, a Noise Complaints Register will be in place throughout the duration of the works to address any issues that arise (see **Section 5.2.5** for construction noise impacts and the specific mitigation measures at **Section 7.0**).

4.7.3 Notification

Section 171(4) of the EP&A Regulation 2021 outlines that the Review of Environmental Factors must be published on the determining authority's website or the NSW planning portal, based on the level of capital investment value (CIV), if an approval of a permit is required alongside consideration of the public interest. The proposed works have a CIV greater than the delineated amount and therefore this REF will be published on the UNSW website. This is outlined in **Table 3** below.

Table 3 Notification requirements under the Environmental Planning and Assessment Regulation 2021

EP&A Regulation 2021 Notification Requirements	Yes	No
171 Review of environmental factors—the Act, s 5.10(a)		
(4) The review of environmental factors must be published on the determining authority's website or the NSW planning portal if—		
(a) the activity has a capital investment value of more than $5 million, or	✓	
(b) the activity requires an approval or permit as referred to in any of the following provisions before it may be carried out—		✓
(i) Fisheries Management Act 1994, sections 144, 201, 205 or 219,		✓
(ii) Heritage Act 1977, section 57,		✓
(iii) National Parks and Wildlife Act 1974, section 90,		✓
(iv) Protection of the Environment Operations Act 1997, sections 47–49 or 122, or		✓
(c) the determining authority considers that it is in the public interest to publish the review.		✓

5.0 Environmental Impact Assessment

The following Section outlines the potential impacts of the activity on the environment, and how these potential impacts will be managed.

5.1 Environmental Planning and Assessment Regulation 2021

Table 4 below provides a summary checklist of matters to be considered under clause 171 of the EP&A Regulation.

Table 4 Summary checklist of matters to be considered

Factor	Impact
(a) any environmental impact on a community The works will be undertaken in a staged and coordinated manner to ensure minimal adverse impact to the ongoing use of the campus and the university community. Long term benefits will accrue for the students and staff of the university by facilitating works for timely renewal of aged campus developments to make way for new services and facilities urgently in demand within the campus.	Positive
(b) any transformation of a locality The works will allow for necessary works which will facilitate transformation of a strategic and central location within the UNSW campus.	Positive
(c) any environmental impact on the ecosystems of the locality The activity is minor, proposed within an urban context (operational campus) and is not of a scale or nature that can adversely impact the campus environment or ecosystem. Due consideration is given to reduce impact on significant trees (Fig trees to the north of the site).	Nil
(d) any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality The activity will have a short term impact to the aesthetic and environmental quality of the locality due to the removal of a number of trees. The future redevelopment of the site in accordance with the University's vision for the campus will appropriately mitigate this impact through landscaping enhancements.	Long term positive
(e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations. The activity will not significantly impact the significance of the site, in the sense that the site is already developed and accommodates a university building. To this end, the proposed activity will simply facilitate works in preparation for timely renewal of the site for new campus development.	Nil
(f) any impact on the habitat of protected animals (within the meaning of the Biodiversity Conservation Act 2016) The activity will not impact on the habitat of protected animals. Appropriate measures will be put in place if any protected species are identified.	Nil
(g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air The activity will not affect any endangered species of animal, plant or other living thing.	Nil
(h) any long-term effects on the environment The activity will not have any long-term effects on the biophysical environment.	Nil
(i) any degradation of the quality of the environment The activity will not degrade the quality of the environment. Mitigation measures will be put in place to reduce any impacts on noise, air and water quality.	Nil
(j) any risk to the safety of the environment There will be minimal risk to the safety of the environment. Any risk would be associated with the demolition works. Risk measures will be put in place to manage potential impacts.	Nil
(k) any reduction in the range of beneficial uses of the environment There will be no reduction in the range of beneficial uses of the environment.	Nil
(l) any pollution of the environment Appropriate construction and operational mitigation measures will be implemented to ensure that the environment will not be polluted.	Nil
(m) any environmental problems associated with the disposal of waste Only minor works are proposed, and so no issues will arise from the disposal of waste as detailed in **Section 5.2.9.**	Nil

Factor	Impact
(n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply The activity will maintain access to essential services and is not envisaged to significantly impact demand for scarce resources.	Nil
(o) any cumulative environmental effect with other existing or likely future activities The activity will not contribute to any adverse cumulative environmental impacts. It will allow for works in preparation for renewal of the campus in line with UNSW's Masterplan	Positive
(p) any impact on coastal processes and coastal hazards, including those under projected climate change conditions The activity will not impact on any coastal process or hazards.	Nil

5.2 Identification of Issues

5.2.1 Tree Removal

An Arboricultural Impact Assessment (Demolition Plan) has been prepared by The Ents Tree Consultancy (**Appendix D**) which considers the trees present within the site, including those to be retained and those to be removed.

A total of 3 trees are required to be removed within the site, as these trees are located in close proximity to existing structures to be demolished and/or services to be removed and augmented. The trees are generally considered to be semi-mature and mature with a low-medium value rating. The trees to be removed generally consist of the following species: irish strawberry and bangalow palm.

Further, the remaining trees are proposed to be retained and protected at the present time within the site. The trees not required to be removed are to be retained and protected using the Australian Standard AS4970 2009 where necessary. If additional works or deliveries are required, the AQF level 5 site Arborist will be required to make an assessment of the proposed routes and required tree protection measures. These management techniques will be imposed as mitigation requirements within **Section 7.0**.

