



Your reference: SSD 5346; SSD 5347; SSD 5349
Our reference: ECM 3804935
Contact: Robert Craig
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21 December 2012

Ms Denise Robertson
Major Projects Assessment
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Robertson

State Significant Development Applications for Stages 2B and Stage 2C (SSD-5346), Stage 2D (SSD-5347) and Stage 3B (SSD-5349) of the North Penrith Mixed-Use Development.

I refer to the Department's letter dated 19 November 2012 seeking comment from Penrith City Council regarding the subject State Significant Development Applications.

Council officers have reviewed the Environmental Impact Statements and accompanying plans and reports submitted with the applications. Comments and recommended conditions of consent in relation to key assessment issues for the proposals are detailed in Attachment 1 to this letter.

It is strongly recommended that the key assessment issues are addressed prior to determination of the applications and that the recommended conditions of consent are imposed should approval of the applications be granted.

Thank you for providing Council with the opportunity to comment on these proposals. Should you require any further information or would like to discuss the matters raised in Council's submission further, please do not hesitate to contact me on (02) 4732 7593.

Yours sincerely

Robert Craig
Principal Planner

Attachment 1	
Access, Traffic and Transport	- The proposed right turn bay length on Grace Drive for the turning movement onto Castlereagh Road should be extended to cater for traffic growth. It is expected that the current storage is insufficient and the North Penrith development will generate a need for extended turning provision. In this regard, the current median should be fully utilised to cater for traffic growth. - It is unclear if a shared path is provided on Thornton Drive into the estate. A minimum 2.5m wide shared path is required connecting the existing Grace Drive to Thornton Drive. It is preferable that this is provided on the northern side. - There is maintained concern that the intersection of Combewood Avenue and Thornton Drive will not cater for short to medium term traffic volumes. Due to the position and state road access, a give-way controlled median island arrangement is not considered sufficient. The proposed treatment is more suited to local traffic arrangements and not significant collector roads intersecting adjacent to a significant development. A roundabout controlled intersection should be provided in order to cater for traffic growth of the development and to provide adequate residential amenity. - While the intersection works at Castlereagh Road and Peachtree Road will cater for traffic within the southern catchment, the demand from the north cannot be neglected. As such, the creation of a right turn bay from Richmond Road into Coreen Avenue and the installation of a seagull treatment on Coreen Avenue at the eastern intersection with Coombes Drive is requested up front, to cater for anticipated traffic movements associated with the development.
Water Cycle Management	<u>General Matters</u> - The development shall be undertaken in accordance with the proposed management actions outlined in the 'North Penrith Stages 2B-3B Water Cycle Management Strategy Report Incorporating Water Sensitive Urban Design Techniques' dated 17 October 2012 and prepared by J. Wyndham Prince. <u>Gross Pollution Traps (GPTs)</u> - Six GPTs are proposed however there are no details on the type or sizing of them. It is recommended that they are not visible (i.e. below ground or in inconspicuous locations) and that access for maintenance is appropriate for Council's maintenance fleet. Design considerations should include, but not be limited to, the following: - All GPTs should be sized to ensure that they can treat the 3 month to 1 year ARI flow. - As the GPTs are to be designed for the pre-treatment

of a wetland, it is important that they be designed to remove coarse sediment loads.

- All GPTs should be designed to ensure that there is no risk of increased flooding upstream of the GPT.
- Council should be given an opportunity to review and approve the proposed GPTs so that consideration of the life cycle costs and maintenance issues can be made. The proponent should provide Council with a detailed operation and maintenance manual which includes estimated costings.

Channel

- The proposed channel is designed to provide a stormwater detention and a treatment function as well as provide some aesthetic value for the site. It is considered that the channel will have limited water quality benefits due to its design and lack of vegetation.
- There is likely to be an issue with sedimentation of the channel which will ultimately result in long term management issues with regards to algae growth. Detention ponds such as the one proposed are commonly associated with algae management and unwanted vegetation management issues. The proposed water reticulation system and reliability of aerators will be critical to the effective management of the canal and failure would likely result in management issues.
- The channel is also likely to act as a sediment basin. As such, it will be essential that adequate access be provided for maintenance and to remove sediment and other materials. Consideration for removing floating litter and other waste material should also be made during the detailed design stage and factored into the final construction of the channel.
- A detailed operational and management manual for the operation of the pumps, aerators, reticulation systems and management of the canal should be submitted to Council for approval before the handover of the assets.

