JRPP NO.:	**2011SYW018**
Section 96 Application No. :	**DA0710/09A**
Proposed Modification:	**Modification to ring towers/structures and inclusion of tower cranes - Lot 181 DP 39768, 2 College Road, Richmond**
Applicant:	**Charles Vella, c/- University of Western Sydney**
Submission:	**Nil**
Report by:	**Colleen Haron, Senior Town Planner, Hawkesbury City Council**

Assessment Report and Recommendation

Executive Summary

On 17 January 2011, Council received a request to modify Development Consent DA0710/09, which gave approval for a Free Air Carbon Dioxide Enrichment Experiment to be carried out on Lot 181 DP 39768 Blacktown Road, Richmond.

The s.96 Application proposes to modify the development in the following manner:

- The inclusion of a free-standing tower crane at each of the array ring plots to provide access for the tree canopy. The tower cranes will have a maximum height above natural ground level of 35.75 metres;

- The trussed vertical towers be replaced by vertical poles approximately 250mm diameter and 26 metres high which also act as CO_2 gas pipes;

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 modification application:

- Flora and fauna
- Height in relation to flight paths for RAAF Base

The application is supported by:

- ❖ Statement of Environmental Effects;

This matter is being reported to the Joint Regional Planning Panel as the original Development application was determined by the Panel.
The application was publicly notified from 1 February 2011 to 17 February 2011. No submissions were received.

It is recommended that the application be conditionally approved.

Description of Proposal
The s.96 Application proposes to modify the development in the following manner:

- The inclusion of a free-standing tower crane at each of the array ring plots.
- The trussed vertical towers be replaced by vertical poles.

The following table provides a comparison between the approved development and the proposed modified development with respect to the ring arrays:

Approved Development	**Proposed Modified Development**
Six (6) to Eight (8) array rings	Six (6) to Eight (8) array rings
Maximum height of 30 metres	Maximum height of 35.75m
Ring Towers: ▪ Maximum height of 24 metres ▪ Free standing vertical trussed towers ▪ Support suspended PVC pipes emitting CO2 gas. ▪ Each tower will be on a concrete pad approx $1m^2$ in area	Ring Towers: ▪ Maximum height of 26 metres ▪ Reduced in dimensions to be vertical poles (approx 250mm in diameter). ▪ Poles also act as CO2 gas pipes. ▪ Each tower will be secured with a 'screw-pile' method. (No concrete base).
Central Tower: ▪ Maximum height of 30 metres ▪ Has a hydraulic lift pod which provides access for researches to the tree canopy.	Central Tower: ▪ Maximum height of 28 metres
N/A	Tower Crane: ▪ Maximum height of 35.75 metres ▪ Incorporation of a free standing tower crane at each ring array ▪ supported by eight (8) screw-piles

Approved Development	Proposed Modified Development
	▪ base area of approx 16m^2. ▪ provides access to the tree canopy ▪ assist in the installation of the vertical towers/poles. ▪ will have limited movement and will only provide access within the area of the array rings.
Manual installation	Manual Installation

Description of the Site and Surrounds

The FACE 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

At its meeting of 15 April 2010, the Sydney West Region Planning Panel granted consent to Development Application DA0710/09 for the erection of structures, buildings and infrastructure required for the carrying out of a Free Air CO_2 Enrichment (FACE) 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 proposed modification will require Conditions 1 and 3 of Development Consent DA0710/09 to be modified.

Condition 1 stated:

"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'

Condition 3 of the Consent was imposed to limit the height of the structures associated with the experiment. This Condition stated:

"3. *The maximum height of the ring towers shall not exceed 30m to ensure that the Department of Defence requirements are not breached and visual impact is minimised.*"

Relevant Policies, Procedures and Codes

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

Environmental Planning and Assessment Act 1979

Assessment of Section 96(2)
This application is to be determined under the provisions of s96(2) - *Other Modifications* - of the EPA & A Act, 1979.

s.96(2)
A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if:

(a) it is satisfied that the development to which the consent as modifies relates is substantially the same development for which consent was originally granted and before that consent as originally granted was modified (if at all) under this section, and

Comment:
It is considered that the development as modified is substantially the same as the approved development. The application seeks only to modify the structures associated with the ring arrays and to include a tower crane at each ring. The location and purpose of the rings will not alter. The increase in height of the towers/poles and inclusion of the tower crane will ensure the long term functioning of the experiment by providing access to the canopy of trees as they grow.

