JRPP NO.:	**JRPP2009SYW026**
DA No. :	**DA0710/09**
Proposed Development:	**Free Air CO_2 Enrichment experiment - Lot 181 DP 39768, Londonderry Road and The Driftway, Richmond**
Applicant:	**Charles Vella, c/- University of Western Sydney**
Report by:	**Hawkesbury City Council**

Assessment Report and Recommendation

Executive Summary

The application proposes the erection of structures, buildings and infrastructure required for the carrying out of a Free Air CO_2 Enrichment experiment related to research into climate change, and the removal of these structures, buildings and infrastructure, and rehabilitation of the site upon completion of the experiment.

The property is owned by the University of Western Sydney and is currently being used for a number of experiments into climate change.

Assessment of the proposal highlights the following relevant issues for consideration in the determination of the application:

- Noise
- Traffic
- Flora and fauna
- Aboriginal cultural heritage
- Site rehabilitation

The application is supported by:

- Statement of Environmental Effects;
- Traffic Impact Report;
- Noise Assessment Report and Construction Methodology;
- Site and Construction Management Plan;
- Environmental Assessment for the Climate Change and Energy Research Facility Project;
- Aboriginal Heritage Management Strategy for Aboriginal Sites within Driftway Forest, University of Western Sydney, NSW; and
- Preliminary Construction and Removal Methodology Plan.

This matter is being reported to the Joint Regional Planning Panel due to the proposal being Crown development with a value of 6.5 million dollars.

The application was publicly notified from 9 December 2009 to 23 December 2009. No submissions were received.

It is recommended that the application be conditionally approved.

Description of Proposal

The application seeks approval for buildings and structures associated with the Free Air CO_2 Enrichment System, which is a component of a research project being carried out by the University of Western Sydney Climate Change and Energy Research Facility. The project seeks to examine the effects of elevated levels of free-air carbon dioxide on eucalyptus-dominated woodland.

The proposed Free Air CO_2 Enrichment System involves:

- The erection of six 'rings' comprising 12 to 16 Vent Pipe Support Towers arranged in a circle around a central tower.

  Each Vent Pipe Support Tower will have a height of approximately 24m and will be connected to a carbon dioxide supply line which will provide the vegetation within each ring exposure to elevated levels of carbon dioxide.

  The Central Tower will have a height of approximately 26m. This tower will have a hydraulic lift pod which will allow researchers access to the tree canopy.

- The installation of a prefabricated and demountable building at each of the six arrays.

  These buildings will have an area of $6m^2$, having dimensions of 2 metres by 3 metres, and will contain control equipment for the infrastructure.

- The installation of elevated walkways to provide access between the main control buildings and other facilities.

  The walkways are proposed to be 1.5 metres wide and slightly raised above the woodland floor.

In addition to the works directly relating to the experiment, the following infrastructure is proposed to be constructed in areas outside of the native woodland:

- Gas holding facility, vaporiser unit and pump house installed on a concrete base and connected by above ground electrical cabling to the power source.

- A demountable building with an area of 24m^2 (8 metres by 3 metres) is to be installed and used for research work and as an office for a site-resident engineer.

- A portable shipping container with an area of 16.8m^2 (7 metres by 2.4 metres) to be used as a maintenance and storage shed.

- A graded track, parking and vehicle manoeuvring area to provide access to the site and parking for 14 vehicles.

- New security fencing and CCTV monitoring along Londonderry Road and around the main CO_2 storage and control building.

- Upgrade of vehicle entry to allow for vehicles ranging in size up to a 19m articulated truck.

Construction will occur over approximately thirty five (35) weeks.

Construction of the tower rings, walkways and associated infrastructure within the bushland areas will be carried out manually.

The research project will be completed in approximately ten (10) to twelve (12) years. At completion all field installations will be removed and monitoring and rehabilitation of flora and fauna undertaken.

Description of the Site and Surrounds

The experiment will be carried out on Lot 181 DP 39768, which is 343.7 ha in area and bounded by Southee Road, Londonderry Road, Castlereagh Road and The Driftway.

The development site is located within the south eastern corner of the land having a setback of approximately 80 metres from both The Driftway and Londonderry Road.

This area is comprised of bushland commensurate with the Endangered Ecological Community Cumberland Plain Woodland and exotic pasture. Two areas of Aboriginal archaeological significance have been identified within the experiment site.

