

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<b>Part 4 - Development Concept</b>		
<i>Objectives</i>		
a) To create a university campus environment supportive of research, business and development activities;	<p>Research and training opportunities will be intrinsically linked with the aged care and seniors housing within the H&amp;WP. The reference plans indicate spatial commitments to facilitate ongoing research, training and learning within the buildings.</p> <p>The Management Plan (included in Attachment 1 to this report) outlines the measures that will be implemented to achieve the 'Living Lab' concept underpinning the Health &amp; Wellbeing Campus. This includes obligations for operators to provide minimum physical spaces to be provided for research / learning within each of the buildings and identifies operational commitment for each future building operator / lessee to enable the research and education initiatives to be undertaken within each building with active participation by residents and staff.</p> <p>The Management Plan contains physical space commitments, operational commitments and requirements pertaining to intergenerational integration across the H&amp;WP. It also deals with staging.</p> <p>Conditions of consent are recommended in relation to the implementation of the Management Plan, oversight by a Governance Committee and the like.</p>	Yes
<p>b) To achieve an appropriate campus scale and character by:</p> <p><i>i) Providing buildings in a landscaped setting;</i></p>	<p>The overall scale of the concept proposal reflected on the envelope drawings has been reduced on that initially proposed, responding to the concerns raised by Council and the DRP in relation to building height and scale. Indicative building envelope heights are now consistent with that required by LEP 2009 and form and massing is improved. The plans provide for greater setbacks to facilitate additional landscape planting in and around buildings and this represents a significant improvement on the earlier iteration of the plans. Streets and the pedestrian spine are activated by the indicative building design and indicative uses.</p> <p>The Green Heart is substantially enlarged on the original proposal and the overall</p>	

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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	pedestrian network is improved, with the main pedestrian spine being straightened, widened where it intersects with key nodes, and activated by neighbouring ground floor uses.	
<i>ii) Providing a well defined pedestrian spine and network to link activity zones and precincts and a series of landscaped features including: - Playing fields; - Parks; - Building forecourts/plazas; - Sculpture forecourt; - Campus green; - Rainforest gully/creek; - Swamp oak forest.</i>	The pedestrian spine, while not following the anticipated direct north-south route indicated on the DCP masterplan (in that it has a slight kink towards the south-west), is well defined, connects activity nodes and provides for lines of sight to key landscape features within and beyond the site. Pedestrian permeability within the H&WP has been improved along with links to the existing Campus and nearby public domain areas.	Yes
<i>iii) Developing a chain of ponds/stormwater management system as an integral feature of the campus;</i>	The chain of ponds will be a key landscape feature supported by the Concept DA.	Yes
<i>iv) Reducing the visual impact of surface parking by provision of carparks under buildings and multi storey parking facilities;</i>	Parking remains either at grade or contained within buildings, above ground. No basement parking is proposed, which is in part due to site constraints (flooding and contamination). Most parking areas are sleeved or are screened by vegetation and either existing or proposed buildings. The resultant form is now considered to be generally reasonable.  The SSD DA for the CHB will need to give close regard to how car parking will be appropriately designed and screened – Council requested changes to the Urban Design Guidelines (UDG) to ensure this issue is adequately addressed.	Yes
<i>v) Consistency of landscape detail including street furniture, paving, lighting, signage and other elements;</i>	Landscape concept plans provided. Details for individual buildings and open space areas to be the subject of future detailed DAs.	
<i>vi) Landscaping used as a positive element to unify site;</i>	As per above comment.	
<i>vii) Consistency in architectural design taking into account project objectives and commercial realities;</i>	Architectural detailing will be the subject of future detailed DAs; the Concept DA sets out indicative building envelopes and the UDG contains the design principles to guide future DAs. All future DAs for the H&WP will be required to be consistent with the concept DA and the UDG.	


## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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	The UDG specify some unifying elements to create a consistent architectural language across the precinct including providing a consistent human-scale, defined entries and active streets, and supporting opportunities for landscaping and a high-quality public domain.	
<i>viii) Consistency of buildings scale and height;</i>	ILA Stages 1 and 2 will be of a similar scale with heights just under the 30m limit. The RACF / CCF and CHB will be shorter buildings. The variation in height reflects the variation in building height evident in existing developed parts of the Campus.	
<i>ix) Providing an accessible and legible campus structure.</i>	The plans provide for improved accessibility and legibility linking the existing iC with the H&WP. The pathways have been specifically designed to ensure compliance with SEPP (Seniors) and to ensure good connectivity with the campus, nearby bus stops and walking paths. The pedestrian spine will continue to the south once this vacant land is developed in future.	
c) To provide opportunities for formal and informal interaction;	There is reasonable interaction between proposed uses and many opportunities for interaction throughout the H&WP within the public domain, at building entries, plaza areas and community facilities.	Yes
d) To develop a sense of community;	A sense of community is sought to be achieved through co-location of the child care centre and RACF, along with the sought after link between seniors living and research into ageing in place. A number of onsite facilities and retail spaces will also offer opportunities for community gathering and interaction.	Yes
e) To provide a stimulating working environment integrated with social, recreation, cultural and support services;	Satisfactory working environment provided; integrated with social, recreational and other services both within the H&WP and the broader campus.	Yes
f) To encourage a positive lifestyle mix of 'work, live and play' activities;	<p>The H&amp;WP will be supported by a good pedestrian / cyclist network which will link with the existing campus and other external pathways, encouraging walking and cycling.</p> <p>Facilities proposed within the H&amp;WP include a wellness centre and open space areas, again to support active and passive recreation.</p>	Yes

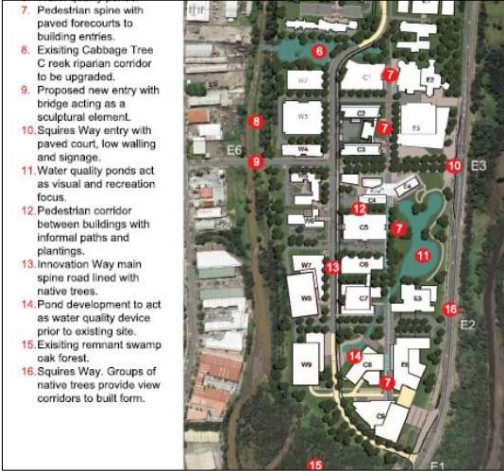


## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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g) To incorporate best practice ecologically sustainable development principles;	<p>A Sustainability Report was submitted with the DA which outlines how the proposal intends to address the requirements of the DCP. This includes initiatives for the Precinct design and operation to target WELL Community Pilot Certification, underpinned by strong environmental initiatives. This includes:</p> <ul style="list-style-type: none"> <li>Individual building ratings will be undertaken at the DA stage for each of the buildings (eg <i>WELL Community Pilot</i>, <i>Green Star</i> and <i>NatHERS</i>).</li> <li>The project is proposing to exceed the requirements of BASIX and BCA Section J for each of the proposed buildings. This will be addressed at future detailed DA stages.</li> <li>ILAs will have a 7 star rating.</li> </ul> <p>Infrastructure will include high levels of solar PV and renewable energy production to meet net zero by 2040.</p>	Yes
h) To create a physical setting which helps to reshape the image of Wollongong as a City of Innovation;	High quality design is expected to be achieved.	
i) To ensure the Wollongong Innovation Campus becomes an integral part of the life of the region;		
j) To rehabilitate riparian corridors to Cabbage Tree Creek, preserve the existing Swamp Oak forest and reinforce the landscaped character of Puckey's Estate;	<p>Appropriate riparian setbacks are proposed.</p> <p>A VMP deals with the riparian corridors.</p> <p>GTAs have been provided by NSW DPE-Water (former NRAR) in relation to the works within 40m of the watercourses.</p>	Yes
k) To implement a transport and access strategy to encourage pedestrian and cycle access to the site and reduce the dependence on private cars;	Proposal incorporates good pedestrian links which are reasonably direct and safe. Activity nodes, public domain works and interaction with proposed built form will amplify the amenity of the pedestrian spine and activate the space.	Yes
l) To develop and improve the streetscape character of Squires Way as the main entry to the site;	Streetscape to Squires Way – pathway to be provided on the western side of Squires Way; this will be required to be constructed in accordance with Council's standards. Existing vegetation will largely remain and will be supplemented with additional landscaping works including mounding to the south of the Squires Way/High Street	Yes


## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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	intersection. The visual presentation of buildings fronting Squires Way has been improved somewhat and the addition of landscape mounds adjacent to the entry will offer some screening of built elements whilst also acting as an acoustic buffer.	
m) To reinforce the community character of the existing Campus East student accommodation;	Existing student accommodation will remain unchanged.	Yes
n) To develop residential development to meet the short, medium and long term needs of students, staff, employees, tenants, visitors and others involved in the activities of the University of Wollongong and the Wollongong Innovation Campus.	Development includes seniors housing.	
2. The development is to be undertaken in stages generally as shown in the Precinct plan.	Staging proposed.  The development site crosses the indicative Stages 2 and 3 identified in the DCP notional staging plan. The sequence of construction proposed in the CMP is not dissimilar to the notional staging plan.	Yes
<b>Performance Guidelines</b>		
The development of the site must be consistent with the Precinct plan – Development Concept which is shown in the following: Figure 6, Figure 7, Figure 8, Figure 9 and Figure 10.		
<p><i>Figure 6 - Development Structure</i></p> 	<p>Concept master plan provides for roads generally in accordance with those shown in Figure 6;</p> <p>Pedestrian spine will continue to the southern extent of the proposed development site; to be extended at a later date with the development of the remaining land to the south of the H&amp;WP. Alignment of the spine is angled more so towards the south-west than directly north-south as shown however the objectives for the pedestrian spine are considered to be met.</p> <p>Green space is much larger than envisaged in Fig 6; this is a positive change.</p> <p>Building envelopes are similar to that contemplated in the figure.</p>	

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p><b>Figure 7: Precinct Plan - Landscape Structure</b></p> 	<p>Green space is much larger than envisaged in Fig 7; this is a positive change.</p> <p>Chain of ponds provided through the proposed Green Heart, connecting to the existing pond.</p> <p>Planting to Squires Way, along Innovation Way and new High Street will be generally as shown on Figure 7. Detailed landscape plans to be provided with each detailed DA.</p>	
<p><b>Figure 8: Precinct Plan - Pedestrian Network</b></p> 	<p>Pedestrian spine will continue to the southern extent of the proposed development site; to be extended at a later date with the development of the remaining land to the south of the H&amp;WP. Alignment of the spine is angled towards the south-west than directly north-south as shown however the objectives for the spine are considered to be met.</p> <p>Pedestrian linkages to eastern side of Squires Way are improved with the proposal, inclusive of the pathway network and signalised pedestrian crossing adjacent to the intersection of High Street / Squires Way.</p> <p>Buildings provided with forecourts/plaza areas to activate nodes along the spine.</p>	
<p><b>Figure 9: Precinct Plan – Precincts</b></p> 	<p>Fig 9 identifies the subject part of the site as being suitable for office/research buildings/residential.</p> <p>The proposed uses are primarily (seniors) residential with supporting land uses with research and learning linkages between buildings/land uses.</p>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p><i>Figure 10: Notional Development Sites</i></p>  <p><b>Part 5 - Site Uses</b></p> <p><b>Objective</b></p> <p>a) To provide education and research facilities supported by residential, social, recreational, cultural and commercial services.</p> <p><b>Performance Guidelines</b></p> <p>The following range of site and building uses should be provided:</p> <ul style="list-style-type: none"> <li>• Offices/Research facilities for firms involved in research and development;</li> <li>• Buildings for academic, education and training purposes;</li> <li>• Conference centre/meeting facilities;</li> <li>• Hotel;</li> <li>• Serviced Apartments;</li> <li>• Recreation Facilities;</li> <li>• Gallery / Theatre / Exhibition Areas;</li> <li>• Student Accommodation;</li> <li>• Residential development to meet the short, medium and long term needs of students, staff, employees, tenants, visitors and others involved in the activities of the University of Wollongong and the Wollongong Innovation Campus;</li> <li>• Services/Commercial Facilities ancillary to previous building uses, including: <ul style="list-style-type: none"> <li>– Campus Management Offices / Support;</li> <li>– Sales and Marketing Offices;</li> <li>– Food Services Outlets;</li> <li>– Cafes / restaurants;</li> <li>– Newsagent / convenience store;</li> <li>– Business supplies;</li> <li>– Business Facilities Support;</li> <li>– Serviced Offices;</li> <li>– Student Support Services;</li> <li>– Retail Outlets;</li> </ul> </li> </ul>	<p>Proposed uses within the H&amp;WP include:</p> <ul style="list-style-type: none"> <li>• RACF / ILAs</li> <li>• Child care centre</li> <li>• Business premises</li> <li>• Retail premises / café</li> <li>• Recreation facilities – indoor and outdoor</li> <li>• community health building (separate SDD DA)</li> </ul> <p>Researching / learning / training opportunities are sought to be integrated across the buildings in the H&amp;WP as outlined in the Management Plan, along with opportunities for intergenerational integration fostered via co-location of the RACF and CCF.</p> <p>The applicant proposes tangible links between the operation of the community health building and the seniors housing. The MP seeks to facilitate and achieve meaningful research connections between all uses on the site, in addition to the operation of the CHB, as discussed elsewhere within this report in relation to the Management Plan.</p>	<p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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Childcare Facilities; – Medical / Health Services.		
<b>Part 6 – GFA</b>		
<p><b>Performance Guidelines</b></p> <ul style="list-style-type: none"> <li>maximum gross floor area as per LEP – 135,000sqm.</li> <li>indicative schedule of development (the floor areas of various building uses may vary):</li> </ul> <p><u>Existing development:</u>            Science Centre 2,514sqm            Campus East Student Accommodation 18,682sqm            Central Facilities/Services 6,642sqm            Research / Innovation Offices / Academic / Training - 30,059sqm</p> <p><u>Proposed development</u>            Hotel / Conference Centre 8,000sqm            Stage 2 Science Centre 2,000sqm            Research / Innovation Offices / Academic / Training Facilities - 39,892sqm*            Residential development In 'existing' Student Accommodation Area 2,500sqm            Squires Way sites 18,000sqm.</p> <p><u>TOTAL 135,000 sqm</u></p> <p>*reduced from 46,603sqm to account for a 6,711sqm research building space constructed since the Masterplan and DCP were last reviewed (2011)</p>	<p>The existing GFA within the Campus has been calculated at 61,969sqm.</p> <p>The GFA of the buildings proposed within the H&amp;WP is around 43,400 sqm (plus 3500sqm for the proposed future CHB).</p> <p>Assuming the approval of both the Concept DA and the SSD application for the CHB, 26,131m<sup>2</sup> will remain available for remaining development sites within the campus under the existing LEP GFA cap.</p> <p>The applicant has analysed the GFA of the existing buildings within the campus in a view to determine what can potentially be achieved on remaining vacant sites within the campus; it is concluded that there remain sufficient GFA available to achieve reasonable development on vacant sites.</p> <p>(The upcoming review of the DCP may consider whether a change to the maximum permitted GFA is warranted and appropriate).</p>	Complies
<b>Part 7 - Building Heights and Floor Levels</b>		
<p><b>Objectives</b></p> <p>a) To meet the density and development floor area objectives required for the project;</p> <p>b) To achieve the character and scale of a university campus by limiting site coverage and providing buildings in a landscaped setting.</p>		
<p><b>Performance Guidelines</b></p> <p>Building Height</p> <ul style="list-style-type: none"> <li>Comply with the LEP maximum heights in the LEP – 30m for this site.</li> </ul>	<p>The initial plans indicated a significant exceedance of height limit however the revised plans provide for all indicative building envelopes to be compliant with the 30m height limit.</p>	Yes



## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<ul style="list-style-type: none"> <li>integrate all rooftop exposed structures with the building design and setback 6m from the sides of the building.</li> </ul>	All rooftop exposed structures are setback from the edges of the buildings as required. Conditions are recommended in relation to screening and concealment of rooftop plant and lift overruns.	
<ul style="list-style-type: none"> <li>Ground levels:               <ul style="list-style-type: none"> <li>i) Minimum floor levels must comply with the Floodplain Management Strategy.</li> <li>ii) Buildings adjacent to the main pedestrian spine (nominal RL 6.0 AHD) must provide access at the level of the main pedestrian spine.</li> <li>iii) Buildings on the East / West link should provide access as close as possible to the street levels.</li> <li>iv) The first habitable floor level of all buildings should be as close as possible to finished ground levels and must not be more than 1500mm above finished ground levels.</li> </ul> </li> <li>Building designs must demonstrate:               <ul style="list-style-type: none"> <li>i) A positive relationship to the landscape, streets and adjoining pedestrian and public areas; and</li> <li>ii) The effect of the proposed building on views from adjoining areas, the main pedestrian spine, main loop street and from Squires Way.</li> </ul> </li> </ul>	<p>The plans suggest ground floor levels designed to ensure barrier-free transitions from internal spaces to adjacent public domain areas inclusive of proposed footpaths and the pedestrian spine.</p> <p>Proposed minimum floor levels comply with applicable requirements pertaining to flooding.</p> <p>The RACF / CCF is designed with a freeboard of 500mm above the PMF.</p> <p>Detailed view analysis has been undertaken to establish key view corridors across the site and envelopes have been adjusted where required, to maintain these lines of sight, particularly to Mt Keira.</p>	Yes
<b>Part 8 – Setbacks</b>		
<b>Objectives</b> <ul style="list-style-type: none"> <li>To achieve a university campus character of buildings in a landscaped setting;</li> <li>To provide riparian corridors to Cabbage Tree Creek and Fairy Creek; and</li> <li>To locate buildings to reinforce activity on the main pedestrian spine and East / West link.</li> </ul>		
<b>Performance Guidelines</b> <ul style="list-style-type: none"> <li>a) 30m setback from Cabbage Tree Creek and Fairy Creek.</li> <li>b) Works within riparian setbacks to be carried out in accordance with the VMP.</li> </ul>	<p>Setback &gt;30m from RACF /CCF building and associated car parking area to Cabbage Tree Creek.</p> <p>A VMP was submitted with the DA in relation to the riparian corridors which includes a number of measures to ensure the protection and enhancement of the</p>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p>c) Works within the riparian setback must be consistent with the Plan of Management and may include:</p> <ul style="list-style-type: none"> <li>i) Stormwater and floodway improvements;</li> <li>ii) Pedestrian access;</li> <li>iii) Landscaping rehabilitation works;</li> <li>iv) Vehicular, pedestrian and cyclist access to Puckey Avenue and Montague Street;</li> </ul>	<p>riparian corridors. This, coupled with the CMP and the consent conditions, will mitigate direct and indirect impacts of the development on the waterways and riparian corridors.</p> <p>Rehabilitation, revegetation, weed management, weed prevention measures and monitoring are canvassed in the VMP.</p> <p>It is noted that the NSW DPE-Water (then NRAR) has issued its GTAs for the proposed works within 40m of the watercourses.</p>	
<p>d) Setbacks from notional leased site boundaries as shown in Figure 12 and:</p> <ul style="list-style-type: none"> <li>i) Buildings adjacent to the main pedestrian spine must have a zero setback for at least 75% of the frontage.</li> </ul>	<p>Proposed setbacks between buildings and indicative lease boundaries seek to achieve a balance of landscape setbacks where appropriate along with activation of key frontages and the pedestrian spine.</p> <p>Setbacks along the pedestrian spine have been largely determined after detailed discussions with the DRP and Council officers in relation to alignment of the spine, the provision of strong visual connections between nodes and lines of sight to key landscape features within and beyond the site; activity nodes including plazas at building entries along the spine and the relationship with adjacent buildings.</p>	Yes
<ul style="list-style-type: none"> <li>i) Buildings sharing common leased site boundaries should be setback 10 metres to preserve solar access and environmental conditions.</li> </ul>	<p>No buildings share common leased site boundaries. ILA2 is separated from the adjacent building to the north by Road No.3.</p>	
<ul style="list-style-type: none"> <li>ii) Site coverage within individual leased sites should not exceed 60%.</li> </ul>	<p>The envelopes and reference plans indicate that the average site coverage across the subject leased sites is 67% (excluding the area of the green heart) which exceeds the maximum sought to be achieved by the DCP. On individual sites, the site coverage of ILA Stage 1 is 85%, ILA Stage 2 is 63% and the RACF / CCF site is 51%. The applicant contends that despite the exceedance of the site coverage limitation on the ILA sites, the objectives of the control are satisfied in that:</p> <ul style="list-style-type: none"> <li>• There are landscaped setbacks along both the eastern, southern and western elevations of ILA Stage 2 and also along Road No. 1 and Cabbage Tree Creek.</li> </ul>	Merit assessment