Wetland

- To ensure that the macrophyte zone functions efficiently, flows that pass through the vegetation must be evenly distributed. Dense vegetation growth is required to dissipate flows and to support efficient filtration. Flow and water level variations and maximum velocities are important considerations and can be controlled with an appropriate outlet structure.
- To ensure design performance, the wetland should also be constructed so that a detention time of 72 hours is achieved. As such, the macrophyte zone outlet orifice must be sized accordingly. In order to demonstrate that adequate detention time is achieved within the wetland, monitoring should be undertaken to assess the performance of the wetland during the three year period prior to handover to Council.

- The wetland should also be constructed and managed to eliminate mosquito habitat and to encourage mosquito predators. Details of the proposed management strategies should also be provided in the operation and maintenance plan.
- Adequate access should be provided to ensure that maintenance of the wetland can be undertaken. A detailed operation and maintenance plan should be developed and it should outline how operation and maintenance issues have been appropriately considered in the development of the WSUD strategy.

Water Quality Monitoring Program

- In order to ensure that the stormwater treatment system is adequately meeting its objectives, a water monitoring program should be developed and implemented during the period prior to the handover of assets to Council. The program should include monthly sampling and regular reports should be furnished to Council. Prior to implementation, the proposed water monitoring program should be referred to Council for approval. The program should provide sufficient data to adequately monitor the performance of the treatment system against its objectives and inform the management of the system. At a minimum, the following indicators should be considered when developing the program:
 - Microbiological faecal indicators.
 - Field physico-chemical sampling including temperature profiles.
 - Nutrient/metal concentration sampling.
 - Algae sampling.
 - Flow distribution and retention times in the wetland.
 - Regular visual monitoring program.

Operation and Maintenance Plan

- An operation and maintenance plan which includes details on the proposed water quality monitoring program should be provided to Council for consideration and approval prior to the handover of the assets to Council. The maintenance manual shall include details and checklists on the following:
 - Site description (area, imperviousness, land use, annual rainfall, topography, etc).
 - Site access description.
 - Likely pollutant types, sources and estimated loads.
 - Locations, types and descriptions of measures proposed.
 - Operation and maintenance responsibility.
 - Inspection methods.
 - Maintenance methods (frequency, equipment and personnel requirements).
 - Landscape and weed control requirements.
 - Mosquito management.
 - Algae monitoring and management.
 - Operation and maintenance costs.

	○ Waste management and disposal options. ○ Reporting. ● With regards to the hand over of the assets to Council, a minimum of 3 years should be given to ensure that the wetland and related infrastructure is functioning in a satisfactory manner.
Environmental Matters	<u>Land Contamination</u> ● As outlined in the Environmental Impact Statements for the proposals, a Site Auditor's Statement has been issued for the North Penrith development as part of the approved Concept Plan, confirming that the site is suitable for the proposed development. It did however highlight that further investigations are required to demonstrate that individual stages are appropriate for their intended future use. ● Geotechnique was engaged to undertake the further assessments to determine the suitability of individual sites for the proposed land uses and to recommend any further assessments, investigations and/or actions to be undertaken during construction. Geotechnique concluded that the site is suitable for its intended use and that the development can meet its obligations under the legislation by: ○ Continuation of Site Auditor involvement. ○ Establishing an Unexploded Ordnance Protocol. ○ Establishing an Unexpected Finds Protocol. ○ Undertaking further contamination assessment after removal of the existing roads and concrete slabs. ○ Undertaking remediation and validation pursuant to an unexpected find or contamination found after removal of roadways. ○ Managing any ash/coal materials. ○ The beneficial re-use of crushed asphalt. ● In consideration that the development has a number of contamination protocols in place and that the overall issues of contamination will be overseen by a Site Auditor, no concerns are raised in relation to land contamination for this development. <u>Noise</u> ● In relation to noise and vibration issues during construction, these are dealt with through the provisions of the adopted Construction Environmental Management Plan for the development. However, in relation to noise impacts more generally, information appears to be lacking in relation to the following: ○ Noise impact assessments and recommendations relating to road traffic noise (from the new internal roadways) on future dwellings within the development. Due to the density of the development it could be assumed that the dwellings on the main roadways within the development could be impacted by road noise.

