



AMENDED STATEMENT OF FACTS AND CONTENTIONS

COURT DETAILS

Leave given on 13 April 2016

Court Land and Environment Court of New South Wales
Class 1
Case number 2016/159652 (Formerly 2015/10898)

TITLE OF PROCEEDINGS

PROCEEDINGS 2016/159652 (Formerly 2015/10898)

Applicant **Liverpool City Council**

First Respondent **Moorebank Recyclers Pty Limited**
Second respondent **Minister for Planning**

PROCEEDINGS 2016/157848 (Formerly 2015/10951)

First applicant **Benedict Industries Pty Limited**
Second applicant **Tanlane Pty Limited**

First Respondent **Minister for Planning**
Second respondent **Moorebank Recyclers Pty Limited**

FILING DETAILS

Filed for **Liverpool City Council, applicant**
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PART A – THE FACTS

THE PROPOSAL THE SUBJECT OF THE APPEAL

- 1 On 12 October 2005, Moorebank Recyclers Pty Ltd (**Moorebank Recyclers**), submitted a proposal (application 05_0157) to the NSW Department of Planning (**Department**) to construct and operate a demolition and construction waste recycling facility (**Development**) at Newbridge Road, Moorebank on land known as Lot 6 DP 1065574 (**the Site**).
- 2 The proposal is for a waste recycling facility that would process 500,000 tonnes of masonry construction and demolition waste per year. The proposed facility would receive concrete, brick, asphalt, sandstone and sand. No domestic loads would be received at the facility.
- 3 As part of the Development it is proposed that most of the activity will occur on the northern half of the Site:
 - a. A weighbridge and an office would be located at the entrance to the Site.
 - b. The materials received would be stockpiled at the southern end of the Site in categories. These would be based on categories, such as bricks or concrete.
 - c. The materials would be processed by crushing them into different sizes in sheds which house two crushers, a picking and a screening area.
 - d. A workshop is proposed on the north-western side of the Site.
 - e. Crushed material would be stockpiled according to size prior to transport to the end-user.
- 4 Moorebank Recyclers also proposes to undertake bulk earthworks at the Site prior to the commencement of any works associated with the Development, to excavate a section of the southern part of the landfill and transfer the material to the northern side part of the site so as to raise it above the 1 in 100 year flood level. These works were the subject of a development consent 1417/2005 granted by Liverpool City Council (**Council**) in 2006, (**Bulk Earthworks Consent**), which has since lapsed

- 5 The proposed facility would operate in accordance with an environmental protection licence issued by the NSW Environment Protection Authority (**EPA**).
- 6 Access to the site is proposed via a road which links Brickmakers Drive to the Site. This access route was adopted as Roads and Maritime Services (**RMS**) objected to vehicular access to and from Newbridge Road.
- 7 The Site is currently only accessible via a 'panhandle' dirt road that runs north from the Site to Newbridge Road.

THE SITE

- 8 The Development is proposed on Lot 6 in DP 1065574 (**Moorebank land**), which is located within the Liverpool local government area.
- 9 The Site occupies approximately 20.5 hectares and is roughly rectangular in shape, and also includes the 'panhandle' access road that is 810 metres long and 10 metres wide. The east boundary follows the contour of the Georges River.
- 10 The Site is currently vacant. It was previously occupied by a landfill that ceased operating in 1979.
- 11 Moorebank Recyclers acquired the Site in 1996. Moorebank Recyclers carried out a remediation plan at the Site in 1998 to maintain the landfill capping. Following remediation, an independent site audit was undertaken in 2001 under the *Contaminated Land Management Act 1997*. The audit concluded that the Site was suitable for 'commercial/industrial use, including a concrete recycling facility'.

THE LOCALITY

- 12 The Site is surrounded by land zoned residential, environmental conservation and public or private recreation:
 - a. to the west by:
 - i. vegetated land that is zoned E2 Environmental Conservation;
 - ii. Brickmakers Drive; and
 - iii. a former Boral quarry, which is zoned R3 Residential and which has been redeveloped as the Georges Fair residential development;

- b. to the south by the New Brighton Golf Course, part of which has been zoned R1 Residential, with the golf course that is remaining zoned as RE2 Private Recreation, and the land along the contour of the Georges River zoned as RE1 Public Recreation;
- c. to the east by the Georges River and its riparian areas, included within land zoned E2 Environmental Conservation; and
- d. to the north by land owned by Tanlane Pty Ltd (**Tanlane**) (lot 7 DP 1065574), being a former sand and gravel facility operated by Benedict Industries Pty Ltd, which is zoned in part as RE2 Private Recreation and in part as R3 Medium Density Residential, and is proposed to be redeveloped partly as marina and associated facilities and partly as residential development (**Tanlane Land**). The portion of land along the frontage to the Georges River is zoned RE1 Public Recreation.

STATUTORY CONTROLS

Part 3A Environmental Planning and Assessment Act 1979 (EPAA)

- 13 The Development application was lodged in December 2005 under Part 3A EPAA. The Development was a major Development under Part 3A EPAA as it was a recycling facility that handled more than 75,000 tonnes of waste per year (see section 75B(1)(a) EPAA, clause 6(a) of the *State Environmental Planning Policy (Major Developments) 2005 (SEPP Major Developments)* and clause 27(2) of Schedule 1 to the SEPP Major Developments).
- 14 On 1 October 2011:
 - a. Part 3A EPAA was repealed;
 - b. Schedule 6A EPAA, which provides a regime applicable to transitional Part 3A EPAA Developments, came into force.
- 15 The Development continued to be assessed by the Department under the transitional Part 3A provisions contained in Schedule 6A EPAA.
- 16 The Minister is the consent authority for transitional Part 3A Developments (section 121A EPAA).

- 17 The Minister delegated that authority to the Planning Assessment Commission (**PAC**) (effective 1 October 2011) and the Department (NSW Government Gazette No 13 of 20 February 2015).
- 18 For transitional Part 3A Developments where more than 25 objections are received from the public and/or where one of the objectors was the local council, the determination is delegated to the PAC.
- 19 Had the Development proposal not been lodged under Part 3A EPAA, it would have been designated development within the meaning of section 77A EPAA, namely 'crushing, grinding or separating works' (see clause 16 Part 1 Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*).

Liverpool Local Environmental Plan 1997 (1997 LEP)

- 20 Under the 1997 LEP, the Site was zoned as 1(a) Rural land.
- 21 In 2002, Council prepared the Moorebank Structure Plan where Council identified:
 - a. the Site (and part of the Tanlane Land to the north) for use as a combination of Waste Recycling and Open Space, with other uses subject to detailed investigations, and
 - b. the former Boral quarry to the west as a residential zone.
- 22 These uses became permissible with consent following amendments made to the 1997 LEP in 2004 and 2005.
- 23 The former Boral quarry has since been redeveloped into a new residential development named Georges Fair. Dwellings in Georges Fair are located approximately 250 metres from the Site.
- 24 In September 2005, LEP 1997 was further amended (**Amendment 76**). Amendment 76 rezoned the Moorebank land to part 1(a) Rural and part 7(a) Environmental Protection – Waterway and part 7(c) Environmental Protection – Conservation. It also permitted, with consent, a materials recycling yard, within the part of the Moorebank land that was zoned 1(a), providing that arrangements had been made for the upgrading of arterial road infrastructure to service the land.

Liverpool Local Environmental Plan 2008 (2008 LEP)

- 25 The 2008 LEP came into effect on 29 August 2008.
- 26 Under the 2008 LEP, the land on which the Development is proposed is zoned E2 Environmental Conservation. This E2 zone extends over land to the west of the site, and to the east, including land within the riparian zone.
- 27 The E2 zone does not permit resource recovery facilities. The 2008 LEP permits Environmental protection works to be carried out within the E2 zone without development consent. It also allows the following development with consent:
- a. Building identification signs;
 - b. Environmental facilities;
 - c. Flood mitigation works;
 - d. Information and education facilities; and
 - e. Roads.
- 28 Schedule 1 of the Liverpool Local Environmental Plan 2008 permits certain development which would otherwise be prohibited.
- 29 The objectives of the E2 zone are:
- a. To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
 - b. To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
 - c. To enable the recreational enjoyment, cultural interpretation or scientific study of the natural environment.
- 30 Additional use of the Development land is permitted under clause 2.5 of the 2008 LEP and clause 11 of Schedule 1 2008 LEP. These clauses allow development for the purposes of a resource recovery facility with consent on Lot 6 DP 1065574 in Zone E2 Environmental Conservation at Newbridge Road, Moorebank.
- 31 Clause 11 of Schedule 1 2008 LEP is to be repealed on 1 September 2018.
- 32 The Development land is not located in a Conservation Area. No item of Environmental Heritage is situated on the land.

- 33 A large portion of land within the Site is mapped as Environmentally Significant Land pursuant to clause 7.6 of the 2008 LEP.

