



19 December 2018

MML Submission - Waste Branch  
Environment Protection Authority  
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**Public submission in respect to Mangrove Mountain Landfill – proposed extension**

Dear Sir/Madam

1. Please find attached my submission in respect to the application by Verde Terra Pty Ltd (the **Company**) to renew its Environmental Protection Licence No 11395 (**EPL No 11395**) with the Environment Protection Authority (**EPA**). I understand the opportunity to provide a submission is the result of a direction from the Land and Environment Court (**LEC**) to enable the Court to make an informed decision. Accordingly, my submission is directed to the Court.
  - a. I believe my submission comes from a unique perspective. I have a comprehensive understanding of the history and facts of this matter. I have been recognised by the LEC as an expert witness in both planning and environmental matters. A copy of my academic qualifications, is annexed to this submission at page 49 and marked A.
  - b. As an officer of the former Gosford City Council (**fGCC**) I provided advice in the assessment of the original and second Development Application (**DA**) for the remodelling of Mangrove Mountain Golf Course. The second DA registered by the fGCC as DA23042/1998 is the development consent issued under the *Environmental Planning and Assessment Act 1979* (**EPA Act**), that activates sections 45 and 50 of the *Protection of the Environment Operations Act 1997* (**POEO Act**). It is my understanding that these two sections of the POEO Act must be taken into consideration when varying an EPL.
  - c. In addition to providing advice on the original and second DA, I become aware in 2012, that the development had allegedly breached multiple conditions of consent and recommended to the fGCC to commence legal proceedings. During the legal proceedings I was the fGCC's senior planning and environmental expert and principal negotiator for Council in the LEC mediation. I departed the fGCC in June 2014. As a result of leaving the fGCC, I had no involvement in the finalisation of the Class 4 proceedings resulting in Court

Orders issued on 29 August 2014, which is document 3 of the related documents placed on exhibition.

- d. As I played a key role in the mediation and formulation of the Heads of Agreement, I acknowledge that many of my concerns, fears, worries and apprehensions resulted in multiple requests being incorporated into the Heads of Agreement.
- e. Not only were the requests incorporated into the Heads of Agreement, I acknowledge that multiple aspects of the Heads of Agreement have been incorporated into the draft Amended Landfill Environmental Management Plan 2013 (Draft ALEMP 2013) and draft Leachate Management Plan 2013 (Draft LMP 2013).
- f. Although I viewed the Draft ALEMP 2013 and Draft LMP 2013, I was no longer employed by the fGCC when the Amended LEMP 2013 and LMP 2013 were presented to Council and incorporated into the Court Order.
- g. Since my departure from the fGCC new facts have come to my attention. The new facts are of such magnitude and significance that I have no hesitation in recommending to the LEC is the strongest terms possible not to extend or vary EPL No 11395. The rational for not extending or varying the EPL is based upon:
  - i. The fGCC entered the Heads of Agreement based upon a false understanding of the environmental risk.
  - ii. The environmental risk is significant with potential impact upon both ground and surface water. The site is located within the Central Coast's drinking water supply catchment, it is situated on top of an aquifer and is located adjacent to and immediately upstream of a state designated conservation area.
  - iii. The EPL No 11395 renewed and varied by the EPA since 1 May 2006 has not been issued in accordance with the statutory requirements under the POEO Act.
  - iv. The Company appears to have presented false or misleading information to the EPA to obtain multiple EPL variations.
  - v. The Company has not implemented or followed all licence conditions contained within multiple EPL variations. The failure to implement and follow relevant environmental controls has placed waste material in a position that it will directly pollute the environment.
  - vi. The Company appears to have hidden the obligation to pay significant sums of environmental levy to the State Government.
  - vii. The Leachate Management Plan Feb 2014 changed to 6 m Mound reduction dated October 2017 (LMP 2014 dated Oct 2017) and the Landfill Environmental

Management Plan 2013 dated February 2014 amended October 2017 (LEMP 2014 dated Oct 2017) to Reduce Mound by 6m have not addressed all known environmental risks.

- viii. The scale and magnitude of the EPL No 11395 variation is well beyond the intent of the original consent.

2. I appreciated the allegations presented in paragraphs 1(g)(i) to 1(g)(viii) are serious concerns and the Court needs factual evidence to weigh up the implications. Accordingly, the following report provides a series of facts for the Court's consideration.

*BACKGROUND - LEADING TO THE HEADS OF AGREEMENT*

3. The reason I state that I believe my submission comes from a unique perspective is because I was employed by the fGCC from May 1989 to June 2014. My employment at fGCC was terminated by the Chief Executive Officer on 19 June 2014.

4. During my time as an employee of fGCC I held the following positions during the periods noted below:

a. Town Planner	May 1989 – April 1990
b. Environment Officer	April 1990 – August 1991
c. Manager Environment Control & Planning	August 1991 – December 2002
d. Manager Environment & Education	December 2002 – July 2005
e. Principal Environmentalist	July 2005 – December 2007
f. Manager Development	December 2007 – January 2009
g. Director Environment and Planning	January 2009 – September 2010
h. Manager Development	September 2010 – June 2014

5. On 4 May 1992, in my role of Manager of Environment Control & Planning I wrote to the original applicant G H Todd Pty Ltd for the remodelling of Mangrove Mountain Golf Course. The purpose of the letter was to set out the fGCC requirements on those matters to be included within an Environmental Impact Statement (**EIS**). The EIS was required to be submitted with the DA for the remodelling of the golf course.

