

Chatswood Chase Shopping Centre Table of Response to Submissions

The table below summarises the responds to issues raised as part of the exhibition of the EAR. The table should be read in conjunction with correspondence from WCC dated 8 August 2007 provided in Appendix A.

No.	Comment	Response
Architectural Form		
1	Council looks forward to similar modifications to the Archer Street in the future that will also see the centre interact and contribute more positively to the public domain along that frontage.	Noted
2a	Council requests that you reconsider elements of the built form in Victoria Avenue particularly with respect to the extent of building encroachment into the road reserve. Elements to consider include:	-
2b	- Up to a 450mm building encroachment Council will accept without a lease arrangement under the Roads Act, 1993 subject to suitable Indemnities and Certifications of structural adequacy being provided.	Noted
2c	- Awning: The maximum width of an awning is 3.6 metres subject to the face of the awning being setback 600mm from the kerb line of the road carriageway. The clearance to the underside of the awning shall be at least 3 metres or of sufficient height that any proposed under awning signage has a clearance of 2.6 metres above the footpath.	Awnings will comply with these requirements. Sweeping curved awning will be adjusted to be at least 600mm back from kerb.
2d	- Encroachments: All encroachments that are not subject to a lease must be capable of removal from the building without affecting the structural integrity of the building.	Noted
2e	- Within the context of the above background information you are requested to give further consideration to the design along the Victoria Avenue frontage.	Noted

No.	Comment	Response
3	<p>Glazed Element- Victoria Avenue</p> <p>The glazed/transparent element adjacent to the east of the entry has changed in its form from the April 2006 design where it increased in horizontal width as it increased in height to a form that now is proposed to increase not only in width but also depth as it increases in height. The extent of encroachment into the road reserve increases to 1 to 2 metres and includes areas of leasable floor area on Levels 1 and 2. It also forces the Chatswood Chase signage blade to increase in depth to be readable from afar such that it appears to extend to the line of the kerb or more.</p>	<ul style="list-style-type: none"> - The Chatswood Chase signage blade will project no closer to the kerb than 600mm. - The glazed element adjacent to the east of the Victoria Avenue entry is fixed over the existing façade. There are therefore no areas of leaseable floor area outside the site boundary. - The glass is colour-backed not transparent. - The glazed element splay out to maximize articulation.
3b	<p>On the basis of the above:</p> <ul style="list-style-type: none"> - The depth of the blade is considered excessive. It is considered that the design of both elements should be reviewed to maintain a constant depth over the height of both elements. - It is considered that the blade encroachment should be less than 3 metres and other encroaching elements should be adjusted such that the "Chatswood Chase" signage can be read from afar. 	<p>Council has previously encouraged increasing the depth of these elements. Maintaining a constant depth will diminish the dynamic quality of these elements and the level of articulation. We would prefer to retain current principles. We believe the sign should be readable from a distance; most viewing will be carried out from moving vehicles.</p>
4	<p>Signage Frame - Victoria Avenue</p> <p>It is considered that the building in the location needs to be redesigned to introduce some light and appearance of transparency in the location that addresses both the south and east views to the site and that the major tenant signage location and design be reconsidered as part of that process.</p>	<ul style="list-style-type: none"> - The sign now returns onto the splayed wall. - The panels will not be transparent, however, framing of the signage frame will give depth to the signage and integrate it with the façade treatment of the centre along Victoria Avenue. - Major tenants signage or logo will be displayed on each face of the sign, being visible from the south, along Neridah Street and east along Victoria Avenue.
