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P1129 dWC Bio-Resources Facility Report

de Witt Consulting
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Attention Mark Maund

Dear Mark,

Bio – resource facility, Callaghan University Campus

Traffic Impact for Construction and Operation

Further to our recent communication, we have now completed our review of the traffic and parking impacts associated with this project at Callaghan Campus, University of Newcastle. The project involves the replacement of a previous building with the construction of a new building. The demolition and removal of the existing building has been covered under an existing approval. This DA will allow for the following works:

- Environmental works including erosion sediment control
- Earthworks and drainage
- Two storey Bioresource Facility for research and education
- Associated works such as retaining walls, landscaping etc.

The proposed development will see the construction and operation of a Bioresources Facility building, with a footprint of 3,500 m^2 for the new building. The proposed facility will be a cross-faculty collaboration between Research and Innovation Division, Faculty of Science and Faculty of Health & Medical Sciences. The Bioresources Facility will comprise the following attributes:

1. PC1 and PC2 Standard Animal Holding and Procedure Spaces.
2. Research & Breeding Animal Facilities to house up to 4400 rodent cages.
3. Entry, Administration, Circulation and Office Spaces.
4. Consumables and Waste Storage Areas and a Secure Loading Dock.
5. Plant Room & Building Services Areas.
6. Research Sample Freezer Farm.
7. Fixed & Loose Laboratory, AV and Office Equipment.

The location of the development site is shown below in Figure 1.