- a. A copy of this letter is contained on page 162 of document 5 of the related documents placed on exhibition titled *Landfill Environmental Management Plan 2013 Feb 2014 Amended October 2017 to Reduce Mound by 6m*. An additional copy is contained on page 105 of document 19 of the related documents placed on exhibition titled *Environmental Impact Statement TGT Consulting 14 October 1992*.
  - b. In preparing the letter of 4 May 1992, I was fully aware that the proposed reconstruction of Mangrove Mountain Golf Course is located within the Central Coast's water supply catchment, is located on top of an aquifer and adjacent to an important bushland which is now Jiliby State Conservation Area.
  - c. As the proposed remodelling was located in a highly sensitive area, I required on behalf of the fGCC the applicant G H Todd Pty Ltd to include within the contents of any EIS:
    - i. The consideration of alternatives to reduce the quantity of fill material to be imported onto the site
    - ii. The consideration of leachate
    - iii. The need to address erosion and sediment control with the specific objective of minimising the amount of land disturbance at any one time
    - iv. Documenting the type of fill material to be imported including a list of material to be prohibited to be imported.
6. In late 1992 or early 1993, a DA for the remodelling of Mangrove Mountain Golf was submitted by G & H Todd Pty Ltd to the fGCC. The DA contained an EIS which was titled *Environmental Impact Statement for the Reconstruction of the Mangrove Mountain Memorial Golf Course – Central Mangrove* prepared by T.G.T Consulting Services dated 14 October 1992. A copy of this EIS is document 19 of the related documents placed on exhibition. The key components in the EIS which are relevant to the consideration of variation of EPL No 11395 are:
- a. The EIS identifies that the total void space across the entire site in Area A, B, C and D is 240,000 m<sup>3</sup>. This total volume consists of 220,000 m<sup>3</sup> of selected imported fill and 20,000 m<sup>3</sup> of Virgin Excavated Natural Material (**VENM**) to be obtained on site. The excavation area is located between Areas A and B.
  - b. The EIS contains no requirement for the installation of a leachate barrier or a leachate collection system as the fill material to be used was to be selected demolition material, compacted and covered daily to minimise any water infiltration. Furthermore, the EIS lists the materials as non-putrescible industrial waste (selected); demolition materials; natural excavated materials; top soils; sand; and other clean fill materials.



- c. When the application was being considered by the fGCC, it was determined that the information contained in the EIS was not sufficient to make an informed decision. On the 8 August 1995, the fGCC acknowledging this situation granted a deferred consent subject to the lodgement of additional information.
  - d. The deferred consent required the submission of additional information including a Plan of Management on how the remodelling was to proceed, a detailed Erosion and Sediment Control Plan' and a 'Landfill Environmental Management Plan (**LEMP**)' as required for licensing by the 'Environmental Guidelines for Solid Waste Landfills', issued by the EPA.
7. When the LEMP was submitted to the fGCC, it was determined that the deferred consent had lapsed and the applicant G & H Todd Pty Ltd was required to lodge a new DA which was registered by Council as DA 23042/1998. This second DA contained the same EIS and the LEMP which was titled *Mangrove Mountain Golf Course Remodelling Project Landfill Environmental Management Plan* prepared by Perram & Partners dated March 1997 (LEMP 1997). A copy of this LEMP 1997 is document 20 of the related documents placed on exhibition. The key components in the LEMP 1997 which are relevant to the consideration of variation of EPL No 11395 are:

- a. Section 1.2 purpose of the LEMP 1997 states:

*The development consent provides for the first of three nominated filling areas, identified as Area B in the EIS, to be developed for initial filling. Approval to extend operations to the second and third landfill sites can be sought from Council after satisfactory operation of the initial landfill has been demonstrated. This first edition of the LEMP describes environmental controls in detail for Area B. (underline and bold emphasis added).*

The EIS limits the amount of fill in Area B to 80,000 m<sup>3</sup> and the LEMP 1997 only addressed Area B and a section of excavation area. Consequently, the approval was limited and did not include Area A, C, D or the remainder of the excavation.

- b. Section 1.4 of the LEMP 1997 relating to implementation states:

*The Landfill Environmental Management Plan will be submitted to Council, the EPA and the Department of Land and Water Conservation. Any licence subsequently issued by the EPA will be incorporated into the plan and an updated version will be prepared. When Council indicates the plan is satisfactory and the development consent may operate, the landfill operator and the golf course owner will implement the plan. (underline and bold emphasis added).*

The wording in section 1.4 of LEMP1997, thus requires any amendment to the LEMP to be submitted and approved by Council prior to expanding the remodelling operations.

c. Section 3.6.5 of the LEMP 1997 regarding leachate states:

*Prior to receiving waste, a bund will be created just downslope from the tipping face to collect run-off from occasions when exposed waste is subject to rainfall before it is covered. An inert waste landfill does not require a leachate collection system (EPA, 1996a). The operator will nonetheless arrange for "operational leachate" to be collected in the bunded area where it may be evaporated or used in dust suppression on the site. Operational leachate is rainfall which has come into contact with deposited waste.*

*The quality of the operational leachate will be controlled by the rigorous waste screening process described in Section 4. The quantity of leachate produced will be a direct result of the volume of clean rainwater which falls on exposed waste or which infiltrates recently covered waste. By progressively shaping, compacting and covering the waste as outlined below, the quantity of leachate produced will be substantially restricted.*

The wording in section 3.6.5 of LEMP 1997 informed the fGCC that by progressively shaping, compacting and covering the waste that the quantity of leachate produced would be minimal and that no Leachate Barrier System (LBS) or Leachate Collection System (LCS) was proposed.

d. Section 4.3.1 of the LEMP 1997 Waste Control states:

*...the following types of waste will be accepted as fill for remodelling the golf course:*

- *demolition material from selected residential, commercial and industrial sites, except the items listed as being not accepted;*
- *clean natural excavated material*

*Waste to be excluded from the golf course includes:*

- *any material classified as "solid", "liquid" or "hazardous" waste in accordance with EPA definitions;*
- *inert waste from contaminated sites;*
- *Treated timber such as CCA pine logs, or creosoted poles;*
- *Light fittings and ceiling fans;*
- *carpet;*

- *metallic demolition materials or products with a substantial metal content such as metal cladding, fencing, beams, pipes, guttering, steel or aluminium-framed doors or windows (but not reinforced concrete);*
- *concrete floor slabs from commercial or industrial premises which contain significant oil staining, where chemicals have been stored, or where vehicle repairs or unidentified industrial processes have been carried out;*
- *soil from immediately beneath concrete floor slabs unless it has been tested and found to be acceptable; and*
- *general site clean-up waste if this includes vegetation.*

The wording in section 4.3.1 of LEMP 1997, informed the fGCC that the type of material to be imported would be clean fill. As a point of interest 100,000 m<sup>3</sup> of clean waste as defined in the LEMP 1997 has been deposited on site although not in an approved area, and without the presence of any LBS or any LCS. Not only does this 100,000 m<sup>3</sup> of waste fall within the defined of clean waste as defined in LEMP 1997, records obtained via *Government Information Public Access (GIPA)* have documented that EPA officers have inspected this area and based upon their site inspection have not requested the waste operator to install any LBS or LCS.