	○ Noise impact assessments and recommendations relating to railway noise on future dwellings within the development. ● It is noted that these aspects were addressed to some degree in the overall Concept Plan, however clarification should be provided on how road and railway noise is going to be managed for the future dwellings and buildings within this development. <u>Environmental Management During Construction</u> ● The Environment Impact Statements for the proposals provide a detailed Construction Environmental Management Plan (CEMP). The CEMP is comprehensive and satisfactorily addresses the key environmental management aspects of the development. However, the following concerns are raised: ○ During construction of previous stages of the development, Council has received reports that following storm events the site dewater heavily sediment laden water into the stormwater system. This practice is not considered appropriate or in line with best management practices. The CEMP fails to address what actions the developer intends to take if the development's sediment ponds and water catchments become full with sediment laden water. Additional procedures should be added to the CEMP to address this issue. ○ The CEMP indicates that regular environmental audits will be undertaken as part of the CEMP, however it was not indicated how often these would be undertaken. Further clarification needs to be provided on how often these audits will be undertaken. <u>Land Use Conflict – Residential Dwellings & Fuel Storage Depot</u> ● Council has previously raised concern regarding a potential conflict between the proposed residential dwellings on the north-west part of the site and the adjoining Mobil fuel storage depot. There does not seem to be any information or assessment of the potential risk the fuel storage depot might pose to these houses.
Public Health Matters	● Given the proposed recreational areas, there is the potential for temporary events involving the sale of food to be carried out. A condition in relation to temporary food stalls and mobile food vendors should therefore be imposed (see below). ● It is noted that water drinking fountains are proposed for the site. A condition should therefore be imposed to ensure that the water from these fountains is potable and the fountains are maintained in good working order and in a clean condition (see below). ● It is also noted that there will be aeration devices as part of the water feature. The applicant should consider the

	potential for legionella dispersal in aerosols in the construction and operation of these devices. - Recommended conditions include the following: - The construction and operation of any temporary food outlet or mobile food vending vehicles shall be carried out in accordance with the requirements of the Food Act 2003, Food Regulation 2010, Food Safety Standards under the Australian and New Zealand Food Standards Code and the current guidelines for temporary events produced by the NSW Food Authority. Operators of temporary food outlets and mobile food vending vehicles must complete and return Penrith City Council's "Application to Sell Food" form at least 14 days prior to operating. Solid and liquid waste storage and disposal must be carried out in accordance with the Food Act 2003, Local Government Act 1993 and Protection of the Environment Operations Act 1997. - Drinking water fountains must be supplied with potable water in accordance with the current Australian Drinking Water Guidelines. The fountain and associated equipment must be maintained in good working order and cleaned as part of a regular cleaning schedule. - The water feature shall be designed and maintained to prevent the proliferation and dispersal of legionella bacteria. The aeration devices shall be designed to produce coarse water droplets to minimise aerosol formation and prevent the dispersal of legionella bacteria. The operation and maintenance plan shall include strategies for the control of legionella proliferation and dispersal.
Safety, Security, Crime Prevention	<u>General Matters</u> - Residential lot designs should provide natural surveillance of rear laneways by ensuring buildings have windows facing the laneways and public spaces. <u>Stages 2B & 2C</u> <i>Water's Edge</i> - Surfaces throughout (stairs, retaining walls, promenade, etc) shall be anti-graffiti coated or made of materials suitable for graffiti removal (i.e. surfaces that won't erode if high pressure cleaned). It is noted that some sandstone clad walls are proposed. These present a challenge in terms of graffiti removal and erosion and they should be appropriately anti-graffiti coated. - Pedestrian walkways shall provide good sight lines and be clear of obstruction to maximise natural surveillance and minimise entrapment spots or opportunities to hide. As the walkways will be at a lower elevation to the adjacent street, clear sight lines down the slope of the land are critical.