Bushland adjoining the experiment area is commensurate with Shale Gravel Transition Forest which is an Endangered Ecological Community under the Threatened Species Conservation Act, 1995. A Freshwater Wetland is located to the west of the experiment.

Vegetation within the experiment area provides habitat for the Cumberland Land Snail, which is also listed as an endangered species, and has been recorded as being present within the development site.

Surrounding landuses include larger rural residential properties with some farming to the south and to the east the pasture land associated with University of Western Sydney. Further to the north is the residential edge of Southee Road, Hobartville.

Background

The subject land is currently used by the University of Western Sydney for climate change research under a project called the Hawkesbury Forest Experiment.

In addition to the subject application, three separate Development Applications for individual experiments on the site have been recently approved. These experiments are components of the climate change research and are briefly described below:

DA 711/09 - Construction of an Eddy Covariance Flux Tower to measure exchange of carbon and water by ecosystems over wide areas stretching over an area covering more than 3 kilometres. Construction involves the erection of a single metal framed tower that rises 10m above the tree canopy to a maximum height of 35m. The tower is to be located to the south-western area of the land bounded by The Driftway and Castlereagh Road.

DA 712/09 - Mechanical upgrading of the air-handling units attached to each of the twelve (12) existing tree chambers to control the temperature and humidity within the chambers to study the effects of controlled atmospheric CO_2 conditions. The chambers are located in a group approximately 120m from Southee Road and 120m from Londonderry Rd.

DA 713/09 - Three (3) rainout shelters and associated infrastructure including a rainwater tank and a 235m by 15m solar array panel installation. The rainout shelters will have dimensions of 8m by 12m and a total height of 8m. This research project is sited along the northern boundary of the subject land, with an approximate setback of 200m from Southee Road.

Each experiment operates independently of DA0710/09, the subject of this report.

Relevant Policies, Procedures and Codes

State Environmental Planning Policy No. 44 – Koala habitat
State Environmental Planning Policy No. 55 – Remediation of Land
Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River
Hawkesbury Local Environmental Plan 1989
Draft Hawkesbury Local Environmental Plan 2009
Hawkesbury Development Control Plan
S94A Development Contribution Plan
Hawkesbury Community Strategic Plan

Section 79C Matters for Consideration

In determining the application, the following matters are relevant:

a. The provisions (where applicable) of any:

i. Environmental Planning Instrument:

The relevant environmental planning instruments are:

Hawkesbury Local Environmental Plan 1989 (HLEP 1989)

Clause 2 – Aims, objectives etc,
The proposed development is considered to be consistent with the general aims and objectives as outlined in Clause 2 of Hawkesbury Local Environmental Plan 1989.

Clause 6 – Adoption of 1980 Model Provisions
Clause 6 of Hawkesbury Local Environmental Plan 1989 adopts definitions from the Environmental Planning and Assessment Model Provisions 1980, including the definition of 'educational establishment'.

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

The land is currently used as a university which is best defined as an 'educational establishment' under the provisions of Hawkesbury Local Environmental Plan 1989. The proposed development is considered to be ancillary to 'educational establishment'.

Clause 8 – Zones indicated on the map
The subject land is within the Special Uses 5(a) zone.

Clause 9 – Carrying out of development
The proposed development is considered to be ancillary to 'educational establishment' and therefore is permissible with consent within the Special uses 5(a) zone.

Clause 9A – Zone objectives
Clause 9A states that consent shall not be granted for a development unless, in the opinion of Council, the carrying out of the development is consistent with the objectives of the zone.

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

(a) to recognise existing public and private land uses and to enable their continued operation, growth and expansion to accommodate associated, ancillary or otherwise related uses;

(b) set aside certain land (being land that the Council or another public authority proposes to acquire) for a variety of purposes, as indicated on the map, for which development is to be carried out by the Council or other public authority, and

(c) restrict development on land which will be required for future community facilities.

It is considered that the proposal is consistent with the objectives of the zone as the proposed research experiment is ancillary to the use of the land for tertiary education.

Clause 18 – Provision of water, sewerage etc services
Services are available to the site. It is considered that the available service are satisfactory for the proposed development.

Clause 37A – Development on land identified on Acid Sulfate Soils Planning Map
The land affected by the development falls within Class 5 as identified on the Acid Sulfate Soils Planning Map. The proposed development does not include any works as defined within this Clause and therefore no further investigations in respect to acid sulphate soils are required. The proposal is consistent with the requirements of this Clause.

