JRPP No.	2011HCC039
DA No.	DA 11/0964
Proposal	NEW RESEARCH BUILDING
Property	LAND ADJACENT TO NIER AND VALE STREET 130 UNIVERSITY DRIVE, CALLAGHAN LOT 16 DP 817507
Applicant	THE UNIVERSITY OF NEWCASTLE
Report By	DEVELOPMENT AND BUILDING SERVICES

Assessment Report and Recommendation

Executive Summary

Proposed Development

The application comprises:

- Preparation of the site by clearing vegetation and undertaking general earthworks;
- Construction of a two storey (17.575m high) research building involving research laboratories for physics and electrical engineering associated with the adjacent Newcastle Institute for Energy Resources (NIER) site and University, offices, breakout spaces, storage areas, display areas, amenities and associated plant;
- Provision of associated parking, internal access arrangements, landscaping and associated services and drainage infrastructure.

Referral to Joint Regional Planning Panel

The proposal is referred to the Joint Regional Planning Panel for determination pursuant to clause 13B of State Environmental Planning Policy (Major Development) 2005, given the application being an 'educational establishment' with a capital investment value of more than $5,000,000. The application submitted to Council nominates the value of the project as $14,147,395.

Permissibility

The site is zoned 5(a) 'Special Uses' pursuant to the Newcastle Local Environmental Plan 2003. The new research building will be occupied by University Faculties conducting research activities under the Newcastle Institute for Energy and Resources (NIER) umbrella. The NIER has been previously established as a permissible land use on the adjacent 6(a) Open Space and Recreation zone under the provisions of the SEPP (Infrastructure) 2007 due to the establishment of its direct ties to the University Campus and its ultimate classification as an 'educational establishment'. The proposal, with its direct and indirect ties to the University therefore continues to be categorised as an 'educational establishment' and is therefore permissible within the 5(a) zone subject to development consent.

All required owner's consent has been provided. The proposal is Integrated Development under the *Environmental Planning and Assessment Act, 1979* because a Bush Fire Safety Authority is required under the *Rural Fires Act* 1997 prior to development.

Consultation

The application was publicly exhibited in accordance with the relevant requirements of the Newcastle Development Control Plan 2005 from 29th August – 12th September 2011. There were no submissions received.

The application is 'Integrated Development' pursuant to the *Rural Fires Act 1997*. No objection was raised by the Rural Fire Service and General Terms of Approval (GTA) have been recommended. The GTA's do not fundamentally affect the design of the proposal.

Key Issues

The main issues identified in the assessment and/or raised in the submissions were as follows:

- Whether the proposed development is acceptable in this location.
- Whether the proposed development directly result in unreasonable traffic impacts on the surrounding road network.
- Whether the new building will have unnecessary or detrimental visual impacts.
- Whether the loss of 136 trees and proposed compensatory ecological enhancement and replacement planting scheme is acceptable.
- Whether the development is acceptable in terms of bushfire protection.

Recommendation

Grant approval to DA11/0964, subject to conditions recommended in Appendix A.

1. Background

In August 2010 development consent was granted to change the use of the former BHP-Billiton Newcastle Research Laboratories that covered a 3.8 hectare site adjoining the University of Newcastle's Callaghan Campus to the Newcastle Institute for Energy and Resources (NIER). The site is currently undergoing refurbishment to implement this use.

The NIER is a partly federally funded, national and international, research centre aimed at addressing national priorities in regard to energy sustainability in both production and use and will include specialist laboratory space for large scale test bed and pilot plant operations.

The proposed development is located on undeveloped land zoned for '*5(a) Special Use – University'* to the north of the existing University Campus and will be located adjacent the NIER site to provide for state-of-the-art research space to compliment and support the NIER site. The new research building will be occupied by University Faculties conducting research activities under the Newcastle Institute for Energy and Resources (NIER) umbrella

