Form A (version 2)



INDIVIDUAL EXPERT REPORT OF ANDREW KOSCIUSZKO

18 JULY 2016

COURT DETAILS

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

PREPARATION DETAILS

Prepared for

Liverpool City Council, applicant

Legal representative

Chris Shaw, Swaab Attorneys

Legal representative reference

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STATEMENT OF EVIDENCE

Andrew Kosciuszko

Liverpool City Council v Moorebank Recyclers Pty Ltd and Minister for Planning NSW LEC 2015/10898

Date of Report: 18 July 2016

Prepared on Behalf of: Liverpool City Council as Commissioned by SWAAB Attorneys

Andrew Kosciuszko

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Director

Summit Enviro Consulting Pty Ltd

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1 Executive Summary

Liverpool City Council has lodged a merits appeal to the approval of a resource recovery facility by the Department of Planning. SWAAB Attorneys are acting on behalf of Liverpool City Council's in this appeal. Liverpool City Council contends that the Moorebank Recyclers proposal is incompatible with existing and future land use patterns and is no longer appropriate.

The key issues reviewed in this report relate to landfill associated issues such as:

- Landfill leachate and ground water contamination
- · Landfill gas emissions and potential migration in buildings and off site
- Potential waste contamination with asbestos and other materials
- The proposed Bulk Earthworks and the impact of the bulk earthworks on leachate, landfill gas impacts and health impacts arising from asbestos
- Facility Operational issues associated with noise, dust, stockpiles and waste receipt screening to avoid asbestos contamination

The main conclusion is there appears to be missing from the proposal by Moorebank Recyclers, a Remedial Action Plan (RAP) for the site which incorporates detailed plans for all the above elements. This detailed RAP should be approved by an independent auditor and then the implementation of the RAP should be supervised by the auditor to ensure compliance.

The detailed RAP would enable the environmental and financial viability of the project to be adequately assessed.

2 Background

The following report provides the advice requested in a letter received by Summit Enviro Consulting Pty Ltd on the 23 October 2015 and further information received from Swaab Attorneys detailed in *Section 7 Information Sources* as well as a conference meeting with Dr Sophie Wood, acting on behalf of Moorebank Recyclers on the 3rd July 2016. The documents that are used to prepare this report are referenced in the body of the report.

I can confirm that I have read, and agree to be bound by, Division 2 of Part 31 of the *Uniform Civil Procedure Rules* 2005 (UCPR) and the *Expert Witness Code of Conduct* contained in Schedule 7 of the *UCPR*. In the event of any future litigation I understand that my role would be to assist the Court in any such proceedings. I have prepared this report and, if I am required to give expert evidence in the future, I will give evidence on that basis.

I have used my broad experience in the waste management industry, and I do not believe that I have any conflict of interest in this matter.

3 Summit Enviro Consulting's Qualifications and Experience

My professional qualifications include a Bachelor of Engineering (Chemical) and Master of Applied Science (Environmental) from the University of NSW and a further post graduate qualification in International Marketing from the AGSM.



I am the current NSW President of the Waste Management Association of NSW (WMAA), past Vice President of WMAA NSW and past Chair of the WMAA Landfill Working Group (for several periods of office). I have been associated with WMAA for over 15 years and have a wide range of contacts in the waste industry.

From 2003 until mid-2014, I held senior positions at SITA Australia (SITA), initially as the NSW Post Collection Manager looking after all post collection activities in NSW, including landfills, transfer stations and Alternative Waste Technology (AWT) facilities. In 2011, I assumed the role of Sydney Landfills Manager, following the acquisition of Waste Services NSW (WSN) facilities from the NSW State Government by SITA Australia, looking after all the SITA landfills in Sydney and providing technical and operational input into landfills in regional NSW areas. My business unit provided a significant part of the total profit of SITA Australia, not just NSW.

In my roles at SITA Australia I was involved in all aspects of landfill operations, including design, construction, and operations and environmental issues.

I was responsible for legislative compliance as well as providing technical support to other senior managers who were responsible for other resource recovery operations within SITA.