Sydney Regional Environmental Planning Policy 20. (No.2 - 1997) - Hawkesbury - Nepean River (SREP No. 20).
It is considered that the proposed development will not significantly impact on the environment of the Hawkesbury-Nepean River, either in a local or regional context and that the development is not inconsistent with the general or specific aims, planning considerations, planning policies, recommended strategies and development controls.

State Environmental Planning Policy No. 44 - Koala Habitat Protection
The 'Environmental Assessment' Report identified the site as being 'potential habitat', but not 'core koala habitat' as defined by State Environmental Planning Policy No. 44.

Therefore the Panel is not prevented from granting consent to the proposal under the provisions of this Policy.

State Environmental Planning Policy No. 55 - Remediation of Land
A search of Council files indicated that the land has not been used for any activities which would render the soil contaminated to such a degree as to cause harm and prevent the future development of the land. Therefore

the application is considered to be consistent with the provisions of State Environmental Planning Policy No. 55.

ii. Draft Environmental Planning Instrument that is or has been placed on exhibition and details of which have been notified to Council:

Draft Hawkesbury Local Environmental Plan 2009 applies to the proposal. The exhibition of this draft Plan is being undertaken from 5 February 2010 to 12 April 2010. Under this Plan the subject land is proposed to be zoned part SP1 Special Activities and part E2 Environmental Conservation. The land is currently used as an 'educational establishment' (university). The proposed development is considered to be ancillary to an 'educational establishment' and therefore is permissible with consent within the SP1 zone. The proposed development is considered to be consistent with the SP1 zone objectives.

An 'Educational Establishment' is proposed to constitute a prohibited landuse within the E2 Environmental Conservation zone, however the proposed development will not be carried out on land within this zone.

iii. Development Control Plan applying to the land:

Hawkesbury Development Control Plan 2000
The Hawkesbury Development Control Plan applies to the proposal. An assessment of the proposal against the relevant provisions of this Plan follows:

Notification Chapter
The adjoining neighbours were notified in accordance with the requirements of this Chapter of the Development Control Plan. No submissions were received.

Erosion and Sediment Control Chapter
Erosion and sediment control will be enforced through conditions of consent in accordance with the provisions of this Chapter.

Development Control Plan – Contaminated Land
Council records do not indicate that the land was used for any purpose that may cause contamination of the land. It is considered that the land is unlikely to be contaminated and that a Preliminary Site Investigation is not warranted.

iv. Planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F:

There has been no planning agreement or draft planning agreement entered into under Section 93F of the environmental Planning and Assessment Act, 1979.

v. Matters prescribed by the Regulations:

Conditions will be imposed relating to compliance with the Building Code of Australia.

b. The likely impacts of that development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality:

Context & Setting

It is considered that the proposed tower rings will not be dominant in the landscape as they are well set back from nearby roads and are situated in excess of 80m from any adjoining development. Further, given the setback of the tower rings from The Driftway and Londonderry Road, and the presence of bushland surrounding their location, it is considered that the tower rings will have no adverse visual impacts.

Likewise, it is considered that the CO_2 tank and Vaporiser Unit, Control Building and Maintenance building will have no unreasonable visual impacts due to the setbacks provided from adjoining roads.

The proposed development will have no unreasonable impact on visual or acoustic privacy of adjoining or nearby properties, or on loss of views or vistas. The proposed development will not overshadow adjoining properties or have an adverse impact on the streetscape of The Driftway or Londonderry Road.

Access, Transport & Traffic

A Traffic Impact Report prepared by Winning Traffic Solutions P/L and dated October 2009 was submitted in support of the application. This Report considered the traffic impacts resulting from the four experiments proposed to be carried out on the land. The Report estimated that the experiments will generate approximately 52 vehicle movements per day and concluded:

"*The overall proposal is to construct facilities for data gathering of four field experiments related to climate change study and to gather stored information, on a daily basis, from those facilities at the subject site.*
Overall it is considered that the nature of the proposed development will not generate sufficient traffic volumes or create unacceptable road safety issues during construction or operation of the various facilities proposed.

It is considered that the proposed development incorporating four field experiments related to climate change study on the subject site will not adversely impact the traffic operations and/or road user safety within the site or on the surrounding road network."

The type of traffic specifically generated by the Free Air CO_2 Enrichment experiment would comprise the following:

- A small number of vehicles accessing the site daily by University of Western Sydney staff and students;
- Maintenance traffic associated with trade vehicles;
- A weekly heavy goods vehicle for delivery of CO_2 gas cylinders.