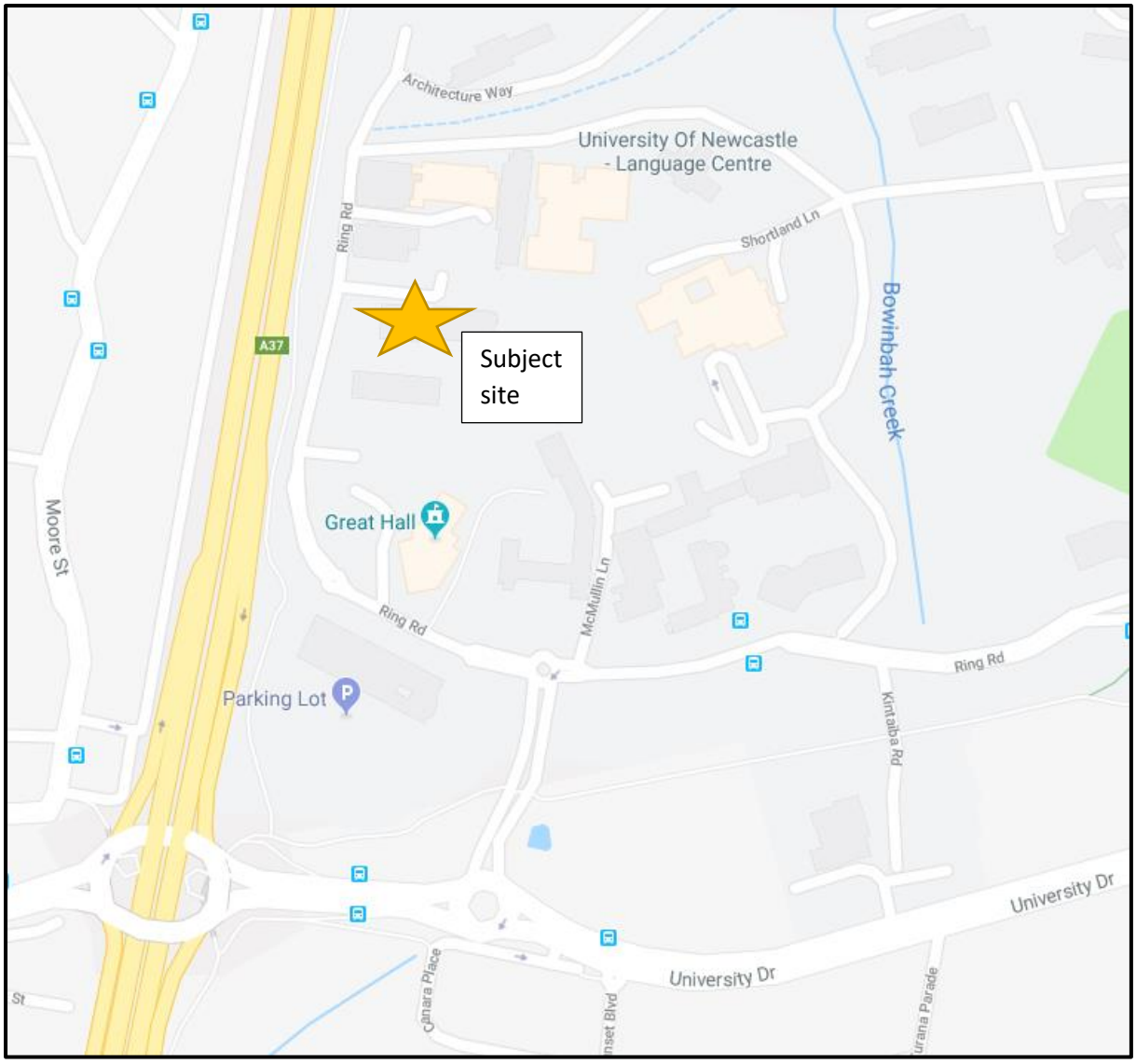

Figure 1 – Site location within Callaghan University campus

Traffic Impacts – Construction

During construction, there will be up to 90 construction staff on site during peak activities with lower number of around 70 outside of this peak activity phase. The staff will enter the campus typically for a 7.30 start and depart prior to 4.30 PM and as such will be prior to the peak associated with the university operations. The morning peak for the university operations are 8.15 to 9.15 AM (source: Strategic Transport Management Plan for University of Newcastle Callaghan Campus dated June 2012) and 4.45 to 5.45 PM.

There will be a demand for delivery vehicles and construction vehicles to access the site e.g. concrete trucks with these typically spread-out across the day. Concrete pours will require increased concentrations of truck movements, but these do not typically occur frequently for the construction work.

The construction is due to commence in November 2018 and will take approximately 2 years to complete. It is considered that the additional traffic movements associated with the construction activities will have a minimal and acceptable impact upon the overall operation of the roundabout controlled site access on University Drive as well as the signal-controlled intersection of University Drive and Ring Road/Stannett Street.

Traffic Impacts – Operations

Advice from the study team indicates that there will be no increase in staff or student numbers associated with the development. It is therefore considered that there are no traffic impacts associated with the development and no impact upon the local and regional road network.

Parking Impacts – Construction

Parking for construction staff will be managed on site to ensure there are no off-site impacts created by the construction work. These will be only for the duration of the construction work and will be managed by the contractor on site in consultation with the university.

Parking Impacts - Operational

Advice from the study team indicates that there will be no increase in staff or student numbers associated with the development. It is therefore considered that there are no parking impacts associated with the development.

Response to SEARs

SEARs issue	Response
Accurate details of current and peak hour traffic flows, public transport, pedestrian and cycling movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development	The proposed building is located within the existing Callaghan Campus with no direct access to the local road network. Access will be provided via the existing access points to the Campus. During the construction phase there will be up to 90 workers on site which is considered to have an acceptable impact upon the local road network and access to the campus. Once constructed the extent of use will be similar to the previous buildings located on the project site and as such there will a negligible change in traffic movements. No detailed assessment of the external road network is considered necessary for the project.
An assessment of the operation of existing and future transport networks including bus network and their ability to accommodate the forecast number of trips to and from the development	The proposed development replaces the existing buildings on the site and there are no changes to the number of staff or students accessing the campus. Therefore, no change to the existing transport demands
Detailed assessment of the daily and peak hour traffic generated by the proposal	No change to student or staff numbers so no change to existing traffic movements created by the proposal in and out of the Callaghan Campus
Adequacy of the public transport, pedestrian and bicycle network and infrastructure to meet likely demand for new development	No change to student or staff numbers so no impact upon local transport infrastructure
Assess impact of the proposal on existing and future public transport infrastructure in consultation with the RMS	No change to student or staff numbers so no impact upon local transport infrastructure
Details of any upgrading or road improvement work required to accommodate development	No road upgrades required as no increase in traffic movements. Development will require access to loading dock off