With respect to tree offsets and future tree planting, Alumni Park will be a prominent landscape feature in the lower campus, and will green the campus with significant plantings in the future. The University has an active and ongoing tree management strategy, which recognises the value of trees on the campus. An effort will be made to replace the removed trees as part of the future redevelopment of Alumni Park where possible.

5.2.2 Contamination

Extensive contamination investigations have occurred across the Kensington campus over the years, including a Report on Contamination Assessment prepared by Douglas Partners for the site (**Appendix F**). The assessment has concluded that the risk of contamination at the site was generally considered to be low to moderate with the primary potential source of contamination that was identified being imported fill and demolition waste from previous site buildings / structures. Douglas Partners confirm that the site is suitable for future redevelopment from a contamination standpoint.

Douglas Partners recommends that, due to the low density of sampling undertaken that an unexpected finds protocol be prepared prior to the commencement of redevelopment works.

Further, prior to demolition of any structures the hazardous building materials assessment should be updated once destructive sampling techniques can be employed to confirm the type and condition of hazardous materials prior to their removal (including in any remnant demolition wastes) and the removal validated. In addition, it is recommended that following demolition of the existing structures that further investigation be undertaken within the footprint of those structures to fully characterise the site.

These specific recommendations have been included as mitigation measures within **Section 7.0**.

5.2.3 Hazardous Materials

Due to the age and condition of the UNSW Hall Building proposed to be demolished, Greencap has undertaken a Demolition/Refurbishment Hazardous Material Risk Assessment which is provided at **Appendix G**.

Various hazardous materials encountered include friable and non-friable asbestos containing material (ACM), synthetic mineral fibres (SMF), polychlorinated biphenyls (PCB) and lead paint. Greencap has provided specific management requirements for asbestos and hazardous materials, which will are included as mitigation measures within **Section 7.0**.

5.2.4 Traffic, Parking and Access

A Traffic Management Plan has been prepared by Arup (refer to **Appendix H**) to identify any potential traffic, access and parking impacts as a result of the proposed site works and provided suitable mitigation measures to ameliorate impact.

Traffic Impact

The proposed activity is expected to generate a total of 30 heavy vehicle trips per day and a small amount of light vehicle trips per day. It is concluded that the resultant traffic impact on the surrounding road network is minor and is unlikely to result in any significant impact.

Parking Impact

As discussed in **Section 2.2** of this report, staff and workers are anticipated to rely on active travel modes to access the site. The site is frequently and regularly serviced by the light rail connecting the site to Central Station, Town Hall and Circular Quay. Further, the site is serviced by several bus route options that connect the site to Museum Station (Routes 394, 396, 397), Bondi Junction (Route 390X) and Leichhardt (Route 370) among others. Further, the CMP (**Appendix I**) outlines measures to reduce any demand on existing off - street or on - campus car parking spaces by encouraging all workers and contractors to use active travel options to access the site during the works.

Truck loading will take place wholly within the secure site compound via gate access as detailed within the Site Plan (**Appendix B**) and use existing internal roadways within the campus to connect to the external road network. Trucks will predominately use the identified circular route and all truck movements will be managed in accordance with safety and mitigation measures put forward in the CMP (**Appendix I**) and **Section 7.0**.

Pedestrian Access

Hoarding will be installed around the site boundary restricting access to the site during works. Pedestrian access to College Walk is proposed to be restricted to emergency vehicle and deliveries with access managed by on site personnel. Pedestrians approaching College Walk will be redirected to Third Avenue, the existing pedestrian footpath to the north of Alumni Park (see **Figure 20**). Appropriate level of signage placed at strategic locations (on the site hoardings) will also be provided to guide and re-route pedestrians as necessary.

Pedestrian access to the Whitehouse building and the surrounds will remain, however the pedestrian pathway to the east of the site boundary (near the arched brick wall) is proposed to be closed given the proximity of the proposed demolition activity to the accessway. Alternatively, pedestrian will be re-routed as shown in **Figure 21**. Traffic controllers with appropriate accreditation will manage the interaction of construction vehicles with pedestrians to cross the work area (refer to **Appendix H**).

A Traffic Pedestrian Management Plan (TPMP) is proposed to be prepared incorporating the above management measures and will be applied to managing the site during the length of the construction program. Appropriate alternate accessible travel options will also be addressed in the TPMP. Necessary mitigation measures to appropriately manage traffic and parking impact and pedestrian and vehicle circulation are provided at **Section 7.0** of this report.