State Environmental Planning Policies (SEPPs)

- 34 The following SEPPs apply to the Site:
- a. State Environmental Planning Policy No. 19 – Bushland in Urban Areas
 - b. State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
 - c. State Environmental Planning Policy No. 44 – Koala Habitat
 - d. State Environmental Planning Policy No. 50 – Canal Estate Development
 - e. State Environmental Planning Policy No. 55 – Remediation of Land
 - f. State Environmental Planning Policy No. 64 – Advertising and Signage
 - g. State Environmental Planning Policy – (Infrastructure) 2007
 - h. State Environmental Planning Policy – (Miscellaneous Consent Provisions) 2007
 - i. State Environmental Planning Policy – (Exempt and Complying Development Codes) 2008
 - j. State Environmental Planning Policy – (State and Regional Development) 2011
- 35 Also applicable to this Development is the Deemed SEPP, Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment.
- a. This plan aims to preserve and protect and to encourage the restoration or rehabilitation of regionally significant sensitive natural environments, to preserve, enhance and protect the freshwater and estuarine ecosystems within the Catchment and to ensure that development achieves the environmental objectives for the Catchment.

ACTIONS OF COUNCIL AND OF THE CONSENT AUTHORITY

Rezoning of the land

- 36 In 1995, Moorebank Recyclers submitted a rezoning request to Council.
- 37 In or around July 1995, Council released a report indicating-recommending that Council resolve to prepare a draft LEP for the Site to allow a "concrete crushing and recycling facility" as an appropriate short term use for the Site. That report also recommended that a sunset provision "could be incorporated into the LEP and any development consent requiring the use to cease in, say 20 years when the planning for the whole of the area comprising the Boral, Echo Dairy and old Collex sites, will be ready for review".
- ~~a. a sunset clause would be incorporated into the proposed LEP; and~~
 - ~~b. a condition would be imposed that development consent would require the use to cease in around 20 years, at which time further planning for the locality would be reviewed.~~
- 38 Council notified Moorebank Recyclers in late 1995 in relation to the above intention, on 5 September 1995 that at its meeting on 14 August 1995, Council had resolved to make the following recommendation:
- 'That Council, pursuant to Section 54 of the Environmental Planning and Assessment Act, resolve to prepare a Draft Local Environmental Plan for the subject land to allow a "concrete crushing and recycling facility" as an additional permitted use for the following reasons:
- a. The proposal may be an appropriate short term use for the site;
 - b. The proposal will meet an apparent demand for a concrete recycling facility, and
 - c. the proposal will provide an opportunity to achieve riverbank revegetation and beautification as an appropriate vegetated buffer can be required along the river.
- 3839 On 29 April~~In~~ 1996, Moorebank Recyclers wrote to a Council Committee requesting to rezone the land "for a definite period of time only, to allow the use of the land for a concrete recycling facility" and indicating its acceptance of the insertion of a sunset clause in the LEP.

Application Process

3940 On 19 December 2005, the Director-General of the Department of Planning declared the proposed Development a major Development under section 75B of the *Environmental Planning and Assessment Act 1979 (EPAA)*.

4041 On 26 January 2006, Moorebank Recyclers submitted a Preliminary Environmental Assessment to the Department.

4142 On 2 May 2006, Moorebank Recyclers submitted a Major Developments Application to the Department for the proposed Development. The application indicated that the annual capacity of the Development would be 500,000 tonnes.

Director-General's Requirements and Access Issues

4243 On 8 July 2006, the Director-General's requirements (**DGR**) for the proposed Development were issued. The DGRs were to expire on 8 July 2008.

4344 One of the key issues identified in the DGRs was the need to have secure access to the Site, including written evidence of the relevant landowner's consent to the proposed Site access works. Several court proceedings followed which resulted in easements being granted over adjoining land.

4445 On 7 July 2008, amended DGRs were issued.

4546 On 27 January 2009, Council consented to the lodgement of the Part 3A Development Application with the Minister of Planning for access to the proposed Development over Council land (being lots 308 and 309 in DP 1118048). This consent did not include consent to undertake the proposed site access work which would also require access over lot 310 in DP 1118048 for the construction of ramps.

4647 In June 2011, Council wrote to the Department that the Part 3A development application be refused because the proposed use of this Site became incompatible with the current and planned residential and recreational uses of the area. Council resolved not to support the access issue required by the DGRs.

Environmental Assessment

4748 On 19 February 2013, Moorebank Recyclers submitted the Environmental Assessment (EA) to the Department.

4849 Between 28 February 2013 and 5 April 2013, the EA was placed on public exhibition in accordance with section 75H(3) EPAA.

4950 Council made a submission against the proposal on 5 April 2013.

Opposition from Council

5051 On 27 March 2013, Council commenced investigating alternative zoning options for the Moorebank East precinct.

5152 On 29 May 2013, Council resolved to initiate an amendment to the 2008 LEP to rezone the land and remove clause 11 (Schedule 1), i.e. the clause which permits a 'resource recovery facility' with consent. This amendment has not yet been made.

5253 On 11 June 2013, the 2005 Minister's Development declaration under section 75B(b) EPAA was amended to include Moorebank Recyclers' rights of way over Council land as part of the Part 3A development application.

Preferred DevelopmentProject Report

5354 On 15 August 2013, Moorebank Recyclers submitted a Preferred DevelopmentProject Report (section 75H(6) EPAA) (PPR) in response to the issues raised in the public submissions.

5455 From 9 October 2013 until 8 November 2013, the PPR was placed on public exhibition.

5556 On 9 April 2014, the Moorebank Recyclers submitted a noise addendum report that acknowledged the adverse impacts on surrounding residential development and proposed as mitigation noise barriers on the private routes.

Secretary's Environmental Assessment Report

5657 In April 2015, the Department finalised the Secretary's Environmental Assessment Report.

Planning Assessment Commission (PAC) assessment

5758 On 1 May 2015, the Development application was referred to the PAC for determination.

5859 A series of meetings with the public and Council senior officers and site visits were held as part of the PAC assessment process between 1 June 2015 and 21 August 2015.

5960 On 11 September 2015, the PAC approved the Development (Development 05-0157) subject to conditions.

Court Proceedings

6061 On 8 October 2015, Council lodged a class 1 application (2015/10898) with the Land and Environment Court. Council brought this objector appeal against the PAC decision with respect to the Development under section 75L of the EPAA.

6462 On 23 October 2015, Benedict Industries Pty Ltd and Tanlane also commenced proceedings (2015/10951) against Moorebank Recyclers and the Minister for Planning against the PAC's decision to approve the Development.

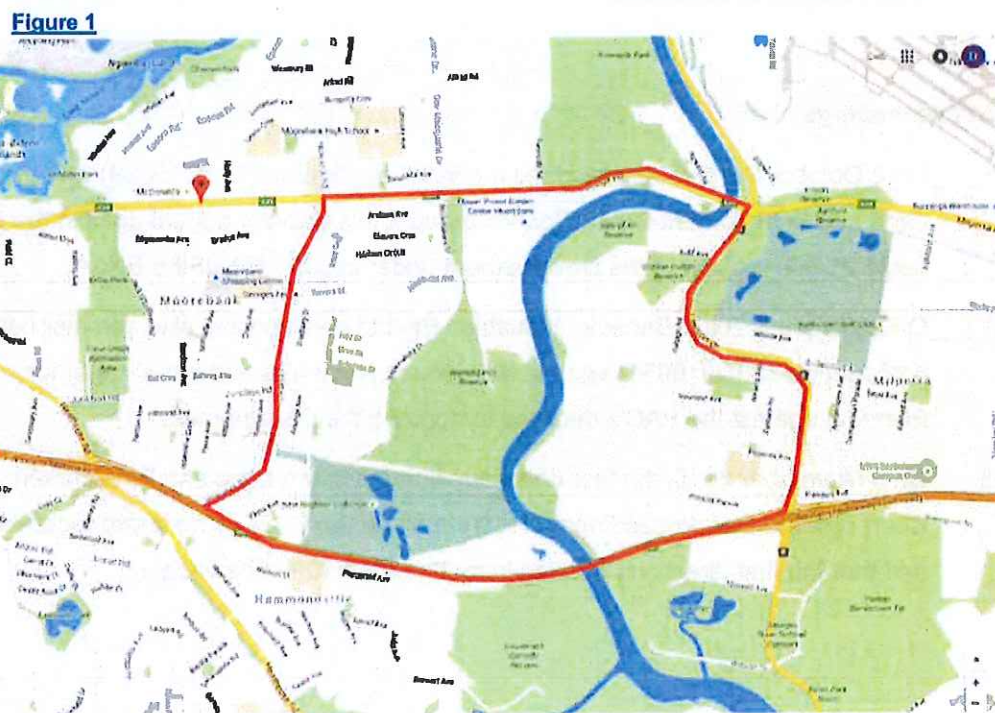
6263 On 5 November 2015, the first directions hearing of the Land and Environment Court ordered that proceedings 2015/10898 and 2015/10951 be heard together, and that the first directions hearing in matter 2015/10951 be vacated.

