# Environmental Service Division Report 3 (b) – Revised Supplementary Report: DA10/200 (2010SYE071) 532 -534 Mowbray Road and 72-74 Gordon Crescent Lane Cove North

**Sydney East Joint Regional Planning Panel** 

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#### **REPORT**

# **Background**

This revised supplementary report is provided as requested by the Joint Regional Planning Panel Secretariat, in relation to the development application before the Joint Regional Planning Panel and outstanding pending bushfire issues.

The subject property falls within the area which was rezoned to R4 high density residential as part of the Lane Cove local Environmental Plan 2009 process.

The applications were referred to the Rural Fire Service for their comment pursuant to clause 79BA of the Environmental Planning and Assessment Act 1979, as amended.

An issue arose when the Rural Fire Service advised Council that they had not been consulted during the rezoning process and that they required a comprehensive traffic report of the area to be carried out dealing with the increased density and the ability to evacuate residents in the event of a bushfire emergency.

The Rural Fire service in their response dated 18 October 2010 advised (Attachment 1):

"An increase in population density in the bush fire interface will cause a greater impact on the existing infrastructure to support evacuating occupants. The RFS needs to be satisfied that the existing road infrastructure in the area can handle the increase in usage brought upon by the entire rezoning process. As a result, the RFS is to be provided an assessment of the impact of this development on the surrounding road infrastructure in an emergency situation whilst taking into account existing and future road users on surrounding properties".

This matter was raised with the Department of Planning, who commissioned Urbanhorizon Pty Ltd to prepare a report.

During the time of preparation of the report by Urbanhorizon, Council submitted its report to the Joint Regional Planning Panel for determination. The application was recommended for refusal by Council based solely on the Rural Fire Service issue. The application was discussed in the Joint Regional Planning Panel meeting held on 10 February 2011 in which the Panel resolved to defer the decision and following receipt of the RFS's response would determine the application accordingly.

The Council and the Joint Regional Planning Panel were provided with a copy of the Urbanhorizon - Lane Cove Bushfire Accessibility Final Report dated March 2011 (**Attachment 2**):

#### Council's Response

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The entire subject property falls within the mapped bush fire prone areas. The vehicular access to and from the site is restricted to Gordon Crescent across from which is the Bushland Batten Reserve. In the event of bushfire all vehicular evacuation from the subject property would occur from Gordon Crescent. The evacuating vehicles may come in conflict with the fire fighting vehicles moving in the opposite direction or those parked for fighting fire

Council has serious concerns with the Urbanhorizon's report, including its comments in relation to work recommended as "options for amelioration" and section of the report which suggests:

- Provide a roll back mountable kerb along the Batten Reserve side of Gordon Crescent and Kullah Parade and at other appropriate locations to facilitate RFS vehicle access and operations during a fire event.
- Undertake works to increase road widths and turning areas funded through contributions from new higher density development in the precinct.

Other "options for amelioration" of the report suggests:

- "Removing lower limbs of trees abutting the southern side of Gordon Crescent and Kullah Parade up to a height of 4 metres above the ground
- Reducing the tree canopy cover in batten Reserve to between 15 and 30%
- Mowing the understory of Batten Reserve along the southern side of Gordon Crescent and Kullah Parade"

Council can not agree to these works.

The report acknowledges that:

"The time taken to evacuate motorists from the precinct during a fire event is likely to be greater under a higher density residential situation than under the current low density situation by virtue of the increased vehicle generation."

The report concludes that:

"Any supplementary traffic investigation will need to be undertaken in a manner that does not delay development application assessment and approval in the precinct."

Council does not accept the report from Urbanhorizon as it is considered incomplete and fails to adequately address how the proposed road infrastructure would cope in a bushfire emergency situation. It fails to outline detailed evacuation analyses. The report from Council's Executive Manager Open Space and Urban Services to the Council meeting of 21 March 2011 is attached (**Attachment 3**):

# **Rural Fire Service's Response**

Rural Fire Service in its letter dated 21 March 2011 (**Attachment 4**) acknowledged that Council has not endorsed any of the options and amelioration recommendations within the Urbanhorizon - Lane Cove Bushfire Accessibility Final Report dated March 2011.

The Rural Fire Service stated that:

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"the fact that the rezoned precinct relied on the existing road infrastructure for access and egress in a bush fire emergency, council needed to be satisfied that the existing road infrastructure was capable of supporting the potential increased usage."

As indicated in the report from Council's Executive Manager Open Space and Urban Services, Council is not satisfied that the existing road infrastructure is capable of supporting the potential increased usage.

The Rural Fire Service recommended that:

"council should consider a traffic report demonstrating how the existing and any proposed road infrastructure would cope in an emergency situation."

As indicated in the report from Council's Executive Manager Open Space and Urban Services, the Urbanhorizon report fails to adequately address how the proposed road infrastructure would cope in a bushfire emergency situation.

The Rural Fire Service has further added that:

"The RFS advised that it recognized that it is was not a traffic authority, and has relied on the expert advice and endorsed all the findings and recommendations of the report, which will provide a better outcome to the existing road infrastructure in the event of a bush fire".

The Rural Fire Service has accepted that it does not have traffic related technical knowhow, has not sought traffic related expert advice and has "endorsed all the findings and recommendations of the report". Simultaneously, Council which has an in-house traffic and engineering expertise, in Executive Manager Open Space and Urban Services report indicates that the Urbanhorizon report is inadequate in the areas of traffic impacts, evacuation in the event of a bushfire emergency situation, road and infrastructure upgrade works and area wide traffic management.

The Rural Fire Service has further added that:

The extent to which council accepts the recommendations of the report and the method by which these recommendations are staged and implemented within the development approval process is a matter between council and the Joint Regional Planning Panel.

In the process of "endorsed all the findings and recommendations of the report" the Rural Fire Service has passed the responsibility to Council and Joint Regional Planning Panel to ensure that the existing road infrastructure is capable of supporting the potential increased usage and the proposed road infrastructure would cope in a bushfire emergency situation.

#### **Author's Comment:**

There remain serious concerns that the Urbanhorizon report, while identifying issues and options, fails to take the next step and analyse those options in enough detail to place Council staff in an informed position to make a recommendation to the proposal with regard to the existing road infrastructure adequacy and evacuation in the event of a bushfire emergency situation.