5	<p>Lifestyle Images – Victoria Avenue</p> <p>Clarification is sought on the intent for the graphics above the entry in Victoria Avenue and the intention for the glazed elements above the driveway. It is not Council's intent that either location is used for changing billboards of tenant advertising.</p>	<p>This element is for lifestyle graphics only and will not be transparent. The scope of graphics used on the sign is to be confirmed in consultation with the assessment authority and through the preparation of signage strategy to be agreed with the assessment authority at a later stage.</p>
6	<p>Public Art</p> <p>At pre DA discussion opportunities for public art elements being incorporated into the entry experience from Victoria Avenue were supported. It is unclear in the documentation as to what form and how that is proposed to occur.</p>	<p>Public art will be provided to the property in a location, design and capital cost to be agreed with Willoughby City Council.</p>
7	<p>Malvern Avenue</p> <p>The architecture of the elevation facing west in Malvern Avenue needs to be given further consideration and design detail as a major vehicular entry point for the centre. Similarly the side elevation to the building element above the driveway in Victoria Avenue needs similar treatment.</p>	<p>The building height has been reduced due to the deletion of car park Level 2A.</p> <p>The west face of Zone A (Refer to EAR, Figure 20 – Building Zone Overview) (the part of the site fronting Malvern Avenue) has for the most part been moved approximately 2400mm in from the boundary line (between the site and 12-14 Malvern Avenue).</p> <p>The increased setback of 2400mm and reduced height will improve the amenity, outlook and penetration of natural light from that proposed as part of the EAR.</p> <p>The louvre element provided on the North Wall (addressing Malvern Avenue) has been returned approximately 6000mm down the west wall from the north corner.</p> <p>The louvers articulate the façade more and better address the visual aspect of the building when approaching along Malvern Avenue from Archer Street.</p>

No.	Comment	Response
8	<p>Electricity Substations</p> <p>Any requirement for electricity substations should be incorporated into the building and integrated into its architecture.</p>	<p>Maximum electricity demand calculations for the proposed development have been submitted to Energy Australia. Based on preliminary maximum demand, the distribution of load within the proposed development and Energy Australia's existing HV reticulation within the area, Energy Australia have advised that a new 1000kVA kiosk substation adjacent to Malvern Avenue (along with the retention of the existing kiosk substation in the same area) will be required.</p> <p>On behalf of the proponents, Norman Disney Young have approached Energy Australia with Councils objection to the location of the substation outside the fabric of the building. Norman Disney & Young are waiting for a design brief from Energy Australia.</p>
Relationship to Neighbours		
9	<p>1-3 Havilah Street</p> <p>Redesign is required to address the relationship particularly with respect to the impacts on 1-3 Havilah Street that has residential units that face directly towards the proposed development. Provision of a setback in the order of at least 7 metres and a landscaped buffer is necessary to maintain some outlook, light penetration and potential for air circulation. Consideration should be given to retention of the existing mature tree buffer if possible. The solution may also involve stepping the setback where it is increased with the height.</p>	<p>The design has been amended.</p> <p>The revised proposal increases the setback from the adjoining properties from those proposed as part of the EAR, increasing the setback to 4000mm, consistent with the current setback of the car park building for levels LG to Level 1, with a greater setback of 7350mm for Levels 2 and Level 2A.</p> <p>The extensions to the various levels (in construction Zones C and D) (located immediately adjacent to 1-3 and 5-7 Havilah Street) will not be constructed any closer to adjoining properties than the present building line of Level G.</p> <p>The proposal improves the amenity, outlook and natural light than that proposed as part of the EAR. The existing tree screen in the setback will be retained.</p>
10a	<p>5-7 Havilah Street</p> <p>The mass and bulk relationship with 5-7 Havilah Street and 12-14 Malvern Avenue as commercial buildings is considered to be primarily with respect to light penetration and mass and bulk of the building. Modulation generally and set back of the upper levels of the building... should be given consideration.</p> <p>The additional concerns expressed by 5-7 Havilah Street regarding loss of sunlight and outlook to its recreational balconies have been considered. Council notes that the roof height of the proposed development over the pedestrian entry and for a distance of 45 metres is about RL 86.8. The proposed building for that distance is set back above that height to about 15 metres from the boundary to the external face of the architectural acoustic screen. Noting that the upper level balcony is at RL 86. and the parapet height of the building is RL 90. and allowing for the orientation of the site, it is considered that there is a reasonable relationship between the buildings and adequate potential for sun light access to the upper level balcony particularly during the lunchtime period. However, the lower terrace may be affected and the relationship is considered further below in respect to the Havilah Street access.