PART B – CONTENTIONS

CONTENTIONS ON WHICH THE APPLICATION MUST BE REFUSED

Planning and Land Use

- 1 The proposed Development is incompatible with:
 - A: the existing and future land use of the locality; (as represented in the map in Figure 1 below, being the area within the red boundary); and
 - B: the objectives of the E2 Environmental Conservation zone in which the Development is proposed to be located.



Particulars

- a. The permissibility of the proposed use is intended to be for short term purposes in order to ensure evolving land use compatibility (also refer 2008 LEP sch 1, cl11).

- b. The desired future character of the locality is characterised by residential, environmental protection and associated compatible recreational land uses, including public open space. This is consistent with the:
- i. rezoning of the former sand and gravel extraction land to the north of the Site for recreational use as well as residential;
 - ii. rezoning of the New Brighton golf course partly for new residential development to the south of the Site; and
 - iii. rezoning of the Site and the adjoining land to the west and east of the Georges River to E2 Environmental Conservation.

See Figure 42 below for a map of the Site (lot 6 DP 1065574) and Figure 23 for the current zoning of the Site and the surrounding locality within the Liverpool local government area.

Figure 42

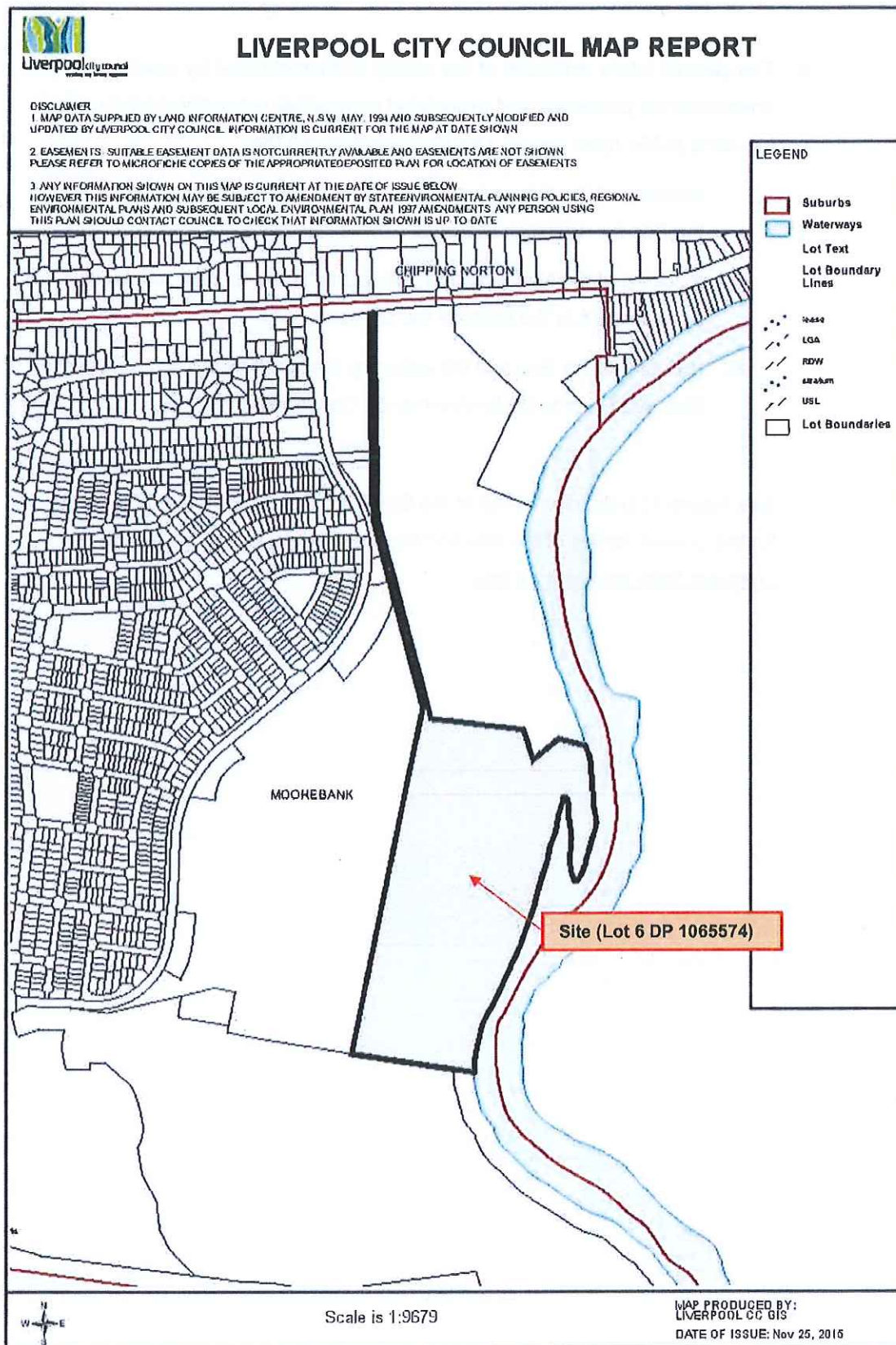
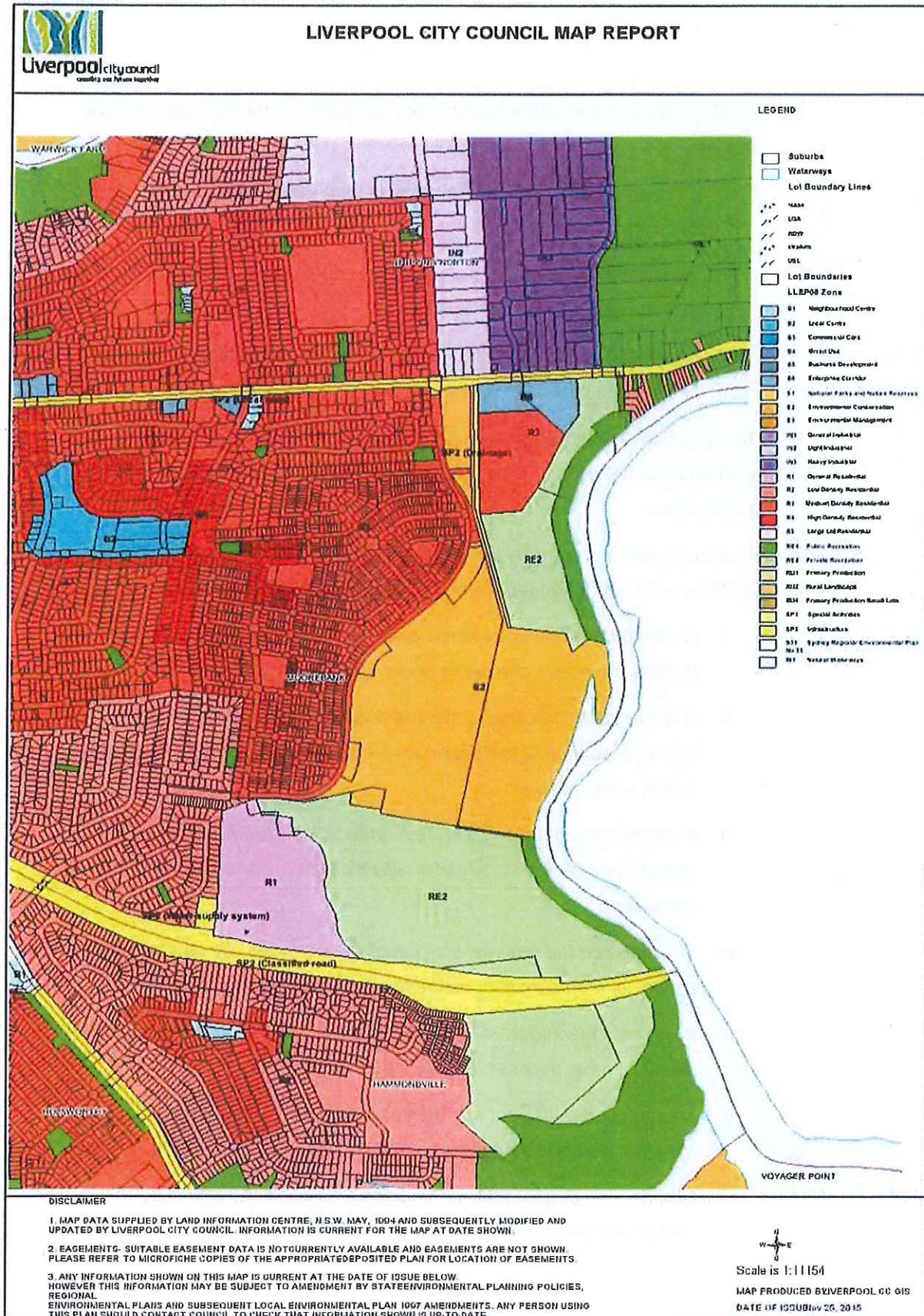