Consequently, 100,000 m<sup>3</sup> of clean waste material has been deposited on site in accordance with the EIS and LEMP 1997.

8. On 6 October 1998, the fGCC approved the DA with a number of conditions. A copy of the conditions of development consent is document 18 of the related documents placed on exhibition.

- a. Condition 1 of the Consent required:

***'The Operations of the waste facility are to be carried out in accordance with the Landfill Environmental Management Plan prepared by Perram and Partners in 1997 except where modified by any conditions of this Consent and the requirements of any relevant regulatory authority.'*** (bold emphasis added)

- b. Condition 2 of the Consent required:

***'The Operations of the waste facility and the remodelling of the Golf Course is to be carried out in accordance with the Environmental Impact Statement prepared by T.G.T. Consulting Services Pty Ltd in 1992 except where modified by any conditions of this Consent, the abovementioned Landfill Environmental Management Plan and the requirements of any relevant regulatory authority.'*** (bold emphasis added)

- c. Condition 18 of the Consent required:

***'The applicant is to obtain all necessary licences from the Environment Protection Authority prior to the commencement of the development and is to comply with the***

*conditions of these licences at all times.'*

9. Conditions 1 and 2 of the Consent required the Landfill Operator G & H Todd Pty Ltd to comply with everything that was included within the LEMP 1997 and the EIS.
  - a. Both these documents describe how the landfill operations and the remodelling of the golf course were to proceed to protect the natural and physical environment along with minimising any risk to human health and safety.
  - b. Due to the type of material being proposed for filling, the list of materials that were prohibited to be used for filling and the method of operations, both documents did not require the installation of a LBS or a LCS.
  - c. The consent was restricted to only apply to Area B and the area of limited excavation to obtain VENM located between Area A and B.
  - d. To extend the operations outside of Area B and the limited excavation the consent required the applicant to submit a new LEMP which had to be approved by Council before continuing.
10. The combination of conditions 1, 2 and 18 was to restrict the landfill operations to the remodelling of the golf course, not the establishment of a waste facility.
11. In mid 2012, I became aware that
  - a. Works were being undertaken in multiple areas across the site outside of Area B and the authorised extraction area.
  - b. More than 80,000 m<sup>3</sup> of material was located on site in Area B.
  - c. A large volume of material was located in an area not identified in the EIS.
  - d. A large excavation had taken place in an area not identified in the EIS. This excavation was later identified as Cells W and X.
  - e. In Area B general waste was being deposited rather than selected material.
  - f. A leachate holding pond was present on site.
12. To clarify the volume of material in September 2012, on behalf of the fGCC I engaged a registered surveyor. A copy of the surveyor's plan containing a contour plan, estimation of volume of material on site and void space as a result of excavation of the site as at September 2012, is annexed to this submission at page 50 and marked B<sup>1</sup>. The survey plan is an attachment in a letter from the fGCC to the EPA. The registered surveyor measured:

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<sup>1</sup> A copy of this plan was obtained via a *Government Information Public Access (GIPA)* application.

- a. In Area B a volume of 800,000 m<sup>3</sup> of material. This is 10 times above the volume approved under the consent.
  - b. In Area A a volume of 10,000 m<sup>3</sup> of material with a further 90,000 m<sup>3</sup> of material west of Area A resulting in a total of 100,000 m<sup>3</sup>. The placement of this 100,000 m<sup>3</sup> of material had not been approved under the consent as the consent issued by the fGCC only applied to Area B as stated in paragraphs 6, 7, 8, 9 and 10.
  - c. In a location identified as Cells W and X an excavation of 149,149 m<sup>3</sup> capacity had been constructed. The volume and location of this excavation had not been approved under the consent.
13. To clarify the type of waste contained on site, on behalf of the fGCC I contacted the EPA who informed Council that approximately 500,000 tonnes of Class 2 waste had been deposited on site<sup>2</sup>.
14. To clarify why a leachate holding pond was located on site, by reviewing EPL No 11395, I was able to determine that when the licence was first issued by the EPA in accordance with clauses O5.1 and O5.2 that:
- A Leachate Barrier System (LBS) must be installed on each surface within the premises to be used for the storage of leachate.*
- The Leachate Collection System (LCS) must be capable of capturing all leachate generated from the waste disposed of at the premises.*
15. As an officer of the fGCC I received an email from an officer of NSW Office of Water. This email contained a series of photos which illustrated leachate discharging into a stormwater drain<sup>3</sup>. A copy of the photos is annexed to this submission at page 67 and marked C.
16. Receiving the information from NSW Officer of Water I approached the EPA to undertake a joint site inspection to determine the risk to the environment. A copy of the EPA inspection report is annexed to this submission at page 68 and marked D<sup>4</sup>.
17. At the joint site inspection:
- a. As a former officer of GCC I expressed concern as to the location of the leachate pond in relation to the adjacent sediment pond.

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<sup>2</sup> NB. that after I left the fGCC I am now aware the volume of material is approximately 670,000 tonnes of waste which is 34% more than advised by the EPA. Furthermore, due to the high levels of methane recorded on site it is highly likely that general waste including putrescible waste has been deposited on site.

<sup>3</sup> Photos can be supplied if requested. Photos obtained via a GIPA application.

<sup>4</sup> A copy of this inspection report was obtained via a GIPA application.