Figure 20 View of the through site pedestrian access to the Whitehouse and Figtree lane from Third Avenue

Source: Ethos Urban

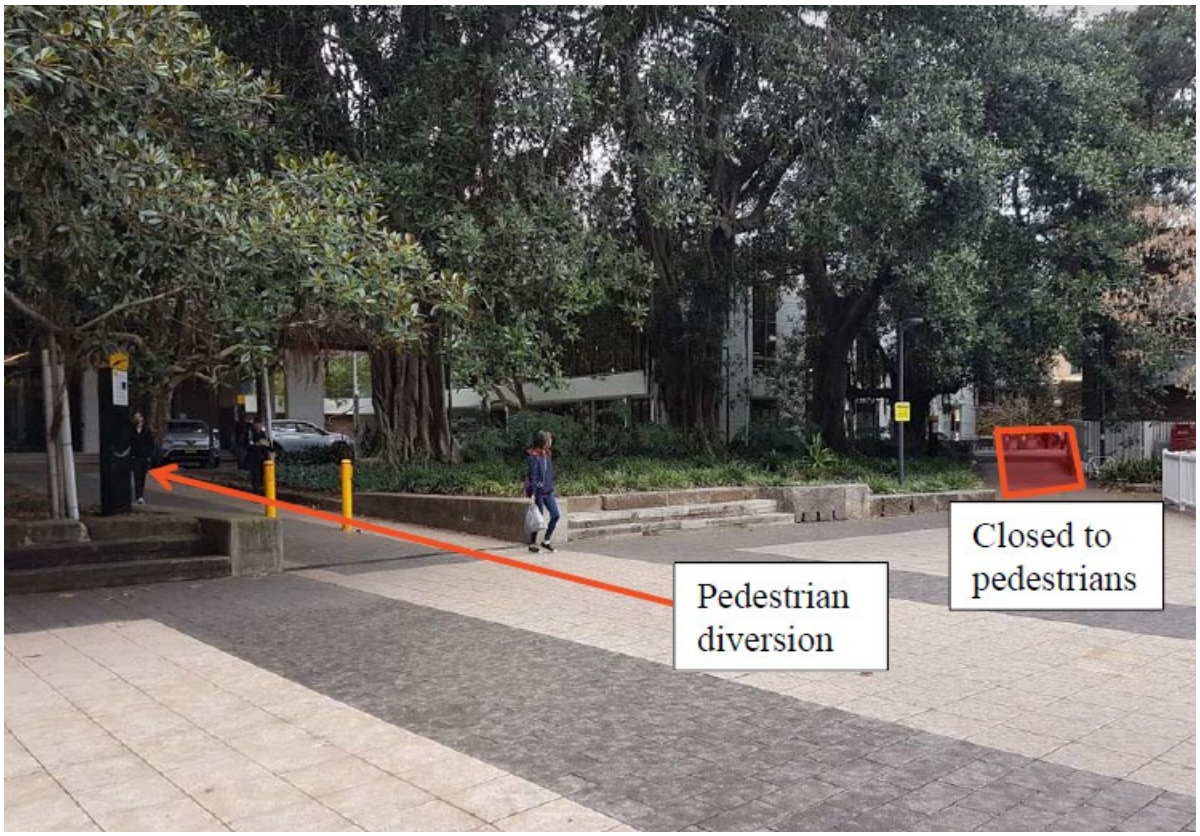

Figure 21 Proposed pedestrian diversion

Source: Arup

5.2.5 Construction Impacts

A CMP (**Appendix I**) undertakes a risk assessment of the proposed activities and identifies suitable mitigation measures to manage construction impacts. An Environmental, Health and Safety Management (EH&S) Plan in consultation with the University, relevant authorities and stakeholders will also be prepared prior to any site establishment or demolition works. The EH&S will be informed by the outcomes of the consultation and will include the following sub-plans to ensure all impacts are appropriately managed:

- Traffic and Pedestrian Management Plan;
- Noise and Vibration Management Plan;
- Dust Management Plan;
- Stormwater Management Plan;
- Waste Management Plan;
- Incident Management Plan;
- Emergency Response Plan;
- Crisis Management Plan;
- Hazardous Materials Management Plan;
- Workplace Relations Management Plan; and
- Air Quality Management Plan.

Noise and Vibration

A Construction Noise and Vibration Management Plan (CNVMP) will be prepared as a sub plan to the EH&S Management Plan by a suitably qualified acoustic consultant prior to commencement of any site works. The CNVMP will outline measures to appropriately manage the potential noise and vibration issues in accordance with the relevant criteria and protocols as identified under **Section 7.0** of this report.

In particular, the CNVMP will identify necessary measures to manage impacts to the sensitive receivers in the vicinity of the site such as the UNSW Village student accommodation to the north, the surrounding administration/university buildings to the east (Goldstein Hall) and south (UNSW Business School) and the Whitehouse Building to the north east. Further, the construction work will largely be restricted to standard construction work hours, in line with EPA guidelines, to reduce impacts to the surrounding student accommodation uses to the north.

The CMP (**Appendix I**) also outlines some noise and vibration measures that will be adopted during the construction phase, including dealing with noise complaints and the like. These will be included in the relevant CNVMP and have also been included as mitigation measures at **Section 7.0**.

Air Quality

An Air Quality Management Plan will be prepared and implemented prior to works commencing, as part of a broader Environmental, Health and Safety (EH&S) Management Plan. This will ensure appropriate controls are in place to manage air quality around the university campus. Refer to specific mitigation measures implemented in this regard at **Section 7.0**.

5.2.6 Heritage

The proposal seeks demolition of the UNSW Hall Building. Accordingly, a Statement of Heritage Impact (the Statement) has been prepared to assess the impact of the proposal on the cultural heritage significance of heritage items in the vicinity of the site. The Statement has been prepared by TKD Architects and is provided at **Appendix L**.