Figure 23



- c. The Development is incompatible with the objectives of the E2 zone in that it does not:
 - i. protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values;
 - ii. prevent development that could destroy, damage or otherwise have an adverse effect on those values; or
 - iii. enable the recreational enjoyment, cultural interpretation or scientific study of the natural environment.
- d. The Development is incompatible with the residential, recreational and environmental protection flavour of surrounding land use that will continue in the long term.
- e. The Development is contrary to the fulfilment of the "Aims" of the 2008 LEP, in particular aims set out under clause 1.2(2) of the 2008 LEP as follows:
 - i. *to encourage a range of housing, employment, recreation and services to meet the needs of existing and future residents of Liverpool,*
 - ii. *to foster economic, environmental and social well-being so that Liverpool continues to develop as a sustainable and prosperous place to live, work and visit,*
 - iii. *to provide community and recreation facilities, maintain suitable amenity and offer a variety of quality lifestyle opportunities to a diverse population,*
 - iv. *to strengthen the regional position of the Liverpool city centre as the service and employment centre for Sydney's south west region,*
 - v. *to concentrate intensive land uses and trip-generating activities in locations most accessible to transport and centres,*
 - vi. *to promote the efficient and equitable provision of public services, infrastructure and amenities,*
 - vii. *to conserve, protect and enhance the environmental and cultural heritage of Liverpool,*

- viii. *to protect and enhance the natural environment in Liverpool, incorporating ecologically sustainable development,*
 - ix. *to minimise risk to the community in areas subject to environmental hazards, particularly flooding and bush fires,*
 - x. *to promote a high standard of urban design that responds appropriately to the existing or desired future character of areas.*
- f. The Development is contrary to the fulfilment of the objects of the EPAA to encourage:
- i. *the promotion and coordination of the orderly and economic use and development of land (s 5(a)(ii)); and*
 - ii. *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats (5(a)(vi)).*
- ~~g. Part of the Site includes a foreshore building line pursuant to clause 7.9 of the 2008 LEP. There is insufficient information as to the impacts of the Development on the foreshore building line, and whether the purposes of clause 7.9 of the 2008 LEP have been considered.~~
- g. Further particulars in relation to planning and land use issues are contained in pages 1-4 of Council's letter to Moorebank Recyclers dated 25 February 2016 in response to Moorebank Recycler's request for further and better particulars.

Sewage Management

- 2 Sewage management at the Site is inadequate in light of the proximity to the Georges River.

Particulars

- a. The proposed sewage pump-out service is unacceptable ~~and not in accordance with best industry~~ because the storage of sewage on floodplains presents a risk to local groundwater and surface water resources. The Evans and Peck Report contained within the Preferred Project Report does not

contain sufficient details to assess the risk posed by the system. At present, the size, storage capacity and management of the facility is unknown.

- a.b. The proposed sewage pump is also not in accordance with industry best practice given the location of the Site within flood liable land and its close proximity to the Georges River. Best practice sewage management on floodplains is for connection to sewer. That may be achieved with a properly designed and managed pump station or with the installation of gravity drainage to sewer where this is achievable. A risk assessment must be undertaken by the Respondent to enable Council to fully assess this issue

CONTENTIONS INVOLVING AN INSUFFICIENCY OF INFORMATION ON WHICH TO CONDUCT AN ASSESSMENT OF THE APPLICATION OR ON WHICH THE APPLICATION MUST BE REFUSED

Aquatic ecology and Groundwater Dependent Ecosystems

- 3 There is insufficient information on aquatic ecology for a proper assessment of the impacts of the Development.

Particulars

- a. The Groundwater Dependent Ecosystems (**GDEs**) are not sufficiently detailed for a proper consideration. The DGRs require such consideration.
- b. The GDEs referred to in this Contention are the GDEs identified in the DGRs and include the native animals, plant, habitats and assemblages that are dependent on permanent or frequent submersion in the ponded or inundated waters known to exist along the western, northern, eastern and possibly southern boundaries of the Site or in isolated ponds along the eastern side that may be surface expressions of the water table, plus terrestrial biota that may be groundwater dependent.

These include freshwater emergent and submerged plants, sedges and algae, freshwater aquatic macroinvertebrates, amphibians and fish, brackish water emergent plants (including mangroves and saltmarsh), algae, macroinvertebrate fauna that reside in or on these brackish habitats such as molluscs and crustaceans and the fish that live in the brackish and saline

waters amongst the GDEs. Terrestrial habitats that are known to be groundwater dependent include River Flat Eucalypt Forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions) referred to as Sydney Coastal River-Flat Forest, Castlereagh Shale Gravel Transition Forest and Castlereagh Swamp Woodland. (For further particulars on the potential impact of the proposed Development on GDEs and surrounding aquatic ecology, we refer to pages 1-3 of Council's letter to Moorebank Recyclers dated 23 March 2016 in response to Moorebank Recycler's request for further and better particulars).

Council notes that Dr Sophie Woods (the contamination expert for Moorebank Recyclers), in her Expert Contamination Report filed 6 June 2016, agrees and recommends, in section 4.2 in response to Council's contention 11(c), that "an ecological baseline survey of the perimeter drainage areas and the area between the landfill and the Georges River to record the current conditions and locate GDEs of significance".

- b.c. There is insufficient material relating to an assessment of the potential impact of the off-site alterations in groundwater/leachate discharge, surface water runoff and water quality on the above habitats and assemblages in the existing environment and an assessment of key issues, including surface and groundwater impacts, particularly on the Georges River. The DGRs require such consideration. .
- d. Further particulars in relation to aquatic ecology issues are contained in pages 1-4 of Council's letter to Moorebank Recyclers dated 25 February 2016 in response to Moorebank Recycler's request for further and better particulars.
- e. Mr Paul Anink, who is the aquatic ecology expert engaged by the Council has met with Dr David Robertson who is the ecology expert engaged by Moorebank Recyclers. Both experts agreed that further studies of the aquatic habitats are required to be able to provide an assessment of the interrelationships of the present plus proposed Site runoff and Site groundwater/leachate behaviour. In particular, Council contends that the following information is required in order for the Court to make a proper assessment:

- i. sub-catchment and drainage line mapping of the Site in relation to the surrounding land-uses, especially between the Site and the surrounding aquatic habitats, including a basic assessment of tidal inundation during dry-weather king tides (flood and ebb) and under minor flood conditions;
- ii. mapping and a description of the composition and interrelationships of aquatic habitats (both surface and groundwater dependent) on and around the Site, including broad-based assessments of the flora and fauna, information about the dominant species and permanent habitats found within reed beds, freshwater and tidal bogs and ponded waters, and to include re-assessment of the listed Green and Golden Bell Frog;
- iii. mapping and a description of the surface and groundwater interrelationships of the identified habitats with each other, the Site, the creek and Georges river and Brickmaker's Drive plus urban development discharges to the ponded waters west of the Site;
- iv. descriptions of the water bodies or bogs that support the identified aquatic habitats (depth, dimensions and permanence), and a description of bottom sediments, riparian edges and overall plant depth-zonation in each of the identified habitats;
- v. a description of the overall condition of the identified aquatic habitats plus an assessment of their permanence including an estimate of their overall response to varying weather conditions (wet, prolonged-dry and flood);
- vi. a description of the identified aquatic habitats' dependence on groundwater levels and quality, and a description of their ability to support fish and/or provide fish passage between each habitat and the river;
- vii. an assessment of the present condition of the identified aquatic habitats in relation to the overall known or inferred water quality of the surface and groundwaters that support the various identified aquatic habitats and an estimate of the relative impacts of present water quality of non-Site surface water sources to those from the present

Site, and an estimate of the relative impacts of the water quality of off-Site groundwater sources to the present Site leachate sources.

With respect to present ponded water quality, Dr Woods' Expert Contamination Report filed 6 June 2016 agrees that there is potential for ponded waters to be present, resulting from surfacing groundwater (see Section 4.5 of Dr Woods' report). Current searches for ponded waters has been constrained by access, and there is insufficient information in relation to ponded waters to the east or the west of the Site, nor any chemical analysis of such ponded waters. In relation to ponded waters to the east of the Site, the Aquila Flora and Fauna report noted that there are some ponded areas 'in the Cabbage Gum Open Forest to the east'. The Aquila report concluded that as there would be no change to this habitat, there was no change to the potential use by Green and Golden Bell Frogs – if present. Further investigation is required to be undertaken on the ponded water habitats:

- viii. an assessment of the impacts of the construction and operational activities for the proposed Development on the surrounding identified aquatic habitats and associated biota relating to surface stormwater runoff, under both non-flood and flood conditions;
 - ix. an assessment of the impacts of the construction and operational activities for the proposed Development on the surrounding identified aquatic habitats and associated biota relating to groundwater quality or quantity during dry conditions, and under both wet non-flood and flood conditions;
 - x. a description of how potential construction and operational impacts on aquatic habitats and associated biota would be avoided, minimised, mitigated or offset; and
 - xi. a description of monitoring and management options to protect and enhance the aquatic ecology of the surrounding aquatic habitats and of associated biota.
- f. Council notes that the need for the provision of the additional information referred to in Contention 3(e) is supported by Dr Wood's Expert

Contamination Report filed 6 June 2016, which recommends such surveys be undertaken and also recommends monitoring (see Section 4.2 of Dr Woods' report).