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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	<ul style="list-style-type: none"> <li>• It is intended that there will be significant street planting along Road No. 1 (ie High Street) and Innovation Way.</li> <li>• It is acknowledged that ILA Stage 1 has an urban presentation to Innovation Way and High Street which is the design intent on account of the future retail and commercial ground floor tenancies that aim to activate these frontages.</li> <li>• The green heart is significantly enlarged on that expected by the DCP; this has been further increased in area to 5950sqm which is around 4700sqm larger than the space indicated in Chapter D14.</li> <li>• Whilst the total site coverage of the three leasable site areas where building envelopes are proposed equates to 67%, adding the additional 4,700m<sup>2</sup> of deep soil landscaped area of the enlarged Green Heart equates to 54% total site coverage across the site.</li> </ul>	
<p>iii) Buildings must address main pedestrian links and forecourts.</p> <p>iv) Buildings must reinforce the street character objectives described in section 9.10 of the approved Precinct plan.</p>	<p>The submitted reference plans indicate that the proposed buildings will be designed to address main pedestrian links and forecourts/plazas. To be confirmed in the detailed Das.</p>	<p>Yes</p>
<p>e) The connection of buildings across leased sites at various levels may be considered provided the following is demonstrated:</p> <ul style="list-style-type: none"> <li>- The connection is primarily to improve access for occupants of the Wollongong Innovation Campus;</li> <li>- The physical size, height and architectural appearance of the connection is consistent with the building character and appearance objectives outlined in the approved Precinct plan; and</li> <li>- The connection does not significantly impact on solar access or environmental conditions to adjoining buildings or public areas.</li> </ul>	<p>There are no buildings crossing leased site boundaries.</p>	<p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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f) Buildings adjacent to the main pedestrian spine must provide covered access in the form of undercrofts, covered ways and the like for a minimum width of 2500mm.	Building envelopes do not provide for undercrofts or awnings covering the pedestrian spine – the buildings have been setback at the recommendation of the DRP to maintain strong visual connections along the spine, as well as to create activity nodes at key locations, to enhance lines of sight to key landscape features both within and outside of the site (the riparian corridors, Escarpment, 'Green Heart', existing pond etc).	No but approach is supported
<b>Part 9 – Building Character &amp; Appearance</b>		
<p><i>Objectives</i></p> <p>a) To ensure a high standard of urban and architectural design in the development of the site and buildings;</p> <p>b) To ensure buildings contribute architecturally to the university campus character of the development;</p> <p>c) To achieve an overall consistency in the design of buildings and the selection of façade systems, materials and finishes; and</p> <p>d) To encourage innovative design solutions.</p>		
<p><i>Performance Guidelines</i></p> <p>a) Buildings must be designed by a qualified and registered architect.</p> <p>b) The siting and design of individual buildings should incorporate the following 'campus character' unifying elements:</p> <ul style="list-style-type: none"> <li>i) Common scale of buildings;</li> <li>ii) Use of landscape as a unifying feature;</li> <li>iii) Use of common landscape elements including paving, lighting, street furniture and the like;</li> <li>iv) Provision of multiple entries to buildings and simple access to the site pedestrian structure;</li> <li>v) Linking of forecourts and landscaped areas across leased site boundaries;</li> <li>vi) Use of undercrofts and covered ways to facilitate all weather pedestrian</li> </ul>	<p>Buildings will be designed by qualified architects; subject to separate future DAs.</p> <p>Concept DA / UDG provides specific design guidelines for future detailed DAs which deal with matters including:</p> <ul style="list-style-type: none"> <li>• Key design principles for the public domain areas;</li> <li>• Precinct level controls for matters such as key built form principles, building heights, setbacks and building separation, uses and active frontages (specific controls for individual streets within the H&amp;WP); co-location of uses; vehicular access; rooftops; articulation of built form and volumetric envelope utilisation.</li> <li>• Site-specific controls for each of the proposed buildings within the H&amp;WP which relate to matters including building heights, street wall heights, setbacks/ building separation, building design (articulation, podium heights,</li> </ul>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p>access particularly along the main pedestrian spine and East / West link;</p> <p>vii) All sides of the building must have a positive relationship to the streetscape, landscape and pedestrian areas.</p>	<p>solar access, expression, decorative screening to un-sleeved car parking areas, building entries, ground floor uses, car parking and service entries private open space and communal open space requirements; outdoor play area requirements (in relation to the child care facility) – supported by diagrams.</p> <p>The recommended conditions will require common landscape elements including paving, lighting, street furniture and the like to that used in the existing developed parts of the campus.</p> <p>The UDG are not inconsistent with the controls in Part 9 of D14. Individual buildings will be required to respond to the principles outlined in the UDG and will be required to also be assessed with regard to the DCP controls; the UDG will not replace the DCP but will rather supplement it.</p>	
<p>c) Building design should incorporate the following elements:</p> <p>i) Extensive use of glass, expressed steelwork and louvers;</p> <p>ii) Use of panelised materials for general external cladding;</p> <p>iii) A generally monochromatic colour scheme based generally on the use of off-white / light greys / natural / aluminium / stainless steel tones;</p> <p>iv) Contrast or feature elements should be generally organic in character and may include: • timber; • stone faced cladding; • terracotta tiles cladding; • bronze or other metal finish colours.</p> <p>v) Use of strong colours should be generally restricted and considered on merit for each proposed building and application.</p>	<p>To be detailed in separate future DAs for the individual buildings.</p> <p>Note: the UDG is not inconsistent with the controls in Part 9 of D14. Individual buildings will be required to respond to the principles outlined in the UDG and will be assessed with regard to the DCP controls. In this way the UDG will not replace the DCP but will rather supplement it.</p>	
<p>d) The visual impact of facades should be reduced by detailed architectural treatment which may include:</p> <p>i) Use of podiums and forecourts at ground level;</p> <p>ii) Attached structures at main access levels;</p> <p>iii) Setbacks and articulation of facades;</p>	<p>UDG addresses these issues.</p>	<p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>iv) Modulation of sun-shading and other façade elements.</p> <p>e) For each development, a detailed site analysis must consider a range of listed matters.</p> <p><b>Part 10 – Landscape</b></p> <p><b>10.1 Landscape Character</b></p> <p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• promote the relationship of the character of the iC to the landscape character of the main UOW campus, the regional coastal landscape and its visual connection to the Illawarra escarpment;</li> <li>• to create a landscape setting which encourages public interaction;</li> <li>• to establish a landscape framework which unifies the various elements and structures of the development;</li> <li>• To reinforce ESD principles in landscape design, plant selection and built form.</li> </ul> <p><b>Performance Guidelines</b></p> <ul style="list-style-type: none"> <li>• The landscape character of development must be consistent with the requirements of the DCP.</li> <li>• plant species must be consistent with those found on-site/ in the immediate environment. Plant species should be suited to the existing site conditions and environment.</li> <li>• Consider placing public artwork at key points within the Campus.</li> <li>• A chain of ponds should play a positive role in stormwater management. The ponds provide an opportunity for a consistent landscape approach through the Campus and relate to the character of the main UOW campus.</li> <li>• Landscaping between &amp; around buildings should blur the leased site boundaries and create the sense of an informal campus setting. Landscaping should enhance building entrances and forecourts and facilitate pedestrian movement between built structures.</li> </ul>	<p>Detailed site analysis documentation supplied; this will also be required for each individual detailed DA.</p> <p>Pedestrian links and open space connect the existing campus with the proposed H&amp;WP. The green heart proposed is substantially larger than the open space shown in the DCP precinct plan.</p> <p>The open space/ landscaped areas will encourage public interaction.</p> <p>The landscape setting of ILA 2, ILA 1, the RACF and CHB has been improved by increasing the size of the Green Heart and introducing new and increased landscaped setbacks for each of the buildings. This supports the vision for providing buildings in a landscaped setting, while also still providing opportunities for key frontages along High Street and the Pedestrian Spine to be activated.</p> <p>The H&amp;WP has been designed to facilitate substantial landscaping (including 40% tree canopy coverage to the proposed streets in line with best practice target recommendations of the NSW Government Architect's Draft Greener Places Design Guide), while also providing for vibrant, active street edges to particular frontages.</p> <p>Broader overall landscape concept plans for the H&amp; WP and specific plans for public</p>	<p>Yes</p> <p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p><b>10.2 Open Space</b></p> <p><i>Objectives</i></p> <ul style="list-style-type: none"> <li>provide a central open space;</li> <li>create a visually strong, attractive and safe series of public open spaces;</li> <li>create a series of pedestrian forecourts and green spaces linked by a pedestrian spine;</li> <li>provide positive and safe linkages to open spaces adjoining the Innovation Campus;</li> <li>integrate open space and stormwater design to create a functional and aesthetic landscape; and</li> <li>provide both passive and active recreation opportunities.</li> </ul> <p><i>Performance Guidelines</i></p> <ul style="list-style-type: none"> <li>Open space must be consistent with the Landscape Precinct plan (Figure 17).</li> <li>Within main communal landscaped areas active recreation should be included in the form of open grassed areas for informal sporting activities.</li> </ul> <p><b>10.3 Vegetation</b></p> <ul style="list-style-type: none"> <li>preserve the "Swamp Oak Forest" at the southern end of the site and preserve, revegetate and rehabilitate the riparian corridor to Cabbage Tree Creek in accordance with the VMP;</li> <li>create a "green campus" by use of appropriate native vegetation;</li> <li>integrate the proposed vegetation with that found in Puckeys Estate, the escarpment and the existing UOW;</li> </ul>	<p>domain areas have been provided which have been reviewed by Council's Landscape Architect and were deemed satisfactory. Detailed landscape plans will be required to be provided with the detailed DAs for the individual buildings and open space areas; to be assessed against the requirements of the ADG, the broader concept landscape master plan and the requirements of the DCP.</p> <ul style="list-style-type: none"> <li>Large green heart and central pedestrian spine proposed as detailed above.</li> <li>Green Heart has an area of 5950sqm; this is central to the precinct and will provide a central open space as a focal point for the Campus and H&amp;WP.</li> <li>Open spaces will be physically and visually well connected.</li> <li>A series of pedestrian forecourts / plaza / green spaces are proposed linked by the pedestrian spine;</li> <li>Positive and safe linkages to open spaces adjoining the Innovation Campus are proposed in the form of new and improved pedestrian pathways and the signalised pedestrian crossing adjacent to the intersection of Squires Way and High Street connecting to the eastern public walkway on Squires Way.</li> <li>stormwater design is integrated with the open space and landscape works; chain of ponds will serve both a stormwater function as well as an aesthetic landscape feature.</li> <li>passive and active recreation opportunities are facilitated in the H&amp;WP.</li> </ul> <p>Vegetation in the southern portion of the campus is outside of the development site. As above; riparian corridor setbacks are proposed consistent with applicable controls.</p> <p>VMP outlies measures for riparian corridors including enhancement, weed management and revegetation.</p>	<p>Yes</p> <p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<ul style="list-style-type: none"> <li>consider planting locations to maximise solar access to key areas</li> <li>consider CPTED principles.</li> </ul> <p><b>10.4 Safety and Security</b></p> <p><i>Objectives</i></p> <ul style="list-style-type: none"> <li>Incorporate CPTED principles into the detailed site landscaping;</li> <li>Provide a safe environment.</li> </ul> <p><i>Performance Guidelines</i></p> <ul style="list-style-type: none"> <li>Design open spaces / courtyards to minimise concealment opportunities.</li> <li>Adopt CPTED principles</li> <li>Provide well lit pathways, clear sight lines particularly near accommodation and public transport; connections between carparks and buildings.</li> <li>Provide CCTV to internal road and pedestrian areas and all pedestrian and vehicle entrances.</li> <li>Provide natural surveillance of carparks.</li> <li>Building material selection to deter criminal activity and provide protection from criminal actions.</li> <li>Secure critical service supply points and installations against vandalism.</li> </ul> <p><b>10.5 Furniture</b></p> <p><b>10.6 Lighting</b></p> <p><b>10.7 Public Art</b></p> <ul style="list-style-type: none"> <li>facilitate and incorporate the creation of artworks throughout the site as a component of the landscape development.</li> </ul> <p><b>10.8 Signage</b></p>	<p>Landscaping concept plans considered with regard to appropriateness of species selection, CPTED principles and other matters and appear acceptable subject to detailed plans with detailed DAs.</p> <p>CPTED report submitted with DA; principles broadly reflected on the concept plan and UDG.</p> <p>Broad site layout and overall landscape concept appears to be consistent with CPTED principles. Further detail will be required with individual DAs for the spaces and buildings.</p> <p>Subject to detailed DAs</p> <p>Subject to detailed DAs</p> <p>Subject to detailed DAs; the applicant has however noted the intent to introduce public art at various locations throughout the precinct and to integrate the recommendations of the <i>Designing with Country/ Connecting with Country</i> report. A consent condition is recommended requiring the submission of a public art strategy developed in consultation with First Nations community representatives.</p> <p>Subject to detailed DAs</p>	<p>Yes</p> <p>Yes</p>



## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<b>10.9 Fencing</b>		
<ul style="list-style-type: none"> <li>provide for a fence-free environment. Localised fencing is permitted for security or legislative requirements.</li> </ul>	<p>No fencing is proposed at this point in time. Future applications will need to consider the controls with regard to fencing where relevant.</p> <p>Subject to detailed DAs.</p>	N/A
<b>10.10 STREETS</b>		
<i>Objectives</i>		
<ul style="list-style-type: none"> <li>Create an accessible, safe, legible and permeable system for vehicular and pedestrian traffic.</li> <li>Create a hierarchy of streets with characteristics as follows:</li> </ul>		
<i>Innovation Way</i>		
<ul style="list-style-type: none"> <li>Primary functional access through the site.</li> <li>Formal and regular tree planting to both sides of the street.</li> <li>Swales, building forecourts and other landscaping to reinforce image of a 'leafy' campus street.</li> <li>Limited kerbside parking provided for taxis, couriers and other short stay vehicles.</li> </ul>	<p>Proposed extension of Innovation Way is consistent with these requirements – primary access point; formal and regular planting on both sides of the street; some kerbside parking proposed.</p>	Yes
<i>Puckey Avenue</i>	N/A to the site.	N/A
<i>Service / Parking Links</i>		
<ul style="list-style-type: none"> <li>Provision of surface parking for visitors and users of the Campus and access to basement parking and service facilities.</li> <li>Pedestrian access provided to both sides of street.</li> <li><i>Residential</i> - 'Leafy' streets providing on-street parking for residents and visitors and access to under building parking and other service functions.</li> <li>Streets should be constructed to create the street system indicated in Figure 17 and sections should be constructed consistent with the sections set out in Figures 18 – 22.</li> </ul>	<p>Remaining roads are consistent with these requirements.</p> <p>Road 1 (eastern) consistent with these requirements.</p> <p>Street layout proposed is generally consistent with that shown on Figure 17 and the sections at Figs 18-22 except that some of the parking is proposed as parallel parking rather than 90 degree parking as indicated on the sections.</p> <p>Pathway to be constructed on the western side of Squires Way as per Fig 22.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<b>Part 11 Transport &amp; Access</b>		
<p><i>Objectives</i></p> <ul style="list-style-type: none"> <li>• provide a convenient &amp; safe transport system for users.</li> <li>• reduce car dependency by encouraging alternative modes of transport.</li> <li>• cater for non-vehicular transport such as cycling and walking.</li> <li>• minimise the environmental impact of transport and improve air quality.</li> </ul> <p><i>Performance guidelines</i></p> <p>Transport and access planning must be integrated and implemented to include the following initiatives:</p> <ul style="list-style-type: none"> <li>• Locating bus stops to maximise the patronage catchment and to consider personal safety, lighting and traffic management.</li> <li>• Providing street, footpath and open space networks for multiple pedestrian and cycle routes.</li> <li>• Providing within each building storage and end-of-trip facilities to encourage cycling.</li> <li>• Provide parking incentives such as cheaper rates or reserved spaces for high occupancy vehicles including car pools and community buses.</li> <li>• provide bike facilities at public transport interchanges.</li> <li>• Provide an integrated network of cycleways and walkways.</li> <li>• parking policies to support public transport use, walking and cycling.</li> <li>• Progressively reduce the availability of car parking within the Ic.</li> <li>• Promote car pooling and park and ride options.</li> <li>• Provide incentives to employees to encourage journey to work by public transport.</li> <li>• Promoting and/or subsidising cheaper off peak travel by public transport.</li> <li>• Preparation of workplace travel plans.</li> </ul> <p><i>Traffic</i></p> <p>DCP refers to a range of road network changes to be implemented to offset the impact of traffic generated by the iC and background growth in the local road network. The timing and nature of the</p>	<p>Pedestrian and cycle networks including formalised intersections are generally consistent with DCP precinct plans.</p> <p>Proposed pedestrian pathway network within the H&amp;WP will facilitate ease of access to bus stops and will encourage reduced reliance on private vehicles.</p> <p>Transport integration within individual buildings will need to be addressed by the detailed DAs for those buildings; these will need to deal with provision of parking, bike storage, end-of-trip facilities, workplace travel plans and the like.</p> <p>Noted.</p> <p>Detailed traffic modelling has undertaken and Traffic Impact Assessments have been lodged with the DA. The modelling includes TRACKS and SIDRA analysis to assess</p>	<p>Yes</p> <p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>works is subject to detailed evaluation of the traffic growth and Innovation Campus vehicle trip generation.</p> <p>The DCP refers to works completed or underway (at the time of the 2012 Precinct plan review) which have since been completed.</p>	<p>the traffic impacts of the H&amp;WP to 2031 with the following conclusions made in relation to each relevant nearby intersection:</p> <ul style="list-style-type: none"> <li>• <u>Puckey Avenue / Squires Way</u>: The future performance of this intersection is acceptable and no upgrades or mitigation is proposed or required.</li> <li>• <u>Puckey Avenue / Montague Street</u>: The future performance of this intersection is acceptable and no upgrades or mitigations are proposed.</li> <li>• <u>Squires Way / Elliotts Road / Carters Lane</u>: The existing intersection has exceeded its practical capacity; upgrades will be required well before 2031 regardless of the introduction of the H&amp;WP. Note: H&amp;WP traffic accounts for less than 5% of overall traffic volumes at this intersection in 2031 so it is unlikely that the future form of this intersection would be significantly impacted by development traffic.</li> <li>• <u>Princes Highway / Ajax Avenue</u>: queuing on Ajax Avenue is an existing issue, particularly in the PM peak period. The future performance of this intersection is therefore also proportionally impacted by the introduction of H&amp;WP traffic, and intersection upgrades are required and are proposed in this application. These works have been considered by Council and Transport for NSW and are conditioned as part of the DA.</li> <li>• <u>Squires Way / High Street</u>: The modelling indicates that this intersection will perform well during the AM Peak period and acceptably during the PM peak period. The design of the intersection and the introduction of the signalised pedestrian crossing has been considered closely with regard to traffic queuing and overall impact and was deemed acceptable by Council's Traffic Engineers.</li> </ul>	
<p><i>Pedestrian and Cycle Access</i></p> <ul style="list-style-type: none"> <li>• The pedestrian and cycle infrastructure should be extended and upgraded</li> <li>• provide storage, shower and changing facilities for cyclists within each building.</li> </ul>	<p>Pedestrian spine will be extended to the south from the existing end point which is consistent with the masterplan / Precinct Plan. Pedestrian pathways are proposed throughout the H&amp;WP and will connect with existing established paths.</p>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
	<p>Earlier concerns regarding pedestrian accessibility to the eastern side of Squires Way from the H&amp;WP has been resolved through the introduction of a signalised pedestrian crossing adjacent to the intersection of High Street and Squires Way. This is the strongest pedestrian desire line / shortest route to the key public domain areas and public recreation facilities. The signalised crossing is supported by TfNSW and Council's Traffic engineers.</p> <p>Pedestrian pathway to be extended along the western side of Squires Way from High Street to Puckey Avenue.</p> <p>End of trip facilities to be provided within individual buildings as required by Chapter E3 of the DCP; to be dealt with in the detailed DAs for the individual buildings.</p>	
<p><b>Rail Infrastructure</b></p> <ul style="list-style-type: none"> <li>The Innovation Campus is within the service area of the Fairy Meadow and North Wollongong railway stations. Connections between the Campus and rail services are achieved through a combination of walking (see Figure 26) or the 'Gong Shuttle' which has dedicated stops at the iC.</li> <li>The DCP refers to ways in which to improve rail accessibility however these are broader strategies that do not apply to individual applications.</li> </ul>	Noted.	Noted
<p><b>Parking Strategy</b></p> <ul style="list-style-type: none"> <li>Parking within Innovation Campus should be provided to satisfy the Campus demand diversity, including visitors, events, students, residential and staff.</li> <li>Provide parking at an average rate between 1 space per 40 to 80sqm of GFA. Note; at the 2013 review the ratio of spaces to GFA was 1 space per 60 sqm GFA (with development around 40% of the total permissible).</li> <li>Configure parking provision to provide adequate parking controls and enforcement regimes including: <ul style="list-style-type: none"> <li>i) Identified visitor parking.</li> <li>ii) Centralised staff parking.</li> </ul> </li> </ul>	<p>The proposal provides for parking across the H&amp;WP housed largely within screened podiums, and a proportion in at-grade or covered car park locations and within the new road network (on-street parking). The parking strategy plan forms part of Attachment 1.</p> <p>Parking strategy:</p> <ul style="list-style-type: none"> <li>Within the ILA buildings – parking will be provided within dedicated podium parking levels, to be sleeved or screened.</li> <li>RACF / CCF – at-grade parking areas within P5 and to the rear/ west of the building.</li> <li>CHB – at grade parking – either within P5 or new at-grade parking area to the east of the building (subject to SSDA)</li> </ul>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>iii) Secure reserved / allocated parking for staff and residents.</p> <p>iv) Parking bays for service vehicles, taxis, bus bays and the like.</p> <ul style="list-style-type: none"> <li>Provide parking spaces generally within development lots and / or in centralised locations such as Multi-Storey Car Parks. Temporary on-grade parking stations will be progressively reduced as the Campus is developed and land is utilised for development.</li> </ul>	<p>and the guidelines contained within the UDG.</p> <ul style="list-style-type: none"> <li>Replacement parking in northern parts of the campus to offset loss of parking spaces associated with the demolition of P3 and P4 – total 330 spaces (Part 5 approval). This will be conditioned as part of this DA to ensure parking availability prior to the parking areas being rendered inaccessible as a result of H&amp;WP construction.</li> <li>On-street parking for visitors which will comprise 89 spaces either parallel parking spaces or 90 degree parking.</li> <li>The applicant advised that the required quantum of parking will be provided in accordance with the relevant legislation and will be detailed in the future individual detailed DAs for each component. This will include bicycle and motorcycle parking provision.</li> <li>A breakdown of the required parking for each proposed land use based on the indicative designs has been provided demonstrating that the development can provide sufficient car parking in satisfaction of the relevant planning controls.</li> <li>Refer to SEPP (Seniors), Chapter E3 and childcare centre assessments.</li> </ul>	
<b>Part 12 Floodplain Management</b>		
<b>12.1 Flooding</b>		
<ul style="list-style-type: none"> <li>Set minimum floor levels for the ultimate development at iC at the 100 year ARI flood level + 0.9m freeboard (based on the results of the 2016 flood modelling).</li> <li>Incorporate flood compatible building materials for all structures at or below the 100 year ARI level + 0.9m freeboard.</li> <li>All internal roads to achieve trafficability during 100 year ARI storm events.</li> <li>Protect basement carparks from floodwater.</li> </ul>	<p>Detailed site-specific flood modelling has been undertaken and a site-specific flood study provided in support of the DA which specifies minimum floor levels for each component of the development; these have been reviewed by Council's Stormwater Engineer and were deemed satisfactory.</p>	Yes
<b>12.2 Flood Access and Evacuation</b>		
<p>Provide safe refuge within the site including:</p>	<p>Detailed site-specific flood modelling has been undertaken and a site-specific flood study provided in support of the DA which</p>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>i) Minimum floor levels set at 100 year ARI flood level + 0.9m freeboard.</p> <p>ii) Multi storey buildings with upper floor levels several metres above PMF.</p> <p>iii) The central section of the main pedestrian spine set at a minimum elevation equal to 100 year ARI flood level +0.9m freeboard.</p> <p><b>Part 13 – Heritage</b></p> <p><b>13.2 Aboriginal Archaeological Assessment</b></p> <ul style="list-style-type: none"> <li>Previous studies stated that there are no known Aboriginal heritage constraints to the proposed development.</li> <li>Stop works if any Aboriginal relics are identified during works.</li> </ul> <p><b>13.3 European Heritage - Brandon Park</b></p> <p>i) The peripheral landscape and stream shoreline to the site should be maintained and enhanced.</p> <p>ii) No activity or works should be allowed that would have a substantial detrimental effect on the significance, landscape and environmental qualities of the shoreline.</p> <p><b>13.4 European Heritage – Campus East</b></p> <p><b>Part 14 - Ecologically Sustainable Development</b></p> <p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>To incorporate into the Innovation Campus site, buildings and infrastructure best practice ESD strategies.</li> </ul> <p><b>Performance Guidelines</b></p> <ul style="list-style-type: none"> <li>Reduce CO2 emissions by applying energy efficient design principles and utilising low or zero carbon technologies; Reduce water use by</li> </ul>	<p>specifies minimum floor levels for each component of the development; these have been reviewed by Council's Stormwater Engineer and were deemed satisfactory.</p> <p>Noted. Due Diligence Assessment and Archaeological Assessment has been submitted with DA.</p> <p>Consultation with NSW Heritage and relevant Aboriginal community groups has been undertaken as part of the DA assessment.</p> <p>NSW Heritage has recommended conditions including the implementation of an unexpected finds protocol and staff induction around Aboriginal cultural heritage.</p> <p>No works are proposed in the vicinity of the shoreline. Development works are setback from riparian corridors in accordance with applicable controls.</p> <p>Not relevant to subject site.</p> <p>The DA was accompanied by a Sustainability Report which states that the project is proposing to exceed regulatory sustainability requirements (BASIX and Section J of the BCA) and outlines commitments of the project beyond minimum compliance. In this regard the applicant advises that it seeks to achieve a minimum of a 7 Star rating for the independent living units under the Green Building Council of Australia (GBCA) Green Star Design and As Built v1.3 rating tool, representing 'Australian Excellence' in</p>	<p></p> <p>Yes, with conditions</p> <p>Yes</p> <p>N/A</p> <p>Yes</p>