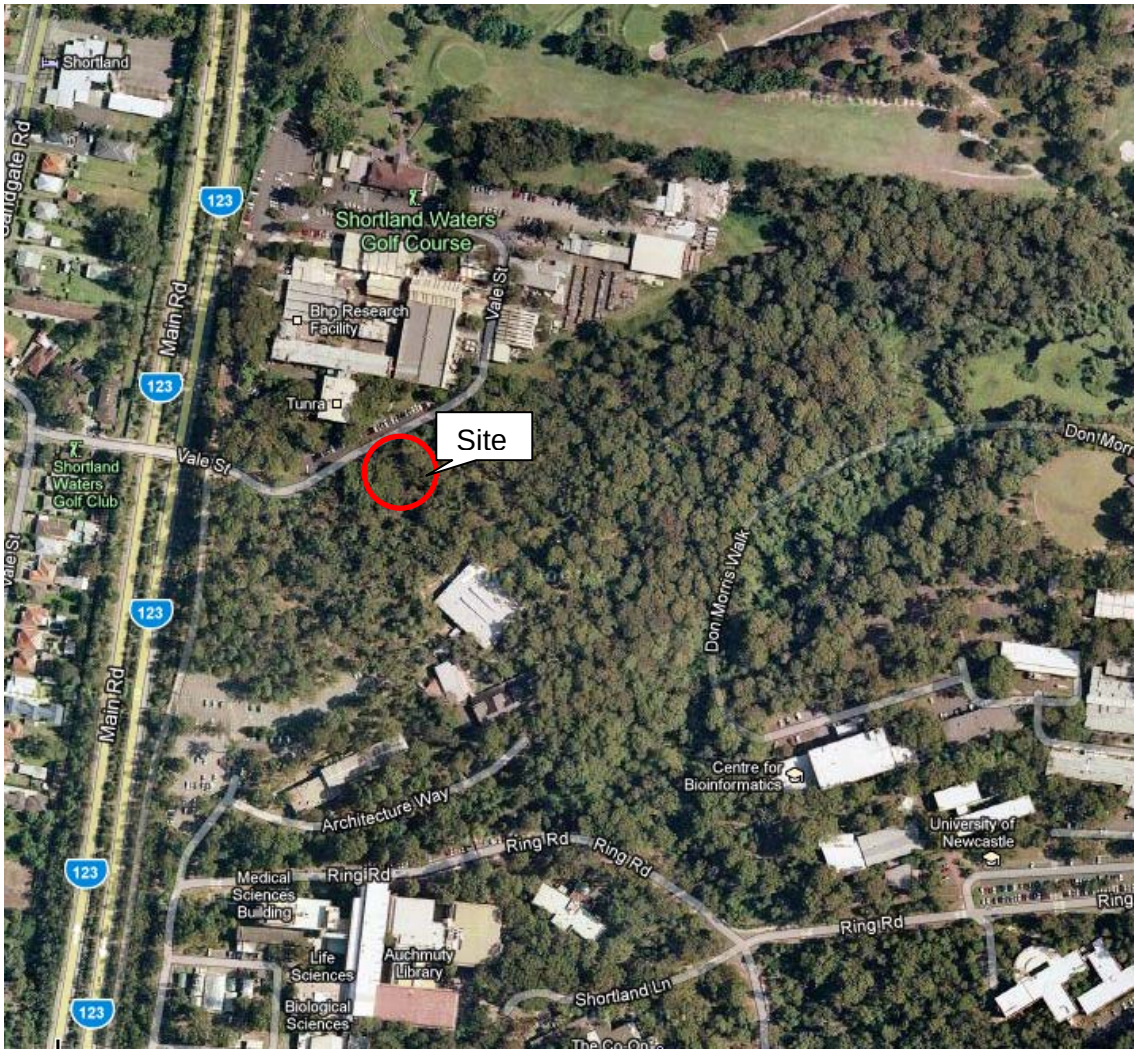
2. Site and Locality Description

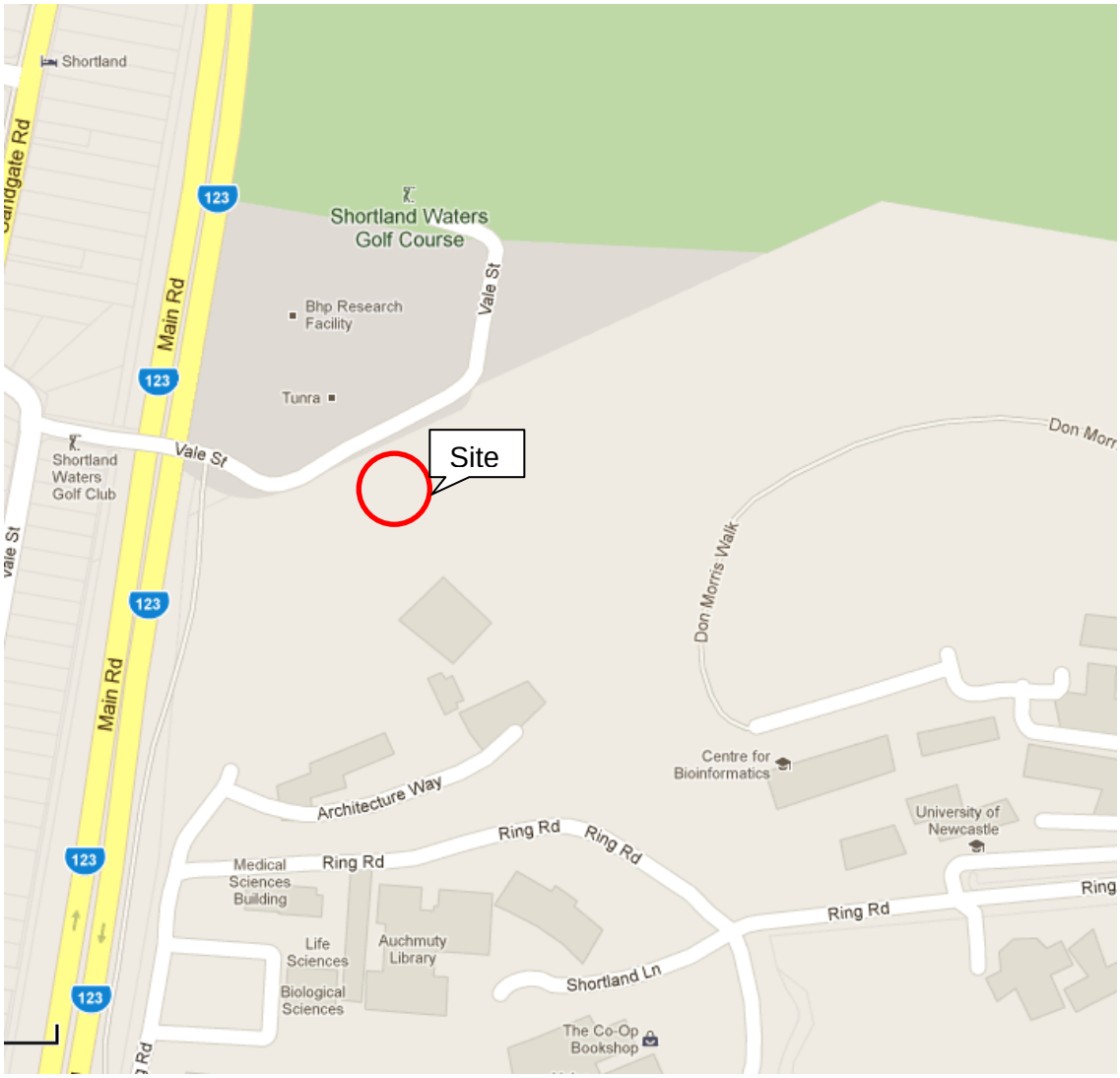
The site consist of a 900sqm, triangular parcel of land within the greater 3.8ha Newcastle Institute for Energy Resources (NIER) Campus. Although the site forms part of the NIER Campus, it is in fact located on University Land, being Lot 16, DP817507 known as 130 University Drive, Callaghan. The site is within an area of bushland setting accessed from Vale Street and immediately adjoins the north end of the University of Newcastle Campus (UoN). To the north, beyond the NIER Campus lies the Shortland golf course. The UoN's Architecture, Science and Engineering facilities are located further south. Further bushland is consistent to the east and west. The residential properties of Vale Street exist beyond the bushland to the west.

The site falls steadily to the south east falling from RL30m along the existing access road to the north of the site to RL26m at the lower south eastern corner of the proposed building. This represents an average fall of approximately 4 metres (grade of approximately 1:10) across the site.

The subject site is currently undeveloped remnant bushland.

The whole of the University Campus is identified as being Bushfire Prone Land.


Shortland
Shortland Waters Golf Course
Bhp Research Facility
Tunra
Site
Vale St
Main Rd
123
Shortland Waters Golf Club
Don Morris Walk
Centre for Bioinformatics
Architecture Way
Ring Rd
University of Newcastle
Medical Sciences Building
Life Sciences
Auchmuty Library
Biological Sciences
Shortland Ln



3. Project Description

The proposed development comprises clearing the site of vegetation and undertaking general earthworks for site preparation for the construction of a two storey research building at the NIER Campus. The new building will provide additional research space involving the provisions of laboratories, work stations and offices for approximately 44 researchers.

The NIER Campus has been established with the Commonwealth's Education Investment Fund and investment from the University of Newcastle to provide a world-class research facility for minerals, energy and resources.

The proposed new building provides two storeys of research space involving 4 main labs, 12 support labs, 12 offices and 32 workstations; basement level plant room and an atrium style foyer with first floor overhead rooms. The total GFA of the building (not including the basement level plant room) totals approximately 2987sqm.

The building is to be cut into the sloping ground. The combination of employing a building with high energy sustainability ratings and a high quality led architectural design has resulted in a building of varying heights. The resultant maximum height from the excavated ground is 17.57m. Plans and Elevations are included in Appendix B.

The new development will capitalise on the existing parking provision on the NIER Campus. An additional 14 parking spaces have been proposed with this development.

Being cut into a sloping site, preliminary estimates for cut and fill equate to some 2500m^3 of soils that would be cut. Some soil quantities are expected to be reused within the immediate site for landscaping works, the majority is expected to be disposed of off site during construction works.

The Capital Investment Value of this project is $14,147,395.

4. Consultation

The application was publicly exhibited in accordance with Newcastle Development Control Plan 2005 from 29th August – 12th September 2011. Neighbouring properties in Vale Street, adjacent the highway were notified of the proposal by letter during this time. No submissions were received.

5 Referrals

Statutory Referrals

The site identified as Bush Fire Prone Land on the Bush Fire Prone Land Map for the Newcastle Local Government Area. The proposed development is considered to be a building of *'Special Fire Protection Purpose'* as defined by the *Rural Fire Services Act 1997* and is therefore 'Integrated Development'. A bush fire assessment was undertaken by the applicant and submitted with the application. The Rural Fire Service have reviewed the application and found the development to be acceptable in fire safety terms and have issued General Terms of Approval in accordance with the recommendation of the Bush Fire Assessment report. The recommendations are echoed in recommended planning conditions.