Noise

- 4 a. The Development proposes a 1.5_m acoustic barrier adjacent to the Site access road, above the relevant ramps, in accordance with C.13(b), C.14 and Appendix D of the PAC Approval dated 11 September 2015. This is insufficient to mitigate noise given the height of trucks with engines as high as 21.5 m above ground and exhausts as high as 43.6 m above ground. The Development does not propose a barrier height as required by the acoustic experts in these proceedings. Dr Renzo Tonin (acoustics expert for Moorebank Recyclers) and Dr Gayle Greer (acoustics expert for Council) agree that 1.5 m is insufficient and suggest the erection of barriers that vary between 4 and 6 m.
- b. The acoustic mitigation measures required by the PAC Approval dated 11 September 2015 do not address the likely impact of the Development on that part of the adjacent Tanlane Land to the north of the Site (lot 7 DP 1065574) which is zoned R3 Medium Density Residential. Dr Tonin and Dr Greer agree that a barrier is required on the eastern side of the access road of 5-6 m in height. A Rezoning Application for the Tanlane Land is currently being assessed (RZ-2/2015), which aims to allow residential development as part of the proposed marina in the southern part of the Tanlane Land. No information has been provided in relation to the noise impacts of the Development on that proposed residential development or any noise mitigation measures.
- c. Recent background noise measurements completed by EMM at 14 Cotter Lane indicate that the criteria detailed in C11 of the PAC Approval dated 11 September 2015 are not appropriate for residential receivers at this location. Based on the EMM measurements the criterion applicable to this location is 46 dB(A). Additional noise mitigation measures to those currently documented will be required to meet this criterion.

- 5—There is insufficient information relating to acoustic mitigation measures for a proper assessment of the impacts of the Development.

Particulars

Background Noise Measurements, Criteria and Assessment

- a. The data associated with background noise measurement is inadequate as it was taken in 2007 and 2013 at different locations making the data unrepresentative of current background noise levels. No daily Assessment Background Levels (ABLS) have been included in the application material.
- b. Methods used to estimate the current background noise levels are not in accordance with the NSW Industrial Noise Policy.
- c. The environmental noise intrusive criteria are based on background noise levels (see above) and are therefore inaccurate.
- d. Part of the adjacent Tanlane Land to the north (lot 7 DP 1065574) is zoned R3 Medium Density Residential, and insufficient information has been provided to determine the appropriateness of the noise assessment criteria used.
- e. Background noise levels have not been remeasured at the locations likely to be the potentially the most affected by the Development and as such a critical assessment is missing.
- f. Weather data used in the noise impact assessment is from 2006 and is therefore out of date.
- g. The Environmental Criteria for Road Traffic Noise used in the assessment is incorrect as it has been superseded by the Road Noise Policy. The assessment should apply the Road Noise Policy to ensure that the data is accurate in relation to how existing residences are affected.
- h. Insufficient information has been provided about the source components of engines and exhaust of traffic moving along the proposed Site access road. There has been no consideration of the influence of engine braking on the local community.
- i. As the criteria used cannot be relied upon, the noise control recommendations cannot be assessed as to their adequacy or accuracy.

Urban Design and Views

- 65 There is insufficient information on urban design and views for a proper assessment of the Development, in relation to the proposed acoustic barriers that will be necessary in order to deal with the matters raised in noise contentions 4.

Particulars

- a. ~~The 2010 Dr Lamb report on view issues is out of date and now is inadequate to enable proper assessment of the application. In the five years since the Lamb report was published, there have been considerable changes to the surrounding areas, including completion of the Georges Fair residential area and changes in canopy since the 2003 survey was undertaken. The main viewing areas of concern are the Georges Fair residential development to the west of the Site, proposed development to the north of the Site and from the river foreshore area and golf course to the south of the Site.~~
- b. ~~The accuracy of the views data is questionable as the Lamb report indicates that the viewing angles used as reference points for views from the subdivision to the west are actually towards the southern portion of the Site rather than the actual location of the proposed facility (to the north of the Site).~~
- c. ~~A view assessment has not been undertaken from the river.~~
- d. ~~No assessment has been undertaken of the view of the proposed wider mound.~~
- e. ~~The report is silent on whether the view from the northern side of the Site is disrupted by the proposed wider mound itself, particularly in relation to the nominated land use to the north of the Site.~~
- f. ~~The Lamb report recommends more vegetation where there are view impacts, however, this is inconsistent with the bushfire recommendation which is to have the Site remain in its non-vegetated state. No solution to this anomaly has been proposed.~~
- g. ~~The Lamb report relies on outdated photographs of views obtained in or prior to 2010. There is no modelling of the impact of the Development within the view. The approach to assessing view impacts has become more sophisticated since the study was undertaken. The study should be updated to include current photographs and provide 3D wire line montage~~

~~representation of the subject views to show the structures and stockpiles on the Site relative to the tree and landscape canopy to demonstrate impacts.~~

- a. There is insufficient information provided to enable an assessment of the visual impact of the proposed noise barriers to the two proposed ramps in proximity to Brickmakers Drive and the residential dwellings within the locality.
- b. There is insufficient information in relation to the existing relative levels of the roadway, residences and the proposed levels along both ramps and to the top of the proposed noise barriers.
- c. The elevations of the ramps and noise barriers are not provided, as seen relative to Brickmakers Drive or the adjacent residential dwellings in the locality, particularly in the suburb of Georges Fair. The visual impact study by Dr Richard Lamb also does not consider the visual impacts of the proposed noise barriers.
- d. There is insufficient information on the extent to which vegetation will be either retained or added between the roadway and the barriers and ramps indicated to assess any visual impact.
- e. The following pieces of information in particular are required in order to fully assess the impact of the proposed noise barriers:
 - i. Site plan showing the location of the ramps (both interim and finished) in context including adjacent roads and houses mapping window locations and heights;
 - ii. details on the existing levels of the context and the Site;
 - iii. details on the new levels of the ramps and the top of the barriers relative to the context levels;
 - iv. elevations of the ramps as seen from Brickmakers Drive and the residential dwellings in Georges Fair;
 - v. detailed sections through the ramps including across Brickmakers Drive and the gully to the ramps at a number of locations to show relative visibility including the height of any existing and retained vegetation or proposed vegetation;

- vi. plans showing landscaping to be removed around the ramps and between Brickmakers Drive and the ramps
- vii. landscaping plan showing any new planting and its maturity;
- viii. visual montage showing the impact of the ramps and barriers with vegetation at 3 years.

Air quality and Dust

~~76~~ There is insufficient information in relation to the likely impacts on air quality and dust ~~for to enable~~ a proper assessment of the impacts of the Development.

Particulars

- ~~a. The air quality studies are from 2006 and are therefore out of date.~~
- ~~b. The meteorological data is deficient as it does not consider appropriate dispersion testing.~~
- ~~c. There is a lack of any assessment of the generation of fine particulate matter pollutants, in particular PM_{2.5}.~~
- ~~d. There is insufficient information on the materials handling procedures for crushed material. As such, an assessment of dust generated and discharged from the Site cannot be undertaken.~~
- a. The meteorological data is deficient as there is insufficient justification that the meteorological data used for the assessment is representative of the worst case year. The current information available does not consider appropriate dispersion sensitivity testing for the meteorology, given that the methodologies used rely solely on direction percentages as a demonstration of worst case meteorology. An analysis of the affect that meteorological data sets with higher levels of calm winds should be investigated as a sensitivity analysis.
- b. There is no information on how it is proposed to prevent tracking of mud and debris onto residential roads to prevent dust blowing in the direction of residential developments.
- c. There is no assessment of the generation of fine particulate matter pollutants, in particular PM_{2.5}. Whilst PM_{2.5} is a subset of PM₁₀, compliance with PM₁₀ does not guarantee compliance with PM_{2.5}. PM_{2.5} readings are considered to

be the most appropriate criteria in NSW for the assessment of health impacts. No information has been provided as to the likelihood of PM_{2.5} to contribute to additional exceedances of the relevant criteria (24 hour maximum concentration of 25µg/m³). Further, because of the location of the site to major roadways, the concentration of PM_{2.5} likely to be experienced on site and in the surrounding neighbourhood needs to be modelled and assessed.