- If walkways are intended for night time use, adequate pedestrian level lighting will be required.
- All vegetation alongside pedestrian networks shall have high canopies or be low in height to maximise surveillance.
- Clear definition and good access control between public space and residential space is important, particularly where the boundaries are close.

The Common (Main Wetland)

- Surfaces throughout shall be anti-graffiti coated or made of materials suitable for graffiti removal (i.e. surfaces that won't erode if high pressure cleaned).
- Pedestrian walkways shall provide good sight lines and be clear of obstruction to maximise natural surveillance and minimise entrapment spots or opportunities to hide.
- If walkways are intended for night time use, adequate pedestrian level lighting will be required.
- All vegetation alongside pedestrian networks shall have high canopies or be low in height to maximise surveillance.
- All shelters shall be located in positions with good surveillance from surrounding properties as they have a tendency to attract congregations of people after hours which is often linked with antisocial behaviour. Maintaining surveillance is important, however when located too close to residential homes they can also become a nuisance. It is therefore important to achieve the right balance and not have them placed close to fence lines, etc.
- All public furniture (benches, barbeques, etc) shall be made of durable, vandal resistant materials.

Public Art

- The proposed public art is to be as vandal resistant as possible with anti-graffiti coating applied.

Stage 2D

Howell Park

- Surfaces throughout shall be anti-graffiti coated or made of materials suitable for graffiti removal (i.e. surfaces that won't erode if high pressure cleaned).
- Pedestrian walkways shall provide good sight lines and be clear of obstruction to maximise natural surveillance and minimise entrapment spots or opportunities to hide.
- All vegetation throughout the park shall have high canopies or be low in height to maximise surveillance.
- The sunken plaza is anticipated to become a popular congregation area after hours. Good sight lines to the plaza from all sides of the park will be important to provide opportunities for natural surveillance.
- The park closely bounds residential lots on one side. Access control measures and clear boundaries will be

	important to restrict unauthorised access. <u>Stage 3B</u> <i>Radcliffe Place</i> • Surfaces throughout shall be anti-graffiti coated or made of materials suitable for graffiti removal (i.e. surfaces that won't erode if high pressure cleaned). • Pedestrian walkways shall provide good sight lines and be clear of obstruction to maximise natural surveillance and minimise entrapment spots or opportunities to hide. • All street side vegetation shall have high canopies or be low in height to maximise surveillance.
Social Planning Matters	<u>Housing Assessment Report</u> • In addressing the Director General's Requirements with regard to affordable housing, Landcom has committed to deliver 44 affordable housing dwellings, 44 adaptable housing dwellings and 100 dwellings for older people at the North Penrith site. • All of the above commitments are welcomed as the availability of these housing stocks will address some of the housing needs of Penrith. <u>Housing for Older People</u> • No objection is raised to the proposed delivery approach which involves Landcom selecting an aged housing provider at the next stage of planning. Council supports the idea that the size and specific location of the site for aged housing will depend on the housing and care delivery model of the selected provider. • Council's Community and Cultural Development staff has ample knowledge and understanding of the housing needs of older people in Penrith and would welcome the opportunity to work closely with Landcom during the planning process. The expertise and local knowledge of Council staff will assist Landcom in achieving the best outcome for the project. <u>Affordable Housing</u> • The delivery of 44 affordable rental dwellings in North Penrith to be managed by a community housing provider is supported. It is recommended that the 44 affordable housing dwellings will be different housing types to suit the diverse housing needs of families. • The location and distribution of these 44 dwellings need to be carefully considered. It is strongly recommended that the dwellings be evenly distributed and located across the whole development. The concentration of all of these dwellings within one location is not recommended.
Public Art	<u>Structural Details</u> • The public art works will require foundation and structural