The Statement confirms that the existing UNSW Hall Building does not exhibit heritage significance and is not listed as an individual item or as part of the wider HCA. In addition, the proposed removal of the UNSW Hall will result in an improved relationship of the site with the HCA, as it will remove a built form that is unsympathetic and lacks spatial separation to the HCA.

The proposed REF works, particularly along the site's north east boundary, are within proximity to the 'Old Tote and Figtree Theatre' HCA. The works are not of a nature that will affect the heritage significance of the HCA, given that the

significance of the HCA is attributed to the Figtree Theatre, the Old Tote, Fig trees and the Whitehouse building which lie outside the site boundary.

Suitable measures are proposed to appropriately manage the sensitive interface between the site boundary and the Whitehouse building. Recommended mitigation measures such as dilapidation surveys and monitoring protocols as part of the CMP are further detailed at **Section 7.0**.

5.2.7 Stormwater and Drainage

As previously discussed at **Section 3.4** of the REF, all existing stormwater pipes within the extent of the site boundary will be disconnected and removed as part of the demolition. Stormwater connections of adjoining buildings will be disconnected and appropriately re-routed to nearby stormwater connections outside of the site boundary. The proposed stormwater works will be carried out as outlined under the 'Soil and Water Management Details' plan prepared by WS&P as part of the civil works package provided at **Appendix J** .

Given the reduction in hardstand areas as a result of the proposed works and the maintenance of suitable offsite stormwater connections, no adverse stormwater impacts are anticipated. Further, a Stormwater Management Plan will be prepared as part of the EH&S Management Plan and will guide stormwater management and drainage during the course of the proposed works.

5.2.8 Aboriginal Heritage

Aboriginal Heritage Advice and Recommendations prepared by Paul Irish, Coast History and Heritage (**Appendix E**) provides recommendations to ensure that any sand deposits with Aboriginal archaeological potential can be recognised and investigated in accordance with the legal protections of the NPW Act. Specific management and mitigation measures including monitoring and unexpected finds protocol, are further detailed at **Section 7.0**.

5.2.9 Waste Removal

Existing waste removal arrangement for UNSW Village and other nearby campus buildings will generally be maintained. Currently, waste service vehicles service the UNSW Village building via an at grade waste collection area on Third Avenue (in front of Alumni Park). Suitable arrangements will be made during the course of the REF works to ensure that existing waste servicing arrangements are not impeded. If necessary, alternate temporary waste servicing arrangements will be provided to appropriately manage waste on campus in coordination with UNSW Estate Management. It is recommended that a Demolition and Construction Waste Management Plan be adopted by the appointed contractor prior to the commencement of works.

5.3 Environmental Protection and Biodiversity Conservation Checklist

5.3.1 Matters of National Environmental Significance Checklist

Matters of National Environment Significance are matters protected under national environmental *law (Environment Protection and Biodiversity Conservation Act 1999)*.

The following checklist provides guidance on whether an action is likely to have an impact on one of these matters, and whether further assessment of significance is required. This checklist or similar should be included in the REF to demonstrate that all matters have been considered.

Table 5 EPBC Act 1999 (Commonwealth Legislation)

Significance Matter	Yes/No	Relevant Details
Listed threatened species and communities	No	The site does not contain any listed threatened species or endangered communities.
Listed migratory species	No	The site does not contain habitat for listed migratory species.
RAMSAR wetlands of international importance	No	The site does not contain and is not in the immediate proximity of any declared wetland.

Significance Matter	Yes/No	Relevant Details
Commonwealth marine environment	No	The site is not located within a marine environment/area.
World heritage properties	No	The site is not and is not in the immediate proximity of a declared World Heritage property.
National heritage places	No	The site is not and is not in the immediate proximity of a National Heritage Place.
The Great Barrier Reef Marine Park	No	N/A
Nuclear actions	No	N/A
A water resource, in relation to coal seam gas development and large coal mining development	No	N/A

5.4 Cumulative Environmental Impacts

The environmental impacts from the proposed development are considered to be minimal, relating to the demolition period only. The proposed development is largely removed from existing works being undertaken elsewhere on the campus and as previously explored, the proposal will only have very minimal environmental impacts. Appropriate mitigation measures to further reduce and manage impacts are outlined in **Section 7.0**.

The proposal is considered to have positive impacts as it allows for timely renewal of an older development within the university campus. Importantly it offers a staged and orderly development approach within an operational university setting.

5.5 Public Interest

The proposal is expected to only have minor temporary impacts on the immediate environment such as dust generation, noise and vibration generation and construction traffic movements during the demolition period. Appropriate mitigation measures have been included at **Section 7.0** to minimise these impacts.

In the long term, the works under this REF will free up land on a strategic campus site to make way for a future university open space that appropriately responds to the current and future needs of the University. In this regard, the proposed works are in the public interest as it enables growth and progress of a premier Australian University.

6.0 Summary of Impacts

The objective of the activity is to allow the delivery of these infrastructure and campus upgrade works in a timely fashion and deliver benefits that will allow revitalisation to occur in a coordinated and safe manner. The impacts of the activity are summarised below.