As I was profit responsible for all the Sydney landfills for SITA Australia, I am fully cognisant of all aspects of landfill operation, environmental compliance and sales, undertaking monthly reviews of the financial performance of all landfills under my control with senior management of SITA. In addition I have also been responsible for the operations, technical, environmental and profit achievement of a SITA transfer stations and an Alternative Waste Technology (AWT) facility.

Prior to joining SITA Australia I was the Principal Waste Management Practice Leader for consulting and engineering company, URS.

(A copy of my CV is attached in Appendix 2)

In terms of this assignment received from SWAAB Attorneys on the 23rd October 2015, I have reviewed the information provided by SWAAB Attorneys relating to the waste management and related environmental issues of the proposal by Moorebank Recyclers and using my extensive waste management experience and provide my opinion on these issues below.

4 Qualifications and Limitations

This response has been developed as a result of a desktop study of documents provided by SWAAB Attorneys and a site visit on 7th December 2015 as well as a conference with Dr Sophie Wood was held on the 3rd July 2016.

5. Landfill Site Environmental Issues and Ongoing Management of the Resource Recovery Facility including Adequacy of Assessment of the Proposal

The site for the proposed recycling facility is a former landfill which ceased receiving waste in about 1979. In 1998 a remedial action plan for the site was developed by Enproc Pty Ltd and the landfill was subsequently rehabilitated (capped).

I appears from the documents provided (Environmental Assessment (EA) by Nexus Environmental Planning



Pty Ltd) that only the southern section of the landfill has a clay landfill liner and the northern section has no liner. ("The ground beneath the fill was lined with clay in the southern section of the Site but not beneath the northern section of the Site").

It is unusual that the whole landfill site was fully not lined as the site was adjacent to the Georges River and the geology of the site is relatively sandy in character as stated in the geological review of the EA. This would potentially permit leachate impacts on the local ground water and ultimately the Georges River.

In addition, there is the potential for landfill gas to more easily migrate to adjoining properties, even at some distance from the landfill.

There have been several submissions made by the community, Benedict Industries and Boral regarding the inadequacies of the EA in many areas, but I will restrict my comments primarily to those specifically requested in my brief.

5.1 Leachate

There does not appear to any significant discussion of leachate issues on the site in the EA. Leachate is not currently collected from the landfill and treated or taken off site for disposal and one can only assume that any leachate generated in the landfill migrates from the site into the groundwater and ultimately into the Georges River as this is the low point for the site, as the water gradient would be expected move in that direction.

If the bulk earthworks are to proceed, then it is recommended that a leachate interception trench be installed at the base of the new batter slope of the landfill in the sections that are to be excavated, with a sump and leachate riser pipe so that leachate can be collected and extracted on a continuous basis, or as required, to mitigate any ground water impacts for the site. Any leachate collected would need to be treated to reduce ammonia levels to a level suitable for discharge to sewer or transported to a facility licensed to accept this liquid. This collection and treatment of leachate would need to continue until such time as the leachate generated on the site is benign and would not impact on the ground water. The use of leachate for dust suppression may not be possible due to odour and contamination issues.

A series of ground water monitoring wells located on the ground water down gradient eastern and southern part of the site should be part of the revised licence conditions for the site. These wells should be monitored at least quarterly during the initial works on the site. The frequency of monitoring can be reviewed once a substantial history of ground water measurements has been accumulated to show a decreasing impact on ground water.

5.2 Landfill Cap

In the letter from Andrew Jackaman (Jeffery & Kautaskas) to Brent Lawson dated 9th December 2010 it has been proposed that the surface landfill will be subjected to heavy compaction using a Broons BH 1300 impact roller to reduce the level of the landfill in order to construct additional flood storage capacity. The integrity of the landfill cap will need to be inspected to ensure that it is not compromised by the compaction. This compaction can potentially have the same impact as high stockpiles on the landfill. This inspection applies to the compacted area of the site as well as the area where the cap is removed and replaced over the additional waste fill.