Hunter Water Corporation were advised of the application. No response was received.

Internal Referrals

Internal referrals were made to the following:

- Senior Development Officer (Traffic) concerning parking provision, traffic generation, vehicle and pedestrian access.
- Senior Development Officer (Stormwater and Flooding) concerning water and services.
- Environmental Protection Officer (Compliance Services Unit) with reference to the use of the building; State Environmental Planning Policy 55 - Remediation of Land; Environmental Planning and Assessment Act 1979 Section 5A (consideration of likely effect on threatened species, populations or ecological communities - the 7-part test) and noise / vibration.

Details of the referrals are provided in **APPENDIX C**.

6. Section 79C Considerations

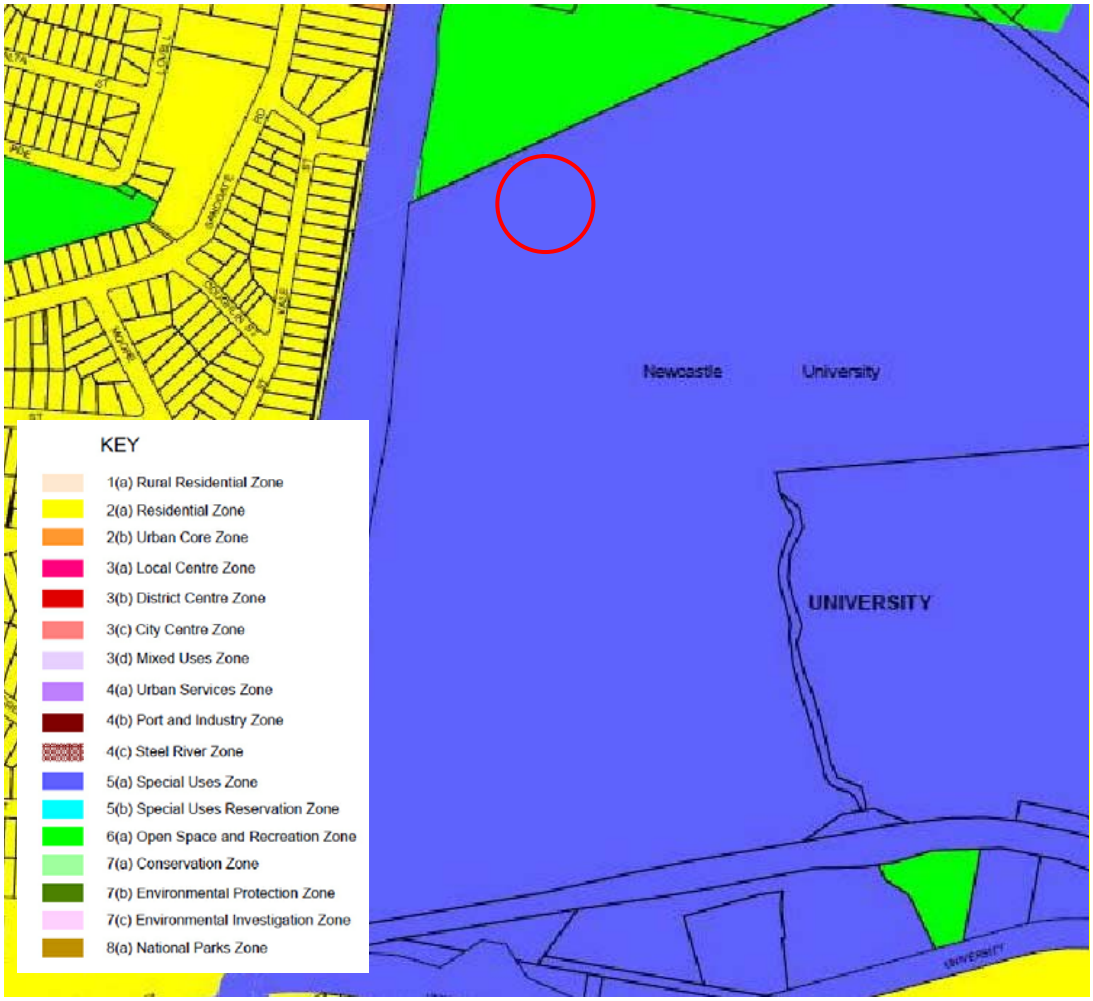
(a)(i) the provisions of any environmental planning instrument

State Environmental Planning Policy No. 55 - Remediation of Land

The proposal involves the excavation of soils on the site and State Environmental Planning Policy No. 55 applies.

The applicant has provided a geotechnical assessment of the site. The site is not identified as, or found to be contaminated. The proposal involves the relocation and removal of significant amounts of soils. Council's Senior Environmental Protection Officer has reviewed the application and recommended adequate conditions to be imposed on any excavated material that is to be exported off-site to be classified and disposed of in accordance with the Office of Environment and Heritage Waste Classification Guidelines.

The site is within the 5(a) Special Uses zone under the provisions of the Newcastle LEP 2003. The proposed development is permitted, with the consent of the Council, in the 5(a) Special Uses zone.



The proposed development is an 'Educational Establishment' which is defined as follows:

> ***Educational establishment*** *means a building used as a school, college, technical college, university, academy, lecture hall, gallery or museum, but does not include a building used wholly or principally as an institution or a child care centre.*

Educational establishments are permitted within the 5(a) Special Uses zone with the consent of the Council.

The objectives of the 5(a) Special Uses zone are:

'(a) To accommodate major transport networks and facilities.
(b) To accommodate large scale facilities and services, together with ancillary activities.
(c) To accommodate large scale community establishments, together with ancillary activities.
(d) To require development to be integrated and reasonably consistent in scale and character with surrounding natural, rural or urban environments.'

The new research building will be occupied by University Faculties conducting research activities under the Newcastle Institute for Energy and Resources (NIER) umbrella and is permissible as an 'educational establishment' within this zone. The NIER has been previously established as a permissible land use on the adjacent 6(a) Open Space and Recreation zone under the provisions of the SEPP (Infrastructure) 2007 due to the establishment of its direct ties to the University Campus and its ultimate classification as an 'educational establishment'.

Clause 25 - Acid Sulfate Soils
There is no known risk associated with Acid Sulfate Soils to this site or within 500m of this site.

Clause 26 - Bush Fire Prone Land
Clause 26 of NLEP 2003 requires the consent authority to be satisfied with the measures proposed to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.

The Newcastle Bush Fire Prone Land Map indicates that the site is within the Category 1 Vegetation.

A bushfire assessment was undertaken in accordance with the requirements of Section 100B of the *Rural Fires Act 1997*, AS3959 (2009), 'Building in Bushfire Prone Areas and Planning for Bushfire Protection' 2006. Various recommendations were made in the conclusions of this report that have been incorporated into the design to ensure a reduced risk to fire damage and safety. The application has been assessed by the NSW Rural Fire Service and confirmed that the development would be acceptable subject to the conclusions of the report being implemented. These matters are detailed in the proposed conditions for any consent that may be issued and include:

- Design and construction
- Provision of Asset Protection Zones
- Building and landscape bushfire management
- Hydrant provision
- Evacuation and emergency management

(a)(ii) the provisions of any draft environmental planning instrument

Draft Newcastle Local Environmental Plan 2011 (draft NLEP 2011)

The Draft Newcastle Local Environment Plan 2011 was adopted by Council on the 21st June 2011. The draft Plan has now been referred to the Department of Planning and Infrastructure.