Appropriate upgrading of the existing driveway access from Londonderry Road is proposed to facilitate access to the site by articulated vehicles during construction and heavy goods vehicles delivering CO_2 cylinders.

All weather construction of the access, driveway, car parking area and manoeuvring areas will be required. In this regard Conditions 16 and 17 have been included in the Recommendation to this Assessment Report.

Heritage

Aboriginal Cultural Heritage

Two Aboriginal sites have been identified within an area on the subject land adjacent to Londonderry Road and adjoining the location for the Free Air CO_2 Enrichment experiment.

A report titled 'Aboriginal Heritage Management Strategy for Aboriginal sites within Driftway Forest, University of Western Sydney, NSW' was submitted with the application to provide for appropriate heritage management of identified Aboriginal sites during use of the land for research activities.

The Aboriginal Heritage Management Strategy Report provided the following recommendations:

- The use of Archaeological sensitivity mapping to guide future proposed development;

- To effectively communicate the cultural and archaeological sensitivities of the site to staff and visitors;

- That Potential Archaeological Deposits associated with the identified Aboriginal sites are clearly demarcated with an exclusion zone identified by signage;

- That if substantial erosion in the vicinity of the sites is detected, then further archaeological assessment should be undertaken; and

- The cultural heritage values of the two Aboriginal sites are such that they warrant interpretation to understand their significance within the wider landscape, the prepared interpretative strategy may be used to as a framework for the interpretation of the sites.

In accordance with the recommendations above, the proposed development will not impinge on the exclusion area, as shown on the submitted plans. It is considered that the above recommendations are satisfactory in respect to the preservation and management of identified Aboriginal heritage sites.

A requirement that the development be carried out in accordance with the recommendation contained in the Aboriginal Heritage Management Strategy for Aboriginal sites within Driftway Forest, University of Western Sydney, NSW' is included as Condition 1 in the Recommendation.

The Deerubbin Local Aboriginal Land Council was notified of the application and did not make any submissions.

Water

The proposed development will not result in the concentration or diversion of water onto adjoining properties.

Flora & Fauna

A Report titled 'Environmental Assessment for the Climate Change and Energy Research Facility Project', Reference 100071, dated February 2010 and prepared by Australian Museum Business Services was submitted in support of the application. The environmental assessment also considered the likely impacts elevated levels of CO_2 may have on flora and fauna within the locality. This Report concluded:

"*The proposed CCEF research project is intended to be undertaken in a way which minimises impacts to native flora and fauna. Direct impacts are likely to be small and localised, occurring mainly during installation of each FACE ring and the Flux Tower. A suitably designed board walk linking each FACE ring will likely minimise impacts that would result from daily access to each site by researchers. Other infrastructure such as maintenance buildings and the CO_2 storage sheds are proposed to be located outside the native woodland areas, impacting only on the areas of exotic pasture. It is our understanding that UWS intend to rehabilitate any areas of native woodland impacted following completion of the research.*"; and

"*Based on the information provided, it is considered unlikely that the proposed works will result in a significant negative impact on any threatened species, populations or ecological communities within the study area or the locality.*"

The Report provided a number of recommendations in relation to:

- the design and location of the elevated walkway,
- the management of weeds throughout the duration of the experiment and for an appropriate period afterwards,

- the implementation of a vegetation management plan for all bushland within the study area,

- the implementation of a management plan in areas not affected by the research project and for an appropriate period after completion of the project to target weeds,

- the carrying out of pre-clearance search for individual Cumberland Land Snails in the location of the concrete bases associated with the ring towers, and the relocation of any snails found.

- the location of ancillary buildings and infrastructure within the areas of exotic pasture; and

- methods to prevent the introduction of plant pathogens and weed species into the threatened plant communities on the site.

Upon completion of the experiment all installations will be manually removed and it is proposed that environmental monitoring will continue. It is considered reasonable that rehabilitation of the site be carried out following completion, including weed management.

In respect to the above Conditions 1, 6 and 13 have been included in the Recommendation to this Assessment Report.

It is therefore considered that the requirements of Part 5A of the EP & A Act are satisfied in that the proposed development will have no significant impact on threatened species, populations, ecological communities or their habitats.

Waste

The application advises that "*the proposed research installations rely on visiting research teams to the site and the minimal generation of sewerage will be collected locally in septic tanks with removal through registered contractors managed through UWS CW&F waste management team.*" This is considered satisfactory given the anticipated use of the site.