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>integrating water re-use strategies, efficient plant, appliances and fittings;</p> <ul style="list-style-type: none"> <li>• Reduce construction and demolition waste to landfill and enable in use recycling.</li> <li>• Increase the use of sustainable modes of transport;</li> <li>• Improve the capacity of the built structures to operate under the different and changing conditions predicted in the future;</li> <li>• Mitigate the risk of flooding and design for flood resilience;</li> <li>• Material selection that reduce the embodied lifetime environmental impacts.</li> <li>• Reduce unavoidable building related emissions.</li> <li>• Enhance the ecology and biodiversity of the iC by protecting existing habitat and by introducing new habitats for endemic flora and fauna.</li> <li>• Provide for a safer, more accessible, healthy and comfortable campus environment;</li> <li>• Develop a campus and built environment that reduces crime and adverse impacts on neighbours through design and good practice in construction and operation.</li> <li>• The Innovation Campus encourages the adoption of ESD rating tools.</li> <li>• All development in Stage 2, where practical, must be designed to have equal or better rating compared to the previous equivalent type of building / development constructed at iC (eg. Design ABGR of 4.0 Stars; Base building NABERS commitment of 4.5 stars;</li> <li>• Base building NABERS commitment of 4.5 star.</li> </ul> <p><b>Part 15 - Environmental Design and Management</b></p> <p><b>15.1 Acoustics</b></p> <p><b>Objectives</b></p> <p>a) To minimise the impact of the development on adjoining residential development.</p>	<p>sustainability. This will be detailed at future DA stages.</p> <p>Proposed strategies to be implemented include:</p> <ul style="list-style-type: none"> <li>• Good passive design reducing reliance on active heating / cooling and lighting.</li> <li>• Efficient air conditioning.</li> <li>• Latest lighting technologies and appropriate controls to common areas.</li> <li>• Demand controlled ventilation systems.</li> <li>• renewable energy generation from photovoltaics on site.</li> <li>• use of efficient fixtures and fittings;</li> <li>• collection and onsite re-use of non-potable water.</li> <li>• careful material selection.</li> <li>• native planting.</li> <li>• implementing water-sensitive urban design measures in the collection and treatment of stormwater runoff.</li> <li>• waste reduction strategy during construction.</li> <li>• increased use of sustainable modes of transport through provision of strong connections with nearby networks, provision of bicycle facilities and end of trip facilities;</li> <li>• mitigate the risk of flooding and design for flood resilience.</li> <li>• careful construction management to ensure no pollution incidents; minimise emissions in operations.</li> <li>• enhancement of the ecological values of the site by protecting and enhancing existing habitat.</li> </ul> <p>Individual building ratings will be undertaken at the DA stage for each of the buildings.</p>	
	<p>A Noise Impact Assessment was supplied which discusses the potential noise impact of the development upon the nearest affected noise-sensitive receivers and also the potential impacts of external noise sources on the proposed development. This included consideration of:</p>	Yes