Biophysical Impacts

Due to the nature and extent of the works, the impact of the activity on the biophysical environment will be minor. Whilst some tree removal is proposed to occur, this is intended to an interim outcome only. The proposed works involve site preparation which will enable a future development in line with the University's vision, which will include future landscaped embellishments. Further, all works will be appropriately managed so as to minimise impact. On this basis, it is considered that the proposed works will not result in biophysical impacts subject to implementation of mitigation measures outlined under **Section 7.0**.

Social Impacts

The proposed works seek to minimise any social impact by staging the works and allowing the university campus to function as 'business as usual'. In this regard, the proposal will minimise social impacts by minimising any disruption around the campus and works to progress in an organised, orderly and safe manner. The proposed activity will facilitate the long term realisation of a space able to be utilised by all students, with an improved interface to College Walk and Alumni Park.

Economic Impacts

In the short term, the works will create additional construction jobs. In the long term, the site works will free up land at a strategic site within campus. The existing UNSW Hall building is considered to be at the end of its useful economic life and as such the works facilitate timely renewal of the site. Importantly, it allows the University to use a key site within the campus for a viable future development that can meet current and future needs of a growing campus. In this regard, the proposal will have positive indirect economic impacts as it allows the university campus to evolve and provide a space which can meet contemporary educational needs of a premier Australian university.

7.0 Mitigation Measures

This REF seeks works to allow the demolition of the existing D14 Building and enhancement of the landscaping of a portion of Alumni Park (the site) within UNSW Kensington's lower campus. The proposed works are consistent with the provisions of the TISEPP for development permitted without consent.

Activities undertaken during demolition and services upgrades would require environmental safeguards to a suitable standard to be implemented as set out under the CMP at **Appendix I** and relevant technical consultant assessment reports appended to this REF.

To ensure minimal adverse impact, the activity proposed under this REF will be carried out in accordance with the mitigation measures identified below:

1. Community Consultation

1.1 Complaints received shall be recorded and attended to promptly. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaint can be avoided or minimised. Feedback shall be provided to the complainant explaining what remedial actions were taken.

1.2 The proponent shall develop a complaints management system and record details of all complaints received and the means of resolution of those complaints. The complaints register shall be made available to Council on request.

1.3 A notice board shall be located at the main entrance to the site in a prominent position and shall include the following:

a. 24 hour contact person;
b. telephone and facsimile numbers and email address; and,
c. construction activities and time frames.

1.4 The site notice shall be erected no less than 2 days prior to the commencement of works.

1.5 Works staging is to be reviewed to ensure there is a full understanding and acceptance of the timing/duration, construction impacts, power tools, noise, temporary partitions and access routes etc with all key stakeholders.

2. Demolition Worksite

2.1 All relevant legislation and associated regulations shall be complied with.

2.2 The work site shall be established, maintained and operated in accordance with the previsions set out within the Construction Management Plan (**Appendix I**).

2.3 Buildings shall be fully vacated prior to commencing any works. Licensed demolition subcontractors shall be used.

2.4 Traffic during construction shall be managed in accordance with AS 1742.3 - 1996 "Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads", and as detailed in Mitigation Measure 15.1.

2.5 Where possible, existing traffic access shall be used and maintained.

2.6 Protective safety fencing shall be installed around the site (such as Class "A" hoardings), if required.

2.7 Spotters and traffic control shall be utilised as required to ensure adequate separate and exclusion zones

2.8 Temporary physical barriers shall be used to provide exclusion zones where established pedestrian and vehicle routes are changing

2.9 The hours of demolition or construction, including delivery of materials to and from the site, shall be consistent with the hours of construction specified in NSW Office of Environment and Heritage's "Interim Construction Noise Guideline (July 2009)".

2.10 The hours of demolition or construction, including delivery of materials to and from the site, shall generally be restricted as follows:

a. between 7.00am and 6:00pm, Monday to Friday;
b. 8:00am to 5:00 pm on Saturdays; and
c. no work or deliveries on Sunday and/or public holidays.

2.11 The site shall be left tidy and rubbish free each day prior to leaving site and at the completion of the works.

2.12 No hazardous materials or dangerous goods shall be used or stored in the site.

2.13 No plant and equipment storage areas or bunded areas for storage of petroleum, distillate and other chemicals shall be permitted within the work area.

2.14 The proponent shall meet all workplace safety legislation.

2.15 Dilapidation reporting of Council assets (e.g. footpath) shall be undertaken prior to commencement of demolition works, if required.

2.16 All materials within the works area or being delivered shall be contained wholly within the work area. The requirements of the *Protection of the Environment Operations Act 1997* shall be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses.
2.17 The public way shall not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances.
2.18 All workers shall be made aware of their responsibilities towards understanding what constitutes disruptive works and to understand the time frames associated with preparing to carry out any such works.
2.19 Access to and from site shall be defined and out of bounds areas clarified for workers. The induction shall focus on the amenities planned for within the construction site boundary which include lunch rooms. Nearby food outlets shall be identified to workers to limit their need to travel far from site at meal times.

3. Plant and Equipment

3.1 In accordance with WorkCover all plant and equipment used in demolition work shall comply with the relevant Australian Standards and manufacturer specifications.
3.2 No vehicle maintenance shall be permitted in the work areas except in emergencies.
3.3 All plant/equipment shall be inspected daily to avoid leakage of fuel, oil or hydraulic fluid to the work sites. Machinery found to be leaking shall be repaired or replaced.
3.4 All machinery shall be secured against vandalism outside working hours.
3.5 No batching plant shall be permitted.