The toilet facilities and collection point will be located within the vicinity of the site office and adjacent to the internal driveway to facilitate servicing by private contractors.

Noise & Vibration

A Noise Assessment Report prepared by Acoustic Consulting Engineers dated November 2009 was submitted in support of the application. This Report Concluded:

The assessment has shown that the predicted construction noise levels satisfy the DECCW:ICNG recommended highly noise management level. The

predicted levels exceed the noise management level by up to 6dB(A). The levels of noise exceedances are not considered significant, given the noise predictions have been conservative. Nevertheless, measures have been recommended to minimise potential construction noise impacts.

The predicted operational traffic noise generated with the project satisfies the DECCW:INP guidelines at the nearest residences along public roads.

Noise levels from existing mechanical plant area predicted to satisfy the noise assessment objectives. It is likely that noise from the upgraded facility will change. However, as the proposal has not been approved and mechanical plant has not been finalised, source noise emission levels are not available at this time. The existing mechanical noise levels would provide indicative levels that can be expected from the HFE facility. For the rain-out shelter and FACE facilities, noise from pumps would be readily controlled with the provision of purpose-built plant rooms.

Considering the types of plant and distances to the receivers, mechanical plant noise associated with the CCERF Project is expected to be readily controlled. Where required, noise controls including selection of equipment based on acoustic performance, siting and engineering controls can be provided to ensure the noise assessment objectives are achieved.

It is recommended that a qualified acoustic engineer be engaged during the design and commissioning phases to review and ensure that noise from the project achieve the recommended noise assessment objectives outlined in this report

It will be a condition of consent that the recommendations contained within the Acoustic Report be implemented, including the engagement of an acoustic engineer during construction. In this respect Condition 15 has been included in the Recommendation to this Assessment Report.

Cumulative Impacts

The proposed development is compatible with the surrounding landuses and no negative cumulative impact is foreseen. This experiment will be carried out in conjunction with three (3) other experiments that have been approved on the land. It is considered that the carrying out of these experiments simultaneously will have no combined adverse impact on the natural or built environments given the nature of and the spatial separation between each research activity.

c. Suitability of the site for the development:

The development site has adequate setbacks from roads to minimise visual and noise impacts on nearby properties. Whilst the development site contains an Endangered Ecological Community, this community provides the tree species required for the research project. Whilst no trees are required to be removed to

enable the development, some understorey (shrubs, groundcover) clearing will be required. The Environmental Assessment Report demonstrates that the amount of clearing is not significant. A cleared exotic pasture that adjoins the bushland area is to be utilised for buildings and structures associated with the research activity. An Aboriginal Archaeological site is located on the land, however, the proposed development will not be located within this area and suitable buffer distances have been provided.

d. Any submissions made in accordance with the Act or the Regulations:

The application was publicly exhibited for the period 9 December 2009 to 23 December 2009. No submissions were received.

Department of Defence
The application was referred to the Department of Defence for comment. In their email of 15 March 2010 the Department of Defence advised:

"*... the structures associated with FACE are unlikely to interfere with the operation of aircraft. Therefore, Defence does not object to these structures.*"

e. The Public Interest:

The establishment of the Free Air CO_2 Enrichment experiment on the site will allow additional research into climate change which will provide technological and community benefits. It is considered that the development will serve a wider public interest.

Crown Development:
The proposal is Crown Development. The draft conditions of consent contained within the Recommendation to this Report were referred on 1 April 2010 to the applicant for acceptance in accordance with Section 89(1)(b) of the environmental Planning and Assessment Act, 1979.

As Crown development there is no requirement for the issue of a Construction Certificate.

Section 94A Development Contribution Plan
A contribution plan applies to the land under Section 94A of the Environmental Planning and Assessment Act, 1979 and requires a levy of 1% be imposed on this development. In accordance with the above, a $65,000.00 developer contribution applies to this development. An appropriate condition of consent has been included in the recommendation.

Hawkesbury Community Strategic Plan
The proposed development is not inconsistent with the *Shaping Our Future Together* Directions statement. In particular it supports the *Caring for our environment* directions:

- *To look after our environmental assets for future generations so that they too can enjoy and benefit from a clean river and natural eco-systems;*

- *Work with our communities and businesses to use our resources in a sustainable way and employ best practices and technologies that are in harmony with our natural environment;*

and Goals

- *Sustainable use of potable and recycled water.*

Conclusion:

The proposed development is consistent with the relevant provisions of Hawkesbury Local Environmental Plan 1989, Sydney Regional Environmental Plan No. 20, State Environmental Planning Policies No. 44 & 55, and Hawkesbury Development Control Plan.