d. A conceptual Air Quality Management Plan must be provided. Such plan must address and comply with:

- i. NSW EPA Approved Methods for the Sampling and Analysis of Air Pollutant in NSW, 2007; and
- ii. Australian Standards that are relevant to this Development, being:
 - I. Siting of Monitoring Equipment - AS3580.1.1:2007 (especially sections 6, 7 and Table 2 of the standard) - Methods for sampling and analysis of ambient air, Part 1.1: Guide to siting air monitoring equipment.
 - II. PM₁₀ Monitoring – Either AS3580.9.6:2015 Determination of suspended particulate matter – PM10 continuous direct mass method using a tapered element oscillating microbalance analyser; or AS/NZS 3580.9.11:2008 and AS/NZS 3580.9.11:2008/Amdt 1:2009 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 beta attenuation monitors;
 - III. PM_{2.5} Monitoring – Either AS/NZS 3580.9.13:2013 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM2.5 continuous direct mass method using a tapered element oscillating microbalance monitor; or AS/NZS 3580.9.12:2013 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM2.5 beta attenuation monitors; and
 - IV. Meteorological Data Collection – AS3580.14-2011. Methods for sampling and analysis of ambient air, Part 14 Meteorological monitoring for ambient air quality monitoring applications

- e. The Plan must be provided for evaluation as part of the Court's assessment process.

Traffic Management

- 87** There is insufficient information in the traffic data to allow a proper assessment of the impacts of the Development.

Particulars

- a. Insufficient information has been provided to justify the Development traffic volumes and Development hourly allocation of traffic volume generated by the Development. In particular there is insufficient information in relation to traffic volumes and local traffic impact on Newbridge Road.
- b. Not all truck and non-truck movements (including cars, delivery vehicles and any other vehicles that would be expected to access the proposed facility during construction and operation) have been accounted for in the testing, such that the traffic data is inadequate. Furthermore, inadequate assumptions have been made in relation to the range of vehicle types coming and going from the proposed facility and the expected vehicular load including whether some vehicles will be partially laden. There is also no sensitivity analysis of any such assumptions.
- c. The impact assessment did not adequately consider the traffic generated by other developments in the locality and thus the cumulative impact of the Development. These other nearby developments include Georges Fair located to the west of the Site, the proposed future marina located to the north of the Site, and the golf course residential development located to the south of the Site.
- d. The traffic impact caused by the restrictions to the Site (via the proposed access road) arising from the identified 1 in 3 year flood has not been properly assessed. It is not clear how vehicles on-site are managed during and after this event.
- e. There is inadequate consideration of pedestrian access issues to Brickmakers Drive, in relation to how the existing footpath located adjacent to the

southbound lane of Brickmakers Drive will function once the proposed new intersection is constructed.

- f. Further swept path analysis is required to ensure that all design vehicles potentially accessing the Site (including B-Doubles) can safely pass each other on the proposed access route to Brickmakers Drive.
- g. There is insufficient information to justify the haulage route allocation. This includes the quantum of expected incoming and outgoing vehicle movements at each relevant direction for both the Brickmakers Drive intersection with the link road and Newbridge Road.
- h. A sensitivity analysis of traffic assumptions has not been undertaken.
- i. There is insufficient information upon which to determine the impacts of the development on the surrounding local road network.
- j. Further particulars in relation to traffic issues are contained in pages 6-7 of Council's letter to Moorebank Recyclers dated 25 February 2016 in response to Moorebank Recycler's request for further and better particulars.

Flooding

98 There is insufficient information to properly assess the impact of flooding on the Development.

Particulars

- a. The Development relies largely on a flood study prepared for the filling and earthworks at the site. Insufficient information has been provided to show how that study relates to, and can be validly relied upon, for the current development proposal. It is unclear what level (in mAHD) any previously approved 'bunds' is relied upon by the Development.
- b. Insufficient information has been provided in relation to the extent of proposed earthworks within the Georges River flood plain.
- c. The impact of the proposed earthworks, roadworks and associated structures in the 1 in 100 year flood and PMF flood extents, levels and character of flows has not been properly assessed.

- d. A 2D flood model has not been prepared for existing and proposed conditions, including the effects of climate change and sea level rise, in order for the impacts of the development proposal, including all proposed earthworks within the floodplain, on the 20 year, 100 year and PMF flood events to be assessed.
 - i. Without this information, it is not possible to assess the risks, impacts and possible mitigation requirements of the proposal in terms of the surrounding road network, adjoining land owners and the Georges River, including ancillary riparian zones.
 - ii. Without this information, it is not possible to assess the continued suitability of any previously approved earthworks for the site.
- e. Flood evacuation requirements and risks under a PMF event have not been properly assessed. A flood risk assessment of the proposed evacuation has not been prepared, being the risk to life and property/infrastructure for a full range of event return intervals and durations up to the PMF. Based on the information to hand, it is not possible to determine the full extent of risks to persons and infrastructure at the facility.
- f. Further particulars in relation to flooding issues are contained in pages 7-8 of Council's letter to Moorebank Recyclers dated 25 February 2016 in response to Moorebank Recycler's request for further and better particulars.

Stormwater Collection

409 There is insufficient information with respect to stormwater collection and its management for a proper assessment of the impacts of the Development to be undertaken.

Particulars

- a. No water quality model, developed in accordance with current best practice and relevant guidelines, has been prepared to support the application. Current best practice having regard to the proposed use of the Site is to include an appropriate stormwater quality model which is capable of demonstrating that any discharges to the receiving environment will be of a suitable quality. The relevant guidelines include the Australian Runoff Quality, MUSIC Modelling Guidelines, the National Water Quality Management Strategy and any

applicable planning instruments including *Greater Metropolitan Regional Environmental Plan No 2—Georges River Catchment*.

- b. There is insufficient information to be able to assess the management and potential impact of nutrients, salts, hydrocarbons and heavy metals and other relevant contaminants that are likely to reach the groundwater system or the Georges River and associated riparian zone. Any discharge of contaminated water from the site to the receiving environment should be in accordance with current best practice, which is to have a neutral or beneficial impact on the environment.
- c. There has been no review of stormwater runoff impacts from crushed concrete, nor are there any proposed mitigation measures in place to control or minimise any impacts of high pH runoff.
- e.d. The water quality management system relies on the outcomes of the Site water balance assessment. There is insufficient material to assess the risks to the receiving environment, which includes the environment that receives either groundwater or surface water discharges from the Site, during periods where there is limited demand for Site water. Further information about water balance modelling assumptions and results, together with expected water quantity and quality released into the receiving environment is required.
- e. There is insufficient material to assess the risk and likely consequences of the proposed stormwater collection sumps intercepting potentially contaminated groundwater and driving the generation of landfill leachate. The consequence of this risk on groundwater flow rates and quality has not been determined. There is insufficient information in relation to the construction and operation requirements of the stormwater sump system. Council notes that Dr Sophie Woods (the contamination expert for Moorebank Recyclers), in her Expert Contamination Report filed 6 June 2016, in section 4.1 in response to Council's contention 10(d), agreed that "the position of the sumps above the landfill cap, and the sealing to prevent water infiltration into the cap was not clearly presented" and she relied on verbal information regarding the proposed design in her assessment. Dr Woods has recommended particular details for the design of the sumps which are not reflected in the current design.

f. No information has been provided to identify how oil and water are to be separated. There is no information to enable an assessment of measures required to ensure that any oil contamination trapped in a sump is removed when required.

d.g. Further particulars in relation to stormwater collection issues are contained in page 8 of Council's letter to Moorebank Recyclers dated 25 February 2016 in response to Moorebank Recycler's request for further and better particulars.

Groundwater System

~~11~~ — There is insufficient information with respect to groundwater contamination at the Site and its management for a proper assessment of the impacts of the Development.

Particulars

- a. ~~Insufficient information has been provided in order to assess the nature and character of the groundwater system below the site and its connection with the Georges River.~~
- b. ~~The impact of the proposed development on the groundwater system has not been assessed, and cannot be properly assessed without further information in relation to existing site groundwater conditions.~~
- c. ~~The impact of the development proposal on any groundwater dependent ecosystems has not been assessed.~~

Geotechnical Issues

4210 — There is insufficient information with respect to geotechnical issues for a proper assessment of the impacts of the Development.

Particulars

- a. There has been insufficient investigation into what impact the proposed piles through the former landfill and landfill liner system will have on groundwater conditions and the preferential movement of any landfill gas exiting the waste

mass or stormwater infiltration leachate from the site towards the Georges River.

- b. The geotechnical risk of differential settlement caused by placement of the proposed bunds, various site working stockpiles and structures, as well as traffic generated by the development, has not been adequately addressed for a proper assessment of the risks to be undertaken.