	engineering details for approval. <u>Glass Elements</u> • Non-fading pigments and colours are to be fused into the glass. • Laminated toughened glass is to be used. • Access to replacement glass is to be available if required. • Replacement glass elements are to be made available in the original order. • All work health and safety issues are to be addressed. • All maintenance is to be carried out in a timely manner. • Before handover to Council, all public art works are to be inspected by Council officers for final sign off. Any maintenance required at this time is to be carried out by Landcom and the commissioned artists.
Waste Management	• In relation to future bin collection from in front of Lot 2327 Laimbeer Place, while turning circles for heavy rigid vehicles have been provided at the end of the street, a garbage truck may not be able to access bins if presented in front of this lot. The truck lifters are located near the cabin of the truck at the front left side meaning that the truck may not be able to reverse back to a point to access the bins.
Flooding	• The Department is reminded of Council's submissions regarding the proposal to alter the approved Penrith Lakes Scheme, particularly the reduction in the number of interface weirs. Council has urged the Department to ensure that the delivery of the Penrith Lakes Scheme does not compromise the Flood Planning Levels for surrounding lands including those that have been established for the North Penrith site. It is critical that this issue is taken into account as part of any project approval relating to these stages of the North Penrith development.
Engineering Matters	• One corner of the Coreen Avenue roundabout is to be widened to accommodate turning for large vehicles. The boundary of the Mobil fuel storage depot site encroaches into the vicinity of this area and hence some land acquisition is required to widen the corner of the roundabout. • Recommended conditions include the following: ○ All road works, drainage works and dedications required to effect the development shall be undertaken at no cost to Penrith City Council. ○ A Stage 3 (detailed design) Road Safety Audit (RSA) shall be undertaken on the proposed road works by an accredited auditor who is independent of the design consultant. A copy of the RSA shall accompany the design plans submitted with the Construction Certificate application. Prior to the issue of a Construction Certificate, the Certifying Authority shall ensure that the