To this end Council and the Department of Planning have commissioned a detailed traffic study for the Mowbray Road Precinct that seeks to specifically address existing road infrastructure upgrade and evacuation in the event of a bushfire emergency situation. It is

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anticipated that the commissioned report, when complete, would place Council staff and the Panel in an informed position to determine this application.

#### CONCLUSION

This application before the Joint Regional Planning Panel has been deferred pending the finalisation of the Traffic/ Bushfire report. The report has been provided to Council and the Rural Fire Service.

The Rural Fire Service has endorsed all the findings and recommendations of the report without technical analysis or feasibility of the report. Council in its meeting of 21 March 2011 identified unresolved issues in relation to the Urbanhorizon report.

Council and the author are not satisfied that the existing road infrastructure is capable of supporting the potential increased usage and that the road infrastructure could cope in a bushfire emergency situation.

In view of the above, even though the Rural Fire Service has endorsed all the findings and recommendations of the report, Council remains of the view that the original issue raised by the Rural Fire Service remains unresolved.

#### RECOMMENDATION

Council remains of the view that the application DA10/200 (2010SYE071) 532 -534 Mowbray Road and 72-74 Gordon Crescent Lane Cove North should not be approved on the basis that Council is not satisfied that the existing road infrastructure is capable of supporting the potential increased usage and that the road infrastructure could cope in a bushfire emergency situation. The Lane Cove Bushfire Accessibility Report prepared by Urbanhorizon is unsatisfactory and fails to adequately address identified traffic and bushfire concerns including emergency evacuation, environmental and infrastructure implications.

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#### NON PREJUDICE CONDITIONS:

The following conditions should be included in the consent in the event that the Joint Regional Planning Panel resolves to approve the application.

### **General Conditions:**

- 1. That the development be carried out strictly in accordance with the following drawings with project no 10-033 dated 2.11.10, prepared by Urban Link Pty Ltd except as amended by the following conditions.
  - Site plan, drawing no.1, Issue D
  - Lower basement, drawing no.3, Issue D;
  - Level 1, drawing no.4, Issue D;
  - Level 2, drawing no.5, Issue D;
  - Level 3, drawing no.6, Issue D;
  - Level 4, drawing no.7, Issue D;
  - Level 5, drawing no.8, Issue D;
  - Level 6, drawing no.9, Issue D;
  - Levels 7 & 8, drawing no.10, Issue D;
  - Section A-A, drawing no.11 Issue D;
  - Elevation 1, drawing no.12, Issue D;
  - Elevation 2, drawing no.13, Issue D.

Landscape Plan Sheet L-03 and Sheet L-04, Revision C prepared by ecodesign dated 06/09/10.

- 2. The provision of a minimum of 77 car parking spaces, 3 motorcycle parking spaces, 4 bike stores and 4 bike rails.
- 3. The existing four allotments must be consolidated prior to issue of an occupation certificate.
- 4. THE PAYMENT OF A CONTRIBUTION FOR AN ADDITIONAL 71.3 PERSONS IN ACCORDANCE WITH COUNCIL'S SECTION 94 CONTRIBUTIONS PLAN. THIS PAYMENT BEING MADE PRIOR TO THE ISSUE OF CONSTRUCTION CERTIFICATE AND IS TO BE AT THE CURRENT RATE AT TIME OF PAYMENT. THE AMOUNT IS \$612,823.50 AT THE CURRENT RATE OF \$8595.00 PER PERSON. NOTE: PAYMENT MUST BE IN BANK CHEQUE. PERSONAL CHEQUES WILL NOT BE ACCEPTED.

THIS CONTRIBUTION IS FOR COMMUNITY FACILITIES, OPEN SPACE/RECREATION AND ROAD UNDER THE LANE COVE SECTION 94 CONTRIBUTIONS PLAN WHICH IS AVAILABLE FOR INSPECTION AT THE CUSTOMER SERVICE COUNTER, LANE COVE COUNCIL, 48 LONGUEVILLE ROAD, LANE COVE.

5. The payment of an additional section 94 contribution, relating to the necessary road infrastructure upgrade works to enable satisfactory evacuation in a bushfire

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emergence and area wide traffic management associated with the proposed development, shall be made prior to the issue of construction certificate.

- 6. The submission of a Construction Certificate and its issue by Council or Private Certifier PRIOR TO CONSTRUCTION WORK commencing.
- 7. All building works are required to be carried out in accordance with the provisions of the Building Code of Australia. Note: Prior to the issue of the Construction Certificate, sufficient information must be forwarded to the certifying authority (whether Council or a private accredited certifier) illustrating compliance with the relevant requirements of the Building Cove of Australia.
- 8. An Occupation Certificate being obtained from the Principal Certifying Authority before the occupation of the building.
- 9. A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation.

Application must be made through an authorised Water Servicing Coordinator. Please refer to the "Your Business" section of the web site <a href="https://www.sydneywater.com.au">www.sydneywater.com.au</a> then follow the "e-Developer" icon or telephone 13 20 92 for assistance.

Following application a "Notice of Requirements" will advise of water and sewer extensions to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.

The Section 73 Certificate must be submitted to the Principal Certifying Authority prior to occupation of the development/release of the plan of subdivision.

10. All demolition, building construction work, including earthworks, deliveries of building materials to and from the site to be restricted to the following hours:-

Monday to Friday (inclusive) 7.00am to 5.30pm Saturday 7.00am to 4.00pm No work to be carried out on Sundays or any public holidays.

- 11. Stockpiles of topsoil, sand, aggregate, spoil or other material capable of being moved by water to be stored clear of any drainage line, easement, natural watercourse, footpath, kerb or roadside.
- 12. The development shall be conducted in such a manner so as not to interfere with the amenity of the neighbourhood in respect of noise, vibration, smell, dust, waste water, waste products or otherwise.
- 13. The provision of a minimum of 77 on-site car parking spaces for the use of the building at all times.
- 14. Access and parking spaces for disabled persons being provided in accordance with part D.3 of Building Code of Australia.

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- 15. All advertising signs/structures being the subject of a separate development application.
- 16. A "Fire Safety Schedule" specifying the fire safety measures that are currently implemented in the building premises and the fire safety measures proposed or required to be implemented in the building premises as required by Clause 168 Environmental Planning & Assessment Regulation 2000 are to be submitted and approved PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE.
- 17. Depositing or storage of builder's materials on the footpath or roadways within the Municipality without first obtaining approval of Council is PROHIBITED.