</p>	<p>The design has been amended.</p> <p>The revised proposal increases the setback from the adjoining properties from those proposed as part of the EAR, increasing the setback to 4000mm, consistent with the current setback of the car park building for levels LG to Level 1, with a greater setback of 7350mm for Levels 2 and Level 2A.</p> <p>The extensions to the various levels (in construction Zones C and D) (located immediately adjacent to 1-3 and 5-7 Havilah Street) will not be constructed any closer to adjoining properties than the present building line of Level G.</p> <p>The proposal improves the amenity, outlook and natural light than that proposed as part of the EAR. The existing tree screen in the setback will be retained.</p> <p>The proposed roof over the Havilah Street entry has been deleted and the tall landscaped screen replaced with 2500mm high hedge screen. The design amendments improve the amenity and the penetration of natural light than that proposed as part of the EAR. The new building structure is now approximately 4500mm from boundary with 5-7 Havilah Street.</p> <p>Other design changes include the deletion of the acoustic screen to the existing car park. The revised acoustic report advises that such a measure are not required.</p> <p>Graphic elements to the wall adjacent to Havilah Street entry walkway have been added. Adding more articulation and visual interest to the wall and walkway in this area.</p>

No.	Comment	Response
10b	<p>12-14 Malvern Avenue</p> <p>The mass and bulk relationship with 5-7 Havilah Street and 12-14 Malvern Avenue as commercial buildings is considered to be primarily with respect to light penetration and mass and bulk of the building. Modulation generally and set back of the upper levels of the building especially adjacent to 12-14 Malvern Avenue should be given consideration.</p>	<p>The design has been amended.</p> <p>The building height has been reduced due to the deletion of car park Level 2A.</p> <p>The west face of Zone A (Refer to EAR, Figure 20 – Building Zone Overview) (the part of the site fronting Malvern Avenue) has for the most part been moved approximately 2400mm in from the boundary line (between the site and 12-14 Malvern Avenue).</p> <p>The increased setback of 2400mm and reduced height will improve the amenity, outlook and penetration of natural light from that proposed as part of the EAR.</p> <p>The louvre element provided on the North Wall (addressing Malvern Avenue) has been returned approximately 6000mm down the west wall from the north corner.</p> <p>The louvers articulate the façade more and better address the visual aspect of the building when approaching along Malvern Avenue from the Archer Street.</p>
11a	<p>341 Victoria Avenue</p> <p>The relationship to 341 Victoria Avenue at this stage is considered acceptable noting that the separation along the boundary of the site with the Chatswood Chase driveway access to the basement car parks is being retained which will allow for buffer planting (see later landscape comments).</p>	Noted
12	<p>Victoria Avenue Vehicular Entry/Exit</p> <p>Advice from a suitably qualified expert (Noise) is requested as to whether the noise from traffic in the driveway will be made worse by the partial enclosure of the driveway such that the request for acoustic screening or some form of treatment noted in some of the submissions needs to be undertaken.</p>	Should the acoustic detailed analysis prove that acoustic treatment is required to the covered loading dock than appropriate resiliently faced, acoustically absorbent material will be provided.
Landscape Design		
13	<p>At the public meeting, comment was made by your architect that it was expected that there was potential for three of the existing trees in the Havilah Street setback to the existing car park will be retained. Council's Landscape Section requires clarification on this point having regard to the extent of demolition and building works that may impact on the root system of the trees. The clarification needs to carefully consider the species, age and health of the trees noting that if damaged through the demolition/construction process, they may become a danger in the future for pedestrians in the vicinity.</p>	<p>The existing tree screen will be lost during construction. A new integrated landscape installation will be provided from 5-7 Havilah Street around to the boundary with 12-14 Malvern Avenue.</p> <p>Hedge planting and new street trees will be planted to Council requirements along Havilah Street as agreed with Council. Illustrated on updated Landscape Plans, Drawing Numbers 1461-LC1 and 1461-LC2.</p>
14a	<p>Various inconsistencies exist between the landscaped plan and the architectural plans, these require review and clarification. These include:</p>	Updated Landscape Plans provided, Drawing Numbers 1461-LC1 and 1461-LC2.