	internal road network. No direct access to the external road network.
Details of travel demand measures to encourage sustainable travel choices	Existing public transport options and bicycle network connections will remain as per existing options for access to Callaghan Campus. Staff and students have access to online Active Travel Guides for access to the campus.
Impact of the trips generated by the development upon the nearby intersections with modelling as required	The development will not increase the traffic demands as similar levels to the current use on the site. No direct vehicle access to the external road network.
The proposed active transport access arrangements and connections to public transport services	The site is located within the existing Callaghan Campus which provides internal links to bus interchange within the campus off University Drive. Warabrook Railway Station is located on the northern boundary of the campus.
Proposed access arrangements for connections for cars and public transport and mitigation measures to reduce impacts	During the construction phase the site will be secure to prevent access to the construction site. Existing paths around the campus permit pedestrian and traffic movements past the site. Once operational users of the development will use existing paths and roads across the campus to access public transport connections as well as the on-site campus shuttle bus service which operates around the Ring Road.
Measures to maintain road and personal safety in line with CTED principles	A Construction Traffic Management Plan will be developed for the construction phase that will direct vehicles and pedestrian around the construction site in a safe manner. Users of the development will utilise existing roads and paths.
The proposed car and bicycle parking including end of trip facilities	Parking during the construction phase will be detailed as part of the Construction Traffic Management Plan and will be managed to ensure minimal impact upon the existing parking demands within the campus. The development will not provide dedicated parking or bicycle parking with staff and students utilising the existing facilities across the campus.
Proposed bicycle parking facilities in secure, convenient and accessible areas	No dedicated bicycle parking provided with users utilising the existing facilities (Bike Hubs) across the campus.
Details of proposed car parking spaces and compliance with appropriate codes	No dedicated parking to be provided as part of the development, with users utilising existing facilities across the campus.
Details of emergency vehicle access arrangements	Emergency vehicle access will remain as per the existing access along internal access roads linking to University Drive.
An assessment of the road and pedestrian safety adjacent to the proposed development	The existing pedestrian paths and roadways will be maintained as part of the project and allow for safe movement of pedestrians and vehicles. During construction the Construction Traffic Management Plan will direct pedestrians and vehicles around the project site in a safe manner and allow for construction vehicle access in a safe manner.
Service vehicle access, delivery and loading	Access to the building will be via the existing internal

arrangements and service vehicle numbers	road network across the campus and currently allows for delivery vehicles associated with various users across the campus. A dedicated loading bay will be provided for the new building to allow for safe and secure access for deliveries. The development will generate 1 or 2 delivery vehicles per day maximum. Waste servicing is consistent with existing arrangements as this facility allows for the consolidation of smaller Bio-Resource centres throughout the campus.
Impact of construction traffic and construction work	No other construction work occurring in the immediate locality of the subject site within the campus. All construction traffic will access the campus off University Drive via the roundabout which connects with the Ring Road or at the traffic signals at University Drive and Ring Road/Stannett Street. Both of these intersections currently carry heavy vehicle movements and provide a safe road environment for heavy vehicles. The construction is expected to take 2 years to complete and is due to commence in November 2018. Key milestones for traffic generation will relate to concrete pours which can occur over a number of days. Other deliveries will be evenly spaced over the life of the construction. The construction work will require a peak workforce of 90 people and the majority will drive to the site. This will give 90 inbound traffic movements in the morning (for 7.30 AM start) and 90 outbound traffic movements (4.30-5.00 PM). Other traffic movements associated with deliveries will be spread-out across the working day. All construction traffic for all stages of the construction work (light and heavy) will access the site via Ring Road that provides direct access to the construction site. This Ring Road currently carries light and heavy vehicle movements associated with other requirements across the campus. The alignment of the Ring Road caters for large heavy vehicle movements such as those associated with the construction activities. The construction site will have a security fence on the boundary to prevent pedestrians and cyclists accessing the site. Pedestrian and cyclists will continue to use the existing footpaths and roads adjacent to the site that will remain in use for the duration of the project construction work. A Construction Traffic Management Plan (CTMP) will be prepared as part of the detailed design stage of the project to ensure that all pedestrian and vehicle movements can be controlled in a safe and appropriate manner, including construction traffic. This CTMP will be prepared in accordance with RMS Guidelines and shall provide details on vehicle routes, number of

	trucks, hours of operation, access arrangements and traffic control measures for all demolition and construction work. It shall include a Traffic Control Plan as appropriate.