- b. As a LBS and a LCS was required to be installed in accordance with clause O5.1 and O5.2 of the first EPL No 11395, I assumed that any leachate generated from the existing waste mound would be directed to the existing leachate pond observed at the site inspection which is illustrated in Photo 1 of the EPA inspection report.
- c. Photos of the leachate discharge illustrated in Photos A, B and C were shared with Chris McElwain and Danielle Playford from the EPA. At the site inspection and recorded on page 2 of attachment C, Ms Playford on behalf of the EPA acknowledged that a leachate spring occurred from Cell B, but it was not active at the time.
- d. Receiving advice from the EPA officers present on site that the leachate discharge observed in the photos supplied by NSW Officer of Water could be managed through the EPL; being aware that the EPL No 11395 required the installation of both a Leachate Barrier System (**LBS**) and a Leachate Collection System (**LCS**) I relied upon the EPA informing me that that the presence of 500,000 tonnes of Class 2 waste on site did not result in any risk to the environment. (NB. At the time of the inspection the EPA informed the fGCC that 500,000 tonnes of waste had been deposited at the site. However, I now understand that 656,183 tonnes of waste have been deposited at the site. The difference in tonnage of waste is discussed in paragraph 77 of this submission).

18. As I relied upon the advice received from the EPA, I supported and recommended to the fGCC that the fGCC present a *without prejudice* offer to explore the opportunity to settle the dispute.

19. The fGCC offer of settlement was not accepted but resulted in all parties entering formal mediation which was chaired by the Hon. Angus Talbot. I actively participated in the mediation in good faith that the existing waste mound on site did not result in any risk to the environment. In particular the integrity of water supply catchment, the underlying aquifer and the adjacent state conservation area.

*HEADS OF AGREEMENT WAS BASED UPON A FALSE UNDERSTANDING OF THE ENVIRONMENTAL RISK.*

20. As discussed in paragraph 1(g)(i), I hold the view that the fGCC entered the Heads of Agreement based on a false understanding of the environmental risk. The reason I hold this view is because during the formal mediation process information came to light regarding the statutory oversight that the EPA had exercised in enforcing and varying EPL No 11395.

21. Although I had a suspicion that the EPA may not have exercised its full statutory responsibility, I did not have independent facts to validate my concerns during the mediation prior to the signing of the Heads of Agreement.
22. To find the truth as to whether or not the EPA had exercised its statutory responsibilities adequately and that the existing waste mound did not propose a significant environmental risk, as an officer of the fGCC, I drafted a letter listing multiple questions and issues to the EPA. A copy of the letter I drafted to Mr Buffier Chair and CEO of the EPA dated 18 July 2018, is annexed to this submission at page 50 and marked B.
23. The letter provides an appraisal and analysis of all the EPL No 11395 that were issued or varied by the EPA. It is important for the Court to appreciate that the EPL was varied on thirteen occasions in April 2002, July 2003, September 2004, April 2006, July 2008, October 2008, December 2008, May 2009, June 2010, July 2010, August 2010, November 2011 and May 2012. As the EPL was varied on so many occasions one would assume that the EPA would have been required to undertake inspections to confirm how the licence was being implemented.
24. I was forced to leave the fGCC in June 2014, so I did not have the opportunity to view the reply from the EPA.
25. Since my departure from the fGCC, through multiple GIPAs, I have been able to:
- a. Review and analyse a comprehensive set of photographs taken by officers of both the NSW Office of Water and the EPA.
  - b. Review and analyse the Amended LEMP 2013 and LMP 2013 which were not available at the time of my departure from the fGCC.
26. In March 2005, May 2005, February 2006, November 2007 and August 2008 a series of photographs was taken by an officer from NSW Office of Water. These photographs document the placement of waste on the site. The photos also document how VENM was obtained on site. A copy of the photos taken from 2005 to 2008 is annexed to this submission commencing at page 74 and marked E.
- a. At the time the waste was being deposited on site it was to be placed on the site in accordance with EPL No 11395 issued on 11 July 2003.
  - b. Reviewing the EPL issued on the 11 July 2003, it is noted that the licence relied upon an Amended Landfill Environmental Management Plan dated 2003 (**ALEMP 2003**). It is

important for the Court to note that this ALEMP 2003 was not submitted or approved by the fGCC as was a requirement of condition 1. However, the issue of an alleged breach of development consent is not the matter that I wish to discuss, rather I wish to bring to the Court's attention that:

- i. Section 3.1.2 of the ALEMP 2003, states that prior to the placement of waste a LBS and a LCS are both required to be installed prior to the placement of any waste; and
  - ii. In accordance with Clause O5.1 and O5.2 of EPL No 11395 issued on 11 July 2003 a LBS and a LCS were required to be installed prior to the placement of any waste.
- c. To assist in understanding what is observed in the photos taken in 2005, at the base of each photo in annexure E is a commentary. In summary the photos taken in 2005 illustrate:
  - i. Photo 1 is an aerial photo taken of the site in 2005. Photos 2, 3, 4, 6 and 7 present ground views of waste.
  - ii. Photos 4, 5, 6, 7, 8 10 and 11 illustrate that waste was being placed directly onto the soil surface without any LBS or LCS. The placement of waste in this manner is in direct conflict with section 3.2.1 of the ALEMP 2003 and clauses O5.1 and O5.2 of EPL No 11395.
  - iii. Photos 11(a) and 11(b) illustrate the type of waste being deposited includes treated pine which is in direct conflict with the Council's consent.
  - iv. Photos 1, 2, 3, 4, 7, 9, 10, 11, 11(a) and 11(b) illustrate that no *compacted waste and clean fill* is being applied on a daily basis to prevent the intrusion of water. The placement of waste illustrated in the photos is in direct conflict with the Council's consent as under section 4.9 of the EIS daily use of clean cover fill was required. As no clean cover fill is being applied daily over the waste this would allow leachate to be generated whenever there was a rainfall event.
- d. To assist in understanding what is observed in the photos taken in 2006, at the base of each photo in annexure E is a commentary. In summary the photos taken in 2006 illustrate:
  - i. Photos 13, 14, and 15 documents that clean cover fill is being placed over the waste.
  - ii. Photos 16 and 17 illustrate the excavation of VENM where clean fill is being obtained on site. This excavation is being undertaken in a location that is not authorised under the EIS or LEMP 1997.