5.3 Stockpiles on the landfill

Stockpiles of concrete and other Construction and Demolition (C&D) materials up to 10 metres in height as proposed can cause accelerated settlement of the landfill causing damage to the sealing layer of the cap and potentially squeezing out any leachate and landfill gas and leachate that may be in the landfill. This can cause increased leachate generation which can flow out of the unlined landfill and can impact the ground water and ultimately, the Georges River.

Therefore a leachate interception and collection system needs to be implemented on the site on the eastern and southern section of the landfill so that any leachate generated by works such as impact compaction or stockpiling on site can be prevented from impacting the surface or ground water systems of the site.

5.4 Landfill Gas

Any increase in the rain water infiltration through the cap can also increase the moisture in the waste mass in the landfill which in turn can increase landfill gas generation. This can lead to migration of landfill gas out through the sides of the landfill as this becomes the easier flow path due to additional stockpile material place on the surface of the landfill.

It was mentioned in the EA that the landfill received C&D materials and timber, cardboard and potentially greenwaste. The 1992 Sinclair Knight report describes the fill material encountered while drilling on the site: "the fill contents included plastics, wire, cloth, soil, wood and wool bales".

Some of these materials such as timber, cloth and wool can have a very long decomposition period, which means that landfill gas will be produced for a long period of time. This is confirmed by the recent landfill gas measurements carried out by Dr S Wood.

It appears that the EPA does not consider landfill gas to be a significant issue on this site but the recent assessment of landfill gas does not corroborate this position.

Major international waste companies such as Suez Environnement, have an "aftercare" period for landfills of at least 30 years to ensure due diligence in respect of environmental impacts resulting from leachate and landfill gas. In fact they are currently considering an aftercare period of 50 years as the standard time period for aftercare of a landfill. Based on their experience with a large number of landfills, it would seem prudent to regularly monitor landfill gas emissions for this site, particularly due to the changes proposed for the site.

5.5 Storm water controls

There does not appear to be an adequate review of storm water runoff impacts from crushed concrete. Th pH of runoff from crushed concrete can be very high

(pH 11 or greater) which can have a deleterious effect on receiving waterways. There does not appear to be any mention of pH measurement or control to mitigate any impacts of high pH runoff.

There was also a statement that contaminants such as hydrocarbons will be removed in the sedimentation basins but these basins are for primarily for sediment control and typically the overflow will contain lighter fractions such as hydrocarbons. An oil/water separator should be used to remove oil (hydrocarbon based)



contaminants. As asphalt and bitumen are proposed to be recycled on site, this is an important consideration.

There is no discussion on how any oil contamination that is trapped in the sump is removed from the sump when required. The oily contamination can become emulsified and attached to soil particles in the water and hence will be discharged during any overflow during prolonged periods of rainfall.

A detailed storm water management plan needs to be prepared as part of this project which clearly describes the proposed methodology for storm water management.

5.6 Ongoing Operations Management of Proposed Resource Recovery Facility, including identifying the presence of Hazardous Materials such as Asbestos

Asbestos and other contaminants

Asbestos is one of the major risks associated with the receipt and processing of C&D waste.

The methods proposed by Moorebank Recyclers to reduce the risk of asbestos arriving at the site include:

- Advise waste clients that asbestos and asbestos containing material (ACM) will not be accepted,
- Incorporate a "no asbestos clause" in contracts,
- Install highly visible signs indicating NO ASBESTOS in C&D waste will be accepted,
- Ensure that workers who receive and inspect C&D materials are trained and provided with suitable equipment to complete their tasks,
- Have a site safety plan which documents a safe system of work;

While partly addressing some of the issues, the issues above are not sufficiently comprehensive as it is common to have asbestos material contamination of C&D materials. This asbestos contamination is often not visible in the waste until the material is handled on site during the processing operations.

To cater for this well known risk of asbestos contamination of C&D materials, the NSW EPA has been working with various C&D recyclers/processors and industry associations such as the Waste Management Association of Australia (WMAA) NSW C&D Working Group, and the Waste Contractors Recycling Association (WCRA) to develop and review an asbestos protocol for the C&D Industry.