The proposed development is to be within SP2 – Infrastructure Zone of the draft NLEP 2011. The site is specifically identified for the purpose as an 'Educational Establishment' on the draft NLEP Map.

> ***'Educational Establishment*** *means a building or place used for education (including teaching), being:*
> *(a) a school, or*
> (b) *a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act.'*

The new building and associated uses are permitted with consent in the SP2 Infrastructure zone as it involves development that would be for '*the purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that* purpose'.

Draft NLEP 2011 is based on the 'Standard Instrument' which contains certain development standards relating to floor space ratio, building height and the like, none of which are applied to this site and are therefore not relevant to the proposed development.

There are no provisions within the draft instrument which would affect the proposed development over and above those which currently apply under NLEP 2003.

(a)(iii) any development control plans

Newcastle Development Control Plan 2005 (NDCP 2005)

There are a number of development controls relating to the proposed development contained in NDCP 2005. Following is a discussion of the relevant sections of NDCP 2005.

(a) Element 3.1 - Public Participation

The proposal has been notified to the public in accordance with Element 3.1 of NDCP 2005. No submissions were received.

(b) Element 4.1 - Parking and Access

A traffic assessment was submitted in support of this application which has been reviewed by Council's Senior Development Officer (engineering).

The new building will create additional floor space for which a maximum total of 44 researchers can be accommodated. Parking rates as defined by Council's DCP are not specifically categorised for this particular use. The closest category is Office/Commercial which requires 1 space per 50sqm of GFA. With a floor space proposed of some 2987sqm, a total of 60 spaces are required. A total of 14 car park spaces are proposed representing a significant shortfall.

The applicant states that the additional 46 spaces are provided in the existing carpark adjacent to this site within the NIER Campus. The Campus currently provides 165 spaces for 5200sqm of floorspace. At a rate of 1 space per 50sqm this represents an oversupply of 61 spaces.

It is additionally acknowledged that additional parking exists at the adjacent golf course site where peak demands are on the weekend. The site also previously supported 240 staff with 165 car spaces. The new building will provide a total of 211 staff and 179 spaces.

Based on the above calculations and assumptions for the use, the site would have adequate parking. Council's Senior Engineering Officer is satisfied with these calculations and raise no objections.

Bicycle spaces are calculated at a rate of 1 per 200sqm of GFA requiring 15 spaces. A total of 10 secure bicycle spaces are proposed. Staff are satisfied that the additional 5 can be secured by planning condition. Motorcycle parking rates are calculated at a rate of 1 per 20 car spaces. As the site generates the requirement for 60 car spaces, 3 motorcycle spaces are required. 4 motorcycle spaces have been proposed on site. Subject to a planning condition, adequate motorcycle and bicycle parking has been provided.

The proposed new access is an internal arrangement off from the existing service road and will support a giveway intersection. Council's engineers are supportive of this arrangement.

The location of the new building will require the relocation of the existing internal pedestrian crossing. The relocation is considered acceptable.

As discussed above with parking calculations, the new building will provide for an additional 44 staff at the site, whilst an increase to the existing staff of 167, this is less than the previous use which supported 240. The NIER Campus is not yet operating and therefore comparison is drawn from the previous use as BHP-Billiton and on this basis, traffic movements are therefore not anticipated to increase from the previous use as a result of this development and therefore no impact upon the Vale Street intersections are considered likely to occur.

(c) Element 4.2 - Contaminated Land Management

Refer to above discussion in Section 6 of this report.

(d) Element 4.4 - Landscaping

The sloping nature of the site and the resultant Asset Protection Zone's (APZ's) associated with bush fire protection has meant that the majority of the land associated with this development is to be disturbed and cleared. A landscape plan has been submitted with the application which has provided a basic scheme of native plantings around the immediate surrounds of the new building and within 1:3 battered slopes and gabion walls to areas of sloping and cut land. As per the arborist report, trees are to be retained were possible, although, this is limited to the APZ zones. The landscaping has been designed to collaborate with the architecture of the development to visually balance the level of cut and fill, pedestrian walkways and the new building. It is recognised that the site is relatively limited in size for anything more substantial.

(e) Element 4.10 Tree Management

The proposal involves the removal of 136 trees, however, three hollow bearing trees are to be retained as is approximately 157 trees within the Asset Protection Areas for Bushfire Protection. The trees marked for removal have been rated with retention values varying from very high to moderate given their native species.

The applicant refers to:

> '*the University of Newcastle's 2011 - 2013 Environmental Sustainability Plan (ESP) and Policy underlines the University's commitment to the bushland character of the Callaghan Campus. This commitment is captured in the Plan's Goal statement 'Preserve the bushland character and image of the University through the protection of its native flora and fauna'. As part of adding to its research space, there will be*

instances where the siting of a new building will require consideration of removal of a patch of mature trees. The launch of the University's ESP and Policy has given rise to consideration of the type of offset that will meet Council's requirement for compensatory plantings, in this instance, while also advancing the policy principles for Landscape and Biodiversity. For this Development Application, the University seeks to apply the principles of its Environmental Sustainability Plan, coupled with the intent of the NCC LEP and NCC's Urban Forest Manual.'

The applicant undertook further analysis of the site in compliance with Council's Urban Forest Manual and concluded that the removal of the trees could be adequately compensated within the University Campus at a rate of 1 to 1 with local provenance tube stock. Accordingly, the applicant proposes to locate these on the edge of the riparian corridor of the main watercourse that runs from south to north through the middle of the Campus and currently supports dry sclerophyll forest. This area, being within the riparian corridor is unlikely to be affected by future development due to its distance to the water course and protection under the *Water Management Act 2000* and is considered an acceptable location for long term compensatory planting.

Council officers are of the opinion that the fundamental basis of this proposal would be acceptable as it achieves Newcastle's urban forest policy objectives, as well as assisting in achieving greater ecological benefits to the immediate area; however, given the high retention value of the trees to be removed consider it more relevant to replace the trees at a rate of 2:1. This is reflected in conditions of consent.

(f) Element 4.5 – Water Management

The application proposes the use of four above ground rainwater tanks be installed to collect roof water runoff from the new building. The stored water will be utilised for internal re-use. Runoff from the new access driveway will be treated in a proprietary stormwater treatment unit before onsite discharge through a level spreader arrangement with site discharge connecting to the University's downstream stormwater system which is designed on water sensitive urban design principles. Council's Senior Development Officer (Engineering) reviewed the application and associated details with water management. This detail is considered acceptable subject to various conditions that are recommended to be imposed to ensure stormwater management is undertaken in accordance with Council's controls.

(g) Element 4.6 – Waste Management

Waste streams associated with the proposed development would be mainly limited to office waste comprised of general waste, paper and cardboard. The existing waste management arrangements at NIER will be extended to service the new building. This generally entails facilities maintenance contractors collecting the waste from the building, sorting and disposing into the relevant skip bins ready fro collection and disposal by the facilities maintenance garbage contractor. Given the proposed building will add into the existing arrangements for the site this is acceptable.

Details of waste management during the construction period would form part of any documentation for the Construction Certificate and relevant conditions are recommended to reflect this.

(a)(iiia) any planning agreement that has been entered into or any draft planning agreement that the developer has offered to enter into

There are no planning agreements which apply to this development.

(a)(iv) any matters prescribed by the regulations

Not applicable.

(a)(v) the provisions of any coastal management plan.

Not applicable.