	recommendations of the RSA have been addressed in any plans approved with the Construction Certificate. ○ Stormwater run-off from parking and uncovered paved areas shall be directed to a stormwater pre-treatment system. The treatment devices shall be designed to remove expected pollutant loadings in accordance with the "Managing Urban Stormwater – Environmental Targets/Treatment Techniques – October 2007" publication. Any Construction Certificate issued by the Principal Certifying Authority or Certifying Authority shall incorporate: ▪ Specification and installation details of the stormwater pre-treatment system. ▪ The approval of an operation and maintenance manual/ schedule for the proposed device. A copy of the approved operation and maintenance manual/schedule shall be submitted to Penrith City Council with notification of the Construction Certificate issue. ○ Erosion and sediment control measures shall be installed prior to the commencement of works and be maintained until all disturbed areas have been rehabilitated and stabilised. ○ All filling shall be undertaken in accordance with AS 3798 and Penrith City Council's Design Guidelines and Construction Specification for Civil Works. The level of testing shall be determined by the Geotechnical Testing Authority/Superintendent in consultation with the Principal Certifying Authority. ○ Soil testing is to be carried out to enable each lot to be classified according to AS 2870 "Residential Slabs and Footings". ○ Prior to the issue of a Subdivision Certificate, the Certifying Authority shall ensure that all works within the road reserve have been inspected and approved by Penrith City Council. ○ After completion of all civil works, works-as-executed drawings and compliance documentation shall be submitted to the Certifying Authority in accordance with Penrith City Council's Design Guidelines and Construction Specifications for Civil Works. An original set of works-as-executed drawings and copies of compliance documentation shall also be submitted to Penrith City Council with notification of the issue of the Subdivision Certificate where Council is not the Certifying Authority. ○ Prior to the issue of a Subdivision Certificate, the Principal Certifying Authority shall ensure that the on-site detention systems and stormwater pre-treatment systems: ▪ Have been satisfactorily completed in accordance with the approved Construction Certificate and the requirements of this consent. ▪ Have met the design intent with regard to any
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	construction variations to the approved design. ▪ Any remedial works required to be undertaken have been satisfactorily completed. Details of the approved and constructed systems shall be provided as part of the works-as-executed drawings. ○ Prior to the issue of a Subdivision Certificate and installation of regulatory/advisory line marking and signage, plans are to be lodged with Penrith City Council and approved by the Local Traffic Committee. Notes: a. Contact Penrith City Council's Development Engineering Unit on (02) 4732 7777 for further information on this process. b. Allow eight (8) weeks for approval by the Local Traffic Committee. ○ Prior to the issue of a Subdivision Certificate, street signs are to be erected at road intersections. Note: Proposed road names can be selected from an approved list. An application for other names, in accordance with Penrith City Council's Street Naming Policy, can also be made. The regulations imposed under the Roads Act require that the proposed road names are advertised on two occasions; firstly as a proposal and secondly as an official naming. This process means that you must pay the required advertising fee to Council before Council can commence this process. Applications for road naming should be made as soon as possible to ensure that this process does not delay the issue of a Subdivision Certificate. ○ Prior to the issue of a Subdivision Certificate, a bond for the final layer of outstanding asphalt works (AC Bond) is to be lodged with Penrith City Council. The final layer of asphalt on all roads shall not to be placed without the written consent of Council (consent will generally be provided when 80% of the housing within the subdivision has been completed). The value of the bond shall be determined in accordance with Penrith City Council's Bond Policy. The bond will be administered in accordance with this policy. Note: Contact Council's Development Engineering Unit on (02) 4732 7777 for further information relating to bond requirements. ○ Prior to the issue of a Subdivision Certificate, a maintenance bond is to be lodged with Penrith City Council for civil works. The value of the bond shall be determined in accordance with Penrith City Council's Bond Policy. The bond will be administered in accordance with this policy. Note:
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	Contact Council's Development Engineering Unit on (02) 4732 7777 for further information relating to bond requirements. ○ Prior to the issue of a Subdivision Certificate, the following compliance documentation shall be submitted to the Certifying Authority. A copy of the following documentation shall be provided to Penrith City Council where Council is not the Certifying Authority. a. Work-as-executed (WAE) drawings of all civil works. The WAE drawings shall be marked in red on copies of the stamped Construction Certificate drawings and signed, certified and dated by a registered surveyor or the design engineer. The WAE drawings shall be prepared in accordance with Council's Design Guidelines. b. The WAE drawings shall clearly indicate the 1% Annual Exceedance Probability flood lines (local and mainstream flooding). c. The WAE drawings shall be accompanied by plans indicating the depth of fill for the entire development site. The plans must show, by various shadings or cross hatchings, the depth of any fill within 0.3m depth ranges. d. CCTV footage in DVD format to Council's requirements and a report in "SEWRAT" format for all drainage within future public roads and public land. Any damage that is identified is to be rectified in consultation with Penrith City Council. e. Surveyor's Certificate certifying that all pipes and services are located wholly within the property or within appropriate easements and that no services encroach boundaries. f. Documentation for all road pavement materials used demonstrating compliance with Council Design Guidelines and Construction Specifications. g. A Geotechnical Report certifying that all earthworks and road formations have been completed in accordance with AS 3798 and Council's Design Guidelines and Construction Specifications. The report shall include: • Compaction reports for road pavement construction. • Compaction reports for bulk earthworks and lot regrading. • Soil classification for all residential lots. • Statement of Compliance. h. Structural Engineer's construction certification of all structures.
Subdivision Matters	• Penrith City Council shall be appointed as the PCA for the subdivisions and related works. • Recommended conditions include the following: ○ The development shall be implemented in accordance