14b	<p>– Level changes and the need for retaining walls along the boundary with Havilah Street in the architectural plans that do not appear in the landscape plans. Council's expectation is that the interface is seamless with minimal level change and if a change in level is required it is not of a height that requires fencing.</p>	The detailed design to achieve Council's expectation will be addressed prior to issue of the CC for Landscaping.
14c	<p>– A paved pathway from Malvern Avenue enters that site to the building but its purpose is unknown.</p>	Stepping stone pavers have been provided where access is required to switchrooms.

No.	Comment	Response
14d	– Planters required in the building structure and roof detailing to allow for the proposed planting is not reflected in the architectural plans for the Havilah Street pedestrian access.	The roof to Havilah Street pedestrian entry is now proposed to be deleted. Refer 20a.
14e	– It is noted that any planting over concrete structures requires more than 600mm depth of soil. Additional detail on the locations where planting is over structure needs to be clarified.	Additional details provided in Landscape Concept Plans, Drawing Numbers 1461-LC1 and 1461-LC2.
15	Street trees (two) in Victoria Avenue will be required consistent with the rest of Victoria Avenue being <i>Platanus x hybrida</i> in vaulted tree pits in accordance with Council's specifications. Generally the use of Bangalow Palms is not supported. In the case of the Victoria Avenue loading area interface, the tree planting should be <i>Platanus x hybrida</i> (two) close to the street and <i>Angophora costata</i> to the rear or north of the frontage. Council would also like to see the two existing <i>Platanus x hybrida</i> retained at the Victoria Avenue driveway entry.	Two new street trees will be planted to Council requirements in tree planting pits as illustrated on Drawing Numbers 1461-LC1 and 1461-LC2.
16	Under-grounding of cables will be required	Under grounding of any new cables required for the new development will be provided.
17	To increase the growing area of the new and replacement trees and to soften the commercial character the public footpath shall not be fully paved and shall include a nature strip along the kerb line.	The footpath is existing, and no change to the footpath width is proposed.
18	There are other details relating to the landscaping of the site such that it is appropriate that the landscape architect have further discussions with Council's Landscape Section.	Additional details provided in Landscape Concept Plans, Drawing Numbers 1461-LC1 and 1461-LC2.

Havilah Street Pedestrian Access		
19	The local community is mixed in its opinion regarding the proposed Havilah Street pedestrian access. On balance it is considered at this stage that a pedestrian access in Havilah Street will be supported.	Noted
20	Notwithstanding the above, the following requires consideration: - The pedestrian entry should be set back from the boundary and buffer landscaping to 5-7 Havilah Street provided in the set back. This gives more options for the type of planting that is consistent with locally indigenous species rather than confusing the view lines and movement through the entry with a trellis and palms. The width of the set back to be adequate for the purpose and is expected to be in the order of over 3 metres. The glazed side wall of the pedestrian entry will look onto the buffer.	The proposed roof over the Havilah Street entry has been deleted and the tall landscaped screen replaced with 2500mm high hedge screen. The design amendments improve the amenity and the penetration of natural light than that proposed as part of the EAR. The new building structure is now approximately 4500mm from boundary with 5-7 Havilah Street. Other design changes include the deletion of the acoustic screen to the existing car park, consistent with the advise in the revised acoustic report. Graphic elements to the wall adjacent to Havilah Street entry walkway have been added. Adding more articulation and visual interest to the wall/walkway in this area.
21a	- Management of the out of hours use and security of the walkway noting that the actual entry doors to the centre are located 28 metres from the face of the building. It will act as an entrapment location. Any measures to provide security to the access will have to consider that it is also part of the fire exit from Stair 14.	The management of the out of hours use and security of the walkway is to be managed through the detailed design and Construction Certificate.