(b) the likely impacts of the development

a. Impact on the Natural Environment

The application site currently supports an area of undeveloped remnant bushland that is conducive to surrounding areas within the Campus grounds. Including the APZ associated with bushfire protection, a total of 136 trees comprising of three category 2, 87 category 3 and 46 category 4 trees are proposed for removal along with the general site clearance of the immediate remnant understorey. Three hollow bearing trees are recommended for retention.

An ecology report has been submitted in support of this application that assessed the loss of this bushland and potential impact to threatened flora and fauna species under Section 5A of the *Environmental Planning and Assessment Act 1979*.

The report identified one vegetation community within the subject site being 'Coastal Foothill Spotted Gum Ironbark Forest', found limited canopy cover for koala habitat and that various threatened flora and fauna species existed within 5km of the subject site. The report found that the condition of habitat within the subject site was of moderate quality and that *'no significant impact upon any threatened or migratory species is considered likely as a result of the proposed action'*.

Council's Senior Environmental Protection Officer has reviewed the information and concluded that '*having conducted the required assessment and considered the impact upon threatened species, there are no grounds to object to the proposal in relation to ecological issues''*

A reasonably significant amount of cut to be undertaken on the site during construction offers the potential for impact to the environment during this period. Suitable conditions have been recommended to ensure that appropriate sediment and erosion control measures are implemented such that sediment laden waters do not enter the Council stormwater system. As the majority of this surplus material will be removed from the site relevant conditions are recommended to be imposed to ensure it is classified and disposed of in accordance with the Office of Environment and Heritage Waste Classification Guidelines.

- Impact on the Built Environment

Impact on the built environment would be limited to visual impact, pedestrian access, parking and vehicle access, noise.

Visually, the proposed building is designed to not rise above the canopy of the existing vegetation of the Campus. The site is located within the NIER Campus and will be cut into the sloping site thereby reducing any visual impact to that of rare possible glimpses from the closest residential properties of Vale Street. The building has incorporated Ecologically Sustainable Building Design and through the use of good quality materials it is considered that the glimpses obtained of the proposed building would not be expected to be detrimental

to the views offered to neighbouring properties. Minimal impact is expected to occur in this regard.

Parking matters have been more closely examined in section a(iii) – Element 4.1 above. In summary, the proposed building is likely to generate an additional 44 researchers to be located within the NIER Campus. There is surplus car parking that exists on the site at present [refer to section 6(a)(iii)(b)], to which, various pedestrian links allow access to the new building. A total of 14 additional car park spaces have been proposed adjacent this building for immediate access to the site.

Pedestrian entrances have been located to the north/west of the building and the existing crossing relocated so that pedestrian linkages can be promoted to the rest of the NIER Campus located to the north side of the Vale Street access road. It is considered that connectivity has been adequately considered in the design of the proposed development.

With regard to noise and vibration, there is a considerable buffer between the site and residential neighbours (including state highway 23), so it is considered unlikely that any will be adversely affected by construction noise. The standard conditions relating to construction noise will be applied to any consent that may be issued.

- Social and Economical

The proposed development offers the potential to generate additional local employment opportunities during construction. The additional facilities will offer new higher class laboratories and associated floorspace that will positively contribute to NIER's priority research as a world class facility. The new building will facilitate additional learning and research capabilities to the University therefore offering contributions to the local, state and federal economy.

The social and economic impacts are considered to be positive.

(c) the suitability of the site for development

The proposed development and use is permissible with consent, in the 5(a) Special Uses zone. The use would be conducive to the educational purposes of the rest of the NIER Campus which ultimately is linked to University Campus. However, the site is currently undeveloped remnant bushland and is within a vegetation category 1 bushfire protection area indicating that this site may be in a less desirable location. The applicant provided additional information regarding the chosen site and states that '*it is relatively unconstrained in terms of its size, proximity to vehicular and service access and offers the best opportunity to physically integrate the NIER Precinct with the rest of the Callaghan Campus. Locating this large building in this zone as proposed also creates a strong visual connection back to the main Campus and enables the building to be oriented to optimise passive environmental controls and reduced energy consumption.'* Council Officers are reasonably satisfied that the overall thought processes and reasoning to developing this site are adequate and would be generally acceptable. The site is suitable for this use.

As indicated previously in this report, the subject site forms part of the University Campus which is recognised as being 'Bush Fire Prone Land'. The NSW RFS have issued General Terms of Approval including recommendations to reduce the risk from bushfire. The site is not subject to any other known risk or hazard that would render it unsuitable for the proposed development.

(d) any submissions made in accordance with this Act or the Regulations

No submission were received in respect of this application.

(e) the public interest

The additional floorspace created by the proposed development will offer a greater level of facilities to the benefit of existing and future researchers at the University.

The proposed development does not raise any significant general public interest issues beyond matters already addressed in this report.

7. Conclusion

The proposed development has been assessed having regard to the relevant heads of consideration under Section 79c(1) of the *Environmental Planning and Assessment Act 1979 (as amended)* and is considered to be acceptable subject to compliance with the recommended conditions.

8. Recommendation

Grant consent to Development Application 11/0964, subject to the conditions contained in Appendix A.

APPENDIX A - Conditions of Consent

A General Conditions

A1 The development being carried out strictly in accordance with the following details, except as otherwise provided by the conditions of this consent:

a. Development plans prepared by EJE Architecture,

Project No	Drawing No	Revision	Date
8913	A000	C	/2011
8913	A001	L	17/11/2011
8913	A002	C	21/07/2011
8913	A003	C	21/07/2011
8913	A004	B	21/07/2011
8913	A101	EE	26/10/2011
8913	A102	EE	26/10/2011
8913	A103	EE	26/10/2011
8913	A104	EE	26/10/2011
8913	A501	EE	26/10/2011
8913	A502	EE	26/10/2011
8913	A503	EE	26/10/2011
8913	A002 – Pedestrian Walkways	A	24.11.2011

b. Survey plans prepared by Monteath and Powys,

Project No	Drawing No	Revision	Date
10/227	1 of 9	-	24.05.2011
10/227	2 of 9	-	24.05.2011
10/227	3 of 9	-	24.05.2011
10/227	4 of 9	-	24.05.2011
10/227	5 of 9	-	24.05.2011
10/227	6 of 9	-	24.05.2011
10/227	7 of 9	-	24.05.2011
10/227	8 of 9	-	24.05.2011
10/227	9 of 9	-	24.05.2011

c. Landscape design report prepared by Terras Landscape Architects job number 8913.5 dated 06.07.2011 and associated plans:

Project No	Drawing No	Revision	Date
8913.5	L01	A	30.06.2011
8913.5	L02	A	30.06.2011

d. Civil Engineering plans prepared by GHD,

Project No	Drawing No	Revision	Date
Nier new build	22-15661-C001 Pavement Plan	E	25.11.2011
Nier new build	22-15661-C002 Stormwater Layout Plan	C	01.11.2011

Nier new build	22-15661-C003 Erosion and Sediment Control Plan	C	01.11.2011
Nier new build	22-15661-C004 Pavement and Stormwater Details	E	25.11.2011
Nier new build	22-15661-C005 Erosion and Sediment Control Details	B	02.11.2011
Nier new build	22-15661-C007 Access road plan and longitudinal section	A	01.12.2011
Nier new build	22-15661-C008 Access Road Cross Sections – Sheet 1 of 3	A	01.12.2011
Nier new build	22-15661-C009 Access Road Cross Sections – Sheet 2 of 3	A	01.12.2011
Nier new build	22-15661-C010 Access Road Cross Sections – Sheet 3 of 3	A	01.12.2011

e. Ecological Constraints Assessment prepared by Ecobiological Survey and Assessment ref 437-851 as amended dated September 2011.

f. Engineering Services (ESD Design Report) prepared by WSP Lincolne Scott rev 1 dated 5.5.11

g. Bushfire Threat Assessment Report prepared by Newcastle Bushfire Planning and Design, Revision 4 dated 04.10.2011.

h. Traffic and Parking Assessment prepared by Better Transport Futures dated 30.11.2011 reference P0728C University of Newcastle NIER Rev02.

i. Geotechnical Assessment prepared by Coffey Geotechnics dated 22.07.2011.

j. Phase 2 Architectural Concept Design Report prepared by EJE Architecture ref 8913

k. Statement of Environmental Effects prepared by De Witt Consulting dated August 2011.

l. Letter from De Witt Consulting dated 24 October 2011 regarding off-set planting and tree removal.

m. Letter from De Witt Consulting dated 26 October 2011 regarding Stormwater Management

n. Letter from GHD dated 01 November 2011 regarding cut and fill volumes.