Whilst the site contains endangered plant communities and fauna, the proposed development will not have a significant affect on these due to the location, and the methods of construction and removal, of buildings and structures. The research activity and associated facilities are located outside of the exclusion area identified to protect the Aboriginal sites on the property.

With the implementation of the recommendations contained within the submitted reports it is considered that the development will have no significant or unreasonable environmental impacts.

RECOMMENDATION:

That development application DA0710/09 at Lot 181 DP 39768, Blacktown Road RICHMOND for Free Air CO_2 Enrichment experiment be approved subject to the following conditions:

General Conditions

1. The development shall take place in accordance with the stamped plans, specifications and accompanying documentation submitted with the application except as modified by these further conditions, including the recommendations within:

(a) The Report titled 'Environmental Assessment for the Climate Change and Energy Research Facility Project', Reference 100071, dated February 2010, prepared by Australian Museum Business Services; and

(b) The 'Aboriginal Heritage Management Strategy for Aboriginal Sites within Driftway Forest, University of Western Sydney, NSW'

2. The development shall comply with the provisions of the Building Code of Australia at all times.

3. The maximum height of the ring towers shall not exceed 26m to ensure that the Department of Defence requirements are not breached and visual impact is minimised.

4. All buildings and structures shall be finished in an earth tone colour of low reflective quality to blend in with the landscape.

5. Following the completion of the experiment, the removal of all buildings and structures, and the rehabilitation of the site shall be carried out in accordance with the approved Environmental Management and Rehabilitation Plan

Prior to Commencement of Works

6. An Environmental Management and Rehabilitation Plan for the development site shall be prepared by an appropriately qualified person and submitted to Council for approval. The Plan shall address (without being limited to) the clearing of vegetation, earthworks, erosion control, environmental monitoring of flora and fauna, and site rehabilitation including vegetation and weed management.

7. Pursuant to section 80A(1) of the Environmental Planning and Assessment Act 1979 and Hawkesbury City Council's Section 94A Development Contributions Plan 2006 (as amended from time to time), a contribution of $65,000.00 shall be paid to Hawkesbury City Council.

   The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of Hawkesbury City Council's Section 94A Development Contributions Plan 2006 (as amended from time to time)

   The contribution is to be paid prior to the commencement of works and copies of the receipts confirming that the contribution has been paid fully are to be provided to Council.

8. Erosion and sediment control devices are to be installed and maintained at all times during site works and construction.

9. At least two days prior to commencement of works, notice is to be given to Hawkesbury City Council, in accordance with the Environmental Planning and Assessment Regulation.

10. Toilet facilities (to the satisfaction of Council) shall be provided for workmen throughout the course of building operations. Such facility shall be located wholly within the property boundary.

11. A sign displaying the following information is to be erected adjacent to each access point and to be easily seen from the public road. The sign is to be maintained for the duration of works:

    a. Unauthorised access to the site is prohibited.

    b. The owner of the site.

    c. The person/company carrying out the site works and telephone number (including 24 hour 7 days emergency numbers).

    d. The name and contact number of the person responsible for the site.

During Construction

12. Site and building works (including the delivery of materials to and from the property) shall be carried out only on Monday to Friday between 7:00am – 3:00pm.

13. Prior to the construction of the footings of any structure within the woodland, a search for the Cumberland Land Snail shall be carried out, and any individuals found relocated. The search and relocation shall be carried out by a suitably qualified person.

14. All work shall be carried out in accordance with the Construction Methodology, Site and Construction Management Plan submitted with the application, and the Environmental Management and Rehabilitation Plan.

15. The development shall be carried out in accordance with the recommendations within the Noise Assessment Report prepared by Acoustic Consulting Engineers P/L dated November 2009, including:

    - A qualified acoustic engineer shall be engaged during the design and commissioning phases to review and ensure that noise from the project achieve the recommended noise assessment objectives outlined within the Acoustic Report;
    - Noisy plant working simultaneously shall be avoided, where feasible and practical;
    - Noisy activities shall take place during less sensitive hours;
    - Plant and equipment shall be turned off and not left to idle;
    - Staff and contractors are to be instructed in quiet work practices.

16. Upon completion of the installation of any onsite effluent disposal system, a works-as-executed plan shall be submitted to Council.