Separate approval must be obtained from Council's Works and Urban Services Department PRIOR TO THE PLACEMENT of any building waste container ("Skip") in a public place.

- 18. Prior to the commencement of any construction work associated with the development, the Applicant shall erect a sign(s) at the construction site and in a prominent position at the site boundary where the sign can be viewed from the nearest public place. The sign(s) shall indicate:
  - a) the name, address and telephone number of the Principal Certifying Authority;
  - b) the name of the person in charge of the construction site and telephone number at which that person may be contacted outside working hours; and
  - c) a statement that unauthorised entry to the construction site is prohibited.

The signs shall be maintained for the duration of construction works.

- 19. The cleaning out of ready-mix concrete trucks, wheelbarrows and the like into Council's gutter is PROHIBITED.
- 20. Where Lane Cove Council is appointed as the Principal Certifying Authority, it will be necessary to book an inspection for each of the following stages during the construction process. Forty eight (48) hours notice must be given prior to the inspection being required:
  - a) All reinforcement prior to filling with concrete.
  - b) Framework including roof and floor members when completed and prior to covering.
  - c) Installation of steel beams and columns prior to covering
  - d) Waterproofing of wet areas
  - e) Stormwater drainage lines prior to backfilling
  - f) Completion.
- 21. Structural Engineer's details being submitted PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE for the following:
  - a) underpinning;
  - b) retaining walls;
  - c) footings;
  - d) reinforced concrete work;
  - e) structural steelwork;
  - f) shoring

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- 22. A temporary connection to be made to the sewers of Sydney Water (where available) with an approved toilet structure and toilet fixtures being provided on the site BEFORE WORK IS COMMENCED. Where the Sydney Water sewer is not available a "Chemical Closet" type toilet shall be permitted.
- 23. All metal deck roofs being of a ribbed metal profile or colourbond corrugated galvanised or zincalume iron, in a mid to dark range colour and having an approved anti-glare finish.
- 24. A check survey certificate is to be submitted at the completion of:
  - a Dampcourse level;
  - b The establishment of all floor level;
  - c roof level; and
  - d The completion of works.

Note: All levels are to relate to the reduced levels as noted on the approved architectural plans and should be cross-referenced to Australian Height Datum.

- 25. The removal, handling and disposal of asbestos from building sites being carried out in accordance with the requirements of the Construction Safety Act and the Regulations details of the method of removal to be submitted PRIOR TO COMMENCING ANY DEMOLITION WORKS.
- 26. (a) The use of mechanical rock pick machines on building sites is prohibited due to the potential for damage to adjoining properties.
  - (b) Notwithstanding the prohibition under condition (a), the principal certifying authority may approve the use of rock pick machines providing that:-
    - (1) A Geotechnical Engineer's Report that indicates that the rock pick machine can be used without causing damage to the adjoining properties.
    - (2) The report details the procedure to be followed in the use of the rock pick machine and all precautions to be taken to ensure damage does not occur to adjoining properties.
    - (3) With the permission of the adjoining owners and occupiers comprehensive internal and external photographs are to be taken of the adjoining premises for evidence of any cracking and the general state of the premises PRIOR TO ANY WORK COMMENCING. Where approval of the owners/occupiers is refused they be advised of their possible diminished ability to seek damages (if any) from the developers and where such permission is still refused Council may exercise its discretion to grant approval.
    - (4) The Geotechnical Engineer supervises the work and the work has been carried out in terms of the procedure laid down.

COMPLIANCE WITH THE REQUIREMENTS OF THIS CONDITION MUST BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE.

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- 27. The demolition works being confined within the boundaries of the site.
- 28. The site being cleared of all debris and left in a clean and tidy condition at the completion of all works.
- 29. Compliance with the Waste Management Plan submitted with the development application.
- 30. It should be understood that this consent in no way relieves the owners or applicant from any obligation to obtain any other approval which may be required under any covenant affecting the land or otherwise nor relieve a person from the legal civil consequences of not complying with any such covenant.
- 31. All demolition works being completed within a period of three (3) months from the date of commencement.
- 32. Use of explosives is not permitted.
- 33. All machinery used on the site during demolition shall have a noise emission no greater than 75dB(A) when measured at a radius of 7.0 metres from the specified item.
- 34. All spillage deposited on the footpaths or roadways to be removed at the completion of each days work.
- 35. The site being properly fenced to prevent access of unauthorised persons outside of working hours.
- 36. Compliance with Australian Standard 2601 The Demolition of Structures.
- 37. An approved type of hoarding being erected along the street frontage.
- 38. Pedestrians' portion of footpath to be kept clear and trafficable at all times.
- 39. Lane Cove Council charges a fee of \$30 for the registration of any Part 4A Certificates (compliance, construction, occupation or subdivision certificates) issued by an accredited certifier under the Environmental Planning and Assessment Act.
- 40. A copy of Sydney Water's Notice of Requirements must be submitted to the Principal Certifying Authority **PRIOR TO THE CONSTRUCTION CERTIFICATE BEING ISSUED.**
- 41. **Long Service Levy** Compliance with Section 109F of the *Environmental Planning* and Assessment Act 1979; payment of the Long Service Levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 (or, where such a levy is payable by instalments, the first instalment of the levy) All building works in excess of \$25,000 are subject to the payment of a Long Service Levy at the rate of 0.35%.

COMPLIANCE WITH THE REQUIREMENTS OF THIS CONDITION MUST BE SATISFIED **PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE.** 

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- 42. **BASIX** Compliance with all the conditions of the BASIX Certificate lodged with Council as part of this application. A BASIX completion Receipt is to be provided to Council before issue of the final Occupancy Certificate.
- 43. Separate approval must be obtained for strata subdivision of the development.

#### **Acoustic Condition**

44. Verification that acoustic impacts from Mowbray Road are addressed shall be submitted prior to the issue of a construction certificate.

### **Accessibility Conditions**

- 45. A minimum of 9 adaptable dwellings shall be provided in the proposed development. Accessible parking spaces are to be allocated to the dwellings.
- 46. The pedestrian entry ramps from Gordon Crescent and Mowbray Road shall be to a minimum 1:14 gradient. All ramps shall have handrails and tactile ground surface indicators as per AS 1428.1.