4. Demolition and Excavation

4.1 All work shall be carried out in accordance with the Construction Management Plan (**Appendix I**).
4.2 End stages of the demolition, including the removal of the footings, foundation slabs or other subfloor structures, removal of redundant services and utilities infrastructure and installation of new services shall be monitored by a suitably qualified archaeologist in conjunction with the La Perouse Local Aboriginal Land Council.
4.3 A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal by any officer of UNSW and Randwick City Council.
4.4 Any demolition work shall be carried out in accordance with AS 2601—2001, The Demolition of Structures, published by Standards Australia on 13 September 2001.
4.5 Protective fencing shall be installed around demolition and construction areas to prevent public access to the work area.
4.6 All previously connected services shall be appropriately disconnected as part of the demolition works, as required. The contractor shall consult with the various service authorities regarding their requirements for the disconnection of services.
4.7 After demolition, the work area shall be left free of debris that may harbour vermin.

5. Erosion and Sediment Control

5.1 All erosion and sediment control measures shall be implemented in accordance with the Erosion and Sedimentation Plans that form a part of the Civil Works Package, prepared by Warren Smith & Partners (**Appendix J**).
5.2 The works shall be in accordance with Landcom's "Managing Urban Stormwater, Soils & Construction Guidelines (The Blue Book)".
5.3 Erosion and sedimentation control measures shall not be removed until disturbed areas have stabilised.
5.4 Any loose material stockpiles shall be located within the temporary construction compounds and be protected from possible erosion.

6. Water Quality

6.1 All care and due diligence shall be taken to minimise or prevent pollutant material entering drain inlets or waterways.

7. Flora and Fauna

7.1 Tree removal shall be carried out in accordance with the Arboricultural Impact Assessment prepared by Ents Tree Consultancy (**Appendix D**)
7.2 Appropriate tree protection measures shall be put in place prior to any works.
7.3 Environmental resources shall be maximised by retention of existing vegetation and resources where possible.
7.4 Trees with limbs overhanging the work area shall not be removed unless absolutely necessary for safety or demolition reasons. Any overhanging limbs shall be cut back where possible.
7.5 The proponent shall minimise vegetation disturbance.

7.6 Vehicles, machinery or stockpiles shall not be placed beneath canopies of trees.

8. Noise

8.1 A Specific Noise and Vibration Report shall be prepared and provided to the satisfaction of UNSW, prior to the commencement of works. The report shall include the following information in order to mitigate any impacts to sensitive university receivers.

- Construction noise and vibration objectives
- Noise emission goals
- Assessment methodology and mitigation methods
- Noise and vibration emission assessment
- Recommendations
- Reporting and monitoring procedures

8.2 The proponent (and its contractors) shall use the best available techniques not entailing excessive cost to meet NSW Office of Environment and Heritage's demolition noise and vibration requirements as far as practicable. Reference should be made to NSW Office of Environment and Heritage's "Interim Construction Noise Guideline (July 2009)".

8.3 For projects with a demolition period longer than three weeks demolition and construction noise shall be limited to NSW Office of Environment and Heritage's "Interim Construction Noise Guideline (July 2009)", which provides for a construction noise level of background plus 10 dB(A) and LAeq 75 dB(A) during recommended standard hours (Monday to Friday 7:00am to 5:00pm, Saturday 7:00am to 3:00pm, with no work on Sundays or public holidays) and a demolition noise level of background plus 5 dB(A) outside standard hours.

8.4 All reasonable practical steps shall be undertaken to reduce noise.

8.5 Demolition noise shall be attenuated with the use of engine silencing and substitution by alternative processes to reduce noise emission levels from typical demolition equipment. In addition to these physical noise controls, the following general noise management measures shall be followed.

8.6 Plant and equipment shall be properly maintained.

8.7 Equipment shall be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power levels are not exceeded.

8.8 Where possible, plant shall be strategically positioned within the work area to reduce the emission of noise to the site, surrounding neighbourhood and to site personnel.

8.9 Unnecessary noise shall be avoided when carrying out manual operations and operating plant.

8.10 Any equipment not in use for extended periods during demolition work shall be switched off.

8.11 Good relations with people living and working in the vicinity of the works shall be established at the beginning of the project and be maintained throughout the project. As part of the CNVMP, a noise complaints register shall be maintained, and any complaints shall be registered, and then addressed seriously and expeditiously.

8.12 All site managers shall be made aware of noise and vibration limits, applicable control measures and methods. They shall ensure that all agreed noise and vibration measures are carried out by employees and sub-contractors.

8.13 Vehicles accessing the work area shall not queue in residential streets and shall only use the designated construction vehicle routes. Loading of these vehicles shall occur as far as possible from any sensitive receiver.

9. Air Quality

9.1 An Air Quality Management Plan shall be prepared to appropriately manage air quality impact prior to any works commencing on the site.

9.2 Trafficable and material storage areas shall be clearly defined to prevent unnecessary vehicle movement into other areas.

9.3 A water cart to dampen work areas and exposed soils to prevent the emission of excessive dust shall be used.

9.4 A wheel shaker grid and/or wash down facilities at the vehicle egress point shall be installed.

9.5 Trucks transporting materials to and from the site shall use covers to prevent windblown dust or spillage.

9.6 Truck tailgate locking mechanisms shall be operational and in use.

9.7 Periodic inspection of surrounding roads shall be carried out to ensure no construction contamination and initiation of road sweeping if required.