The outcome of this work is the NSW EPA document "Draft Protocol for Managing Asbestos during resource recovery of construction and demolition materials 2014".

This document outlines the comprehensive procedures that should be followed during the various stages of C&D waste recovery including initial site set up, contracts and signage, receipt and inspection of the incoming material, procedure if asbestos is found during processing, training of staff and operators and occupational health and safety aspects. This is a very comprehensive document with flow charts for actions and log sheets for recording of actions.

The NSW EPA document must be fully adopted by Moorebank Recycler if the project does proceed. The current proposal by Moorebank Recyclers in their "Submission Report, Preferred Project Report and Revised Statement of Commitments" does not cover all the necessary steps and issues of asbestos management in waste delivered to site for processing.

There are other contaminants that can be received with C&D waste including gas bottles, batteries, fluorescent tubes, drums and general pesticides and herbicides. There needs to be a detailed procedure to



deal with all the various potential contaminants that could be presented with the C&D waste and suitable storage facilities where such materials can be stored safely on site until they are disposed at a facility licensed to receive them.

Similarly C&D materials can also contain contaminated soil which needs to be separated and disposed of to an appropriate facility as rain water runoff from such material can contain heavy metals and hydrocarbons.

Analytical testing of any soil brought to site should be part of the internal procedures for the site.

5.7 Conference with Dr Sophie Wood

A conference was held on 1 July 2016 with Dr Sophie Wood, Rowena Salmon and me where various elements of the Statement of Facts and Contentions (SOFAC) were discussed. During the review of Section 11 Contamination and Section 12 Waste Management of the SOFAC, there was a high level of agreement on the issues stated in the SOFAC.

In summary the key issues of agreement were that:

- A detailed Remedial Action Plan (RAP) was required to be prepared which would be approved by an independent auditor and then supervised by the auditor;
- The RAP would include detailed plans for leachate, landfill gas, storm water and ground water management, which are key issues for the site;
- A detailed plan for the Bulk Earthworks was also required for the RAP;
- A detailed asbestos management plan is required as part of the bulk earthworks;
- The RAP and supporting plans need to have sufficient detail to allow the plans to be evaluated to ensure the project is viable.

6 Information Sources

In addition to my general experience and expertise in the waste industry which is set out in my CV, I have been provided with, and considered the following documentation:

- Various Environmental Assessments, sitemaps and correspondence from the community and adjoining landowners, Council and Regulatory bodies relating to the Moorebank Recyclers proposal provided in 3 Volumes by SWAAB Attorneys in October 2015;
- Additional information supplied by SWAAB Attorneys in 2016 including the three 6 June 2016 reports by Dr S Wood;
- NSW EPA Draft Protocol for Managing Asbestos during resource recovery of construction and demolition materials 2014;
- Environmental Protection Authority Licence (EPL 13432) as varied.
- Environmental Guidelines Solid Waste Landfills Second Edition April 2016



APPENDIX 1 - Letter of Instruction



Andrew Kosciuszko

Summit Enviro Consulting Pty Ltd

6 Woodfield Place

Castle Hill NSW 2154

SWAAB Attorneys

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Dear Mr Kosciuszko,

Liverpool City Council v Moorebank Recyclers Pty Limited and Minister

for Planning

NSWLEC2015/10898

We act for Liverpool City Council in the above proceedings. Instructions

We are instructed by our client to engage you as a waste management expert to provide advice in relation to this matter and to provide evidence in court, if required. Specifically, we would like you:

- to prepare an initial report addressed to us with respect to the waste management related matters which arise from:
 - the fact that the site is a former landfill which is now capped;
 - the ongoing management of the proposed resource recovery facility, including identifying risks (such as the presence of hazardous material (for instance asbestos) within the waste arriving on site) and means by which these issues can be addressed; and
 - the adequacy of the assessment of the proposal (with respect to waste management) undertaken by the Department of Planning and Environment.
- to confer with Council's other experts with respect to the matter;
- to attend a site inspection and discuss the matter with Council's legal advisors;
- to assist in the preparation of contentions for Council's statement of facts and contentions.