17. A bitumen sealed rural footway crossing 6m wide shall be constructed to the development in accordance with Hawkesbury Development Control Plan Appendix E, Civil Works Specification.

18. Off-street car parking spaces, access driveways and turning areas shall be constructed as shown on the approved plans and be of an all weather construction.

Use of the Development

19. The development shall be limited to the area shown on the submitted plans.

20. All waste material shall be regularly removed from the property.

Advisory Notes

*** The applicant shall make themselves aware of the Discrimination Against People with Disabilities Act (DDA) and assess their responsibilities and liabilities with regards to the provision of access for all people.

*** Should any Aboriginal site or relic be disturbed or uncovered during the construction of this development, all work should cease and the National Parks and Wildlife Service consulted. Any person who knowingly disturbs an Aboriginal site or relic is liable to prosecution under the National Parks and Wildlife Act 1974.

*** The applicant is advised to consult with:

(a) Sydney Water Corporation Limited
(b) Integral Energy
(c) Natural Gas Company
(d) a local telecommunications carrier

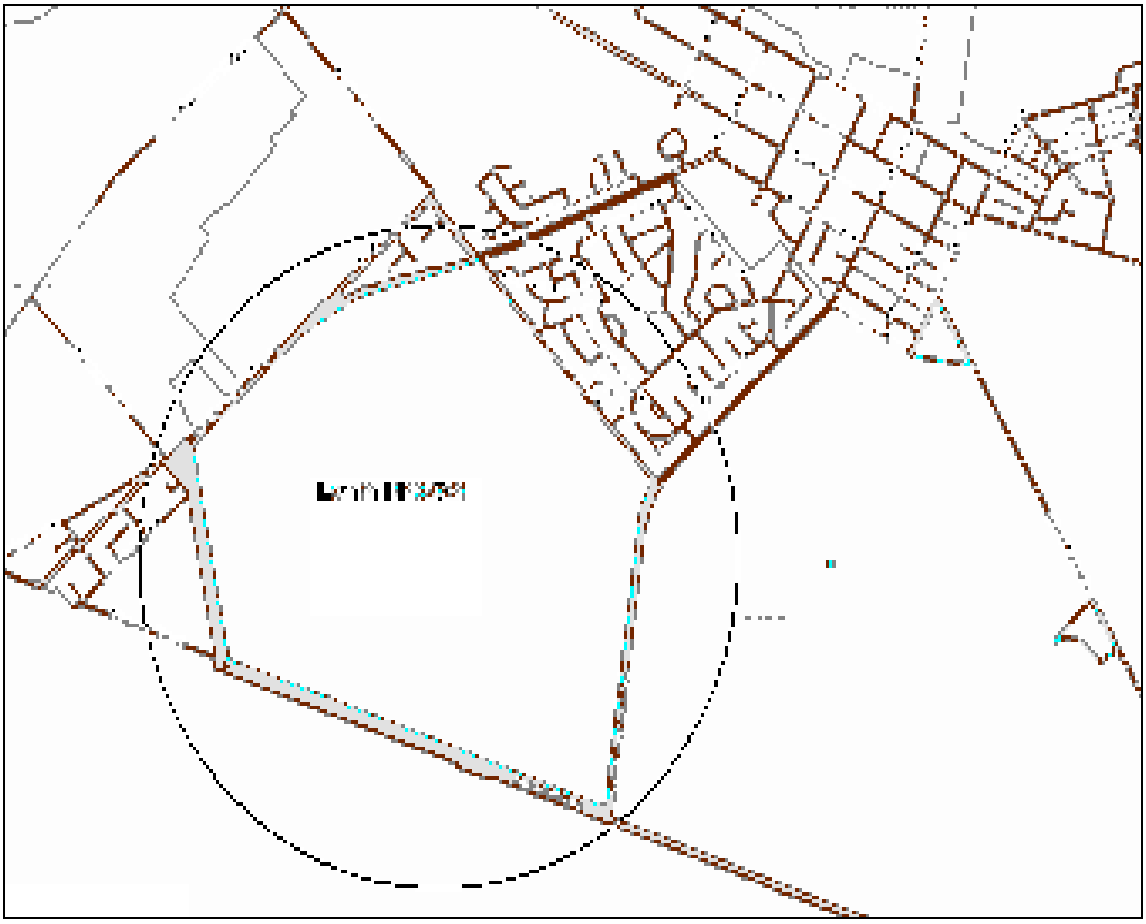
regarding their requirements for the provision of services to the development and the location of existing services that may be affected by proposed works, either on site or on the adjacent public roads.