Note: Any proposal to modify the terms or conditions of this consent whilst still maintaining substantially the same development to that approved, will require the submission of a formal application for Council's consideration in accordance with the provisions of Section 96 of the Environmental Planning and Assessment Act, 1979.

Reason: To confirm and clarify the terms of Council's approval.

B Conditions which must be satisfied prior to the demolition of any building or Construction

No conditions

C Conditions which must be satisfied prior to the issue of any Construction Certificate

Flooding, Stormwater and Services

C1 All stormwater runoff from the proposed development being managed in accordance with the requirements of the 'Water Management' Element 4.5 of the Newcastle Development Control Plan 2005 and the associated Technical Manual generally as indicated on the preliminary Stormwater Layout Plan, prepared by GHD (Drg. No. 22-156610C002, Rev C, dated 01.11.11). Full details to be included in documentation for a Construction Certificate application.

Reason: To ensure that site stormwater runoff is properly managed in a safe and sustainable manner.

C2 Any alteration to existing surface levels on the site being undertaken in such a manner as to ensure that there is no increase in surface water runoff towards adjoining building sites or that runoff is impounded on adjoining building sites as a result of the development. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure that any such proposed works do not disrupt existing stormwater flows with adverse impacts on adjoining buildings and surrounding areas.

C3 A copy of the stormwater drainage design plans approved with the Construction Certificate with 'work as executed' levels indicated, shall be submitted to Newcastle City Council prior to occupation of the building. The plans shall be prepared by a Practising Professional Engineer or Registered Surveyor experienced in the design of stormwater drainage systems.

Reason: To ensure the stormwater system is constructed in such a manner that achieves the design's objectives and to update Newcastle City Council's records.

C4 Erosion and sediment control measures being implemented prior to the commencement of works and being maintained during the period of construction in accordance with the details set out on an Erosion and Sediment Control Plan that is to be submitted for approval with the Construction Certificate application. Controls are not

to be removed until the site is stable with all bare areas supporting an established vegetative cover.

Reason: To ensure that appropriate measures are taken to prevent surface erosion and the emission of sediment from the site as a result if the proposed development.

C5 The applicant complying with all requirements of the Hunter Water Corporation regarding the connection of water supply and sewerage services, including the payment of any required cash contribution towards necessary amplification of service mains in the locality as a result of the increased intensity of land use proposed. A copy of the Corporation's Certificate of Compliance is to be included in documentation for a Construction Certificate application.

Reason: To ensure that water supply and sewerage services are properly connected to the proposed development in the public interest.

Access for Persons with Disabilities

C6 The building being provided with adequate means of access for persons with disabilities in order to comply with the Building Code of Australia and the *Disability Discrimination Act 1992*.

In this regard, the applicant is to submit a design detail which has been certified by a qualified Access Advisor* with the application for a Construction Certificate.

Note: i) Compliance with the Building Code of Australia only can still leave a building professional or building owner in contravention of the *Disability Discrimination Act 1992*.

ii) * A qualified Access Advisor is a current member of -
Association of Consultants in Access Aust Inc
326 Autumn Street, HERNE HILL, VIC. 3218.
Ph (03) 5221 2820
www.access.asn.au

iii) A qualified Access Advisor should carry current and relevant public liability and public indemnity insurances for the practice of their trade.

Reason: To ensure compliance with the provision of the Environmental Planning and Assessment Act, 1979 and the Building Code of Australia and the Disability Discrimination Act 1992 in relation to the provision of equity in access for disabled persons.

C7 All external ramps and pathways within the site required to be accessible for persons with disabilities being designed and constructed in accordance with AS.1428 – *'Design for Access and Mobility*.' Full details are to be included in documentation submitted with the application for a Construction Certificate.

Reason: To ensure appropriate disabled persons access is provided for this development in accordance with statutory requirements.

Access and Parking

C8 Landscaping and any other obstructions to visibility should be kept clear of or limited in height to 1.2 m in the 2 metre by 2.5 metre splay each side of the new internal road

intersection. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure adequate sight distance to traffic on the frontage road and sight distance to pedestrians on the frontage road footway.

C9 The car park is to be designed to comply with AS/NZS 2890.1:2004:'*Parking facilities – Off-street car parking'* and AS/NZS 2890.6:2009:'*Parking facilities – Off-street parking for people with disabilities*'. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure that all parking spaces are conveniently accessible and to thereby encourage use of on-site parking facilities and minimise overflow parking in adjacent streets.

C10 Opposing traffic flows on car park ramps are to be separated by the provision of an appropriate kerb and/or safety barrier. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure that all parking spaces are conveniently accessible and to thereby encourage use of on-site parking facilities and minimise overflow parking in adjacent streets.

C11 The proposed vehicular access driveway is to be increased in width to 5.0m for a minimum distance of 5.0m inside the property boundary. Full details are to be included in documentation for a Construction Certificate application.

Reason: To allow sufficient space for vehicles to pass at the point of entrance/exit to the site so as to minimise the potential for vehicular conflict within the adjacent public road as a result of the proposed development.

C12 A loading bay with capacity to accommodate the largest delivery vehicles likely to deliver goods to or from the premises, is to be provided in a position adjacent to the proposed roller shutter in a manner which does not cause obstruction to the vehicular access driveway or parking area. Full details are to be included in documentation for a Construction Certificate application.

Reason: To ensure that adequate provision is made on-site for the loading and unloading of goods.

C13 All proposed driveways, parking bays, loading bays and vehicular turning areas are to be constructed with a basecourse of adequate depth to suit design traffic, being sealed with either bitumen seal, asphaltic concrete, concrete or interlocking pavers and being properly maintained. Full details are to be included in documentation for a Construction Certificate application.

Reason: To facilitate the use of vehicular access and parking facilities and to minimise any associated noise and dust nuisance.

C14 Kerbing or dwarf walls having a minimum height of 100mm are to be constructed along the edge of all garden or lawn areas adjacent to driveways and parking bays sufficient to discourage the encroachment of vehicles thereon. Full details are to be included in documentation for a Construction Certificate application.

Reason: To minimise vehicular conflict and accident potential within the car park and thereby facilitate operational efficiency.

C15 On-site secured bicycle parking accommodation is to be provided for a minimum of 15 bicycles. Full details are to be included in documentation for a Construction Certificate application.

Reason: To promote sustainable transport options.