We note that Council, who are an objector in the proceedings, do not have access to the site and therefore we are happy for a desktop assessment of these issues to be undertaken. We can provide you with access to Council's relevant records.

Expert witness obligations

As an expert witness in the Land and Environment Court, you are required to comply with Division 2 of Part 31 of the *Uniform Civil Procedure Rules 2005* and the Expert Witness Code of Conduct in Schedule 7 of the *Uniform Civil Procedure Rules 2005*. Copies of the rules are **enclosed**.

Partner Chris Shaw

Contact

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By email

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Privileged and confidential communication

All communications from you concerning this matter will be with Swaab Attorneys. These communications are privileged and confidential and are subject to legal professional privilege. All written communications should be marked "*Privileged and confidential*" except for your expert report to be filed in the proceedings.

Estimate

While you are engaged by Swaab Attorneys, the cost of your services will be covered by Liverpool City Council.

Please provide us with your fee estimate. We note the following:

- we will be relying on your estimate to meet our disclosure obligations to the client under the Legal Profession Uniform Law (NSW). Accordingly, please provide:
 - (a) an estimate of your total costs
 - (b) a single figure for your estimate (not a range of costs)
 - (c) an explanation of the basis on which your costs will be calculated (eg applicable hourly rates and relevant units of time, or fixed fee)
 - (d) a single figure estimate of all disbursements and, where applicable, how they will be calculated; and
- we are unable to pay any fees or expenses significantly above those stated in your estimate unless you have notified us promptly after you become aware that your estimate should be revised, giving reasons for the change.

Licence

We ask that, by accepting these instructions, you grant to Swaab Attorneys a non-exclusive, royalty free, perpetual licence to reproduce, adapt and communicate any advice you provide in connection with the instructions for the purposes of the matter and for precedent, knowledge management and training and development purposes.

We will not provide the advice to any client other than the client on whose behalf you are currently briefed without your express permission, and then only subject to any conditions you may require. If this is not acceptable, please let us know immediately.

Timing

The matter is listed for a first directions hearing in the Land and Environment Court on 5 November 2015, at which time Council must have a draft Statement of Facts and Contentions

We would like your input with respect to contentions by Friday 30 October 2015.

Yours sincerely,

Chris Shaw Ana Coculescu



APPENDIX 2 Curriculum Vitae





Andrew Kosciuszko

Synopsis

Andrew has over 30 years broad experience in various senior roles, including operations, sales, marketing and business development. He has been involved with the waste industry for over twenty years, specialising in operations management.

His technical expertise in waste management includes, transfer stations, landfill disposal, composting, alternative waste treatment options, waste characterisation and collection and recycling systems.

Andrew is the current President of the NSW Executive of the Waste Management Association of Australia (WMAA) and previous Chair of the WMAA Landfill Working Group (NSW) and secretary of the Landfill Division.

Career History of Andrew Kosciuszko

July 2014 to present

Summit Enviro Consulting

Consultant

Nationality: Australian

Consultant

Current Position:

Name:

Andrew Kosciuszko

Qualifications: Bachelor of Engineering (Chemical Engineering) -

UNSW

Master of Applied Science (Environmental Pollution Control) UNSW

Graduate Qualification in International Marketing - AGSM University of NSW

2011 to June 2014

SITA Australia (Suez Environnement) Sydney Landfills Manager

Management of all SITA Sydney Landfills which provide a significant part of SITA Australia's total profit result. Management of tenders for cell construction and capping for several landfills.

2003 – 2011 SITA Australia

NSW Post Collection Manager Responsible for the Elizabeth Drive Landfill and Davis Road Transfer Station, together with Alternative Waste Technology and recycling projects that included:

- Preparation of Master Plan for Elizabeth Drive Landfill including closure and post closure provisions, and shale removal
- Project management including DA, construction and procurement of a C&I recycling operation at Davis Road Transfer Station.
- Project management of the SITA Advanced Waste Treatment (SAWT) Technology facility including rezoning, EIS, DA, facility commissioning and operation together with audit reviews.