21b	- An undertaking needs to be provided and details given that shopping trolleys used in the centre will be fitted with features such as special flooring treatment or automatic braking devices or similar that precludes trolleys being taken outside the building.	The management of trolleys is to be managed through the detailed design and Construction Certificate. Details on appropriately gating the walkway will be considered as part of the detailed design.
21c	- Agreement to adjustment or relocation of the traffic management device at the location to provide unobstructed view lines of the access and ensure a level of passive surveillance from the public domain.	Propose to replace the existing speed hump with a "wombat" type raised pedestrian crossing.
21d	Council will not agree to provision of any short term parking restrictions in the location as it will encourage use for quick stop shopping and increase vehicular traffic in Havilah Street. The current time limits are proposed to remain. This issue and the additional setback of the entry has been considered in the context of the objection by the adjoining owner that their driveway/crossing is likely to be used for short stay pick-up/drop off by customers.	Noted
BCA Matters		
22	There are some inconsistencies between the issues raised in the BCA report and the fire engineering brief. The BCA report notes that there is less than the required exit width proposed on the lower ground floor but the fire engineering brief considers that the exit width issue is on the ground floor.	An updated BCA assessment report reflecting the current status of the design including confirmation of assessment of exit widths will be issued concurrently (under separate cover) with this report (Response to Submissions).
23	The BCA report does not have regard to considering the amenities requirements for staffing levels likely in the centre notwithstanding that the likely employment numbers have been identified in the social impact assessment.	Dix Gardner (Private Certifier) will provide formal confirmation of compliance of the amenities requirements having regard to the staff population numbers concurrently (under separate cover) with this report (Response to Submissions).

Traffic Management Issues and Car Parking		
24	<p>In carrying out the investigation where traffic volumes are being considered you are advised to have regard to the fact that an allowance has been made in the report for traffic generation from the Chatswood Transport Precinct Project (CTPP) for its 10,500 GLA retail floor space where no car parking is provided and the same consultant did not acknowledge any traffic generation in the report accompanying the application to the Minister for the CTPP development.</p> <p>Also the development proposed on the Civic Place hotel site (DA2007/323) is now known and proposes 141 serviced apartments, a tavern, restaurants and ancillary retailing with provision of 147 car spaces. The impact of those context developments on the surrounding road needs to be adjusted to properly consider the Chatswood Chase development impacts.</p>	<p>Traffic/Parking issues have been addressed by the project traffic consultants, Masson Wilson Twiney Pty Ltd. Their response is provided in Appendix D to this Report.</p> <p>In assessing the traffic generated by the Chatswood Transport Precinct Project, a cautious/conservative allowance was made. The traffic analysis conducted for Chatswood Chase was therefore conservative (i.e. provided trip generation rates which are likely to be in excess than those actually expected).</p> <p>No further analysis of the Civic Place Hotel site traffic generation is considered necessary as in each case "worst" case i.e. higher than expected traffic generation estimates were incorporated in the Chatswood Chase analysis.</p>
25a	<p>The following further investigation is required:</p> <ul style="list-style-type: none"> - The level of service of some intersections is not compatible with expected delay. 	<p>It is acknowledged that there are some discrepancies in Table 3.3 of the Traffic and Transport Assessment. These arose through transcription errors and are corrected on an amended version of the table which is attached at Appendix D.</p>
25b	<ul style="list-style-type: none"> - Increase in the number of entry boom gates from Victoria Avenue from two to three. 	<p>An additional boomgate is shown on the Victoria Avenue entrance plans.</p>
25c	<ul style="list-style-type: none"> - No right turn from Daisy Street to Archer Street south. 	<p>The provision of a no right turn from Daisy Street to Archer Street is a decision which should be made by council.</p>
25d	<ul style="list-style-type: none"> - Potential of a raised median to stop the illegal right turn movement from Archer Street (north) to the speed ramp. 	<p>Agreed. It is suggested that the following condition be imposed:</p> <p>"The applicant shall construct a central median in Archer Street opposite the Chatswood Chase car park access to prevent right turns into and out of the site. The design of the median shall be approved by Council's Director of Technical Services."</p>