# **Traffic and Parking Conditions**

- 47. All Car Park design shall comply with AS 2890.1-2004 This includes all parking spaces, ramps, aisles, disabled parking and loading areas. All other aspects of the Car Parking areas shall comply with AS/NZS 2890.1:2004 for Off-Street car parking and for loading facilities and Services vehicles with AS 2890.1-2002. Amended plans shall be submitted prior to the issue of a construction certificate.
- 48. The spaces for people with disabilities shall comply with AS / NZS 2890.6: 2009. Amended plans shall be submitted prior to the issue of a construction certificate.
- 49. The disabled spaces No 50 (Level 1) and 15 (Level 2) shall comply with AS / NZS 2890.6: 2009. Amended plans shall be submitted prior to the issue of a construction certificate.
- 50. The height of the area of the disabled space for loading and unloading of a wheelchair shall be as minimum of 2500 mm from parking pavement level.
  Amended plans shall be submitted prior to the issue of a construction certificate.
- 51. No Stopping zones shall be introduced along Gordon Avenue on both sides of the access driveways for a distance of 15 metres on each side of the driveways. This also means that between the two driveways a 'No Stopping' Zone is required. The proposed 'No Stopping' restrictions are required to provide proper sight distance for cars exiting the driveway to the satisfaction of the Lane Cove Traffic Committee Meeting.
- 52. A Service Vehicle Parking bay shall be introduced and to comply with AS 2890.1-2002. Amended plans shall be submitted prior to the issue of a construction certificate.

### **Construction Management Plan**

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- 53. A Construction Management Plan must be lodged with Council prior to the issuing of a Construction Certificate. The Construction Management Plan should address (but not necessarily be limited too) issues related to the movement of construction vehicles to and from the site, safe access of construction vehicles, public transport and any conflict with other road users in the street, proposed Work Zones and impact of construction traffic activities to the residents and cyclists. The Construction Management Plan should also assess and address the impact of heavy vehicles travelling through the surrounding road network and the impact on the intersection of Girraween Avenue and Mowbray Road.
- 54. Any proposed Work Zones should be clearly shown on plans and application be made to Council in accordance with approvals required for the Works Zones, Crane Permits and other associated works. Wherever possible, construction vehicle parking should be contained within the site. Proposed Work Zones will require the approval of the Lane Cove Traffic Committee.
- 55. Any construction vehicles exiting the site during demolition/construction should have their tyres washed in order to avoid any construction material, dust, etc coming in contact with the road pavement.

#### **Tree Conditions**

- Lane Cove Council regulates the **Preservation of Trees and Vegetation** in the Lane Cove local government area. Clause 5.9(3) of *Lane Cove Local Environmental Plan 2009* [the "LEP"], states that a person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation to which any such development control plan applies without the authority conferred by development consent or a permit granted by the Council. Removal of trees or vegetation protected by the regulation is an offence against the Environmental Planning and Assessment Act 1979 (NSW). The maximum penalty that may be imposed in respect to any such offence is \$1,100,000 or a penalty infringement notice can be issued in respect of the offence, the prescribed penalty being \$1,500.00 for an individual and \$3,000.00 for a corporation. The co-operation of all residents is sought in the preservation of trees in the urban environment and protection of the bushland character of the Municipality. All enquiries concerning the Preservation of Trees and Vegetation must be made at the Council Chambers, Lane Cove.
- 57. The applicant must obtain written Authority prior to pruning of any trees designated for retention; greater than 4m in height, located on the property or in neighbouring properties including the cutting of any tree roots greater than 40mm in diameter.
- 58. There must be no stockpiling of topsoil, sand, aggregate, spoil or any other construction material or building rubbish on any nature strip, footpath, road or public open space park or reserve.
- 59. Footing, trench or excavation that is within 4m of any tree greater than 4m in height; including neighbouring trees, must be carried out using hand held tools only with no tree roots greater than 40mm diameter to be severed or damaged.
- 60. Trees numbered 1, 2, 7, 8, 9, 10, 11, 12, 13 and 14 on the approved plans must be retained and protected for the duration of the development. Tree protection

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- measures including the recommendations and advice documented in the Arborist Report prepared by Adrian Swain dated 06/09/2010 must be followed at all stages of the development.
- 61. The Supervising Arboriculturist Adrian Swain must be on site and provide certification of site attendance and supervision of all works described and/or recommended in Section 5 Recommendations, Section 6 Tree Management and Section 10 general Tree Protection Notes of the Arborist Report prepared by Adrian Swain dated 06/09/2010. A copy of the Arborist Report must be available on site for reference for the duration of the development.
- 62. A 1.8m high chain mesh fence shall be erected a distance of not less than 2.4m from the trunk of all existing street trees adjacent tot eh allotment. The tree protection areas shall not be used for the storage of building materials, machinery, site sheds, or for advertising and soil levels within the tree protection area shall remain undisturbed.
- 63. All tree protection measures for street trees and site trees mentioned in the arborist report must be in place and Certified by the Site Arborist. A copy of the Tree Protection Certification must be obtained by the authorized private Certifier PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE OR THE COMMENCEMENT OF WORKS, WHICHEVER OCCURS FIRST. This includes demolition or site preparation works, and tree protection measures must remain in place for the duration of the development.
- 64. A waterproof sign must be placed on all tree protection zones stating 'NO ENTRY TREE PROTECTION ZONE this fence and sign are not to be removed or relocated for the work duration.' Minimum size of the sign is to be A4 portrait with NO ENTRY TREE PROTECTION ZONE in capital Arial Font size 100, and the rest of the text in Arial font size 65.
- 65. All tree protection measures and signage must be erected **PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE OR THE COMMENCEMENT OF WORKS, WHICHEVER OCCURS FIRST.** This includes demolition or site preparation works, and tree protection measures must remain in place for the duration of the development, including construction of the driveway crossing.

#### **BOND ON STREET & COUNCIL TREES**

66. A bond of \$10 000 must be paid to Council prior to the issue of Construction Certificate to ensure adequate protection measures are taken during the development to prevent mechanical damage to the street trees that must be retained. This bond shall refundable on completion of works and following an inspection and certification of the tree by Council's Tree Assessment Officer. This certification must be obtained by the Private Certifying Authority prior to issue of the occupation certificate. In the event of damages to the tree, as determined by Council's Tree Assessment Officer, the cost of replacing the tree including labour will be incurred in addition to forfeiting the bond. The following formula shall be used for retention of all or part of the tree bond:

Breach of any condition - 25% of bond for each offence.