Response to RMS comments (letter dated 7th February 2018)

RMS Issue	Response
Assessment of all transport routes and intersections for access to development site	All site access will be via the three-way roundabout that connects University Drive to Ring Road or the traffic signal-controlled intersection of University Drive and Ring Road/Stannett Street. Access to the site will be along Ring Road that provides direct access to the development site. This road currently allows for 2-way traffic movements. The two intersections on University Drive currently operate well for the majority of the day, but delays can occur in the peak hour in the morning and afternoon. This congestion is also impacted upon by the university timetables, as during exam periods and holiday periods the traffic flows are much lower and the congestion is very low. Outside of the peak hours these two intersections operate well. The two intersections will only be impacted for the duration of the construction work, as once the facility is open there will be no additional traffic movements. The development caters for existing staff and student needs and it is not anticipated that there will be any additional staff or student demands to access the site. Construction companies will adopt typical routes to the site that may include A37 (Main Road), University Drive and Pacific Highway.
Current traffic counts along traffic routes	The development will not be generating any additional traffic movements once operational. The only additional traffic movements will be during construction. The construction traffic movements will be spread across the normal working day and as such will not create any significant impacts. It is therefore considered that the collection of traffic data for this project is not required.
Anticipated additional traffic movements during construction and operational stages	During construction there will be 90 construction staff during peak periods and these would generate 90 inbound traffic movements in the morning and 90 outbound traffic movements in the afternoon. Delivery vehicles would be spread-out across the duration of the construction of the project with daily numbers of less than 10. The noise report recommends that noise intensive activities be completed outside of university hours (ie university holidays or during out of hours periods) where possible to minimise the disruption to student" so some work may occur outside normal construction hours (Monday to Friday - 7am to 6pm, Saturdays - 8am to 1pm, Sundays or Public Holidays - No

	construction)
Distribution of generated traffic by the development onto the network	The development is not anticipated to increase staff or student numbers and therefore there will be no additional traffic generated by the development.
Consideration of the impact of the construction and operational traffic upon the local road network allowing for cumulative impacts of other developments	The development is not anticipated to increase staff or student numbers and therefore there will be no additional traffic generated by the development. Therefore, there is no impact. The construction will occur over 2 years and is anticipated to have a minimal impact. The major impacts will be during staff arrival and departures. The inbound construction staff will arrive on site prior to the typical morning peak period associate with the university and will therefore not impact. The construction staff will typically depart at around 4.30-5 PM when a number of students and staff have already left the campus and as such, the impacts are considered to be acceptable upon the local road network. Delivery vehicles for the construction activities will be spread-out over the working day and will typically be less than 5 per hour and as such will have a minimal and acceptable impact upon the local road network.
Identify road infrastructure upgrades required to maintain the existing levels of service on the local and classified road network including any preliminary concept plans for any road upgrades identified.	It is considered that no road upgrades are require as part of the project. The impacts during the construction phase will be over 2 years and will have an acceptable impact upon the local and classified road network. Once operational there will be no impact as there will be no additional staff or student demands for the campus.

The overall conclusion for the project is that the impacts associated with the new development will be negligible, as there is no increase in staff or student numbers associated with the new building. The building is replacing an existing building on the site and consolidates existing facilities within the campus.

During construction there will be a minor impact created by the construction workers traffic, but this will not impact upon the peak periods associated with the university campus. The parking for the construction staff will be managed though the Construction Traffic Management Plan that will be developed for the project as part of the Detailed Design phase of the project.

Yours sincerely

Sean Morgan

Director

Attachment – Site Plan

1 GROUND FLOOR PLAN
SCALE 1 : 200

- administration facilities
- animal holding and proc space
- central wash and cage processing
- CIRCULATION
- facility support
- laboratory support facilities
- LIFT

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