- e. To assist in understanding what is observed in the photos taken in 2007, at the base of each photo in annexure E is a commentary. In summary the photos taken in 2007 illustrate:
  - i. Photo 18 illustrates the placement of additional waste expanding the basal area of Area 1A.
  - ii. Photo 19 illustrates that waste is being deposited directly onto the ground surface without any LBS or LCS. In fact, the photo illustrates that waste is being placed directly into a stormwater drainage channel and overland water flow is being directed into the waste. This practice would increase the amount of leachate being generated.
  - iii. Photos 20, 21 and 22 illustrate that sediment is being generated on site and is leaving the site controls.
- f. To assist in understanding what is observed in the photos taken in 2008, at the base of each photo in annexure E is a commentary. In summary photos 23, 24 and 25 taken in 2008 illustrate the expansion of the basal area of Cell 1A.

27. In April 2009 a series of photographs were taken by an officer of the EPA. These photographs document the installation of both the LBS and the LCS in the location identified as Area 1B. A copy of these photos are annexed to this submission commencing at page 89 and marked F. To assist in understanding what is being observed in the photos at the base of each photo is a commentary. In summary the photos taken in 2009 illustrate:

- a. Photos 26 and 27 illustrate various views of the placement of a leachate barrier.
- b. Photo 28 illustrates the placement of a leachate drainage blanket which would form part of a leachate collection system.
- c. Photo 28 illustrates that no leachate barrier was installed at the western end of cell 1B. The reason why no leachate barrier was installed at this location is because the western end of Cell 1B was designed to connect to the eastern section of Cell Z which was proposed to be excavated.

28. In August 2009 photographs taken by an officer of the EPA record and document the filling of Cell 1B. A copy of the photos are annexed to this submission commencing at page 91 and marked G. To provide an understanding of what is being observed at the time the photo was taken, a commentary is provided at the base of each photo. In summary

- a. Photos 29 and 30 illustrates that daily cover material is not being applied to the waste.

- b. Photos 29 and 30 illustrate that waste is extending in a westerly direction beyond the boundary of Cell 1B.
  - c. Photo 30 illustrates waste is being deposited in a northerly direction on top of the southern edge of the existing waste indicating that waste is extending beyond the leachate barrier of Cell 1B.
29. The LBS illustrated in Cell 1B is connected to the current leachate holding pond on the eastern side of the existing waste mound. It is estimated the maximum holding capacity of the existing leachate holding pond is approximately 300,000 litres <sup>5</sup>. The leachate holding pond is illustrated in a photo in this submission at page 92 and marked H. Through multiple GIPA applications I have not been able to view any plans or approvals for this leachate holding pond. I can only assume that no plans or approvals exist for the leachate holding pond of its present size and holding capacity.
30. By cross referencing all photographs in annexures E, F and G with the registered survey plan contained in annexure B, I have calculated that up to 85% of the base of the existing waste mound is unlined. Furthermore, that part of the existing waste mound representing 15% of the basal area of the existing waste mound that has been lined has **not been** completed in accordance with its design or conditions contained within EPL No 11395. Consequently, even the 15% that is lined is not containing all leachate that is generated.
31. The EPA through the engagement of an independent consultant in the preparation of the Technical, Environmental and Operational Review Mangrove Mountain Landfill Wisemans Ferry Road, Mangrove Mountain NSW (May 2017) acknowledges that
- ...it has been assumed, based on available information that up to 85% of the area of the existing fill mound does not have an engineered barrier. Approximately 15% has a composite lined leachate barrier (Reference page 15 of the technical report)*
32. Recognising that the majority of the existing waste mound does not have an effective LBS or an effective LCS the Court now has to address the question of what are the consequences? In my view the consequences are substantial as the presence of up to 657,183 tonnes of waste of unknown origin proposes a significant environmental risk.

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<sup>5</sup> NB Due to time constraints and not being able to visit the site or engage a registered surveyor in preparing this submission I have only made an estimation using measurements on my computer. The capacity of the leachate holding pond could be more accurately determined by a registered surveyor as the shape and depth of the leachate holding pond is variable.

#### *ANALYSING AND UNDERSTANDING THE MAGNITUDE OF ENVIRONMENTAL RISK*

33. As discussed in paragraph 1(g)(ii), I hold the view that the unknown environmental risk is significant. The reason I hold this view is because of two factors.

- a. The first factor is the volume of leachate that is being generated annually that is not being intercepted but escaping into the environment.
  - i. The holding capacity of the leachate holding pond is calculated using the HELP model. I do not have access to this model. However, by reviewing the multiple LMPs that have been presented by the Company the following information emerges.
  - ii. In the LMP 2014 dated October 2017 it states:
    - Proposed Cells W, X, Y and Z cover an area of 42,985 m<sup>2</sup> – ref Section 5.6 page 16
    - The proposed leachate holding pond is 5,471,000 litres – ref section 6.8 page 39
  - iii. In the LMP 2014 dated June 2016 it states:
    - Proposed Cells W, X, Y and Z cover an area of 42,985 m<sup>2</sup> – ref Section 5.6 page 15
    - The proposed leachate holding pond is 6,962,000 litres – ref section 6.8 page 37
    - NB This document was received via GIPA 796-EPA327
  - iv. Comparing the two documents the text is inconsistent in that the same area requires two different sized leachate holding ponds. The difference is 1,491,000 litres. The question arises: Why the difference?
  - v. With personal communication with Alan Dyer clarification was sought as to whether or not the leachate generated from the existing waste mound was incorporated into the proposed leachate holding pond. Mr Dyer advised Mountain Districts Association (**MDA**) that he was informed that the leachate holding pond in the LMP 2014 dated June 2016 was amended to take into consideration the leachate from the existing waste.
  - vi. Given the information supplied to Mr Dyer it is therefore deduced that the Company has calculated the leachate holding capacity for the existing waste already on site would be in the order of magnitude of 1,491,000 litres. This represents the difference between the LMP 2014 dated October 2017 and the LMP 2014 dated June 2016.