Landscaping

C16 All proposed planting and landscape elements indicated on the submitted landscape concept plans or otherwise required under the conditions of this consent being implemented and comprehensive landscape design plans and specifications in respect thereof being prepared by a qualified landscape designer and being submitted with a Construction Certificate application.

Note: The required comprehensive landscape design plan and specifications is to be in accordance with the provisions of Council's adopted Newcastle Development Control Plan, 2005 and is to include cross sections through the site where appropriate, proposed contours or spot levels, botanical names, quantities and container size of all proposed trees, shrubs and ground cover, details of proposed soil preparation, mulching and staking as well as treatment of external surfaces and retaining walls where proposed, drainage, location of taps and the nominated maintenance periods.

Reason: To ensure that adequate and appropriate provision is made for landscaping of the site in association with the proposed development, to enhance the external appearance of the premises and to contribute to the overall landscape quality of the locality.

D Conditions which must be satisfied prior to the commencement of any development work

Erosion and Sediment Control

D1 Erosion and sediment control measures being implemented prior to the commencement of any works and being maintained during the period of bulk earthworks and construction in accordance with the details set out on the Erosion and Sediment Control Plan submitted with the Construction Certificate application. Controls are not to be removed until the site is stable with all bare areas supporting an established vegetative cover.

Reason: To ensure that appropriate measures are taken to prevent surface erosion and the emission of sediment from the site as a result if the proposed development.

Traffic

D2 Any proposed work within the public road reserve, including driveway works, reinstatement of a kerb or installation of drainage, is to be the subject of the separate approval of Council prior to commencement.

Note: A separate approval from Council must be obtained for all works within the public road reserve pursuant to Section 138 of the *Roads Act 1993*. For

further information contact Council's Works Depot on 4974 6000 to request a Road Opening Approval. A fee will be payable in this regard.

Reason: To ensure that works within the public road are suitably authorised and constructed to appropriate standards.

D3 Prior to commencement of site works the developer is to submit to Council for approval a Construction Traffic Management Plan addressing traffic control measures to be utilised in the public road reserve during the construction phase.

Reason: To ensure that works do not unnecessarily interfere with surrounding road networks.

E Conditions which must be satisfied during any development work

General Matters

E1 All building work must be carried out in accordance with the provisions of the Building Code of Australia.

Reason: To confirm a condition of consent prescribed by the *Environmental Planning & Assessment Regulation 2000*.

E2 Construction/demolition work that generates noise that is audible at residential premises being restricted to the following times:

- Monday to Friday, 7:00 am to 6:00 pm;
- Saturday, 8:00 am to 1:00 pm;

With no noise from construction/demolition work to be generated on Sundays or Public Holidays.

Reason: To prevent 'offensive noise' from construction/demolition sites in order to safeguard the amenity of the neighbourhood

E3 No construction/demolition work being undertaken on a Public Holiday or on a Saturday or Sunday adjacent to a Public Holiday

Reason: To safeguard the amenity of the neighbourhood.

E4 Council's 'PREVENT POLLUTION' sign being erected and maintained in a conspicuous location on or adjacent to the property boundary so that it is clearly visible to the public or at other locations on the site as otherwise directed by Council for the duration of construction work.

Note: Council's 'PREVENT POLLUTION' sign can be obtained by presenting your development application receipt at Council's Customer Enquiry Counter at 282 King Street Newcastle or at the Master Builders Association office.

Reason: To increase industry and community awareness of developer's obligations to prevent pollution and to assist in ensuring compliance with the statutory provisions of the *Protection of the Environment Operations Act 1997*.

Earthworks

E5 Any excavated material to be removed from the site being assessed, classified, transported and disposed of in accordance with the NSW Office of Environment and Heritage Waste Classification Guidelines.

Reason: To prevent environmental pollution and to ensure observance of appropriate health standards.

Public Utility Installations

E6 Any necessary alterations to public utility installations being at the Developer/Demolisher's expense and to the requirements of both Council and the appropriate authorities.

Reason: To ensure that any required alterations to public utility infrastructure are undertaken to acceptable standards and without demands on public sector resources.

E7 It is recommended that, prior to commencement of work, the free national community service 'Dial before you Dig' be contacted on 1100 or by fax on 1200 652 077 regarding the location of underground services in order to prevent injury, personal liability and even death. Inquiries should provide the property details and the nearest cross street/road.

Reason: To ensure that any required alterations to public utility infrastructure are undertaken to acceptable standards and without demands on public sector resources.

F Conditions which must be satisfied prior to any occupation or use of the building

Landscaping

F1 A minimum of 272 compensatory replacement native trees being planted within 'the edge of the riparian corridor of the main watercourse that runs from south to north through the middle of the University of Newcastle Campus, Callaghan that currently supports dry sclerophyll forest' in accordance with the letter from DeWitt Consulting dated 24 October 2011 within 12 months of works commencing on site and maintained to maturity.

Note: For the purpose of this condition, the definition of 'works commencing' applies to the first tree to be removed from the site, the subject of this application.

Reason: To ensure that trees to be removed are replaced with compensatory species and to maintain the treed landscape of the locality.

F2 A Landscape Practical Completion Report being submitted to the Principal Certifying Authority by the consultant responsible for the landscape design plan prior to the issue of any Occupation Certificate or occupation of the premises. The report is to verify that all landscape works have been carried out in accordance with the approved landscape design plan to a high professional standard and that an effective maintenance program has been commenced.

Reason: To ensure that landscape works are carried out in accordance with the approval.

Traffic

F3 All parking and loading bays are to be permanently marked out on the pavement surface, with loading bays and visitor parking facilities being clearly indicated by signs.

Reason: To encourage and facilitate the orderly and efficient use of on-site parking facilities.

F4 The vehicular entrance and exit driveways and the direction of traffic movement within the site are to be clearly indicated by means of reflectorised signs and pavement markings.

Reason: To ensure that clear direction is provided to the drivers of vehicles entering and leaving the premises in order to facilitate the orderly and efficient use of on-site parking spaces and driveway access and in the interest of traffic safety and convenience.

F5 All public footways, footpaving, kerbs, gutters and road pavement damaged during the works are to be immediately repaired following the damage, to a satisfactory state that provides for safe use by pedestrians and vehicles. Full restoration of the damage is to be carried out to Council's satisfaction prior to the issue of any occupation certificate in respect of the development.

Reason: To ensure that safe conditions are maintained on the site during construction and that the required restoration is undertaken to acceptable standards, without demand on public sector resources.

General

F6 All building or site works or other written undertaking or obligation indicated in the submitted plans and supporting documentation or otherwise required under the terms of this consent being carried out or implemented prior to occupation of the premises.

Reason: To ensure compliance with the provisions of the *Environmental Planning and Assessment Act 1979*.

F7 Where the proposed development involves the destruction or disturbance of any existing survey monuments, those monuments affected being relocated at no cost to Council by a Surveyor registered under the *Surveying and Spatial Information Act 2003*.

Reason: To ensure that existing permanent survey marks which may be affected by the development are appropriately reinstated.

G Conditions which must be satisfied prior to the issue of any Subdivision Certificate

None

H Conditions which must be satisfied during the ongoing use of the development

Offensive Noise

H1 There being no interference with the amenity of the neighbourhood by reason of the emission of any 'offensive noise', vibration, smell, fumes, smoke, vapour, steam, soot, ash or dust, or otherwise as a result of the proposed development.

Reason: To prevent environmental pollution, to ensure observance of appropriate public health standards and to protect the existing amenity of the neighbourhood.