Trunk or root damage of any protected tree - 50% of bond for each offence.

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# Death or severe decline of any protected tree - 100% of bond and possible legal action by Council.

### **Landscape Conditions**

- 67. The Applicant must ensure that 'On' structure landscaping has adequate soil depth, volume and suitable profile to support the number of trees and shrubs indicated on the approved DA plan.
- 68. The Applicant must ensure that all landscaping is completed to a professional standard, free of any hazards or unnecessary maintenance problems and that all plants are consistent with NATSPEC specifications.
- 69. A landscape practical completion report must be prepared by the consultant landscape architect and submitted to the accredited certifier within 7 working days of the date of practical completion of all landscape works. This report must certify that all landscape works have been completed in accordance with the landscape working drawings.

#### **Environment and Waste management Conditions**

# **Garbage Chutes**

- 70. A garbage chute system and interim recyclable storage facilities must be provided to the development. Amended plans including the provision of a garbage chute system designed to the following requirements must be submitted prior to the issue of a construction certificate.
  - Garbage chutes must be constructed in accordance with the requirements of the Building Code of Australia (BCA).
  - Garbage chutes must be located and insulated in a manner that reduces noise impacts.
  - Chutes, service openings and charging devices must be constructed of material (such as metal) that is smooth, durable, impervious, non-corrosive and fire resistant.
  - Chutes, service openings and charging devices must be capable of being easily cleaned.
  - Chutes must be cylindrical and have a diameter of at least 500mm.
  - Chutes must not have any vends or sections of reduced diameter in the main shaft of the chute;
  - Internal overlaps in the chute must follow the direction of waste flow.
  - Chutes must deposit rubbish directly into a bin or compactor located within a waste/recycling storage room.

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- A cut-off device must be located at or near the base of the chute so that the bottom
  of the chute can be closed when the bin or compacting device at the bottom of the
  chute is withdrawn or being replaced.
- The upper end of the chute must extend above the roofline of the building.
- The upper end of the chute must be weather protected in a manner that does not impede the upward movement of air out of the chute.
- Compaction of garbage must not exceed a ratio of 2:1. No compaction is permitted for recyclable material or green waste.

#### Garbage Chute Service Rooms

- 71. The service opening (for depositing rubbish into the main chute) on each floor of the building must be located in a dedicated service room. Amended plans including garbage chute service rooms designed to the following requirements must be submitted prior to the issue of a construction certificate.
  - The charging device for each service opening must be self-closing and must no project into the main chute.
  - Branches connecting service openings to the main chute must be no longer than 1m.
  - Each service room must include provision for 2x240l recycling bins for the storage of recyclable materials. Signage regarding the materials that can be recycled must be displayed near these recycling bins.
  - Each service room must be located for convenient access by users and must be well ventilated and well lit.
  - The floors, walls and ceilings of service rooms must be finished with smooth durable materials that are capable of being easily cleaned.
  - Service rooms must include signage that clearly describes the types of materials
    that can be deposited into the garbage chute, the types of materials which must be
    deposited into recycling bins, and bulky waste collection arrangements including the
    location and travel paths to the bulky waste storage room.

#### Waste and Recycling Storage Rooms

72. Level 1waste and recycling rooms must be of sufficient size to accommodate garbage chute systems, a total of 16x240l garbage bins and 10x240l recycling bins with adequate space for maneuvering garbage and recycling bins. Amended plans including waste and recycling storage rooms designed to the following requirements must be submitted prior to the issue of a construction certificate:

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- Minimum clearance between bins of 300mm;
- Minimum door openings of 1700mm; &
- Minimum distance of 1700mm between rows of bins (where bins are located on either side of the room).
- The floor of waste and recycling rooms (including bulky waste storage rooms) must be constructed of either:
  - o Concrete which is at least 75mm thick; or
  - o Other equivalent material; and
  - o Graded and drained to a floor waste which is connected to the sewer
- All floors must be finished to a smooth even surface, coved at the intersection of walls and floor.
- The walls of waste and recycling rooms, bulky waste storage areas and waste service compartments must be constructed of solid impervious material and must be cement rendered internally to a smooth even surface coved at all intersections.
- All waste and recycling rooms and bulky waste storage rooms must be provided with an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock.
- A close-fitting and self-closing door that can be opened from within the room must be fitted to all waste/recycling and bulky waste storage rooms.
- All waste/recycling and bulky waste storage rooms must be constructed to prevent the entry of vermin.
- All waste/recycling and bulky waste storage rooms must be ventilated by either:
  - Mechanical ventilation systems exhausting at a rate of 5L/s per m2 of floor area, with a minimum rate of 100l/s; or
  - Permanent, unobstructed natural ventilation openings direct to the external air, not less than 1/20<sup>th</sup> of the floor area.
- All waste/recycling and bulky waste storage rooms must be provided with artificial light controlled by switches located both outside and inside the rooms.
- Clearly printed "No Standing" signs must be affixed to the external face of each waste/recycling and bulky waste storage room.

# Bulky Waste Storage Room

73. Readily accessible bulky waste storage areas located near the main garbage rooms must be provided for the use of all residents. **Amended plans including a bulky** 

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# waste storage room designed to the following requirements must be submitted prior to the issue of a construction certificate:

Bulky waste storage rooms must be of sufficient size to accommodate a minimum of 6m<sup>3</sup> of bulky waste at any given time. Doorways and travel paths must be a minimum width of 1700mm and of sufficient height and be free of obstructions to permit easy transport from individual units to the storage area, and from the storage area to collection point.

# Access to Waste Collection Point

- 74. All waste must be collected on-site via on-site access by Council's garbage collection vehicles. Amended plans including the access paths to the waste collection point designed to the following requirements must be submitted prior to the issue of a construction certificate:
  - The location(s) of waste and recycling rooms & bulky waste storage areas must be conveniently accessible for both occupants and Council's waste collection contractors.
  - The minimum finished ceiling height must be 2.6m along the path of travel from the street to the residential waste and recycling collection point and maneuvering area. This clearance must be kept free of any overhead ducts, services and other obstructions.
  - The maximum grade of any access road leading to the waste and recycling collection point must not be more than 1:5 (20%). The turning area at the base of any ramp must be sufficient for the maneuver of a 6.0m rigid vehicle to enter and exit the building in a forward direction.
  - Where security gates are proposed, a Council master key system must be installed to permit unimpeded access.

#### <u>Indemnity</u>

75. **Prior to the issue of an Occupation Certificate**, the applicant must enter into a suitable Deed indemnifying Council and its contractors against claims for loss or damage to common property, liabilities, losses, damages and any other demands arising from any on-site collection service.

# Composting/Worm Farming

76. The applicant must provide a container for communal composting/worm farming, the siting of such must have regard to potential amenity impacts. Amended plans showing the location of the communal composting/worm farming container must be submitted prior to the issue of a construction certificate.

#### Internal Waste Management

77. Internal waste/recycling cupboards with sufficient space for one day's garbage and recycling generation must be provided to each dwelling. **Amended plans** 

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identifying the internal waste/recycling cupboards must be submitted prior to the issue of a construction certificate.

#### **Provision of Waste Services**

78. **Prior to the issue of an Occupation Certificate**, the applicant must make written application to Council for the provision of domestic waste services.

# **General Engineering Conditions**

- 79. **Design and Construction Standards:** All engineering plans and work shall be carried out in accordance with Council's standards and relevant development control plans except as amended by other conditions.
- 80. **Materials on Roads and Footpaths:** Where the applicant requires the use of Council land for placement of building waste, skips or storing materials a "Building waste containers or materials in a public place" application form is to be lodged. Council land is not to be occupied or used for storage until such application is approved.
- 81. Works on Council Property: Separate application shall be made to Council's Urban Services Division for approval to complete, any associated works on Council property. This shall include vehicular crossings, footpaths, drainage works, kerb and guttering, brick paving, restorations and any miscellaneous works. Applications shall be submitted prior to the start of any works on Council property.
- 82. **Permit to Stand Plant:** Where the applicant requires the use of construction plant on the public road reservation, an "Application for Standing Plant Permit" shall be made to Council. Applications shall be submitted and approved **prior to the start of any related works**. Note: allow 2 working days for approval.
- 83. **Restoration:** Public areas must be maintained in a safe condition at all times. Restoration of disturbed Council land is the responsibility of the applicant. All costs associated with restoration of public land will be borne by the applicant.
- 84. **Public Utility Relocation:** If any public services are to be adjusted, as a result of the development, the applicant is to arrange with the relevant public utility authority the alteration or removal of those affected services. All costs associated with the relocation or removal of services shall be borne by the applicant.
- 85. **Pedestrian Access Maintained:** Pedestrian access, including disabled and pram access, is to be maintained throughout the course of the construction as per AS-1742.3, 'Part 3 Traffic control devices for works on roads'.
- 86. **Services:** Prior to any excavation works, the location and depth of all services must be ascertained. All costs associated with adjustment of the public utility will be borne by the applicant.
- 87. **Temporary Footpath Crossing:** A temporary footpath crossing must be provided at the Vehicular access points. It is to be 5m in width, made out of sections of hardwood with chamfered ends and strapped with hoop iron.

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- 88. **Safety fence along the boundary of the property:** Before commencement of any works, barrier or temporary fencing is to be provided along the full frontage of the property. This fence is for the safety of pedestrians on the public footpath.
- 89. **Recording of Trucking Movements:** Prior to commencement of site works, the applicant shall
  - Nominate a contact person who will be responsible for all heavy vehicle operations,
  - Submit contact details of the nominated person to council including relevant telephone numbers, facsimile numbers and email.

During construction the applicant shall

- Submit a weekly summary of all trucking movements. The summary is to include the number of trucks that have travelled to and from the site each day, and the registration numbers (both truck and dog-trailer registration plates) of these vehicles.
- 90. **Heavy Vehicle Duty Employee:** The applicant shall place an employee within close proximity of the site exit during site operation hours to ensure that all outgoing heavy vehicles comply with Council's requirements. This employee shall liaise with heavy vehicle drivers and provide regular written updates to drivers on the conditions of entry to the subject site.
  - Those drivers who have been determined to continually not comply with Council's requirements, either by the developer or authorised Council officers, shall not be permitted re-entry into the site for the duration of the project.
- 91. **Truck Shaker:** A truck shaker ramp must be provided at the construction exit point. Fences are to be erected to ensure vehicles cannot bypass the truck shaker. Sediment tracked onto the public roadway by vehicles leaving the subject site is to be swept up immediately.
- 92. Heavy Vehicle Duty Employee and truck cleanliness: The applicant shall
  - Inform in writing all contractors of Council's requirements relating to truck cleanliness leaving the site.
  - Keep a register of all contactors that have been notified, the register is to be signed by each contractor. The register must be available for access by Council officers at all times.
  - Place an employee within close proximity of the site exit during site operation hours to ensure that all outgoing heavy vehicles comply with Council's requirements. This employee shall liaise with heavy vehicle drivers and provide regular written updates to drivers on the conditions of entry to the subject site.

Those drivers who have been determined to continually not comply with Council's requirements, either by the developer or authorised Council officers, shall not be permitted re-entry into the site for the duration of the project.

93. **Covering Heavy Vehicle Loads:** All vehicles transporting soil material to or from the subject site shall ensure that the entire load is covered by means of a tarpaulin or similar material. The vehicle driver shall be responsible for ensuring that dust or dirt particles are not deposited onto the roadway during transit. It is a requirement under the Protection of the Environment Operations (Waste) Regulation, 1996 to ensure that all loads are adequately covered, and this shall be strictly enforced by Council's ordinance inspectors. Any breach of this legislation is subject to a

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- "Penalty Infringement Notice" being issued to the drivers of those vehicles not in compliance with the regulations.
- 94. **On-Site Stormwater Detention System Marker Plate:** The on-site detention system shall be indicated on the site by fixing a marker plate. This plate is to be of minimum size: 100mm x 75mm and is to be made from non-corrosive metal or 4mm thick laminated plastic. It is to be fixed in a prominent position to the nearest concrete or permanent surface or access grate. The wording on the marker plate is described in Council's DCP-Stormwater management. An approved plate may be purchased from Council's customer service desk.
- 95. **Overland Flow around Buildings** To prevent stormwater from entering the building the finished habitable ground floor level of the building shall have a minimum freeboard of 300mm and 150mm above the calculated top water level for the 1 in 100 year ARI storm event respectively.
- 96. **Cast In Situ Drainage Pits:** Any drainage pit within a road reserve, a Council easement, or that may be placed under Council's control in the future, shall be constructed of cast in situ concrete.
- 97. **Rainwater Reuse Tanks:** The proposed 3000L rainwater tank is to be installed in accordance with Council's rainwater tank policy and relevant Australian standards. Note:
  - Rainwater draining to the reuse tank is to drain from the roof surfaces only.
     No "on ground" surfaces are to drain to the reuse tank. "On ground" surfaces are to drain via a separate system.
  - Mosquito protection & first flush device shall be fitted to the reuse tank.
  - The overflow from the rainwater reuse tank is to drain by gravity to the receiving system.
- 98. **Stormwater Requirement:** The diverted drainage easement width needs to be a minimum 2.5m wide.
  - The design and construction of the drainage system is to fully comply with, AS-3500 and Council's DCP-Stormwater Management. The design shall ensure that the development, either during construction or upon completion, does not impede or divert natural surface water so as to have an adverse impact upon adjoining properties.

#### **Engineering conditions to be complied with prior to Construction Certificate**

99. **Drainage Plans Amendments:** The stormwater drainage plan numbered **10328** DWG No **D1**, **D2**, **D7**, **D8** prepared by **EZE Hydraulic Engineers** dated **28-09-10** is to be amended to reflect the above condition titled *'Stormwater requirement'*. The amened design is to be certified that it fully complies with, AS-3500 and Council's DCP-Stormwater management; certification is to be by a suitably qualified engineer. The amended plan and certification shall be submitted to the Principal Certifying Authority **prior to the issue of the Construction Certificate.** 

The Principal Certifying Authority is to be satisfied that the amendments have been made in accordance with the conditional requirements and the amended plans are adequate for the purposes of construction. They are to determine what details, if any, are to be added to the construction certificate plans, in order for the issue of the Construction Certificate.

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- 100. **Positive Covenant Bond:** The applicant shall lodge with Council a \$1000.00cash bond to cover the registration of a Positive Covenant over the on site detention system. Lodgement of this bond is required **prior to the issue of the Construction Certificate.**
- 101. **Positive Covenant OSD:** Documents giving effect to the creation of a positive covenant over the on site detention system shall be registered on the title of the property **prior to the issue of the Occupation Certificate**. The wording of the terms of the positive covenant shall be in accordance with Council's DCP-Stormwater management.
- 102. Accelerated Depreciation to Council's Road Infrastructure: In order to cover the accelerated depreciation to Council's Road Infrastructure the applicant is to pay a fee based upon a calculation of the damage caused by trucking operations. A qualified consultant needs to prepare a report estimating all associated truck movement leaving the site for the duration of the construction works. The fee shall be calculated based on the following table:
  - 3 axle single unit \$5.76
  - 4 axle single unit \$7.17
  - 4 axle or less double unit, 1 unit is truck \$8.56
  - 5 axle double unit, 1 unit is truck \$10.03
  - 6 or more axle double, 1 unit is truck \$11.50
  - 5 axle or less multi unit \$18.06
  - 6 axle multi unit \$14.32

The calculated fee is payable to Lane Cove Council Prior to the issue of the **Construction Certificate.** 

103. Construction adjacent to or parallel to a drainage Easement / pipeline: The footings of the proposed structure adjacent to the Council drainage easement shall be taken below the zone of influence of the Council stormwater line. The location and depth of the footings in relation to the stormwater line, along with the design of the footings, are to be detailed on engineering plans. The engineering plans are to be completed and certified for construction by a suitably qualified engineer and be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.

On completion of the works and **prior to the issue of the Occupation Certificate** the design engineer shall certify that structure has been constructed in accordance with the approved plans and is within acceptable construction tolerances. The certification is to include a Work as Executed plan. The Work-as-Executed must show the location of all structures in the vicinity of the council drainage easement, indicating that all footings are located below the zone of influence of the Council stormwater line.

- 104. **Design of retaining structures**: All retaining structures grater than 1m in height are to be designed and certified for construction by a suitably qualified engineer. The structural design is to comply with, all relevant design codes and Australian standards. The design and certification shall be submitted to the Principal Certifying Authority **prior to the issue of the Construction Certificate**.
- 105. Geotechnical report: A geotechnical report is to be completed for the excavation proposed for the development. The Geotechnical Report and supporting information are to be prepared by a suitably qualified geotechnical engineer and be submitted to Principle Certifying Authority prior to issue of a Construction Certificate.

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106. Geotechnical Monitoring Program: Excavation works associated with the proposed development must be overseen and monitored by a suitably qualified engineer. A Geotechnical Monitoring Program shall be submitted to the principle certifying authority prior to issue of a Construction Certificate. The Geotechnical Monitoring Program must be produced by suitably qualified engineer ensuring that all geotechnical matters are regularly assessed during construction.

The Geotechnical Monitoring Program for the construction works must be in accordance with the recommendations of the Geotechnical Report and is to include

- Recommended hold points to allow for inspection by a suitably qualified engineer during the following construction procedures;
  - Excavation of the site (face of excavation, base, etc)
  - Installation and construction of temporary and permanent shoring/ retaining walls.
  - Foundation bearing conditions and footing construction.
  - Installation of sub-soil drainage.
- Location, type and regularity of further geotechnical investigations and testing.

Excavation and construction works must be undertaken in accordance with the Geotechnical and Monitoring Program.

107. Construction Methodology Report: There are structures on neighbouring properties that are deemed to be in the zone of influence of the proposed excavations. A suitably qualified engineer must prepare a Construction Methodology report demonstrating that the proposed excavation will have no adverse impact on any surrounding property and infrastructure. The report must be submitted to Principal Certifying Authority prior to issue of a Construction Certificate. The details must include a geotechnical report to determine the design parameters appropriate to the specific development and site.

The Report must include recommendations on appropriate construction techniques to ameliorate any potential adverse impacts.

The development works are to be undertaken in accordance with the recommendations of the Construction Methodology report.

108. **Dilapidation report** The applicant is to provide a dilapidation report of all adjoining properties and any of Councils infrastructure located within the zone of influence of the proposed excavation.