- vii. Therefore, the leachate holding pond on site should be in the order of magnitude of 1,491,000 litre capacity rather than the 300,000 litres. This means the current leachate holding pond is only 20% the correct design capacity and that up to 1,191,000 litres of leachate is escaping into the environment annually.
- b. The second factor is the concentration or potential toxicity of the leachate. In the information contained in the LMP 2014 dated October 2016 and the LMP 2014 dated June 2016, both documents state the volume of leachate is calculated by the area. However, the depth of waste is not discussed.
  - i. It is reasonable to assume that as any leachate generated has to be captured and secured from entering the environment the depth of waste that rainwater or groundwater has to flow through waste would not be relevant.
  - ii. However, given the fact that 85% of the existing waste mound is unlined and that the existing leachate holding pond is only 80% of the current design capacity the concentration and potential toxicity of the leachate is a factor I believe the court must address.
  - iii. To assist the court is coming to terms with this matter the following information is provided.
    - Examination of photos 11(a) and 11(b), in Annexure E documents that treated timber or copper logs which contains arsenic is present in the waste.
    - Through multiple GIPA application from the EPA sub-surface methane gas levels have been received for the time period between 2012 and 2016. Examination of the records has identified that levels as high as 896,000 ppm have been recorded. It is noted that within the EPL No 11395 the permitted level of methane should be no higher than 500 ppm. For the existing waste mound to generate such high levels of methane is a strong indication that putrescible waste has been incorporated into the landfill.
    - If you examine Figure 4.6 on page 51 of document 20 of the related documents placed on exhibition titled *Landfill Environmental Management Plan by Perram and Partners March 1997*, the court will observe the original landfill was to have a depth of waste up to 10 metres deep.
    - If you examine the registered survey plan prepared by Bannister and Hunter dated September 2012 located at Attachment B in Annexure B the court will observe the depth of fill is variable across the site and in some locations is up to 30 metres above the natural ground level.

- iv. Examining the facts presented in paragraph (iii) above, given the existing waste mound contains, toxic substances, is highly likely to contain putrescible material and is three times greater depth than the original consent it is highly probable that the leachate will be concentrated and toxic.
- v. Please note that even if the court were to obtain an analysis of the existing leachate holding pond this only represents 15% of the basal area of the existing waste mound. The Court would still not have information on the potential toxicity and concentration of leachate that is being generated on the remaining waste covering 85% basal area of the existing waste.

#### STATUTORY REQUIREMENTS OF VARYING AN EPL

34. As discussed in paragraph 1(g)(iii), I hold the view that since 1 May 2006, the EPA has not varied EPL No 11395 in accordance with statutory requirements. The reason I hold this view is because on 1 May 2006, section 50 of the POEA Act was amended to read:

##### Timing of licensing of development requiring Consent under EPA Act

- (1) *Licensing of controlled development under EPA Act. This section applies to development that cannot be carried out without Development Consent under the Environmental Planning and Assessment Act 1979. This development is called "controlled development" in this section.*
- (2) *Licence to be concurrent. A Licence that relates to controlled development must not be granted or varied (other than on the initiative of the EPA) by the appropriate regulatory authority, unless Development Consent has been granted for the controlled development. However, this section does not prevent the consideration of a Licence application by the appropriate regulatory authority before Development Consent is granted. (emphasis in underline added) <sup>(6)</sup>.*

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<sup>6</sup> Attached are historical copies of section 50 of the POEO obtained from NSW Government legislation at <https://www.legislation.nsw.gov.au/#/> for the 1 May 2006 and the 1 December 2005

#### Protection of the Environment Operations Act 1997 No 156

**Historical** version for 1 May 2006 to 14 May 2006 (accessed 10 December 2018 at 18:45) [Current version](#)

##### [Chapter 3](#) [Part 3.2](#) [Section 50](#)

#### 50 Timing of licensing of development requiring consent under EP&A Act

- (1) **Licensing of development controlled under EP&A Act** This section applies to development that cannot be carried out without development consent under the *Environmental Planning and Assessment Act 1979*. This development is called **controlled development** in this section.
- (2) **Licence to be concurrent** A licence that relates to controlled development must not be granted or varied (other than on the initiative of the EPA) by the appropriate regulatory authority, unless development consent has been granted for the controlled development. However, this section does not prevent the consideration of a licence application by the appropriate regulatory authority before development consent is granted.

#### Protection of the Environment Operations Act 1997 No 156

**Historical** version for 1 December 2005 to 30 April 2006 (accessed 10 December 2018 at 18:47) [Current version](#)

##### [Chapter 3](#) [Part 3.2](#) [Section 50](#)

#### 50 Timing of licensing of development requiring consent under EP&A Act

35. A review of the fifth variation of the EPL No 11395 issued on 19 June 2008 at the initiative of Verde Terra Pty Ltd identifies:

- Licence holder changed to Verde Terra Pty Ltd trading as Central Mangrove Waste
- Clause A2.1 amended as property definition
- Clause A4.2 same as 11 July 2003
- Clause L5.3 same as 5 April 2002
- Clause L5.4 same as 21 November 2001
- Clause O5.1 same as 21 November 2001
- Clause O5.2 same as 21 November 2001
- Clause O7.2 same as 11 July 2003
- New clause O7.8 requiring that any leachate storage pond must be designed to prevent storm water running into it
- New amended clauses O11.1, O11.2 & O11.3 stating the licensee **must** provide a report to the EPA detailing the design, construction, operation and rehabilitation of any new landfill cell proposed on the site
- Clause O14 and the various subparts now become clause O15 with subparts. The new clause O15.1(a) reintroduces the requirement of a daily cover of all active waste areas to a minimum depth of 15 centimetres over **all exposed** landfill waste prior to ceasing operations at the end of each day.