	with the submitted plans and documentation and the proposed mitigation measures. ○ Retaining walls on sloping lots shall be stepped to reduce retaining wall heights. ○ Service authority clearances shall be submitted to the Certifying Authority prior to the issue of a Subdivision Certificate, including a Section 73 Compliance Certificate, Notification of Arrangement Certificate and telecommunications infrastructure provisioning certificate. ○ The Subdivision Certificate applications shall be accompanied by an 88B instrument addressing residue lots, maintenance easements for zero lot line construction, inter-allotment drainage easements, acoustic controls and the like. ○ Prior to the issue of a Subdivision Certificate, the subdivision which precedes the proposed subdivision shall be registered. ○ Prior to the issue of a Subdivision Certificate, applicable Section 94 Contributions for District Open Space Facilities shall be paid to Penrith City Council.
Landscape and Public Domain	<u>Stages 2B & 2C</u> • A maintenance plan shall be provided for any Construction Certificate approval for landscape elements for general maintenance and asset renewal purposes. Costs should also be included. • In relation to the Castlereagh Road intersection works, removal of screen planting to provide a shared cycleway should include a replacement treatment of the vegetated screening effect currently achieved to the sub-station site. The visual amenity of this intersection and gateway to the CBD is a part of Council's vision and screening has been negotiated and achieved with through prior development approvals. • There are no details provided of the upgrade of the existing Coreen Avenue roundabout. • Street cross sections are inconsistent with Council standards. The inconsistency relates to 1.2m versus 1.5m path widths in narrow verge widths (3.6m). Council's standard is 1.5m however this path in a 3.6m verge means there is insufficient space for street trees. Also, there are both 3.8m and 3.9m verge widths. • Street trees should take into account and not compromise the levels of lighting from street lights. • In relation to Water's Edge, details of tree species and their planting method are required for Council's assurance that the root zones of the maturing trees will not damage retaining wall, planter wall, canal wall and path infrastructure. • Fencing details should be provided. Council requires assurance that opportunities for graffiti are minimised and surrounding and streetscape amenity is not compromised by the height and scale of fencing.

- Combewood Avenue may not require a footpath on the western side, south of Thornton Drive, as it will not connect to an existing path at the Fire Museum site (part of the recently completed commuter car park project). The design for Combewood Avenue should integrate with existing conditions adjacent to the car park site in terms of street tree species and paths and shared cycleways.
- The Woodrow Way median requires detailed consultation with Council with respect to plant species and effective and safe maintenance practices.
- Council generally supports a mix of native and exotic species. With the over-dominance of exotics proposed, Council requests more native species be included in the planting palettes for the development. This will respond to the locality, assist native birdlife and add to biodiversity generally.
- More detail is required in relation to the materials palette. Of particular interest are pavement materials. Specifications and construction details require Council sign off and are also required for asset renewal and maintenance programs. Alternative materials to timber for the boardwalk and deck are to be considered. Council consistently encounters fire vandalism to timber structures in the LGA.
- In relation to the furniture palette, Council does not support lighting bollards (ineffective lighting levels and vandalism). Bollards should include luminance contrast strips (as required by AS 1428). An adequate proportion of seats with backs should also include arm rests. Council does not support timber as a material used in shelters (fire vandalism). Throughout the LGA, Council has adopted and is implementing stainless or galvanised steel circular hoops as attachments to street posts as a form of cycle rack and this should be considered for North Penrith.

Stage 2D

- A maintenance plan shall be provided for any Construction Certificate approval for landscape elements for general maintenance and asset renewal purposes. Costs should also be included.
- Street cross sections are inconsistent with Council standards. The inconsistency relates to 1.2m versus 1.5m path widths in narrow verge widths (3.6m). Council's standard is 1.5m however this path in a 3.6m verge means there is insufficient space for street trees. Also, there are both 3.8m and 3.9m verge widths.
- Fencing details should be provided. Council requires assurance that opportunities for graffiti are minimised and surrounding and streetscape amenity is not compromised by the height and scale of fencing.
- Council generally supports a mix of native and exotic species. With the over-dominance of exotics proposed, Council requests more native species be included in the