Contamination

4311 There is insufficient information with respect to existing contamination at the Site and its management for a proper assessment of the risks of the Development to be undertaken. Approval of the development is not consistent with SEPP 55 Remediation of Land.

Particulars

- a. The landfilling of the site occurred in the period 1972 to 1979. There is a strong possibility that the materials landfilled on the site contained asbestos.
- b. The Development will involve considerable earthworks and disturbance of the waste material which is present on the site.
- c. There are potential health and safety risks inherent in excavating into the waste including exposure to waste contaminants, asbestos and potential medical waste and leachate.
- d. The site is a former landfill which is identified in SEPP 55 as an activity that may cause contamination, and investigations have identified the presence of contamination at the site. Significant earthworks and reworking of landfill material are proposed as part of the development however a remedial action plan (RAP) has not been prepared which is a requirement of SEPP 55.
- e. Preparation of a RAP and approval by a Site Auditor would be appropriate prior to approval for a project of this nature.
- a.f. A Site Audit Statement (SAS) was prepared in 2001 and required the imposition of a number of conditions: which needed to be fulfilled for the site to be considered suitable for a materials recycling facility. The application does not adequately consider the Site Audit Statement findings and the

conditions. -The following Site Audit Statement conditions ~~have~~were not ~~been~~ adequately considered in the original application material:

- i. Landfill gas assessment ~~has~~was not ~~been~~ performed ~~to date~~.
 - ii. A site specific environmental management plan ~~has~~was not ~~been~~ prepared.
 - iii. There ~~is~~was no detailed assessment of the groundwater impacts or ongoing monitoring of groundwater to identify impacts from landfill leachate.
- g. Since compliance with the conditions has not been demonstrated, the SAS cannot currently be relied on for the purpose of demonstrating that the Site is suitable (from a contamination perspective) for the proposed concrete recycling facility.
- h. Information has since been provided to address these conditions in part, in reports by Dr Sophie Woods filed 6 June 2016, including the Environmental Site Assessment (SA) and Draft Operations Environmental Management Plan (Draft Operations EMP). Review of these documents by a Site Auditor would be required to confirm that they are adequate to address the previous SAS conditions and confirm that the Site can be made suitable for the intended use. Such a review would normally be undertaken in conjunction with review of a RAP prior to development approval (Section B Site Audit).
- i. The Project Approval requires a Site Audit upon completion of earthworks, however, requirements for the protection of human health and the environment identified at the completion of earthworks (including in relation to the adequacy of capping, quality of material to be reused as capping and leachate management requirements) may not be able to be retrospectively incorporated into the proposed Development. The detail of these requirements should therefore be considered before approval of the Development.
- j. A RAP would also include validation requirements to demonstrate achievement of critical elements for the protection of human health and the environment. Review of the validation requirements by a Site Auditor prior to approval of the Development would ensure that the validation information that

will ultimately be required by a Site Auditor to demonstrate that the Site is suitable is collected during the development works.

- ~~b.k.~~ Soil ~~and~~ contamination data is inadequate and have not been properly detailed in the application material to allow for a proper assessment of the risks of the Development. The current landfill capping material is proposed to be excavated and reused to cap relocated waste in the proposed development. The current capping material has not been assessed for the presence of asbestos therefore it is not known if it will be suitable for use as capping. An assessment for the presence of asbestos is required for the current landfill capping material. Dr Sophie Wood also made this recommendation in her Expert Report on Contamination, stating in Section 4.3 that "Further assessment of the potential asbestos presence ... within current capping materials would be appropriate".
- ~~c.~~ The design of the facility includes four water collection sumps, and details of their construction and impact is unclear from the documents provided.
- ~~d.~~ The risk of contamination arising out of any excavation into former landfill material at the site has not been assessed.
- l. It is not clear what activities have taken place at the Site or what materials have been imported since the 2001 SAS that may have resulted in further contamination of the site. Further detail is required regarding the usage of the site over this period, including the source of stockpiled soils.
- m. Dr Sophie Wood reported in her Expert Report on Contamination that she observed the presence of potential bonded ACM sheeting on the landfill surface and recommended in section 4.3 that "Further assessment of the potential asbestos presence on the surface of the site ... would be appropriate" and further that surface clearance for asbestos be undertaken prior to commencement. Council agrees with this recommendation.
- n. The SA prepared by Sophie Wood on 6 June 2016 is stated to be a preliminary assessment and the report acknowledges that "Further phases of investigation may be needed". The SA concluded, inter alia:
 - i. the groundwater/leachate within the landfill contains elevated concentrations of ammonia, petroleum hydrocarbons and some metals;

- ii. groundwater downgradient of the landfill is also affected by elevated ammonia and petroleum hydrocarbons;
 - iii. methane and carbon dioxide were detected in gas wells across the majority of the landfill area with high concentrations and flows reported within the northern portion of the landfill;
 - iv. the calculated gas screening value of 4.33L/hr indicated that the site is classified as a moderate to high risk site requiring the implementation of appropriate mitigation measures to manage the risk of influx of ground gases into buildings;
 - v. monitoring of surface emissions has reported trace concentrations of methane across the landfill; and
 - vi. potentially complete source-pathway-receptor linkages are present in relation to impacted groundwater and ground gases which may require further assessment and management.
- o. A number of these issues have been addressed through recommendations for ongoing monitoring (post development) and incorporated into the Draft Operations EMP. Sophie Wood also made recommendations for further works to address the SA findings in her Expert Report on Contamination. The key outstanding aspect is the design of gas protection measures for buildings.
- p. The groundwater investigation documented in the SA has indicated an increasing degree of impact to groundwater due to landfill leachate (using ammonia as an indicator) between 2001 and 2016 (including monitoring in 2004 and 2009). This is contrary to the expectation of the previous SAS findings which required "continued monitoring of the groundwater in select wells for a sufficient period to confirm that the discharge of leachate from the landfill has been minimised by the improved capping of the filled area and will not significantly affect the ecosystems of the Georges River". Further information is required regarding leachate management proposed during the earthworks and contingencies for the ongoing management of leachate (post development).
- q. The groundwater monitoring undertaken since 2001, including the 2016 monitoring documented in the SA, has not been adequate to address the SAS

conditions or the requirements of the NSW EPA which were documented in the Site Audit Report (letter dated 16 October 2001).

- r. The Bulk Earthworks Consent, Condition 22, required "A detailed groundwater assessment report shall be submitted to Council for approval by the Department of Environment and Conservation prior to issue of a Construction Certificate for the earthworks". The groundwater investigation undertaken by EIS (2009) and submitted to Council for this purpose was not adequate to address the requirements of a "detailed groundwater assessment". In addition there is no evidence of Department of Environment and Conservation (now NSW EPA) approval of the groundwater assessment report.
- s. The project Environmental Assessment does not adequately consider impacts to groundwater from landfill leachate since it relies on these issues having been addressed in response to the Bulk Earthworks Consent (which was not the case, as noted above).
- t. Groundwater monitoring aspects described in the Approval Conditions are not adequate to address potential groundwater impacts. The Draft Operations EMP prepared by Sophie Wood includes additional groundwater monitoring requirements. Confirmation of proposed ongoing groundwater monitoring at the site is required.
- u. The impact of the proposed Development on the groundwater system has not been assessed, and cannot be properly assessed without further information in relation to existing site groundwater conditions.

Waste Management

- 4412 The Development will change the footprint of the landfilled area with a portion of the southern part of the landfill being excavated and moved to the northern section.

There is insufficient information to determine the impact of the Development on the former landfill and its management to ensure minimisation of the risk of leachate impacts on the Georges River, of tidal influences on the groundwater in the landfill, and of the potential for landfill gas to migrate to adjoining properties.