36. It is my understanding that in granting or varying an EPL, the EPA or a consent authority must take into consideration both sections 45 and 50 of the POEA Act. Pursuant to section 45 of the POEO Act it states:

***Matters to be taken into consideration in licensing functions***

*In exercising its functions under this Chapter, the appropriate regulatory authority is required to take into consideration such of the following matters as are of relevance:*

*Subsection 45(i) states:*

*in connection with a Licence application **any relevant environmental impact statement, or other statement of environmental effects, prepared or obtained by the applicant under the Environmental Planning and Assessment Act 1979, (bold emphasis added)***

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- (1) **Licensing of development controlled under EP&A Act** This section applies to development that cannot be carried out without development consent under the [Environmental Planning and Assessment Act 1979](#). This development is called **controlled development** in this section.
- (2) **Licence to be concurrent** A licence that relates to controlled development must not be granted by the appropriate regulatory authority, unless development consent has been granted for the controlled development. However, this section does not prevent the consideration of a licence application by the appropriate regulatory authority before development consent is granted.

37. At the time EPL No 11395 was varied on 19 June 2008 by the EPA, according to registered survey plans submitted to the EPA on 21 December 2007, there were 257,602 m<sup>3</sup> of material in Area B.

<sup>(7)</sup> This is 3.2 times the volume of material permitted by the Consent issued by the fGCC.

38. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act as required, the evidence indicates that the EPL No 11395 issued on 19 June 2008 in my view is allegedly invalid.

39. A review of the sixth variation of the EPL No 11395 issued on 3 October 2008 at the initiative of Verde Terra Pty Ltd identifies:

- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
- All other major clauses discussed in the fifth variation remained unchanged.

40. As discussed within the fifth variation of the EPL No 11395 issued on 19 June 2006, due to amendments to the POEO Act in 2006, the EPA must consider the conditions of consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirms that as at 30 June 2008, 299,102 m<sup>3</sup> of was in Area B. <sup>(8)</sup> This is 3.7 times the volume of material permitted by the Consent issued by the fGCC.

41. As the EPA varied the EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 3 October 2008 in my view is allegedly invalid.

42. A review of the seventh variation of the EPL No 11395 issued on 8 December 2008 at the initiative of Verde Terra Pty Ltd identifies:

- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
- All other major clauses discussed in the sixth variation remained unchanged except Clause L5, which amends the definition of waste permitted on site and the inclusion of a new clause O22 dealing with disposal of tyres not permitted except for individual delivery containing no more than 5 tyres.

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<sup>7</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, in Annexure B

<sup>8</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

43. As discussed with the fifth and sixth variations in the proceeding paragraphs due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirms that as at 30 June 2008, 299,102 m<sup>3</sup> of material was in Area B. <sup>(9)</sup> This is 3.7 times the volume of material permitted by the Consent issued by the fGCC.
44. As the EPA varied the EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 8 December 2008 in my view is allegedly invalid.
45. A review of the eighth variation of the EPL No 11395 issued on 13 May 2009 at the initiative of Verde Terra Pty Ltd identifies:
- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
  - All other major clauses discussed in the seventh variation remained unchanged except for Clauses A4.2, O12.1 and new clauses U1 to U3 which relate to the construction and lining of Cell 1B.
46. As discussed with the fifth, sixth and seventh variations in the proceeding paragraphs due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirms that as of 20 February 2009, 405,402 m<sup>3</sup> of material was in Area B. <sup>(10)</sup> This is 5 times the volume of material permitted by the Consent issued by the fGCC.
47. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 13 May 2009 in my view is allegedly invalid.
48. A review of the ninth variation of the EPL No 11395 issued on 29 June 2009 at the initiative of Verde Terra Pty Ltd identifies:
- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
  - All other major clauses discussed in the eighth variation remained unchanged except for new wording in clauses A4 and O12. As the LBS and LCS had been installed for Cell 1 B, clauses U1 to U3 which related to the construction and lining of Cell 1B were deleted.

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<sup>9</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>10</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B



49. As discussed with the fifth, sixth, seventh and eighth variations in the proceeding paragraphs due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirmed that as of 18 December 2009, 538,652 m<sup>3</sup> of material was in Area B.<sup>(11)</sup> This is 6.7 times the volume of material permitted by the Consent issued by the fGCC.
50. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 29 June 2009 in my view is allegedly invalid.
51. On the 30 November 2009, on behalf of Verde Terra Pty Ltd Consulting Earth Scientists submitted to the EPA a Leachate Management Plan (LMP 2009), titled '*Landfilling Area B, Cells W, X, Y and Z General Solid Waste (Non-putrescible) Landfill, Lot 582, DP 1123656, Hallards Road, Central Mangrove NSW Prepared for Verde Terra Pty Ltd dated November 2009.*'
52. Although the LMP 2009 was submitted to the EPA, in my role as an officer of the fGCC, I am aware that this document was never submitted to the fGCC. As it was not submitted to the fGCC, the latter did not have the opportunity to undertake a review of the document in accordance with the EPA Act. LMP 2009 therefore has no formal approval under the EPA Act and it did not amend the existing Consent for DA 23042/1998.
53. A review of the tenth variation of the EPL No 11395 issued on 9 July 2010 at the initiative of Verde Terra Pty Ltd identifies:
- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
  - All other major clauses discussed in the ninth variation remained unchanged except for amendments to clauses A4, O11 and O12 to reflect the inclusion of the LMP 2009 for landfill of Cell 1B, and future Cells W, X, Y and Z.
54. As the EPA approved the inclusion of the LMP 2009 into the EPL the following non-compliances with the Consent arise:
- a. The first **non-compliance** is that the location of Cells W, X, Y and Z do not correspond to Area B or the excavation location as defined in the EIS and LEMP 1997. Examining the plans contained in the EIS and LEMP 1997, a small portion of Cells W, X and Y fall within Area B as defined in the EIS. However, much of the area of Cells W, X and Y falls outside

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<sup>11</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

of Area B as defined in the EIS and LEMP 1997. The footprint of Cell Z falls within Area B as defined in the EIS.