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>b) To generally reduce the background acoustic levels within the site consistent with a campus environment.</p> <p><i>Performance Guidelines</i></p> <p>a) Noise levels at boundaries of the site should not exceed:</p> <p>i) Day 40dB(A);</p> <p>ii) Evening 38dB(A);</p> <p>iii) Night 35dB(A).</p> <p>b) Provide an acceptable acoustic environment.</p> <p>c) Demonstrate that external ambient noise from traffic, other buildings and adjoining properties has been considered in determining design details for buildings and site works.</p>	<ul style="list-style-type: none"> <li>noise from vehicle movements on Squires Way intruding into the habitable spaces within the proposed development;</li> <li>noise emissions from mechanical plant associated with the proposed development;</li> <li>noise emissions from the industrial area intruding into the development;</li> <li>noise emissions from the outdoor play area associated with the CCF and its impact on other development.</li> </ul> <p>The acoustic report includes indicative recommendations for noise mitigation measures where required to meet the relevant criteria provided. These measures will need to be detailed in the DAs for the individual buildings; some preliminary requirements are reflected in the Urban Design Guidelines.</p> <p>The proposed land uses in themselves are unlikely to result in excessive noise generation and any associated plant can be designed and installed in such a manner to reduce noise transmission within the campus or offsite.</p> <p>A detailed acoustic assessment of the CCF will be required to be provided with the detailed DA for this facility to ensure noise impacts from it on the surrounding noise-sensitive receivers are managed, including particularly the residents of the RACF who will utilise spaces immediately adjacent to the outdoor play areas.</p> <p>The acoustic report states that predicted noise from vehicle movements within the site will be negligible and will not increase noise already generated by traffic on Squires Way (15,000- 20,000 vehicle movements per day).</p> <p>Landscape mounds adjacent to the Squires Way/ High Street entry will assist in reducing noise transmission from the roadway to ILA Stage 2.</p>	
<b>Part 16 – Services Infrastructure</b>		
<i>Performance Guidelines</i>		
<p><i>Water (Sydney Water)</i></p> <ul style="list-style-type: none"> <li>The site will be serviced progressively utilising a new 150mm dia. Sydney Water Main installed within the iC</li> </ul>	<p>An Infrastructure Report was supplied with the DA which identified the existing utilities / infrastructure within the site and any expected impacts or required upgrades.</p>	Yes, with conditions



## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<p>services spine (adjacent Innovation Way) with connections to Sydney Water's external water main infrastructure.</p> <ul style="list-style-type: none"> <li>The internal Sydney Water Main will be a combined Fire and potable Water Service and each development lot will have their own dedicated connections.</li> </ul> <p><i>Electricity (Endeavour Energy)</i></p> <ul style="list-style-type: none"> <li>The site will be serviced progressively with EE infrastructure consisting of high voltage power lines and a series of substations.</li> <li>A high voltage back-bone will be installed within the iC services spine (adjacent Innovation Way).</li> <li>Ultimate development of the iC will require the augmentation of the existing supply arrangements via a dedicated HV feed from their Mount Ousley Zone Substation.</li> <li>Development sites are supplied with power from local pad mounted Endeavour Energy sub-stations.</li> </ul> <p><i>Communication Services</i></p> <ul style="list-style-type: none"> <li>A network of communication pathways shall be installed along the main services spines throughout the iC.</li> </ul> <p><i>Sewer (Sydney Water)</i></p> <ul style="list-style-type: none"> <li>A network of private sewer infrastructure will be installed throughout the iC to serve the developments.</li> <li>Sewer infrastructure is installed, to suit the staging of the development, within the main services spine (adjacent Innovation Way).</li> <li>The private sewer network discharges to the Sydney Water external sewer infrastructure in Squires Way.</li> </ul> <p><i>Gas (Alinta)</i></p> <p>a) A network of private gas infrastructure will be installed throughout the iC to serve the developments. The private infrastructure is connected to Alinta gas supplies at the site boundary.</p>	<p>Sydney Water and Endeavour Energy have been consulted and provided comments. No objection has been raised.</p> <p>Refer to discussion with regard to cl 28 of SEPP (Seniors) 2004 in the report re water and wastewater servicing.</p> <p>It will be necessary to obtain the necessary authority approvals prior to undertaking works on the site or in the vicinity of existing infrastructure in conjunction with the Tranche 1/ Stage 0 works proposed in this application and in relation to each of the detailed DAs for the individual buildings.</p>	

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

Standards/controls	Comment	Compliance
<b>Part 17 – Water Sensitive Urban Design</b>		
<i>Objectives</i>		
<p>The iC should:</p> <ul style="list-style-type: none"> <li>• Encourage a flexible strategy for water re-use in order to reduce demands on potable supply.</li> <li>• Provide at-source treatment solutions which target pollutants at an early stage within the urban water cycle.</li> <li>• Provide effective control of a range of diffuse urban pollutants including suspended solids, nutrients, heavy metals and oil and grease. There should be no net increase in pollutant loads resulting from the development.</li> <li>• Limit the transport of coarse debris and litter into waterways.</li> <li>• Encourage development of healthy natural aquatic systems through appropriate design of stormwater treatment wetlands. Integrate water quality controls into the built form to meet architectural and landscape objectives.</li> <li>• Minimise long term maintenance.</li> <li>• Balance capital costs against environmental benefits and ensure good environmental 'value for money' is achieved.</li> </ul>	<p>The submitted Stormwater Management Plan incorporates stormwater quality and water sensitive urban design measures which are to be implemented across the site.</p> <p>A number of water quality treatment measures are proposed:</p> <ul style="list-style-type: none"> <li>• Rainwater reuse tanks;</li> <li>• Permeable paving;</li> <li>• Bioretention raingardens; and</li> <li>• Gross pollutant traps.</li> </ul> <p>The results of the analysis shows that the proposed water quality treatment train will achieve the water quality targets. Conditions of consent are recommended in relation to this issue.</p>	Yes
<i>Performance Guidelines</i>		
<p><i>Clean water-</i> includes potable water from the reticulated supply system and run-off from 'clean' roof surfaces.</p> <ul style="list-style-type: none"> <li>• install water efficient fittings to all new buildings.</li> <li>• dual plumb new buildings to allow an alternative water source to be used for toilet flushing.</li> <li>• Treated (re-used) water plumbing to be extended in buildings to allow future connection to cooling towers.</li> <li>• wastewater or recycled water mains to be continued throughout the iC to allow future flexibility in alternative water source connections to each development.</li> <li>• Use captured rainwater for recycled use within buildings to reduce potable water consumption and improve water quality during storm events.</li> </ul>		