9.8 Materials for temporary road surfacing shall be carefully selected.

9.9 Subcontractors shall maintain equipment / machinery to ensure exhaust emissions comply with relevant legislation and guidelines.

9.10 All waste material shall be sorted, collected and removed from site (for recycling where possible).

9.11 Air quality monitoring shall be carried out.

10. Waste Management

10.1 All waste generated by the project, shall be beneficially reused, recycled or directed to a waste facility lawfully permitted to accept the materials in accordance with the NSW Office of Environment and Heritage's "Waste Classification Guidelines (2008)" and the Protection of the Environment Operations Act 1997.

10.2 Where available, recyclable site and demolition waste shall be recycled in accordance with the NSW Government's "Waste Reduction and Purchasing Policy (WRAPP guidelines)". Waste oil shall be sent to approved recyclers.

10.3 The type and volume of all waste materials (e.g. excavation material, green waste, bricks, concrete, timber, plasterboard and metals) shall be estimated prior to demolition and construction with the destination specified either for re-use or recycling, or off-site re-use or recycling and as a last resort disposal at a licensed waste facility.

10.4 No burning or burying of wastes shall be permitted on site.

10.5 Non-recyclable waste and containers shall be regularly collected and disposed of at a licensed landfill or other licensed disposal sites in the area.

10.6 Any bulk garbage bins delivered by authorised waste contractors shall be placed and kept within the property boundary.

10.7 Waste management practices shall follow the resource management hierarchy principles embodied in the Waste Avoidance and Resource Recovery Act 2001. These practices include: avoid unnecessary resource consumption; recover resources (including reuse, reprocessing, recycling and energy recovery); and dispose (as a last resort).

10.8 A Demolition and Construction Waste Management Plan is recommended to be adopted by the appointed contractor prior to the commencement of works.

11. Utilities and Services

11.1 Any services near the work area which may be impacted by the works shall be accurately located prior to commencing works.

12. Contamination

12.1 The hazardous building materials assessment shall be updated once destructive sampling techniques can be employed to confirm the type and condition of hazardous materials prior to their removal (including in any remnant demolition wastes) and the removal validated prior to the demolition of any structures.

12.2 Further investigation shall be undertaken within the footprint of those structures to fully characterise the site following demolition of the existing structures.

12.3 All works shall be undertaken in accordance with the recommendations set out in the Report on Contamination Assessment for REF, prepared by Douglas Partners.

12.4 The Contractor shall be immediately notified and works shall cease in the event that any new information come to light during demolition or construction works that have the potential to alter previous conclusions about contamination. Works shall not recommence until the work area is remediated in accordance with an approved Remedial Action Plan, and a Validation and Monitoring Report together with a notice of completion of remediation pursuant to clause 4.15 of State Environmental Planning Policy (Resilience and Hazards) 2021 (and evidence of approval by NSW Office of Environment and Heritage) is obtained.

12.5 Contamination of the work area during demolition works shall be avoided.

12.6 If any contaminated materials or hazardous substances (for example, asbestos, polychlorinated biphenyls, synthetic mineral fibre, lead dusts, paint containing lead and ozone depleting substances) are encountered during demolition and construction then safe work method statements and appropriate documented practices shall be implemented.

12.7 Any contaminated materials or hazardous substances shall be classified first and then stored, transported and disposed of in accordance with NSW Office of Environment and Heritage requirements at a NSW Office of Environment and Heritage licensed waste facility.

13. Hazardous Materials

13.1 Further investigation and sampling of the roof cavity shall be undertaken to confirm status of presumed asbestos-containing sprayed insulation material. This shall be conducted following vacant possession of building. Access shall be restricted in the interim.

13.2 Destructive investigations and additional sampling shall be undertaken following vacant possession of the building.

13.3 All identified and presumed ACMs shall be removed prior to demolition works, as far as reasonably practicable, by an appropriately licensed contractor under controlled conditions in accordance with the SafeWork NSW 'How to manage and control asbestos in the workplace' Code of Practice and in line with University of New South Wales procedures.

13.4 An independent asbestos consultant shall be engaged to undertake asbestos fibre air monitoring and clearance inspections during and following the asbestos removal, if required.