Wastes

H2 Any liquid wastes from the premises, other than stormwater being discharged to the sewers of the Hunter Water Corporation in accordance with that authority's requirements.

Reason: To prevent environmental pollution and to ensure observance of appropriate public health standards.

Landscaping

H3 Landscape Establishment Reports for both 'The Site' and 'Compensatory Planting' are to be submitted to the Principal Certifying Authority following completion of a three (3) month maintenance period and at 52 weeks after the date of Practical Completion. This report is to state the actual maintenance carried out on site, including maintenance records such as site work report sheets, diary entries or log books which show frequency of watering, weeding, mulching, personnel and any other remediation or rectification works carried out.

Reason: To ensure that the landscape works are conserved and properly maintained in accordance with approved plans so as to improve the appearance of the premises and the visual quality of the locality.

Utilities

H4 The driveway crossing, parking areas and stormwater management system are to be properly maintained for the life of the development.

Reason: In the interests of highway safety and to ensure stormwater is not impounded onto neighbouring properties.

Traffic

H5 Vehicles are to be loaded or unloaded standing wholly within the premises and within loading bays designated on the submitted plans or as otherwise provided in accordance with the conditions of this consent and under no circumstances are vehicles to be loaded or unloaded at the kerbside, across the public footpath or in a manner which obstructs vehicular access to the site.

Reason: To ensure that the proposed development does not give rise to street loading or unloading operations or obstruction of internal driveways with consequent accident potential and reduction in road and driveway efficiency.

H6 All vehicular movement to and from the site is to be in a forward direction.

Reason: To ensure that the proposed development does not give rise to vehicle reversing movements on or off the public road with consequent traffic accident potential and reduction in road efficiency.

I Other Agency Conditions

Rural Fire Service

I1 The proposed development is to comply with the General Terms of Approval of the NSW Rural Fire Service dated 18th October 2011 as attached to this schedule. Full details are to be provided to the Principal Certifying Authority for approval with the required construction certificate application.

Reason: In the interests of safety to future occupiers and to advise of the necessity to comply with the requirements of relevant government authorities.

J Advisory Notes

J1 Prior to commencing any construction works, the following provisions of the *Environmental Planning and Assessment Act 1979* are to be complied with:

a) A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.

b) A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act and form 7 of schedule 1 to the Regulations.

c) Council is to be given at least two days notice of the date intended for commencement of building works, in accordance with Section 81A(2)(c) of the Act and Form 7 of Schedule 1 to the Regulations.

Reason: To advise of matters to be resolved prior to the commencement of work.

J2 Prior to the occupation of a new building, or, occupation or use of an altered portion of, or an extension to an existing building, an Occupation Certificate is to be obtained from the Principal Certifying Authority appointed for the proposed development. An application for an Occupation Certificate must contain the information set out in Clause 155 of the *Environmental Planning and Assessment Regulations 2000.*

Reason: To ensure compliance with Section 109M of the *Environmental Planning and Assessment Act 1979*, as amended.

J3 A Construction Certificate application for this project is to include a list of fire safety measures proposed to be installed in the building. The lists must describe the extent, capability and basis of design of each of the measures.

Reason: To advise of information that must accompany an application for a Construction Certificate for the project.

J4 A copy of the final Fire Safety Certificate is to be given to the Commissioner of NSW Fire Brigades and a further copy of the Certificate is to be prominently displayed in the building.

Reason: To ensure compliance with Clause 172 of the *Environmental Planning and Assessment Regulation 2000*.

APPENDIX B – Plans and Elevations

APPENDIX C – Referral Comments

Comments from External Agencies

Agency	Comments
NSW Rural Fire Service	Issued a Bushfire Safety Authority with conditions regarding: Asset Protection Zones; Water and Utilities; Access; Evacuation and Emergency Management; Design and Construction; Landscaping
Hunter Water	None

Comments from Internal Referrals

Department	Comments
Council Building Surveyor	No Comments
Council Traffic Officer	**Parking** Clarification has been provided that the previous research facility had 240 employees, this facility will have a total of 211 staff, with 44 in the new building. This is a decrease in the total number of staff. The parking demand will be less then the previous research facility. The existing parking numbers provided within the site directly available for this development are 165 spaces. A further 14 spaces are to be provided as part of the redevelopment of the site. This gives a total parking supply of 179 spaces with total staff numbers of 211 people. This amount of parking exceeds parking requirements based on RTA guidelines. However is slightly less then Councils requirements for an education establishment of 1 space per staff member. However the provided rate of 0.85 per staff member of a research facility seems expectable when the location of the site and its use is separated from the university as an adult education establishment. Dimensions for parking and associated aisle widths comply and are generous in some locations. Some minor increases in aisle widths could make extra car parking spots available. Motor cycle and bicycle parking has also been provided. **Access** The site is serviced by an existing access road for access with a new internal road off that road. The internal intersection is to be designed as a giveway treatment, with priority to the existing road. The location of the proposed building cuts into the existing internal road and reduces the sight distance available and forces the relocation of the pedestrian crossing. Reducing the available road width at the pedestrian crossing should reduce the speed of any approach vehicle to compensate

	for minor looses in site distance. It is imagined that vehicles on the internal road network would be rather slow, hence increasing reaction time, the bend in the access road also allows from sight distance of the pedestrian crossing. **Traffic movements** SIDRA modelling has been provided that show that all intersections will be able to continue to function with the proposed facility and with a slight reduction in employees some intersections should improve slightly The range of anticipated traffic generation for the subject site from the traffic report is around 90 to 150 peak hour vehicle trips. Recommendation: Approval subject to conditions. *Conditions reflected in Appendix A*
Council Stormwater and Flooding Engineer	**Flood Management** This site is not affected by flooding based on available information. **Stormwater Management** The preliminary Stormwater Layout Plan, prepared by GHD, Drg. No. 22-15661-C002, Rev. C, dated 1/11/11, has been updated as requested to provide additional information on proposed stormwater management measures for this site. Roofwater will be collected in rainwater tanks for onsite reuse. Runoff from the new access driveway will be treated in a proprietary stormwater water treatment unit before onsite discharge through a level spreader arrangement with site discharge connecting to the University's downstream stormwater system which is designed on water sensitive urban design principles. Recommendation: Approval subject to conditions. *Conditions reflected in Appendix A*
Council Environmental Services Officer	The additional ecological assessment information submitted provides an assessment of significance in relation to the identified threatened flora and fauna species which may utilise the site. Appendix 3 of the report addresses the heads of consideration from section 5A of the *Environmental Planning and Assessment Act 1979*. The assessment determines 'no significant impact upon any of (the) threatened or migratory species is considered to be likely as a result of the proposed action.' The proposed development will result in the elimination of

	a considerable stand of mature trees, an area described as comprising 'moderate quality' habitat. However, having conducted the required assessment and considered the impact upon threatened species, there are no grounds to object to the proposal in relation to ecological issues. Some cut and fill will be required for the buildings, with a quantity of surplus spoil anticipated. The application states that the intention is to reuse this material on the University Campus 'where appropriate'. If this excavated material is to be exported off-site it should be classified and disposed in accordance with the OEH Waste Classification Guidelines. There is a considerable buffer between the site and residential neighbours (including state highway 23), so it is considered unlikely that any will be adversely affected by construction noise. The standard conditions relating to construction noise will be applied as a precaution. A sediment and erosion control plan has been prepared for the works. A condition relating to implementation of appropriate controls throughout the construction phase will be applied. *Conditions reflected in Appendix A*