It is considered that the structure of the proposed modified towers and the tower cranes is not dissimilar to those structures originally approved.

(b) it has consulted with the relevant Minister, public authority or approval body (within the meaning of Division 5) in respect of a condition imposed as a requirement of a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted by the approval body and that Minister, authority or body has not, within 21 days after being consulted, objected to the modification of that consent, and

Comment:
The original application did not require concurrence or approval from any external authority. Therefore, no consultation is required for the modification application.

(c) *it has notified the application in accordance with:*

(i) the regulations, if the regulations so require, or

(ii) a development control plan, if the consent authority is a council that has made a development control plan under section 72 that requires the notification or advertising of applications for modification of a development consent, and

Comment:
The modification application was notified in the same manner as the original development application in accordance with the requirements of Hawkesbury Development Control Plan - Notification Chapter.

(d) it has considered any submissions made concerning the proposed modification within he period prescribed by the regulations or provided by the development control plan, as the case may be.

Comment:
Following notification of the application, no submissions were received.

s.96(3)
In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 79c(1) as are of relevance to the development the subject of the application

Comment:
The relevant matters for consideration under s.79C(1) of the EP&A Act are discussed below.

s.96(4)
Modification of a development consent in accordance with this section is not to be construed as the granting of development consent under this Part but a reference in this or any other Act to a development consent is a reference to the development consent so modified.

Comment:
Council has previously obtained legal advice (2001) in respect to s.96(2) of the EP & A Act, 1979, which advised that "*Council may only approve or refuse a section 96 application in total and not approve one part and refuse another.*" It is proposed to support the proposed modification application in its entirety.

s.96(5)
Development consent of the kind referred to in section 79B(3) is not to be modified unless the requirements of section 79B(3)-(7) have been complied with in relation to the proposed modification as if the proposed modification were an application for development consent.

Comment:
The proposed modification is not located on land that is, or is a part of, critical habitat, or is likely to significantly affect a threatened species, population, or ecological community, or its habitat. Therefore section 79B(3) - (7) do not apply.

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)

The proposed modified development is considered to be consistent with the relevant provisions of Hawkesbury Local Environmental Plan 1989 as per the assessment of the original application and as listed below:

- **Clause 2 – Aims, objectives etc,**
- **Clause 6 – Adoption of 1980 Model Provisions**
- **Clause 8 – Zones indicated on the map**
- **Clause 9 – Carrying out of development**
- **Clause 9A – Zone objectives**

- **Clause 18 – Provision of water, sewerage etc services**
- **Clause 37A – Development on land identified on Acid Sulfate Soils Planning Map**

Sydney Regional Environmental Planning Policy 20. (No.2 - 1997) - Hawkesbury - Nepean River (SREP No. 20).
It is considered that the proposed modified 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 modified proposal under the provisions of this Policy.

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

The proposed modified development is considered to be consistent with the relevant provisions of Draft Hawkesbury Local Environmental Plan 2009 as per the assessment of the original application.

iii. Development Control Plan applying to the land:

Hawkesbury Development Control Plan 2000
The proposed modified development is considered to be consistent with the relevant Chapters of Hawkesbury Development Control Plan 2000 as per the assessment of the original application and as listed below:

Notification Chapter
Erosion and Sediment Control Chapter

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 have been imposed within Development Consent DA0710/09 requiring 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

The modification application proposes to alter the towers within the rings by reducing their diameter and increasing the outer towers to a height to 26 metres and the central tower to a height of 28 metres. The amended design of these towers eliminates the need for concrete bases for each tower, as they will be secured by a 'screw-pile' method. A tower crane will be positioned adjacent to each ring array to provide access for researchers to the tree canopy and to assist in the construction of the rings. The tower cranes will have a height of 35.75m above natural ground level.

It is considered that the proposed modified tower rings and crane 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 and crane from The Driftway and Londonderry Road, and the presence of bushland surrounding their location, it is considered that the modified structures will have no adverse visual impacts. The modified design of the structures is narrower and less bulky in appearance when compared to those previously approved.