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p><b>Stormwater</b></p> <p>Expand and enhance the existing storm water treatment elements.</p> <p><b>Wastewater (Grey and Blackwater)</b></p> <ul style="list-style-type: none"> <li>guidelines for further development shall include a focus on re-use of rainwater for toilet flushing / cooling tower make up purposes rather than grey water reuse;</li> <li>The UOW will update the analysis on sewer mining in the future to see the impact on the revised Legislation.</li> </ul>		
<b>Part 18 – Lifestyle Health</b>		
<p><b>Performance Guidelines</b></p> <p>Provide a walking / jogging track; opportunities for informal group recreation such as half-court basketball; playing fields.</p> <p>Provide staff facilities including lockers for clothing / shoes to encourage staff to cycle to / from work; showers; bike lockers; filtered water drinking fountains; healthy food options; condom vending machines and provide medical services on-site.</p>	<p>Pedestrian network will be extended to service the H&amp;WP and to integrate it with the broader network within the existing IC and that on the eastern side of Squires Way. This will encourage active lifestyle choices to be made. The provision of a signalised intersection at the intersection of High Street and Squires Way will provide a safe and direct crossing point for residents, workers and visitors to access the main pathway on the eastern side of Squires Way.</p> <p>Detailed DAs will be required to incorporate end of trip facilities for workers.</p>	Yes
<b>Part 19 - Disabled Persons' Requirements</b>		
<ul style="list-style-type: none"> <li>Site and building development must comply with the Disability Discrimination Act 1992 (DDA), BCA and applicable Australian Standards.</li> </ul>	<p>Compliance with the NCC and applicable standards be required to be demonstrated in detailed DAs for each built component.</p> <p>An accessibility report has been provided with the DA which confirms that the concept design will provide equitable inclusive access for site users in a manner that is consistent with the relevant requirements of the DDA, NCC, SEPP (Seniors) 2004 and WDCP 2009.</p>	Yes
<b>Part 20 – Forward Planning</b>		
<p><b>Forward Planning Strategy</b></p> <ul style="list-style-type: none"> <li>The UOW co-ordinate the planning and implementation of the works in accordance with the staging outlined in section. 5. The Forward Planning</li> </ul>	<p>Noted. The proposed development will result in the overall development of the Campus exceeding the 95,000sqm GFA trigger for the review of the masterplan.</p>	Review to commence

## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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<p>Strategy is linked to the following stages of development:</p> <p><i>Total Development (GFA sqm)</i></p> <p>55,000m2 Stage 1 - Complete</p> <p>95,000m2 Stage 2</p> <p>135,000m2 Stage 3 (Ultimate)</p> <p>Section 19.2 identifies the general order of works as a notional staging strategy.</p>	<p>The UOW and WCC have commenced discussions around the review of the Master plan.</p> <p>Agreement has been reached between WCC and UoW on a program for progressing the DCP review as a priority.</p>	
<b>20.2 Notional Staging Strategy</b>		
<p><i>Performance Guidelines</i></p> <ul style="list-style-type: none"> <li>The project should be developed from the centre outwards and should not occur randomly over the site.</li> <li>Services and site infrastructure works should proceed to meet building requirements. It is not proposed to complete all roadworks or landscaping to the site in the early stages for example.</li> <li>The Transport and Access Strategy must be reviewed and updated match the impacts of the development and Staging.</li> <li>The iC should generally be developed in accordance with the notional staging strategy indicated below.</li> </ul>	<p>The development of the southern portion of the Campus will generally proceed from north to south (ie. from the centre outward). A staging plan and construction management plan has been provided with the DA outlining the proposed program of works/ staging of the development. See Attachment 1.</p> <p>As detailed in the report, this DA seeks consent for the 'Stage 0' works. Detailed Das will be required for all subsequent stages of the development, each of which are required to be consistent with this Concept DA inclusive of the UDG.</p> <p>The staging plan in the CMP generally follows the notional staging plan outlined in the DCP and provides for a logical sequence of works and provision of required services to support the development – eg, provision of intersection works, accessible pedestrian pathways and a large portion of the Green Heart before occupation of any of the seniors housing components.</p>	Yes

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Standards/controls	Comment	Compliance
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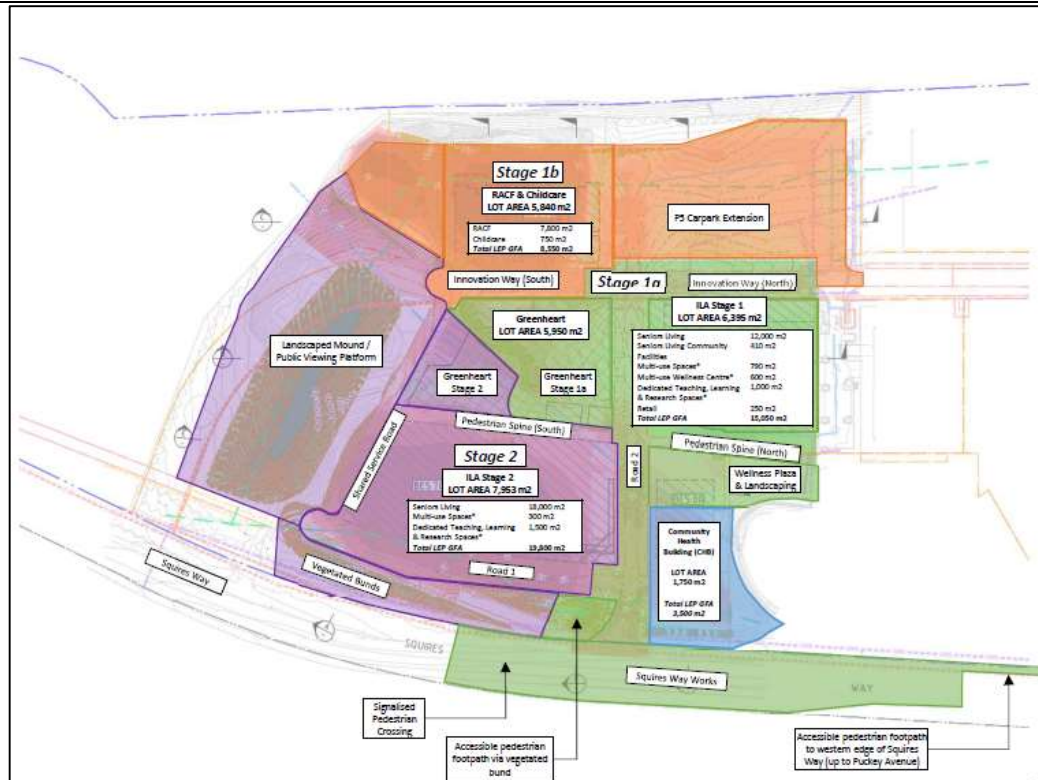
### Proposed Staging Plan

Initial Stage 0 works area for which consent is sought in this DA:



## Attachment 6 - Wollongong DCP 2009 - Chapter 14 – Innovation Campus Assessment

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Stage	Description
<b>Stage 1a</b> 	<ul style="list-style-type: none"> <li>ILA Stage 1</li> <li>Greenheart Stage 1a</li> <li>Road 2 &amp; Innovation Way (North)</li> <li>Pedestrian Spine (North)</li> <li>Wellness Plaza &amp; Landscaping adjacent existing Lake</li> <li>Squires Way Works</li> </ul>
<b>Stage 1b</b> 	<ul style="list-style-type: none"> <li>RACF / Childcare</li> <li>Chain of Ponds Extension</li> <li>Innovation Way (South)</li> <li>P5 carpark extension</li> </ul>
<b>Stage 2</b> 	<ul style="list-style-type: none"> <li>ILA Stage 2</li> <li>Greenheart Stage 2</li> <li>Road 1 and Shared Service Road</li> <li>Pedestrian Spine (South)</li> <li>Landscaped Mound / Public Viewing Platform</li> <li>Vegetated Bunds</li> </ul>
<b>CHB under Future SSDA</b> 	<ul style="list-style-type: none"> <li>Community Health, Teaching and Research Spaces</li> <li>Landscape Buffer</li> </ul>