*** The developer is responsible for all costs associated with any alteration, relocation or enlargement to public utilities whether caused directly or indirectly by this proposed subdivision. Such utilities include water, sewerage, drainage, power, communication, footways, kerb and gutter.

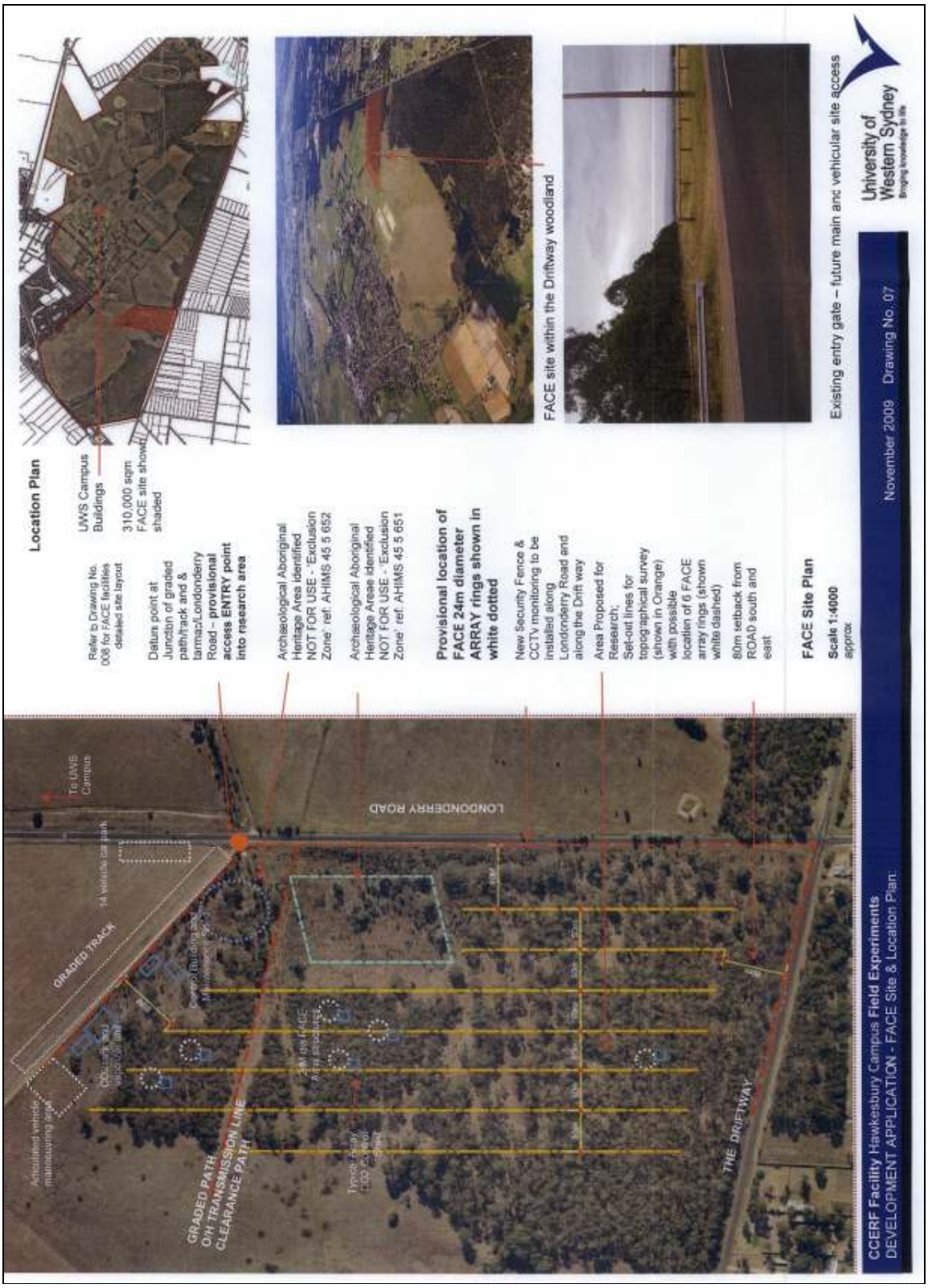
Attachments

AT 1 – Locality Plan
AT 2 – Site Plan
AT 3 – Elevation Plan

Locality Plan
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond



Site Plan
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond



Elevation Plan
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond