

File no: MC-14-1404

10 October 2014

Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

**Attention: Rebecca Sommer**

Dear Rebecca,

**Lindt Facility, Sydney Business Park, Marsden Park**

I refer to your notice of exhibition of the Environmental Assessment for the Stage 1 Lindt Facility, Marsden Park, wherein Council was given the opportunity to provide comments for the abovementioned State Significant Development.

Council's Development Assessment Section is generally supportive of the proposed Lindt Facility subject to the imposition of conditions as indicated in **Attachment A** to this letter.

It is also advised that there are some concerns regarding the drainage of the site which are required to be addressed via amended engineering plans to be prepared to the applicant. The issues are outlined in **Attachment B** to this letter and which were previously provided to the Department.

Council requests that this further work be undertaken prior to any determination of the Application and that Council be given the opportunity to provide comment on the amended plans and supporting documentation.

Should you require any further information regarding this matter, please contact Council's Assistant Team Leader – Sara Smith, on 9839 6000.

Yours sincerely,



Judith Portelli  
**MANAGER DEVELOPMENT SERVICES AND ADMINISTRATION**

## **ATTACHMENT A – Recommended Conditions of Consent**

### **1 ADVISORY NOTES**

#### **1.1 Terminology**

1.1.1 Any reference in this document to a "consent" means a "development consent" defined in the Environmental Planning and Assessment Act 1979.

1.1.2 Any reference in this consent to a Construction, Compliance, Occupation or Subdivision Certificate is a reference to a certificate as defined by Section 109C of the Environmental Planning and Assessment Act 1979.

#### **1.2 Scope of Consent**

1.2.2 The granting of this consent does not imply or confer compliance with the requirements of the Disability Discrimination Act 1992. The applicant is advised to investigate any liability that may apply under that Act. The current suite of Australian Standard 1428 - Design for Access and Mobility, should be consulted for guidance. The prescriptive requirements of Part 1 of the Standard apply to certain buildings requiring development consent.

#### **1.3 Other Approvals**

1.3.1 A separate valid Construction Certificate shall be issued prior to commencement of any construction works.

1.3.2 The applicant's attention is drawn to the need to obtain separate approval for any ancillary development not approved by this consent, including:

(a) any fence, retaining wall, land excavation or filling, advertising structure or other development not being exempt development under Council's Local Environmental Plan.

#### **1.5 Services**

1.5.1 The applicant is advised to consult with:

- (a) Sydney Water Corporation Limited
- (b) Endeavour Energy
- (c) Natural Gas Company
- (d) The relevant local telecommunications carrier

regarding any requirements for the provision of services to the development and the location of existing services that may be affected by proposed works, either on the land or on the adjacent public road(s).

All approved building construction plans attached to the Construction Certificate should be submitted to and stamped by a Sydney Water Corporation Limited Customer Centre or a Sydney Water Quick Check Agent as an indication that the proposal complies with the Sydney Water requirements. Sydney Water may also require the applicant to obtain a Trade Waste Approval as part of the operation of the approved development. Enquiries should be made to ascertain the Sydney Water requirements for the eventual operation of the approved use.



1.5.2 Information regarding the location of underground services may be obtained from the Sydney "Dial Before You Dig" service, telephone number 1100, fax number (02) 9806 0777. Inquirers should provide the street/road name and number, side of street/road name and the nearest cross street/road name.

1.5.3 Prior to any demolition works, all services or utilities should be disconnected in consultation with the relevant service provider.

## 1.6 Tree Planting and Service Locations

1.6.1 In order to facilitate street tree planting that does not impact on public utilities, the applicant is advised to liaise with the relevant service authorities regarding the location and use of their specific service allocation within the public road reserve. These authorities have indicated that it may be possible to lay services on opposite sides of the road thereby providing larger areas for tree planting.

## 1.8 Identification Survey

1.8.1 The applicant is advised to obtain an identification survey from a registered surveyor to ascertain the correct location of the property boundaries, and to ensure the development does not encroach upon adjoining properties.

## 2 GENERAL

### 2.1 Scope of Consent

2.1.1 The applicant shall carry out the project in accordance with the:

- (a) Environmental Impact Statement titled Lindt Facility, Sydney Business Park, prepared by PJEP Environmental Planning, dated 20 August 2014
- (b) Following drawings, except for:
  - I. Any modifications which are Exempt or Complying Development;
  - II. Otherwise provided by the conditions of this consent (\*).

Drawing No.	Revision	Name of Plan	Date
DA01	B	Site / Floor Plan	25-07-2014
DA02	A	Office and Amenities Ground Floor Plan	10-07-2014
DA03	A	Office and Amenities First and Second Floor Plans	10-07-2014
DA04	A	Elevations and Section	10-07-2014
DA05	A	Office and Amenities Elevations	10-07-2014
3642-14		Perspective Image	18-06-2014
L00	C	Landscape Concept Plan *	25-07-2014
L01	A	Proposed Planting Schedule *	10-07-2014

### 2.2 Services

2.2.1 Low voltage electricity and telecommunications services for the approved development shall be reticulated underground.

### **3 Prior to Construction Certificate (General)**

#### **3.1 DA Plan Consistency**

- 3.1.1 A Construction Certificate for the proposed development shall only be issued when the accompanying plans, specifications and/or details are consistent with the approved Development Application design plans.

#### **3.2 Electricity Substation**

- 3.2.1 In the event that a new sub-station is required for the development, details regarding its location and design will be required to be submitted and approved by Council prior to the release of any Construction Certificate.

#### **3.3 Special Infrastructure Contribution – Western Sydney Growth Areas**

- 3.3.1 A Special Infrastructure Contribution is to be made in accordance with the Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Growth Areas) Determination 2011 (as in force when this consent becomes operative).

##### *More information*

Information about the special infrastructure contribution can be found on the Department of Planning's website:

<http://www.planning.nsw.gov.au/PlanningSystem/DevelopmentContributionsSystem/tabid/75/language/en-US/Default.aspx>

Please contact the Department of Planning regarding arrangements for the making of a payment.

Written evidence of these arrangements is to be submitted.

### **4 Prior to Construction Certificate (Planning)**

#### **4.1 Access/Parking**

- 4.1.1 The internal driveway and parking areas are to be designed in accordance with Australian Standard 2890.1.
- 4.1.2 All internal roads and other paved areas shall be designed to provide continuous surface drainage flow paths to approved points of discharge.
- 4.1.3 Access to and parking for persons with disabilities shall be designed in accordance with Australian Standard 2890.1.
- 4.1.4 Car parking for visitors and customer shall be clearly linemarked and directional signage provided.
- 4.1.5 A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted and approved prior to the issue of the Construction Certificate.



- 4.1.6 The right turn movement from Hollinsworth Road shall be only used as a temporary arrangement only. The right turn provision shall be closed once alternative access becomes available as part of the construction of the remaining road network within the Marsden Park Industrial Precinct.

**4.2 Other Matters**

- 4.2.1 A lighting plan is to be provided that shows the provision of lighting within the car park, entry points to the building, as well as the entry and exit points to the site. The use of energy efficient lighting is encouraged.

**5 Prior to Construction Certificate (Environmental Health)**

- 5.1 All odorous exhaust streams are to be designed such that:
- the stack diameter is sized to achieve a minimum exit velocity 10 m/s
  - emissions are released as a free vertical discharge with a rain cap that does not restrict vertical discharge
  - The height of the stack is to rise 3m above the highest point of the building.
- 5.2 A qualified acoustic consultant with experience consistent with the technical eligibility criteria required for membership of the Australian Association of Acoustic Consultants and/or the grade of membership of the Australian Acoustical Society denoted by MAAS, must certify details of the design of the acoustic attenuation treatment for all plant and equipment that the noise emitted will not exceed the Project Specific Noise level when measured at the most affected point on or within any residential property boundary. The Project Specific Noise level must be calculated in accordance with the provisions of the Department of Environment and Conservation's Industrial Noise Policy.
- 5.3 The garbage and recycling storage area must have a smooth impervious floor that is graded to a floor waste. A tap and hose must be provided to facilitate regular cleaning of the bins and all waste water must be discharged to the sewer in accordance with the requirements of Sydney Water. Garbage bins must be designed to prevent the escape of any liquid leachate and must be fitted with a lid to prevent the entry of vermin.

**6 Prior to Development Works**

**6.1 Safety/Health/Amenity**

- 6.1.1 Toilet facilities shall be provided on the land at the rate of 1 toilet for every 20 persons or part thereof employed at the site.

Each toilet provided shall be:

- (a) a standard flushing toilet, or
- (b) a temporary on-site toilet which is regularly maintained and the waste disposed to an approved sewerage management facility.

- 6.1.2 A sign is to be erected and maintained in a prominent position on the site in accordance with Clause 98 A (2) of the Environmental Planning and Assessment Regulations 2000 indicating:

- (a) the name, address and telephone number of the principal certifying authority for the work, and
- (b) the name of the principal contractor (if any) for the building work and a telephone number on which that person may be contacted outside working hours, and
- (c) stating that unauthorised entry to the work site is prohibited.

This condition does not apply to:

- (a) building work carried out inside an existing building, or
- (b) building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.

6.1.3 Should the development work:

- (a) be likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
- (b) involve the enclosure of a public place,

a hoarding or protective barrier shall be erected between the work site and the public place. Such hoarding or barrier shall be designed and erected in accordance with Council's current Local Approvals Policy under the Local Government Act 1993.

Where necessary, an awning shall be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place.

The hoarding, awning or protective barrier shall be effectively illuminated between sunset and sunrise where it may be hazardous to any person in the public place.

6.1.4 Soil erosion and sediment control measures shall be provided in accordance with Council's Soil Erosion and Sediment Control Policy.

6.1.5 All soil erosion and sedimentation control measures indicated in the documentation accompanying the Construction Certificate shall be installed prior to the commencement of development works.

6.1.6 A single vehicle/plant access to the land shall be provided to minimise ground disturbance and transport of soil onto any public place. Such access shall be provided in accordance with the requirements of Appendix "F" of Council's Soil Erosion and Sediment Control Policy. Single sized 40mm or larger aggregate placed 150mm deep, and extending from the street kerb/road shoulder to the land shall be provided as a minimum.

6.1.7 Any excavation and/or backfilling associated with the development shall be executed safely and in accordance with appropriate professional standards, with any excavation properly guarded and protected to prevent such work being dangerous to life or property.

6.1.8 Should any excavation associated with the development extend below the level of the base of the footings of a building or any other structure on any adjoining allotment of land (including a public place), that building or structure:



- (a) shall be preserved and protected from damage, and
- (b) if necessary, shall be underpinned and supported in accordance with structural design details accompanying the Construction Certificate, and
- (c) the owner(s) of which shall, at least 7 days before any such excavation or supporting work commences, be given notice of such intention and particulars of the excavation or supporting work.

## 6.2 Notification to Council

- 6.2.1 The person having the benefit of this consent shall, at least 2 days prior to work commencing on site, submit to Council a notice under Clauses 135 and 136 of the Environmental Planning and Assessment Regulation 2000, indicating details of the appointed Principal Certifying Authority and the date construction work is proposed to commence.

## 7 During Construction (Building)

### 7.1 Safety/Health/Amenity

- 7.1.1 The required toilet facilities shall be maintained on the land at the rate of 1 toilet for every 20 persons or part of 20 persons employed at the site.
- 7.1.2 A sign is to be erected and maintained in a prominent position on the site in accordance with Clause 98 A (2) of the Environmental Planning and Assessment Regulations 2000 indicating:
  - (a) the name, address and telephone number of the principal certifying authority for the work, and
  - (b) the name of the principal contractor (if any) for the building work and a telephone number on which that person may be contacted outside working hours, and
  - (c) stating that unauthorised entry to the work site is prohibited.
- 7.1.3 Should the development work:
  - (a) be likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
  - (b) involves the enclosure of a public place,

the required hoarding, awning or protective barrier shall be maintained between the land and the public place.

The hoarding, awning or protective barrier shall be effectively illuminated between sunset and sunrise where it may be hazardous to persons in the public place.
- 7.1.4 Soil erosion and sediment control measures (including the connection of roofwater downpipes to stormwater drainage lines upon fixing of roof covering) shall be maintained during the development works.
- 7.1.5 All measures specified in the Construction Certificate to control soil erosion and sedimentation shall be maintained throughout development works.

- 7.1.6 A single vehicle/plant access to the land shall be maintained to minimise ground disturbance and transport of soil onto any public place. Such access shall be maintained in accordance with the requirements of Appendix "F" of Council's Soil Erosion and Sediment Control Policy. As a minimum, single sized 40mm or larger aggregate placed 150mm deep, and extending from the street kerb/road shoulder to the land shall be provided.
- 7.1.7 Any excavation and/or backfilling associated with the ongoing development works shall be executed safely and in accordance with appropriate professional standards, with any excavation properly guarded and protected to prevent them from being dangerous to life or property.
- 7.1.8 Should any excavation associated with the ongoing development works extend below the level of the base of the footings of a building or any other structure on any adjoining allotment of land (including a public place), that building or structure:
- (a) shall be preserved and protected from damage, and
  - (b) if necessary, shall be underpinned and supported in accordance with structural design details accompanying the Construction Certificate, and
  - (c) the owner(s) of which shall, at least 7 days before any such excavation or supporting works be given notice of such intention and particulars of the excavation or supporting works.
- 7.1.9 Building and construction materials, plant, equipment and the like shall not to be placed or stored at any time on Council's footpath, roadway or any public place.
- 7.2 **Building Code of Australia Compliance**
- 7.2.1 All building work shall be carried out in accordance with the provisions of the Building Code of Australia.
- 7.3 **Nuisance Control**
- 7.3.1 Any objectionable noise, dust, concussion, vibration or other emission from the development works shall not exceed the limit prescribed in the Protection of the Environment Operations Act 1997.
- 7.3.2 The hours of any offensive noise-generating development works shall be limited to between 7.00am to 6.00pm, Mondays to Fridays: 8.00am to 1pm, Saturdays; and no such work to be undertaken at any time on Sundays or public holidays.
- 7.3.3 Construction work on all buildings (except that on single dwelling houses and associated structures on the on the site of a single dwelling house) shall not occur on Saturdays and Sundays on weekends adjacent to a public holiday.
- 7.4 **Waste Control**
- 7.4.1 The waste material sorting, storage and re-use requirements of the approved Waste Management Plan and Council's Site Waste Management



and Minimisation Development Control Plan shall be implemented during the course of development works.

## **8 Prior to Occupation Certificate**

### **8.1 Road Damage**

- 8.1.1 The cost of repairing any damage caused to Council's assets in the vicinity of the land as a result of the development works shall be met in full by the applicant/developer.

Note: Should the cost of damage repair work not exceed the road maintenance bond Council will automatically call up the bond to recover its costs. Should the repair costs exceed the bond amount a separate invoice will be issued.

### **8.2 Compliance with Conditions**

- 8.2.1 An Occupation Certificate shall not be issued until such time as all conditions of this consent, other than "Operational" conditions, have been satisfied. The use or occupation of the development prior to compliance with all conditions of consent, other than "Operational" conditions, may render the applicant/developer liable to legal proceedings.

- 8.2.2 Prior to occupation/use of a new building, it is necessary to obtain an Occupation Certificate from the principal certifying authority in accordance with the provisions of Section 109H of the Environmental Planning & Assessment Act 1979.

### **8.3 Service Authorities**

- 8.3.1 The applicant shall obtain a Trade Waste Approval from the Sydney Water Corporation Limited in relation to any discharges to the Corporation's sewerage system.
- 8.3.2 A final written clearance shall be obtained from Sydney Water Corporation, Integral Energy and Telstra (or any other recognised communication carrier) if such clearance (in the form of a Section 73 Certificate, Notification of Arrangement, etc) has not previously been issued.

### **8.4 Temporary Facilities Removal**

- 8.4.1 Any hoarding or similar barrier erected to protect a public place shall be removed from the land and/or public place.
- 8.4.2 Any temporary toilet facilities provided during construction works shall be appropriately dismantled, disconnected and removed from the land.
- 8.4.3 Any temporary soil erosion control measure installed during development works shall be removed and other permanent measures required by Council's Soil Erosion Control Policy shall be provided.
- 8.4.4 Any temporary builder's sign or other site information sign shall be removed from the land.

- 8.4.5 Any temporary site access provided for the purpose of development works shall be removed and the kerb and gutter and/or previous roadworks reinstated in a manner satisfactory to Council. Should the reinstatement involve the provision of a new vehicular crossing, layback, kerb and gutter or road shoulder works the separate approval of Council's Maintenance Section shall be obtained (and any appropriate fees paid) prior to such works commencing.
- 8.5 **Landscaping/Car Parking**
- 8.5.1 All landscaping shall be completed in accordance with approved landscaping design plan. All turfed areas shall be finished level with adjoining surfaces and graded to approved points of drainage discharge.
- 8.5.2 All common open space areas and internal driveways shall be appropriately illuminated by the use of bollard lighting or the like to provide for the safety and convenience of occupants and other people resorting to the land at night.
- 8.5.3 Entrance/exit points are to be clearly signposted and visible from the street and the site at all times.
- 8.5.4 Access and parking for people with disabilities shall be provided in accordance with Australian Standard 2890.1.
- 8.5.5 All required internal roads and car parking spaces shall be line-marked, sealed with a hard standing, all-weather material to a standard suitable for the intended purpose.
- 8.5.6 The landscape is to be provided with an automatic trickle irrigation system installed below mulch level. The system is to be supplied by rainwater collected from the site.
- 8.5.7 Landscaped areas are to be separated from vehicular access areas by an appropriate edge, preferably a raised kerb.
- 8.5.8 The tree planting bay area is to have a 2 metre bay of deep soil condition.
- 8.5.9 Retaining wall elements must be finished in decorative masonry and no greater than 3 metres in height. All retaining walls must be screened by vegetation.
- 8.5.10 The communal open space area is to be embellished with landscaping, paving, tables, chairs and the like for the use and enjoyment of employees.
- 8.5.11 The right turn movement from Hollinsworth Road shall be only used as a temporary arrangement only. The right turn provision shall be closed once alternative access becomes available as part of the construction of the remaining road network within the Marsden Park Industrial Precinct.
- 8.6 **Fee Payment**
- 8.6.1 Any fee payable to Council as part of a Construction, Compliance or Occupation Certificate or inspection associated with the development



(including the registration of privately issued certificates) shall be paid in full.

## **8.7 Inspections**

- 8.7.1 Any *additional* Council inspections beyond the scope of any Compliance Certificate package and needed to verify full compliance with the terms of this consent will be charged at the individual inspection rate nominated in Council's Fees and Charges Schedule.

## **8.8 Retaining walls**

- 8.8.1 Retaining wall(s) and/or other effective methods to retain excavated or filled ground (other than those sites works which may be Exempt Development under the Blacktown Local Environmental Plan), together with any associated groundwater drainage system, shall be constructed and/or provided in accordance with the plans attached to the Construction Certificate.

## **8.9 Environmental Health**

- 8.9.1 Council must verify that the fit-out of the food premises complies with:
- o Australian Standard AS4674-2004 – Design, Construction and Fit-out of Food Premises.
  - o Food Standards Code.
  - o The cool rooms are provided with safety devices to comply with G1.2 of the BCA.
  - o The NSW Food Authority has been notified under the Food Notify Scheme.
  - o Comply with the requirements of Sydney Water – Trade Waste Section (grease trap).
- 8.9.2 Documentation shall be submitted to Council certifying that the ventilation system has been installed and is operating in accordance with Australian Standard 1668.2-2012: *The use of ventilation and air-conditioning in buildings - Mechanical ventilation in buildings*
- 8.9.3 Occupation of the premises for the food business must not occur until a registration application has been submitted to and approved by the appropriate food standards enforcement agency, which is either Council or NSW Food Authority.

# **9 The use of the site / Operational Matters**

## **9.1 Planning**

- 9.1.1 Separate development consent of Council is required for any proposed café.
- 9.1.2 The 7.5m setback to the northern road is to be suitably landscaped. The landscape plan is to be amended to include planting in this area. All landscaped areas including the stage 2 area shall be maintained at all times.

- 9.1.3 The hours of operation of the showroom shall not be outside of the following nominated times.

Any alteration to these hours will require the separate approval of Council.

Approved hours of operation:

7:00am to 6:00pm Monday to Friday  
8:00am to 1:00pm Saturdays  
Closed Sunday and Public Holidays

Should there be any justified complaints that the activity is operating outside these hours, or is causing noise and disturbance to the neighbouring residents, then these will be required to investigate, which may result in the commencement of enforcement proceedings in the event of non-compliance.

## 9.2 **Access/Parking**

- 9.2.1 The internal driveway and parking areas are to be designed in accordance with Australian Standard 2890.1.
- 9.2.2 All internal roads and other paved areas shall be designed to provide continuous surface drainage flow paths to approved points of discharge.
- 9.2.3 Access to and parking for persons with disabilities shall be designed in accordance with Australian Standard 2890.1.
- 9.2.4 On-site parking for 341 formalised car spaces (including 6 disabled spaces) are to be provided for both stages 1 and 2.
- 9.2.5 Car parking for visitors and customer shall be clearly linemarked and directional signage provided.
- 9.2.6 No trucks shall be stored or maintained on the site.
- 9.2.7 No truck entry is permitted from the northern estate road, signage to this effect shall be installed.
- 9.2.8 The right turn movement from Hollinsworth Road shall be only used as a temporary arrangement only. The right turn provision shall be closed once alternative access becomes available as part of the construction of the remaining road network within the Marsden Park Industrial Precinct.

## 9.3 **Environmental Health**

- 9.3.1 The food premises shall be maintained in accordance with the requirements of:
- *Food Act 2003* and Regulations there under
  - Australian New Zealand Food Standards Code
  - Australian Standard 4674-2004 *Design, construction and fit-out of food premises*.
- 9.3.2 The proprietor is to ensure that all food handling complies with the requirements of the Food Act 2003 and Regulations there under.



- 9.3.3 All plant and equipment must be operated and maintained so that the level of noise attenuation forecast in the certified design is achieved in order to minimise noise to the standard required by this consent.
- 9.3.4 Dangerous goods and hazardous substances must be stored in accordance with the Workcover Authority requirements. All tanks, drums and containers of toxic and hazardous materials must be stored in a bunded area.
- 9.3.5 All liquids, including oils and chemicals must be stored in a covered and bunded area. The bund is to be made of any impervious material and be large enough to hold the contents of the largest container plus 10% i.e. 110% the total stored volume. Where applicable the construction of bunds must comply with the requirements of:
- Australian Standard AS 1940 2004: The storage and Handling of Flammable and Combustible Liquids;
  - Australian Standard AS 4452 1997: The storage and Handling of Toxic Substances
  - Storage and handling of Dangerous Goods Code of Practice 2005 Workcover NSW
  - NSW DECC (2007) - *Storing and Handling Liquids: Environmental Protection - Participants Manual*
  - NSW DECC (2005) - *Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation.*
- 9.3.6 Sufficient supplies of appropriate absorbent materials and/or other appropriate spill clean-up equipment shall be kept on-site to recover any liquid spillage. Liquid spills must be cleaned-up using dry methods only and shall not give rise to an offence under the *Protection of the Environment Operations Act 1997*.
- 9.3.7 The installation of any grease arrestor shall comply with the requirements of the Sydney Water Corporation Ltd prior to the commencement of use.
- 9.3.8 The use and operation of the premises must not cause the emission of any odours that, by reason of its level, nature, character or quality is likely to be harmful to or interfere unreasonably with the comfort or repose of person who is outside the premises.

## ATTACHMENT 2

### 1. Engineering Issues

The following Engineering issues are required to be addressed, with amended plans to be submitted to Council for the inclusion of conditions of consent prior to the determination of the application.

1. Amended Concept Drainage Plans must address the following:
  - i. Provide a pit schedule.
  - ii. Pits containing Enviropods are to be clearly detailed on the drainage plans.
  - iii. Enviropods treating only surface flows require a minimum clear depth of 400 mm from the grate to any inlet or outlet pipe obvert. Enviropods treating surface flows and upstream pipe flows require a minimum clear depth of 350 mm from the invert of the upstream pipes to be treated, to the obvert of the outlet pipe. Where Enviropods are designed to treat upstream pipe flows, the invert levels on all pipes discharging to and from the pit are to be clearly shown. Provide details.
  - iv. On drawing C04(P4) amend the plan to provide full kerb on the eastern side of every raingarden type 1. Continue raingarden type 1 for the full length south of pit 12A.
  - v. On drawing C05(P4) provide finished levels within the swale at frequent intervals for the length of the swale. Ensure pits within the bioretention swale are a minimum of 900 x 900 and/or locally depressed to allow full collection of surface flows.
  - vi. On drawing C05(P4) amend the plan to provide off-line treatment. Replace the two 900 mm pipe diversions to the Stormfilter vault with a much smaller set sized at say twice the flow rate of the Stormfilters cartridges.
  - vii. On drawing C05(P4) review the overall pipe capacities as there are two 900 mm pipes collecting flows from various parts of the site however there is only one 900 mm pipe exiting the site.
  - viii. Provide detailed sections and plan of the Stormfilter chamber with energy dissipaters on all pipe entries, a weir set 770 mm above the false floor and a sealed baffle set 250 mm upstream of the weir and extending from the top of the tank to 400 mm below the weir to contain floatable including oil. The minimum length of the Stormfilter baffle (L) is to be designed to provide a maximum velocity of 0.4 m/s under the baffle during peak flow (i.e.  $L > Q_{\text{diversion}} / (0.4 \times 0.25)$ ) in m, where  $Q_{\text{diversion}}$  is in  $\text{m}^3/\text{s}$ . The Stormfilter weir length is to be a minimum of 75% of the baffle length. There are insufficient access grates for the below ground Stormfilter chamber. Access grates must be a minimum 900mm by 900mm and are positioned such that the maximum distance from any point in the tank to the nearest grate is not greater than 3m in accordance with the requirements of Council's Engineering Guide for Development 2005. Provide mosquito screens under the grates.
  - ix. Provide details of each of the diversion weirs to the Stormfilter set a minimum of 870 mm above the false floor of the Stormfilter chamber. Provide sufficient overflow capacity over the weir.
  - x. On drawing C06(P4) it is unclear what areas drain to raingarden type 2. Within raingarden type 2 provide eight subsoil lines in an angular pattern from the collection pit. Within the extent of the carpark for raingarden type 1 there



- xii. On plan C08(P3) amend the "Pit in Raingarden Detail" to delete the two 50 mm weepholes and amend the grate to be a raised park or surcharge style to minimise blockage. The depth of flow into the pit is to be assessed for the 1 in 20 year ARI event assuming 50% blockage. Amend the "Ag Drain Inspection Opening" to provide a detail of a subsoil riser is to be provided for flushing and maintenance of the subsoil collection pipe. The riser is to include two 45° bends with a short section of un-slotted straight (minimum 300 mm) in between. The vertical riser is to be sealed with a removable screw cap. A marker plate is to be positioned on the adjacent wall or a small concrete marker with "SS" is to be positioned directly over the cap. Alternatively the riser cap can be brought to the surface providing it is lockable and constructed out of vandal resistant material. Provide intermediate risers at 20 m maximum spacings.
  - xiii. On plan C09(P3) amend the detail in Raingarden Type 1 and 2 to delete the 100 mm gravel layer at the surface (jute mat is permitted), the filter surface level and transition layer is to be level (no batters). The gravel layer may vary allowing for a minimum grade of 0.5% in the subsoil lines. Subsoil lines are to be slotted PVC with NO sock. The raingarden media is to be contained within a waterproof liner. Provide overflow pit with surcharge style grate to minimise blockage. Set the filter media level down 100 mm for raingarden type 1 and 200 mm for raingarden type 2 below the pavement level. Overflow pit for raingarden type 2 is to be set 100 mm above the filter media. Provide two subsoil lines for Raingarden Type 1.
  - xiv. On plan C09(P3) amend the swale detail to delete the 100 mm of topsoil over the bioretention component (jute mat is permitted), provide 400 mm sandy loam, delete the 50 mm sand bedding, provide a minimum of two subsoil lines, subsoil lines are to be slotted PVC with NO sock, set the edge of swale a minimum of 50 mm below the pavement level and delete swale note 7.
- xv. On plan C10(P3) amend the slotted kerb (SK) detail to have 1.5 m centres.

2. The MUSIC model does not reflect the landscaping plans and concept drainage plans. Amended MUSIC modelling must address the following:

- i. A minimum of 80% of the non-potable water uses on site is to be met through rainwater. This is to be assessed using the node water balance in MUSIC. Allow for a 20% loss in rainwater tank size volume in MUSIC to that shown on the design plans to allow for anaerobic zones, mains water top up levels and overflow levels.
- ii. Amend the daily non-potable demand to be 2.4 kL/day
- iii. For Annual Demand for watering landscaped areas only e.g. mass planting areas, allow 0.4 kL/year/m<sup>2</sup> as PET-Rain ignoring any turf. For bioretention filter areas only allow 1 kL/year/m<sup>2</sup> as PET-Rain.
- iv. On the node Road Area to Swale (Eastern Side) this should refer to the western side.

- v. In the bioretention swale include the total length of the four sides of the pit, times the number of pit as the Overflow Weir Width.
  - vi. Provide a separate catchment and bioretention node for the raingarden type 1 and raingarden type 2.
  - vii. Delete the area of raingarden type 1 where the canopy trees are to be retained.
  - viii. Allow for zero depth for raingarden type 1.
  - ix. Provide a Generic node to represent the Stormfilter flow diversion pits with the high flows bypassing treatment.
  - x. The available area for the Stormfilter detention node is to exclude the area of the Stormfilter cartridges and the area of the weir.
3. Provide a water quality catchment plan showing what areas drain to specific devices and what areas are bypassing treatment. These are to be colour coded or hatched to differentiate the catchments.
4. Revised Landscape plans by Habitation are required that include appropriate species for the raingarden type 1 and 2 and the bioretention swale in accordance with the BCC Handbook Part 5 - Vegetation Selection Guide (October 2012). A number of the plant species nominated on the plan will not be permitted to be planted within the filter media area. Planting within the filter area should incorporate several growth forms, including shrubs and tufted plants and be densely planted (tufted plants at a minimum of 8 plants per square metre) to ensure plant roots occupy all parts of the media. Groundcover species must not be used in the filter media area. To ensure diversity and disease resistance a minimum of 4 different species is required to be planted as a matrix for raingarden type 1, a minimum of 8 different species is required to be planted as a matrix for raingarden type 2, and a minimum of 8 different species is required to be planted as a matrix for the bioretention swale. Nominate each area type with a different colour or hatching. All plants within the filter area are to be planted from tubestock or virotube and not pots. The area proposed for the raingarden type 2 on the drainage plans does not match the landscape plan that shows turf. Within the extent of the carpark for raingarden type 1 there are a number of tree species Cma that are not permitted within the bioretention areas. Alternatively the extent of raingarden type 1 may be reduced and the trees remain.