	planting palettes for the development. This will respond to the locality, assist native birdlife and add to biodiversity generally. • Street trees should take into account and not compromise the levels of lighting from street lights. • More detail is required in relation to the materials palette. Of particular interest are pavement materials. Specifications and construction details require Council sign off and are also required for asset renewal and maintenance programs. • In relation to the furniture palette, Council does not support lighting bollards (ineffective lighting levels and vandalism). Bollards should include luminance contrast strips (as required by AS 1428). An adequate proportion of seats with backs should also include arm rests. Council does not support timber as a material used in shelters (fire vandalism). Throughout the LGA, Council has adopted and is implementing stainless or galvanised steel circular hoops as attachments to street posts as a form of cycle rack and this should be considered for North Penrith. • Use of the name Howell Park could cause confusion with Howell Oval in Penrith. • Howell Park should employ Council's inclusion principles, e.g. the sunken plaza should be accessible and there should provision of space for wheelchairs adjacent to other seating, for inclusive community interaction. • A screening treatment is considered a requirement to minimise the visual impact of the raised filled site and retaining wall up to 1.5m along the boundary with the Mobil fuel storage depot site. Drainage, anti-graffiti coating and fencing (top of wall) details are to be provided for the retaining wall. • Howell Park employs a very similar palette of materials and park elements to other parks in the development. Consideration should be given to place making through public art in this park. <u>Stage 3B</u> • A maintenance plan shall be provided for any Construction Certificate approval for landscape elements for general maintenance and asset renewal purposes. Costs should also be included. • Street cross sections are inconsistent with Council standards. The inconsistency relates to 1.2m versus 1.5m path widths in narrow verge widths (3.6m). Council's standard is 1.5m however this path in a 3.6m verge means there is insufficient space for street trees. Also, there are both 3.8m and 3.9m verge widths. • Fencing details should be provided. Council requires assurance that opportunities for graffiti are minimised and surrounding and streetscape amenity is not compromised by the height and scale of fencing. Of particular interest is the southern boundary, backing onto the commuter car
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	park. Additional screen planting is recommended to supplement existing planting for an effective vandal resistance and amenable interface. • Council generally supports a mix of native and exotic species. With the over-dominance of exotics proposed, Council requests more native species be included in the planting palettes for the development. This will respond to the locality, assist native birdlife and add to biodiversity generally. • Street trees should take into account and not compromise the levels of lighting from street lights. • More detail is required in relation to the materials palette. Of particular interest are pavement materials. Specifications and construction details require Council sign off and are also required for asset renewal and maintenance programs. • Furniture palette – Council does not support lighting bollards (ineffective lighting levels and vandalism). Bollards should include luminance contrast strips (as required by AS 1428). An adequate proportion of seats with backs should also include arm rests. Throughout the LGA, Council has adopted and is implementing stainless or galvanised steel circular hoops as attachments to street posts, as a form of cycle rack and this should be considered for North Penrith. • In relation to the furniture palette, Council does not support lighting bollards (ineffective lighting levels and vandalism). Bollards should include luminance contrast strips (as required by AS 1428). An adequate proportion of seats with backs should also include arm rests. Throughout the LGA, Council has adopted and is implementing stainless or galvanised steel circular hoops as attachments to street posts as a form of cycle rack and this should be considered for North Penrith. • In relation to the Radcliffe Place through site link, it will be necessary to ensure sufficient luminance contrast to the stone elements extending into the footpath. It will also be necessary to ensure there are no concealment opportunities provided by the sandstone structures compromising safety to path users. A perception of safety can be provided by reducing the height of sandstone structures to 1.2m, permitting sight lines beyond. Overhead lighting should be provided, the effectiveness of which is not compromised by tree plantings. An effective barrier to cars is to be provided but should allow maintenance vehicle access. • Recommended conditions include the following: ○ All trees that are required to be retained as part of the development are to be protected in accordance with the tree protection standards prescribed in Section 2.6 (Landscape) of Penrith Development Control Plan 2006. ○ Street trees shall be located so as not to diminish the effectiveness of street lighting. ○ The public domain areas shall be:
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	a. Landscaped and embellished in accordance with the approved landscape plans and details. b. Dedicated to Penrith City Council at no cost to Council. Prior to dedication to Council, the applicant shall provide to Council a certificate of currency for a public liability insurance policy for \$20 million for the land. The applicant shall also provide to Council a deed of agreement indemnifying Council for the duration of the maintenance period plus 12 months. c. Maintained by the applicant for a period of 3 years prior to handover to Penrith City Council. Handover shall occur following an inspection by Council.
Heritage	• The recommendations of the Non-Indigenous Archaeological Testing Results prepared by Casey & Lowe and dated October 2012 shall be implemented as part of Stage 2B.