Dilapidation report must be conducted by a suitably qualified engineer **prior to the commencement of any demolition**, **excavation or construction works**. The extent of the survey must cover the zone of influence that may arise due to excavation works, including dewatering and/or construction induced vibration. The Initial dilapidation report must be submitted to Principal Certifying Authority **prior to issue of a Construction Certificate**.

A second dilapidation report, recording structural conditions of <u>all</u> structures originally assessed prior to the commencement of works, must be carried out at the completion of the works and be submitted to Principle Certifying Authority **prior to issue of an Occupation Certificate**.

109. **Proposed Vehicular Crossing:** The proposed vehicular crossing shall be constructed to the specifications and levels issued by Council. A *'Construction of a multi-unit dwelling, Vehicular Footpath Crossing'* application shall be submitted to Council **prior to the issue of the Construction Certificate.** All works associated

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with the construction of the crossing shall be completed **prior to the issue of the Occupation Certificate**.

- 110. **Car Parking Certification**: The plans and supporting calculations of the internal driveway ramps, turning areas, garage opening widths, parking space dimensions and any associated vehicular manoeuvring facilities shall be submitted to the Principal Certifying Authority.
  - The plans shall be prepared and certified by a suitably qualified engineer. The design is to be certified that it fully complies with AS 2890 Series and Council's standards and specifications. The design and certification shall be submitted to the Principal Certifying Authority **prior to the issue of the Construction Certificate.**
- 111. **Boundary Levels:** The levels of the street alignment shall be obtained from Council. These levels are to be incorporated into the design of the internal pavements, car parking, landscaping and stormwater drainage plans and shall be obtained **prior to the issue of the Construction Certificate.**
- 112. **Council Infrastructure Damage Bond:** The applicant shall lodge with Council a \$50,000.00 cash bond or bank guarantee. The bond is to cover the repair of damage to Council's roads, footpaths, kerb and gutter, drainage or other assets as a result of the development. The bond will be released upon issuing of the Occupation Certificate. If Council determines that damage has occurred as a result of the development, the applicant will be required to repair the damage. Repairs are to be carried out within 14 days from the notice. All repairs are to be carried in accordance with Council's requirements. The full bond will be retained if Council's requirements are not satisfied. Lodgement of this bond is required **prior to the issue of the Construction Certificate.**
- 113. **Council Construction Requirements:** The applicant shall reconstruct the following:
  - 1. New 1.5 meter wide concrete footpath along the entire frontages of Gordon Crescent and Mowbray Road.
  - 2. New Kerb and Gutter along the entire frontages of Gordon Crescent and Mowbray Road.
  - 3. Reinstate the nature strip and new turf along the entire frontages of Gordon Crescent and Mowbray Road.

A \$10,000 cash bond or bank guarantee shall be lodged with Council to cover the satisfactory construction of the above requirements. Lodgement of this bond is required **prior to the issue of the construction certificate**. The Bond will be held for a period of six months after satisfactory completion of the works. All works shall be carried out **prior to the issue of the Occupation Certificate**. All costs associated with the construction of the above works are to be borne by the applicant.

- 114. **Council Inspection Requirements:** The following items shall require Council inspection and approval.
  - The new footpath
  - The new kerb and gutter
  - The new driveway
  - The diverted drainage easement pipe laying
  - Stormwater discharge point into Council's drainage system

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Each item is to be inspected prior to the pouring of any concrete (formwork) and on completion of the construction. An initial site meeting is to be conducted with Council and the contractor prior to the commencement of any of the above works to allow for discussion of Council construction / set out requirements.

An Inspection fee of \$480.00 is to be paid **prior to the issue of the Construction Certificate.** 

# Engineering condition to be complied with prior to commencement of construction

115. **Soil and Water Management Control:** The applicant shall install appropriate sediment control devices **prior to the start of any works on the site**. The devices are to be installed in accordance with the plans numbered 10328 DWG No E1-E3 and dated 2-9-10. The devices shall be maintained during the construction period and replaced when necessary.

# **Engineering Condition to be complied with prior to Occupation Certificate**

- 116. **Stormwater System Engineering Certification:** On completion of the drainage system a suitably qualified engineer shall certify that the drainage system has been constructed in accordance with the approved plans, Council's DCP-Stormwater management and AS-3500. The certification is to include a work as executed plan. The work as executed plan shall:
  - (a) be signed by a registered surveyor, &
  - (b) Clearly show the surveyor's name and the date of signature.

All documentation is to be submitted to the Principle Certifying Authority **prior to** the issue of the Occupation Certificate.

- 117. **Redundant Gutter Crossing:** All redundant gutter and footpath crossings shall be removed and the kerb, gutter and footpath reinstated to the satisfaction of Council's Urban Services Division. These works shall be carried out **prior to the issue of the Occupation Certificate**.
- 118. Creation of Drainage Easements: A 2.5m wide drainage easement is to be created in favour of Lane Cove Council and burdening Lot 2A DA400225 and 14 in DP 27911 to accommodate the new Council pipeline. The diversion shall be generally in accordance with the plan numbered 10328 D7 prepared by EZE Hydraulic Engineers and dated 28-09-10. Documents demonstrating that the proposed pipe line has been constructed and the easement has been created are to be submitted to the principle certifying authority prior to the issue of the Occupation Certificate. All costs associated with piping, relocation and creation of easements shall be borne by the applicant.
- 119. **Certification of retaining structures and excavations:** A suitably qualified engineer shall provide certification to the principal certifying authority that all retaining structures and excavations have been carried out;
  - In accordance with the relevant Australian Standards and Codes of Practise. The certification and a complete record of inspections, testing and monitoring (with certifications) must be submitted to the principal certifying authority **prior to the issue of the Occupation Certificate.**

#### **Rural Fire Service Conditions:**

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#### 120. Asset Protection Zones:

At the commencement of building works and in perpetuity the entire property shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones'.

### 121. Design and Construction:

Roller doors, tilt-a-doors and other such doors shall be sealed to prevent the entry of embers into the building.

Roofing shall be gutterless or guttering and valleys are to be screened to prevent the build up of flammable material. Any materials used shall be non-combustible.

Construction of the northern elevation shall comply with section 7 (BAL 29) Australian Standard AS3959–2009 Construction of buildings in bush fire–prone areas and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.

All other construction shall comply with section 8 (BAL 40) Australian Standard AS3959–2009 Construction of buildings in bush fire–prone areas and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.

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