2002 - 2003 *URS Australia*

Principal Waste Management Practice Leader Developed Waste Management business for URS, winning and completing several major projects and cross selling the other services of URS

Projects included:

 Development of Waste Management strategies for the Cooma Monaro, Snowy River Shire Councils

and National Parks & Wildlife Service, including the Perisher Range Ski Resorts. Alternative Waste Technology (AWT) review and financial modelling of costs and development of an organisational structure for waste management in the region.

- Development of AWT tender and contract for Shore Regional Organisation of Councils, including a site optimisation study and "fatal flaw" analysis of the project.
- Review of ACT NoWaste Strategy for the ACT government

1999 - 2001

TMP Worldwide (Morgan & Banks)

Recruitment consultant specialising in the manufacturing sector

1998 - 1999

Pacific Waste Management

National Business Development Manager / Landfill Manager Responsible for National Business Development for Pacific Waste Management as well as all operational activities at the Elizabeth Drive Landfill, including landfill sales.

- Developed Strategic Plan for landfill and reduced costs and increased flexibility of operations through amendment of landfill operating conditions such as "Hours of Operation" and removal of Section 94 Levy and updated the landfill earthworks contract.
- Developed proposals for hydrocarbon contaminated soil bio-remediation and landfill monocells (First landfill to gain EPA approval for monocells) Also one of first landfills to obtain EPA licence based on LEMP (early 1999)
- Negotiated contracts to provide good base volumes for the landfill and reduced operating costs.

1996 - 1997

Pacific Waste Management Responsible for all aspects of Middlemass Industrial Services.

General Manager – Middlemass Industrial Services /

Business Development Manager Responsible for Landfill sales and the development of new business for Pacific Waste Management, particularly projects of a technical nature. Also management of Middlemass Industrial Services concurrently.

1990 - 1995

Comalco Extrusions Australia (CEA) Manager of the largest extrusion plant operation in CEA and responsible for NSW Sales (\$ 40 Million GSV) and a staff of 170 persons.

Manager Minto Extrusions / National Marketing Manager Responsible for the marketing strategy of CEA and the development of pricing structures to ensure profitable volume for the whole of CEA.

1971 - 1990



Consumer Manufacturing Industry Management of Unilever manufacturing operations

Summit Enviro Consulting Assignments Summary

Sydney Recycling Park Landfill

Review of a potential new landfill acquisition and calculation of provisions for closure and post closure for the current landfill site. Review of methods of leachate treatment for the current landfill site.

Enviro Recycling

Completion of Council DA application for a recycling operation and EPA licence application. Provision of technical and strategic advice for an EA for a large scale recycling operation on the site.

Henry Davis York (Acting for WestConnex Delivery Authority)

Calculation of value of St Peters Landfill and recycling operation for the acquisition of the landfill site for a roadway interchange including information for the Valuer General, acting as the mediator.

WestConnex Delivery Authority

Provision of technical advice for the St Peters landfill site in relation to closure plans, site clean-up, leachate and storm water controls and operation. Tender review of contractors for site clean-up and tender review of main roadway construction tenders for construction of a motorway through a landfill.

Suez Environnement

Assistance with an EPA major infrastructure grants application.

NSW EPA

- Provision of expert technical advice relating to recycling operation licence review mediation in the Land and Environment Court.
- Provision of expert technical advice relating to a fire in a waste recycling facility

Kimbriki Environmental Enterprises

- Assistance with EPA grants application for a public drop off facility and transfer station
- Review of tender and contract for landfill operations



ACTNowaste

Peer review of landfill gas engine tender

Newcastle City Council

Preparation of a financial "flash" report for the Council Landfill site operations

Arcadis

Consultant to Arcadis for a due diligence review for a waste industry acquisition.

Element Environmental

Consultant to Element Environmental for waste component of EA for new waste recovery project and EPA grant application.