The proposed modified 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

The proposed modified development will have no additional impacts on matters related to access and traffic generation.

Heritage

Aboriginal Cultural Heritage

An Aboriginal Archaeological site is located on the land, however, the proposed modified development will not be located within this area and suitable buffer distances have been provided.

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' was included in Development Consent DA0710/10.

Water

The proposed modified 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 original development application.

Australian Museum Business Services were engaged to assess the potential impacts of the proposed changes to the development, and in their letter of 14 February 2011 provided the following comment:
"*The main potential impacts associated with the proposed alterations described above are direct impacts to native vegetation at the ground level. The incorporation of a tower crane at each ring array is likely to result in the direct loss of native plant community where it is constructed, as will the construction of each trussed vertical tower.*

The potential impacts assessed in the flora and fauna impact assessment (AMBS 2010) were based on each of the twelve vertical trussed towers being constructed manually on a concrete base, and each covering an area of approximately one metre square, as well as a hydraulic lift pod in the centre of each array. The area directly impacted at each ring would therefore be approximately 12 square metres. Additional minor impacts would also be expected during the construction phase (e.g. due to trampling of vegetation).

The proposed changes will reduce the area of direct impact to the ground vegetation at each ring array, but would result in an additional impact where the tower crane is located. Overall, the difference in area would be less than 0.01 hectares. Additional minor impacts would also be expected during the construction phase (e.g. due to trampling of vegetation), but are likely to be similar to those estimated for during the previous assessment (AMBS 2010). It should be noted these values area calculated based on the assumption that all the control and recommendations outlined in the previous report (AMBS 2010) remain valid and are adhered to (e.g. all components of the system are installed manually, weed management is conducted etc).

Based on the information provided, potential impacts to threatened species, populations or ecological communities listed under the TSC Act and EPBC Act are likely to be similar to that assessed under the original proposal, and are therefore unlikely to be significant."

The controls and recommendations within 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 submitted with the original application were incorporated into the conditions of Development Consent DA0710/09.

It has been confirmed by the applicant that the installation of the ring structures will be carried out manually.

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

Noise & Vibration

It is considered that the proposed modified development will have no significant additional impacts in relation to noise generation. The crane will replace the hydraulic lift attached to the central tower of each ring. Noise generated by the operation of the cranes is not expected to adversely impact the locality, given the distance of the experiment site from adjoining and nearby residential properties. Condition 14 of Development Consent DA0710/09 ensures that any noise generated by the activity will be within accepted guidelines.

Cumulative Impacts

The proposed modified 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, and its addendum demonstrated that the proposed modifications will not result in the development having any significant impact on threatened species, populations, ecological communities or their habitats.

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

The application was publicly exhibited for the period 1 February 2011 to 17 February 2011. No submissions were received.

Department of Defence
The application was referred to the Department of Defence for comment. In their letter of 16 February 2011 the Department of Defence advised:

"*Defence has assessed the proposal and determined that 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, as modified, 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 28 February 2011 to the applicant for acceptance in accordance with Section 89(1)(b) of the Environmental Planning and Assessment Act, 1979.

In their letter of 28 February 2011, the University of Western Sydney advised of their acceptance of the proposed amended conditions.

Conclusion:

The proposed modifications to the structures associated with the FACE experiment were developed to optimise the durability and useability of the installation, and to minimise site disturbance and environmental impact within the vegetation community in which it is sited.

These modifications have resulted in changes to the approved towers to narrower, more lightweight structures, and the inclusion of tower cranes at each ring. The increase in the height of the central tower and ring towers to 28 metres and 26 metres will have no increase visual impacts due to the lightweight appearance of the structures. The tower cranes will have a maximum height of 35.75 metres, with the arm of the crane being at a height of 30 metres above natural ground level resulting in an insignificant change to the developments visual impact compared to that originally approved. Disturbance to the ground and vegetation at each ring is comparable between the approved and the proposed modified development.

It is concluded that the proposed modified development will have no significance additional impacts to that originally approved with regard to flora and fauna, visual impacts, noise generation, traffic generation and cultural heritage.