Particulars

- a. There is an inconsistency between the Development and the Bulk Earthworks Consent. For example, Condition 21 of the Bulk Earthworks Consent requires the fill material used in the "Fill" area of the perimeter mound to be VENM (Virgin Excavated Natural Material). The Development proposes to utilise excavated material from the southern section.
- b. There is insufficient information regarding construction of the perimeter mounds. The Bulk Earthworks development proposed construction of 4 metre high perimeter mounds in the north of the site with landfill material excavated from the south of the site (wet waste and fill). The modified development proposes mounds up to 8 metres high. The proposed construction materials for the extended mounds are not detailed and are required. Council notes that Dr Sophie Woods (the contamination expert for Moorebank Recyclers), in her Expert Contamination Report filed 6 June 2016, in section 4.4, agrees and states "I agree that additional detail on the proposals for the bund construction is warranted".
- c. There is insufficient information to assess the potential environmental impact of using waste in the perimeter bunds. The potential for landfill gas generation should be considered in addition to the implication of running the stormwater sump discharge pipes through the base of the bunds. Placement of waste materials in the bunds will require future management of these areas. The Project Approval requires a Site Audit at completion of bulk earthworks. The bund construction may be found to be inappropriate at this stage. Details of the bund construction should therefore be considered before approval of the Development.
- d. There is insufficient detail of sampling procedures to classify the presence of asbestos or other contaminated waste within the bulk excavated material.
- e. There is insufficient information in relation to the management of asbestos, gasses and other hazardous materials that may be encountered in the excavated waste material.
- f. An Environmental Management Plan (EMP) must be provided for assessment by the Court. Such an EMP must deal with hazardous materials, gases and liquids that may be encountered during all works and activities to be carried on the site. The EMP should include:

- i. an asbestos management plan
- ii. an acid sulphate soils management plan
- iii. details of leachate extraction, treatment and disposal during earthworks
- iv. contingency plan for dealing with other potentially hazardous materials that could be encountered in the earthworks (for example medical wastes, concentrations of oily wastes, buried drums)
- v. validation requirements for areas from where waste is removed
- vi. health and safety and environmental protection should be considered
- g. The EMP should comply with: the Site management plan (operation phase) requirements of a RAP in EPA (1997) 'Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites'; NSW Acid Sulphate Soils Management Advisory Committee (1998) 'Acid Sulfate Soil Manual'; NSW Department of Infrastructure, Planning and Natural Resources (2004) 'Guideline for the Preparation of Environmental Management Plans'; and relevant asbestos regulations. The DGRs require such consideration of management and mitigation measures.
- h. A site specific environmental management plan for the former landfill ~~has~~ was not ~~been~~ presented as part of the Development application. The EMP which was prepared by Sophie Wood on 6 June 2016 on behalf of the Respondent does not provide guidance on issues associated with earthworks construction activities as part of the Site redevelopment nor does it deal with all types of hazardous materials that may be encountered on the Site, for example asbestos. This includes whether such materials are already on the site or within the existing landfill, or whether such materials are brought to the Site during the operations of the proposed facility.

Landfill lining-leachate and cap

- a. ~~Additional information is to be provided to determine the adequacy of the initial remediation of the Site undertaken in 1998 and the capping's ability to withstand the proposed use on the basis that only the southern section of the landfill has a clay landfill liner. The northern section has no liner which may~~

increase impacts on the adjacent Georges River given the geology of the Site is sandy.

- b. ~~The remediation process and the current appropriateness of a compacted clay layer between 300mm and 600mm acts as a 'sealing layer'. The Jeffrey & Katauskas 2012 report on geotechnical issues (submitted with the EA) does not indicate whether the cap thickness was confirmed by drilling on-site. As such, further information is required to be certain that the landfill capping is adequate to support the increased stockpiles.~~

- i. Details of the proposed landfill capping are not clear in the information provided. Sophie Wood states in her Expert Contamination Report that details of the proposed new capping are provided in a report by Jeffery & Katauskas ('Report on Geotechnical Investigation for Proposed Earthworks for New Development' 15 October 2010 ref M22833SA4rpt). This report has not been provided. It is understood from Sophie Wood's Expert report that existing capping material is proposed to be excavated and reused as capping following relocation of waste material to the north of the site. It has not been demonstrated that the proposed capping is adequate to provide an appropriate barrier to hazardous materials within the landfill (including potentially asbestos), to support the increased stockpiles, to prevent infiltration of surface water and to prevent leachate breakout.

- j. The Bulk Earthworks Consent (conditions 19 and 20) require covering of any uncovered waste and the capping of any waste to be left in-situ, including daily cover and final capping in accordance with Landfill Guidelines benchmark technique 28. SAS Condition 2 requires ongoing management measures to consider EPA requirements for closed landfills. The information provided is not sufficient to assess compliance with these requirements. This type of detail would normally be included in a RAP which would allow review and approval by a Site Auditor prior to development approval.

- e.k. Data indicates that landfill leachate has had an impact on the groundwater system outside of the landfill site. There is no information available to enable a proper assessment of methods proposed to collect any leachate in the landfill, treat it and take it off site for disposal. These details are required for during the

bulk earthworks (EMP requirements noted above) and during landfill operation (ongoing leachate management requirements).

- l. Council notes that Dr Sophie Woods (the contamination expert for Moorebank Recyclers), in her Expert Contamination Report filed 6 June 2016, in section 4.4 in response to Council's contention 14(d), recommended that "leachate treatment and disposal is necessary during the earthworks". In addition she concludes that "Once the development is completed, leachate pumping to maintain low leachate head may or may not be necessary". The Draft Operations EMP, also filed on 6 June 2016, proposes an action level for leachate extraction if the standing level of leachate within the landfilled area is gauged to be higher than 1 metre above the base of the waste, to prevent seepage from occurring. The monitoring frequency proposed is quarterly for the first year with a reduced frequency thereafter. More frequent monitoring of the standing level of leachate would be required, including potentially in response to rainfall events, to ensure the prevention of seepage. Details of contingency leachate extraction infrastructure are required prior to approval to ensure they can be incorporated into the completed development.

Landfill gas

- ~~d. There are insufficient methodologies proposed for the ongoing maintenance of waste management issues, such as regular landfill gas monitoring. There is insufficient detail in relation to appropriate sub-surface landfill gas collection drains under Site buildings, associated venting, the installation of subsurface landfill gas detection wells around the Site perimeter, measures to ensure that there is no offsite subsurface migration of landfill gas.~~
- ~~e. Insufficient information is provided with respect to ongoing testing, particularly in relation to a landfill gas survey. Such testing is required due to the usual 'aftercare' period for landfills that last from 30–50 years.~~
- m. The SA by Sophie Wood filed on 6 June 2016 included a landfill gas risk assessment which classified the site as a moderate to high risk site requiring the implementation of appropriate mitigation measures to manage the risk of influx of ground gases into buildings. Recommendations regarding ongoing landfill gas monitoring were provided in the Draft Operations EMP also filed on

6 June 2016. Details of gas protection measures for buildings and confirmation of proposed ongoing landfill gas monitoring at the site are required.

- n. The SA also included investigation of landfill gas along the western boundary and the Draft Operations EMP recommends ongoing monitoring of perimeter gas wells and potentially further assessment of risks to off-site receptors, including due to changes that may be caused by the development earthworks. Confirmation of proposed perimeter landfill gas monitoring at the site and further details regarding contingency landfill gas management measures for the protection of offsite residents are required.

Stormwater runoff

- ~~f. There has been no review of stormwater runoff impacts from crushed concrete, nor are there any proposed mitigation measures in place to control or minimise any impacts of high pH runoff.~~
- ~~g. No information has been provided to identify how oil and water are to be separated.~~
- ~~h. There is no information to enable an assessment of measures required to ensure that any oil contamination trapped in a sump is removed when required.~~

Asbestos and other contaminants

- o. There is a real risk of asbestos in the existing landfill and the nature and extent of the asbestos has not been assessed. The nature and extent of the asbestos in the landfill should be assessed and an Asbestos Management Plan ought to be provided to the Court as part of the assessment process.
- The Asbestos Management Plan must require the operator of the facility to adopt the NSW EPA Draft Protocol for Managing Asbestos during Resource Recovery of Construction and Demolition Materials 2014.

i.p. The proposed methods to deal with the risk of asbestos arriving at the site are insufficient. Contamination is not often visible in the waste until the material is handled on site during the processing operations.

j.q. There are no measures proposed for the safe storage and appropriate disposal of contaminated materials.

k. ~~There is insufficient information provided to enable an assessment of procedures in conformity with the NSW EPA Draft Protocol for Managing Asbestos during Resource Recovery of Construction and Demolition Materials 2014.~~

l.r. Further particulars in relation to Contentions 11, 12, 13 and 14 are contained in pages 6-8 of Council's letter to Moorebank Recyclers dated 23 March 2016 in response to Moorebank Recycler's request for further and better particulars.

Air Quality

m. ~~There is no information on how it is proposed to prevent tracking of mud and debris onto residential roads to prevent dust blowing in the direction of residential developments.~~

n. ~~A condition should be imposed that the operator of the facility adopt the NSW EPA Draft Protocol for Managing Asbestos during Resource Recovery of Construction and Demolition Materials 2014.~~

Aboriginal Heritage

15 — ~~There is insufficient information to properly assess Aboriginal cultural heritage as it relates to the Site.~~

Particulars

a. ~~The DGRs identify Aboriginal Heritage as a key issue.~~

b. ~~The Office of Environment and Heritage required a cultural heritage assessment, which was not undertaken.~~

c. ~~Through not completing the cultural heritage assessment, the views of the Aboriginal stakeholders was not obtained, and results in insufficient~~

information provided by Moorebank Recyclers with respect to intangible
Aboriginal cultural values of the locality.

CONTENTIONS THAT MAY BE RESOLVED BY CONDITIONS OF CONSENT

Nil

SIGNATURE

Signature

Full Name

Toni Averay



Capacity

~~Town planner~~ Director, Planning and Growth

Date of signature

24/6/16