25e	<ul style="list-style-type: none"> - Provision of a right turn phase at Neridah St (south) /Victoria Ave and Malvern Ave (north)/Archer Street. 	<p>It is suggested that phasing of these traffic lights be agreed with the RTA. To achieve this it is suggested that the following condition of consent be applied:</p> <p>"The applicant shall investigate the most appropriate phasing of traffic signals at the intersections of Neridah Street (south) with Victoria Avenue and of Malvern Avenue with Archer Street. The investigation shall include examination for the potential for separate right turn phases in Neridah Street and Archer Street and as appropriate involve consultation with RTA and Council officers. The applicant shall implement any phasing changes determined as being appropriate in the investigation."</p>
25f	<ul style="list-style-type: none"> - Removal of the right turn facility to exit west from the basement car park entry in Victoria Avenue. 	<p>Agreed. This would be examined as part of 25 e) above.</p>
25g	<ul style="list-style-type: none"> - A bicycle only phase at Archer/Malvern intersection from Lane W124. 	<p>Agreed. This would be examined as part of 25 e) above.</p>

25h	- Kerb narrowing to reduce the crossing width for pedestrians at Mills Lane while still allowing for truck movements to the Mills Lane loading facility.	Agreed in principle but will need to be subject to detailed design to ensure that large trucks can still turn left in and out. We suggest a condition as follows: "In conjunction with Council's engineering department the applicant shall investigate the potential to narrow the throat of Mills Lane at its intersection with Archer Street. The applicant shall implement any narrowing deemed appropriate."
25i	- Provision and location of 18 motorcycle bays.	Agreed and suggest the following condition: "A minimum of 18 motorcycle spaces shall be provided within the car park of the Centre."
25j	- Provision of in the order of 10-12 bicycle parking bays at each entrance to the centre noting that as space is an issue at the Victoria Avenue entrance if less are provided at that location, extra are provided at an alternative entrance and adequately sign posted accordingly.	As previously discussed with WCC, this may be difficult as there may be implications for pedestrian access or landscaping. We suggest the following condition to cover this: "Prior to the issue of the construction certificate, the applicant shall investigate in conjunction with Council officers the potential to provide 10 to 12 bicycle parking spaces at each of the three main pedestrian entrances to the Centre. The applicant shall provide the bicycle parking agreed in the investigation."
25k	- Provision of bicycle lockers with capacity for at least 26 bicycles.	The following condition is suggested: "The applicant shall provide secure caged or locker bicycle parking for 26 bicycles within the Centre."
25l	- Reviewing the design of all car park levels having regard to the Memo of 20 July, 2007 (previously circulated).	The car park design is likely to change slightly as detailed structural and services design takes place. We accordingly suggest the following condition to ensure that the design is satisfactory: "The car park layout shall be generally as indicated on Buchan Group's plans [list plan numbers as appropriate]. Parking spaces on new structure shall have geometry generally in accordance with the requirements of Australian Standard AS 2890.1-2004."
25m	- Redesign of the parallel drive way entrances from Malvern Avenue to minimise potential truck and vehicle conflicts and provide increased safety for pedestrians.	The design has been modified to separate the driveways as suggested by Council. The potential for improved delineation of movements in Malvern Avenue is being investigated in conjunction with landscaping plans.
25n	- Checking and confirmation of the adequacy of the design of the entry/exit ramp from/to Malvern Avenue for all size vehicles likely to use the car park (swept path confirmation).	A plot indicating vehicle access movements is attached at Appendix D.
25o	- Redesign of the left turn into Victoria Avenue (east) from the car park/loading area to improve pedestrian safety.	Any change to this will need to meet RTA requirements because of the relationship of the left turn to the adjacent traffic signals. We suggest the following condition in relation to this: "The applicant shall consult the RTA in relation to the potential to narrow the free left turn lane from the Chatswood Chase Victoria Avenue car park exit into Victoria Avenue with a view to making the crossing of the left turn easier for pedestrians. If the RTA is agreeable to the left turn lane being narrowed, the applicant shall implement such narrowing."