RECOMMENDATION:
That development application DA0710/09 at Lot 181 DP 39768, Blacktown Road RICHMOND for Free Air CO_2 Enrichment experiment be amended in the following manner:

Condition 1 be amended to read:

1. The development shall take place in accordance with the stamped plans (Drawing No. 5A dated January 2011 & Drawing No. S06 Rev P5 prepared by Taylor Thomson Whitting), specifications and accompanying documentation submitted with the s.96 Modification Application DA0710/09A and the stamped plans (Drawing No. 3, 4 & 7 dated November 2009), specifications and accompanying documentation submitted with Development Application DA0710/09 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

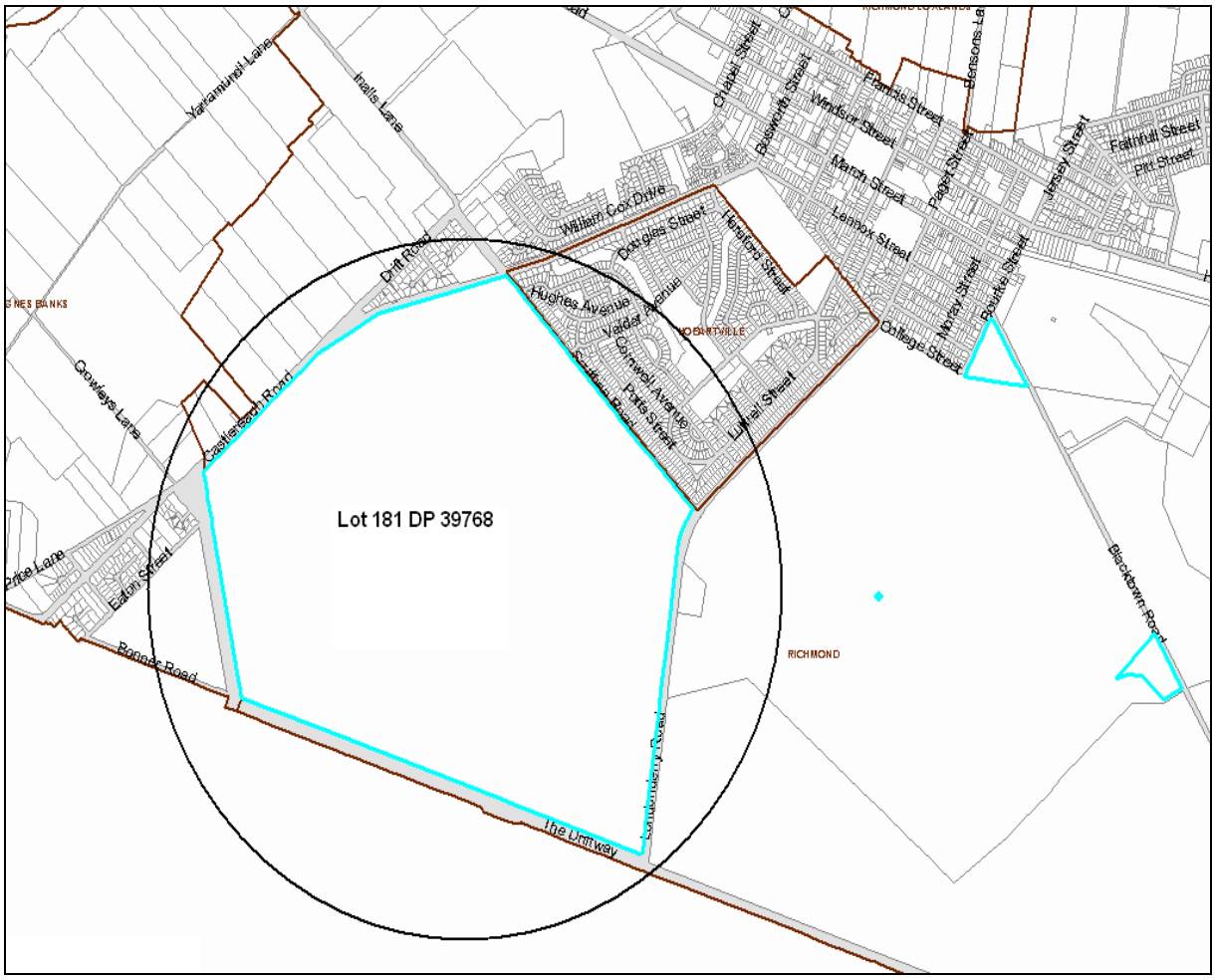
   (b) The 'Aboriginal Heritage Management Strategy for Aboriginal Sites within Driftway Forest, University of Western Sydney, NSW'