13.5 All identified hazardous materials shall be removed, as far as reasonably practicable, prior to the demotion works by appropriately licensed/experienced contractors.
13.6 When demolition/refurbishment works are to take place, dust suppression techniques shall be utilised when working with lead-containing paint. Any works which may disturb potential lead-based paint systems, shall be conducted by appropriately experienced contractors under controlled conditions in accordance with the requirements of AS 4361.2-1998 Guide to lead paint management, Part 2: Residential and commercial buildings.
13.7 Consideration shall be given to engaging an independent hygiene consultant to undertake Lead air monitoring during any removal works to ensure works are conducted safely.
13.8 Capacitors and electrical components identified as containing Polychlorinated Biphenyls (PCBs) shall be deenergised by a licensed electrician and removed under controlled conditions and disposed of in accordance with environmental protection guidelines prior to refurbishment or demolition works.
13.9 Contractors shall use appropriate Personal Protective Equipment (PPE) including skin, eye and respiratory protection.
13.10 Hazardous materials identified on site shall be noted within the demolition/refurbishment works Safe Work Method Statement (SWMS) and any safe systems of work put into place if required.
13.11 Areas highlighted in the Areas Not Accessed section as areas of 'no access' shall be presumed to contain hazardous materials. Appropriate management planning shall be implemented in order to control access to and maintenance activities in these areas, until such a time as they can be inspected and the presence or absence of hazardous materials can be confirmed.
13.12 Demolition or refurbishment works shall cease pending further sampling if materials suspected of containing asbestos or hazardous materials are encountered.
13.13 Where Hazardous Materials are identified in a good condition (refer to Hazardous Materials Register) these shall only remain in-situ where refurbishment or demolition works do not impact upon the site.
13.14 Where ACMs remain in-situ, the person with management or control of the site shall update the Asbestos Register as per the requirements outlined in the SafeWork NSW 'How to manage and control asbestos in the workplace' Code of Practice.

14. Other Requirements

14.1 Works-as-executed drawings shall be forwarded to UNSW for information purposes at the completion of the project.

15. Traffic and Pedestrian Management

15.1 Traffic and vehicle management measures shall be carried out in accordance with the Traffic Management Plan prepared by Arup.
15.2 A Traffic and Pedestrian Management Plan shall be prepared and a suitably qualified traffic consultant prior to works commencing. The plan shall identify suitable alternate pedestrian travel routes, including appropriate accessible travel routes during the course of the REF works.
15.3 Construction traffic movements on the adjacent road network and vehicle movements to and from the site shall be managed and controlled.
15.4 Trucks shall enter and exit the site in a forward direction.
15.5 All workers and contractors shall be encouraged to use active travel options to access the site.
15.6 Traffic capacity at intersections in the vicinity of the site shall be maintained.
15.7 Construction vehicle activity shall be restricted to designated truck routes.
15.8 Construction access from the external road network shall be restricted to signalised intersections.
15.9 Pedestrian movements adjacent to demolition activity shall be managed and controlled by site personnel in accordance with WorkCover requirements.
15.10 Pedestrian warning signs and construction safety signs/devices shall be utilised in the vicinity of the site and shall be provided in accordance with WorkCover requirements.
15.11 Construction activity shall be carried out in accordance with approved hours of work (refer to mitigation measure 2.10).
15.12 Truck loads shall be covered during transportation off-site.
15.13 On-site vehicle speeds shall be limited to 30km/h and may be reduced depending on weather conditions or safety requirements.
15.14 Activities related to the demolition works shall not impede traffic flow along local roads.
15.15 Materials shall be delivered and spoil removed during standard construction hours.
15.16 Construction vehicles shall not to queue on Gate Two Avenue and be wholly accommodated within the site.
15.17 Construction traffic movements to/from the site shall be minimised during peak hours to minimise the impact on the wider road network.
15.18 Vehicle movement shall be tracked through onsite communication to coordinate vehicular access to the site.

16. Heritage & Aboriginal Cultural Heritage

16.1 The following aspects of the works shall be monitored with the La Perouse Local Aboriginal Land Council either together with, or in consultation with, a suitably qualified archaeologist:

- End stages of demolition of the existing Building D14 and associated ancillary structures, including removal of any footings, foundation slabs or other subfloor structures;
- Removal of redundant in-ground hydraulic, stormwater and electrical services; and
- Installation and/or upgrade of in-ground hydraulic, stormwater and electrical services.

8.0 Justification and Conclusion

This Review of Environmental Factors (REF) has been prepared by Ethos Urban on behalf of the University of New South Wales (UNSW) to assess the potential environmental impacts that could arise from the proposed works within the D14 Precinct and adjacent Alumni Park (the site) within UNSW Kensington's lower campus.

This proposal exclusively relates to specific works including site establishment, demolition works, installation and/or upgrade of services infrastructure and minor landscaping works. It is noted a previous REF for the demolition, site establishment and enabling works within the site was endorsed by UNSW on 31 January 2019. The subject REF represents an addendum to the previous REF.

This REF identifies that the proposed activity can be carried out under provisions of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP), with specific reference to clauses 2.3(3), 2.44(1), 2.75(2), 2.126(6), 2.137(1), 2.141(1) and 3.47(1), which enable the proposed services upgrade works, demolition of structures and minor landscaping works to be undertaken as 'Development without Consent'. This REF considers the requirement of Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as well as clause 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation),

This REF has examined and taken into account to the fullest extent possible all matters affecting, or likely to affect, the environment by reason of the proposed activity. As discussed in detail in this report, the proposal will not result in any significant or long-term impact. The potential impacts identified can be reasonably mitigated and where necessary managed through the adoption of suitable site practices and adherence to accepted industry standards.

As outlined in this REF, the proposed activity can be justified on the following grounds:

- It responds to the existing need within the University and community;
- It generally complies with, or is consistent with all relevant legislation, plans and policies.;
- It has considered all potential impacts and has minimal environmental impacts.; and
- It recommends adoption of adequate mitigation measures to address any resultant impacts.

The environmental impacts of the amended proposal are not likely to be significant. On this basis, it is recommended that UNSW determine the amended proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of mitigation measures identified within this report.