25p	- Investigation of the need for provision of a pedestrian crossing/refuge across Havilah Street at the pedestrian entry (it may not be necessary) and adjustment to the traffic calming device (see also earlier point no.4) and car parking layout in the street.	Propose to replace the existing speed hump with a raised pedestrian crossing.

25q	- Further clarification of the design and operation of the Coles loading area as its size including the size of the goods handling area is not considered adequate for the size of supermarket. Truck manoeuvring for 17 metre articulated vehicles requires confirmation allowing for the potential of a second vehicle being present at the dock. Goods handling needs to allow for the incoming goods holding area prior to stacking on shelves as well as waste management storage facilities for general waste, putrescibles and recycled waste (cardboard baling facility etc).	A draft management plan prepared by Coles is attached as Attachment 4 in the Traffic Statement at Appendix 4.
25r	- Further clarification of the scope and scale of use of the loading areas and waste handling services off Mills Lane including the "Coles" area including truck sizes.	Plan showing truck layout supplied at Appendix 4..
26	Further given the extent of demolition, redesign and reconstruction of the car park levels and the loading dock from Malvern Avenue, the design needs to consider achieving the head room requirements (2.5 metres) for car spaces for people with disabilities.	New spaces are located on Level 2 and are proposed to have a vertical clearance of 2.5m above them. Because of the need to match existing floor levels it will not be possible to provide such headroom elsewhere in the car park.
27	The maneuvering of delivery vehicles is not to be compromised by columns located in the manoeuvring area. Unobstructed head room in the truck loading areas shall be a minimum of 4 metres.	Headroom in the new Coles loading area will be a minimum of 4m.

Hydraulic Matters		
28	Chatswood Chase lies within a major stormwater system being part of the Scotts Creek system. Recent studies commissioned by Council have indicated there are likely to be issues of overland flow and the capacity of the system during a 1 in 100 year event. It is noted that the proposal will impact on existing stormwater pipes that traverse the site. Further hydraulic investigation is required in consultation with Council's Engineering Section (Eric Cheang 9777 7708).	<p>1) <u>Overland Flow</u> - WCC plan to install a 5000m³ flood mitigation/water reuse storage tank as part of the Civic Place development. This will have a significant affect on the existing hydrological conditions of Scotts Creek Catchment. Council's Consultant has completed a preliminary flood study of the Catchment and it was agreed with WCC on 15 August 07 that Arup could access some information derived for this study. Arup acknowledge that flooding may occur and subject to review of Council flood study will advise the proponent of likelihood of flooding. The proponents will provide a flood risk management strategy to Council in response to the likelihood of this event based on the current design.</p> <p>2) <u>Traversing Pipes</u> – Concept design for the treatment of the traversing pipe was discussed and agreed with WCC on 15 August 07 (subject to WCC review of detailed design). Concept includes:</p> <ul style="list-style-type: none"> - diversion of existing Council drainage; grated inlet on NE side of Archer Street diverted to existing Council pit on opposite side of Archer Street and grated inlet on southern side of Malvern Street diverted to existing Council system on Malvern/Havilah Street - provide for drainage of adjacent private properties to the NW of the site. Connection of this drainage though the new development requires an Interallotment Drainage Easement and appropriately sized drainage conduits. <p>3) <u>On Site Detention (OSD)</u> - OSD to be provided to WCC requirements for the new Coles development area on the northern section of the site. Alterations and additions in other existing building areas will not require OSD.</p> <p>4) <u>Rainwater Reuse</u> – As discussed and agreed with WCC on 15 August 07, the proposed 250m³ rainwater reuse tank proposed is satisfactory. The designers to explore rainwater reuse opportunities to maximising reuse where possible.</p>
29	You will also be required to consult with Sydney Water as it is part of a Sydney Water system. Reference is made to the Memo of 30 July previously circulated to you.	Arup to consult with Sydney Water regarding any of their assets that will be directly affected by the proposed development.