Condition 3 be amended to read:

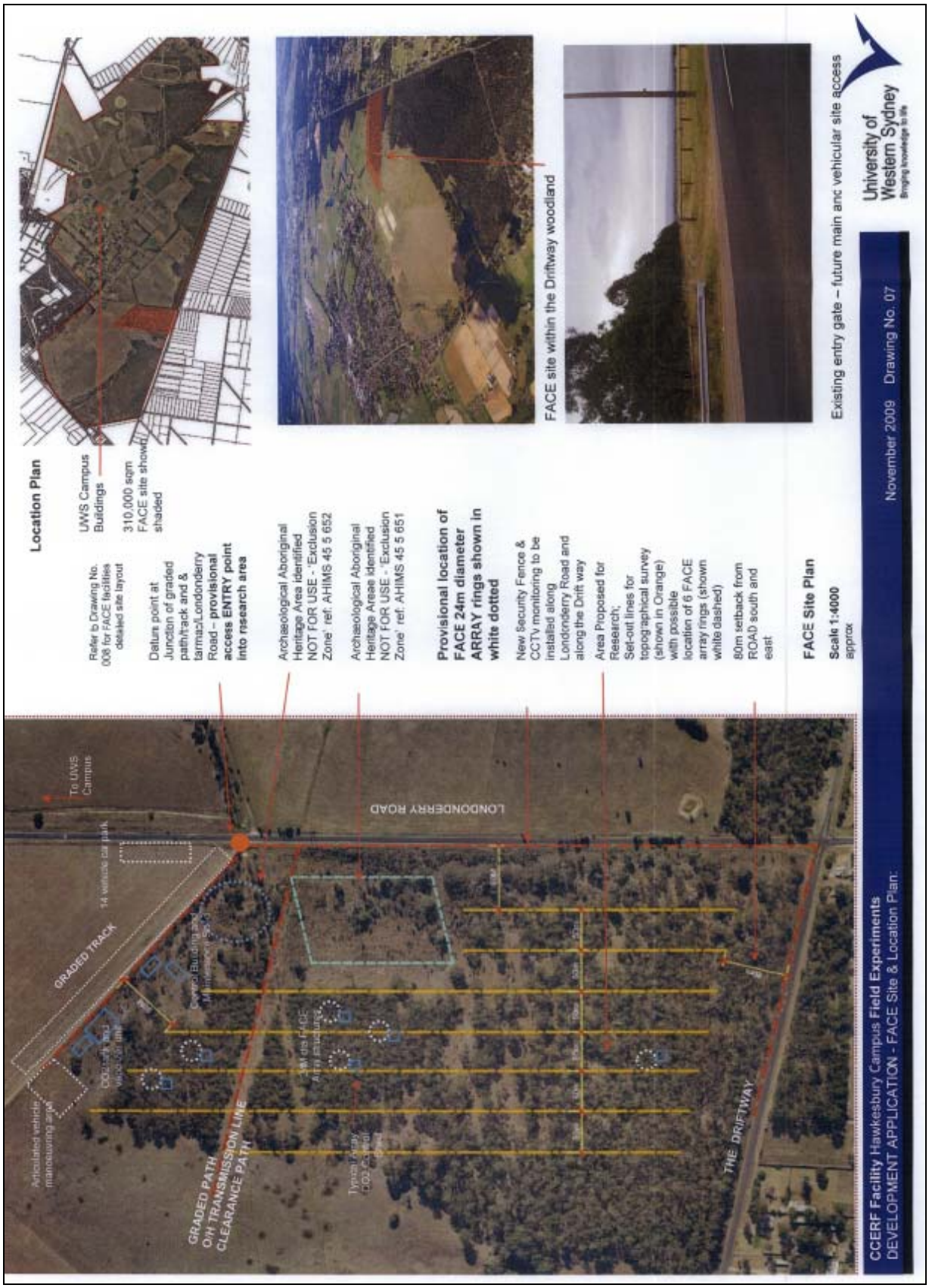
3. The maximum height of the ring towers and tower cranes shall not exceed 35.75m to ensure that the Department of Defence requirements are not breached and visual impact is minimised.

Attachments
AT 1 – Locality Plan
AT 2 – Site Plan
AT 3 – Elevation Plan 1 – Proposed Modified Development
AT 4 – Elevation Plan 1 – Approved Development
AT 5 – Elevation Plan 2 – Proposed Modified Development

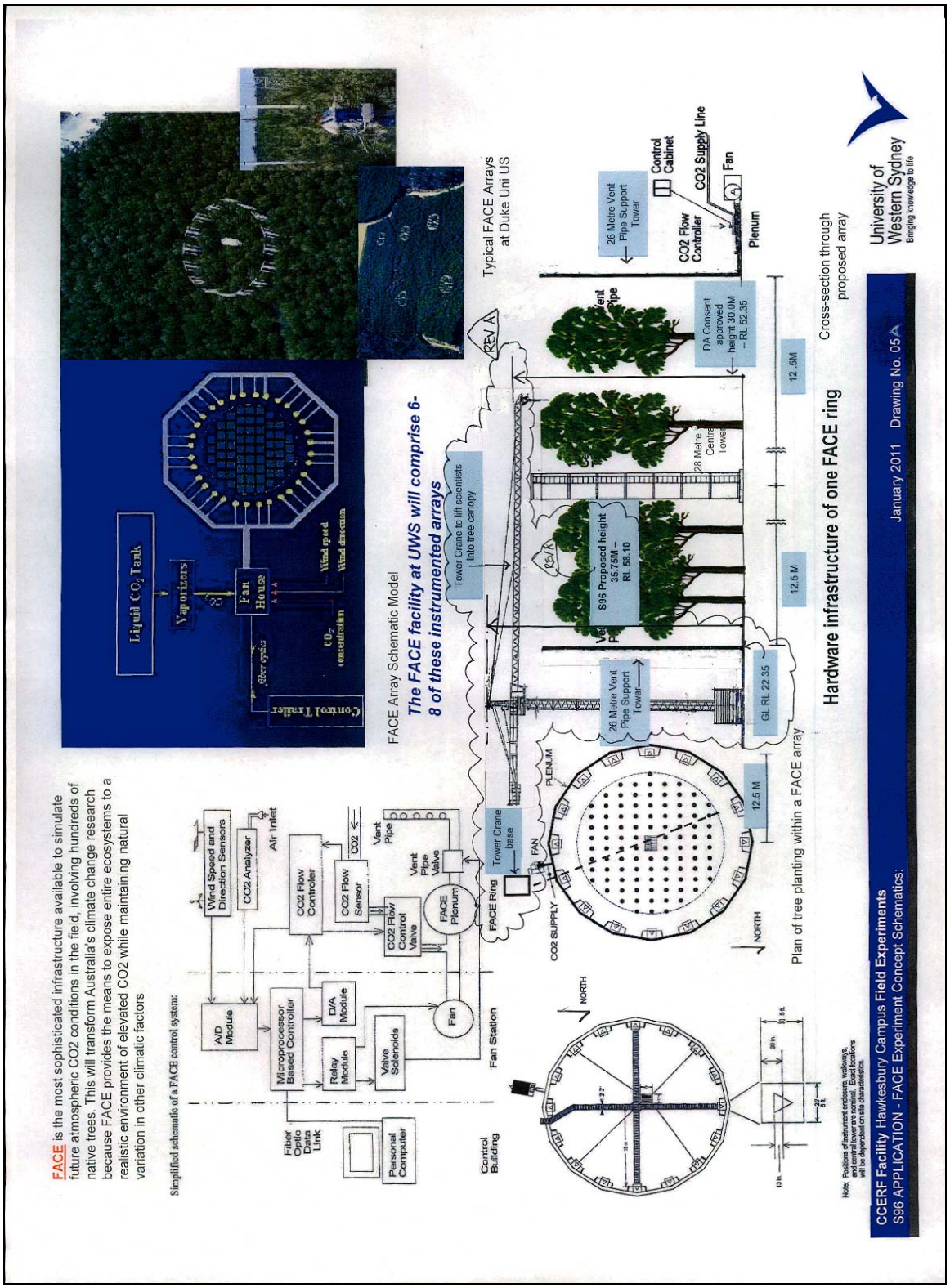
Locality Plan
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond



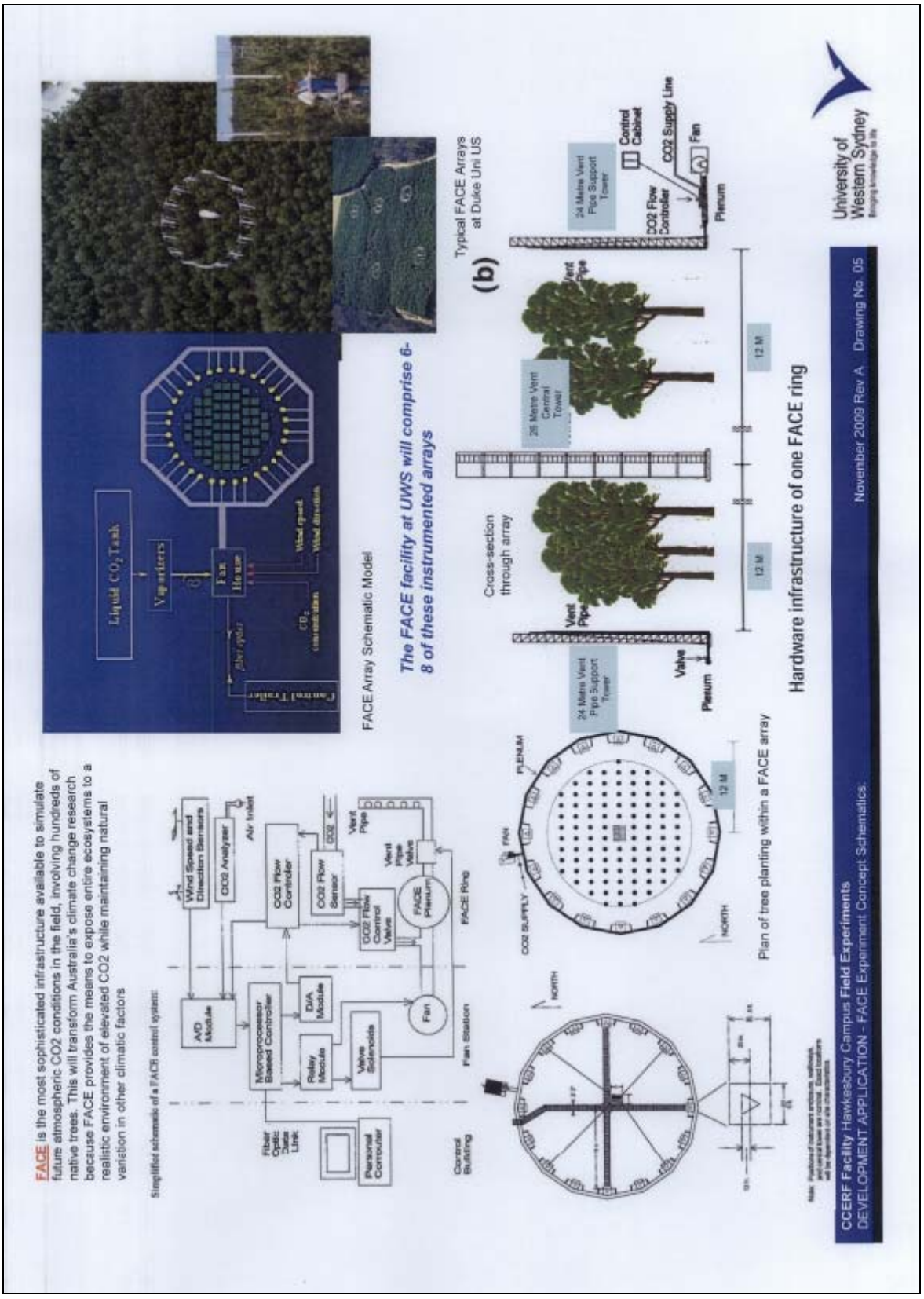
Site Plan
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond



Proposed Modified Development
Elevation Plan 1
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond



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



Proposed Modified Development
Elevation Plan 2
Lot 181 DP 39768 Londonderry Road and The Driftway, Richmond