- b. The second **non-compliance** is that the approved area of excavation in the EIS is limited between Area A and Area B. The volume of excavation is winning approximately 20,000 m<sup>3</sup> of VENM by relocating the top 7 m of a small knoll. In contrast, Fig. 8 of the LMP 2009 identifies that the excavation at the deepest point in Cell Y is 52 m below natural ground level which is 7.4 times greater than is stated in the EIS and LEMP 1997. Plus, the extent of excavation in Cells W, X, Y and Z requires the relocation of 955,448 m<sup>3</sup> of VENM (see page 15, LMP 2009). This results in an excavation 47.7 times the amount approved in the EIS.
- c. The third **non-compliance** is that the final land surface of Cells 1A, 1B, W, X, Y and Z as presented in Fig. 7 of the LMP 2009 does not correspond with the approved final land surface presented in Fig. 4 of the LEMP 1997. A copy of Fig 7 of the LMP 2009 is presented below in this submission and is labelled Fig 1. Furthermore, a copy of Fig. 4 of the LEMP 1997 is presented on the following page in this submission and is labelled Fig 2.



Figure 1. Illustrates the location of proposed Cells W, X, Y and Z. The yellow area represents Cell W, the brown area represents Cell X, the lilac area represents Cell Y and the blue area represents Cell Z (Source: Fig. 7: Approved Contours copied from the Leachate Management Plan 2009).

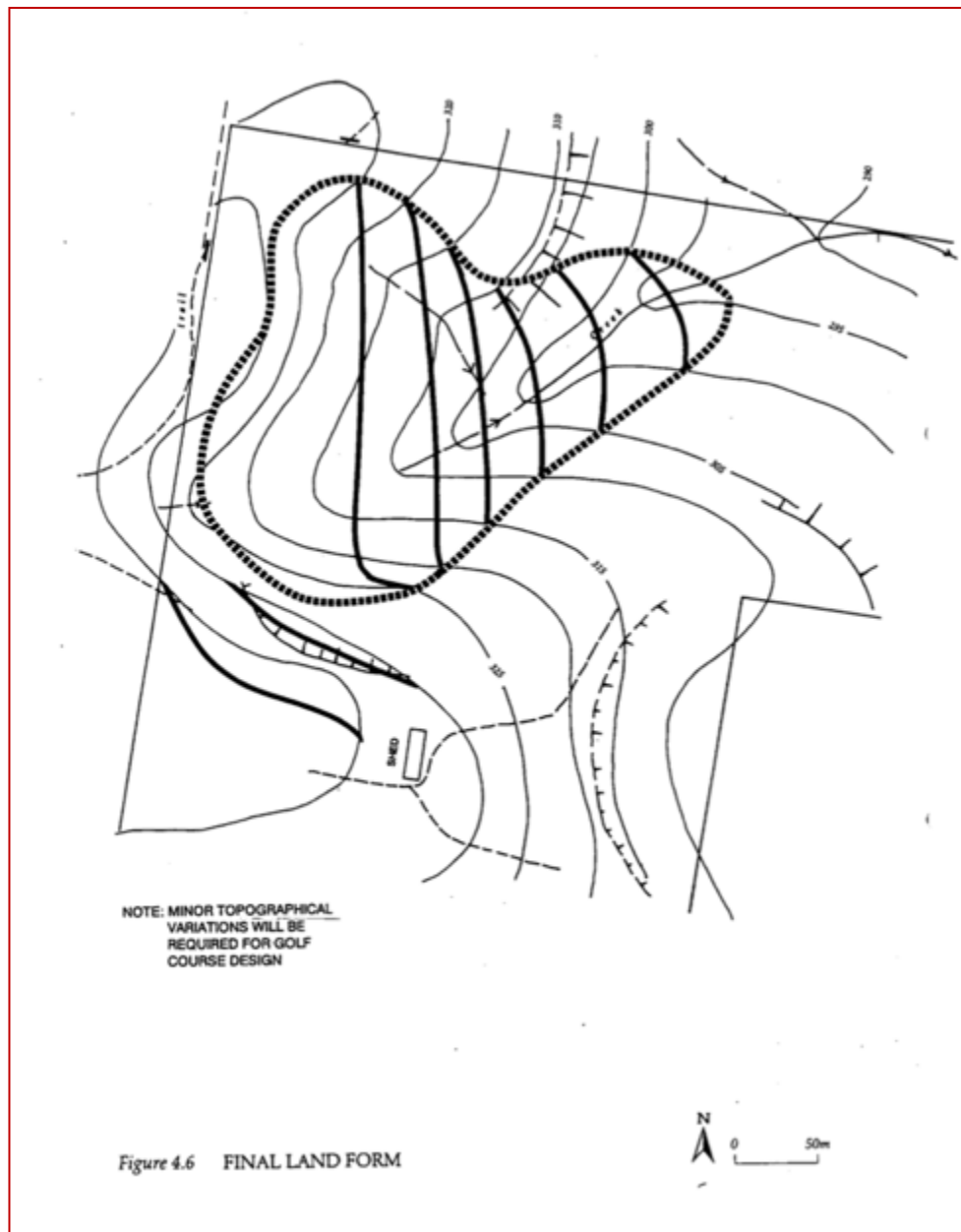


Figure 2. Copy of the approved Final Landform which is contained in the LEMP 1997. (Source: Fig. 4.6 Final Land Form LEMP 1997).

By comparing Figs 1 and 2 of this submission it is evident that the contour height of Area B has increased above the approved level of 310 m in the EIS and LEMP 1997. To illustrate the increase in height, by comparing the 310 m contour level between Figs 1 and 2 you will observe that in Fig. 1 it is altered at the northern property boundary. However, in Fig. 4, if you follow the 310-metre contour level you will observe that it is not adjusted until you have travelled 60 m south of the northern property boundary.

- d. The fourth **non-compliance** is that notwithstanding that the contour levels of Area B have increased above the approved levels in the Consent, the EPA did not monitor them as

referenced in the EPL No 11395. It is noted that on 15 July 2009 the EPA received a volumetric survey from the Central Mangrove Waste Facility - Licence No 11395, survey period December 2008 to June 2009. By comparing the contour levels of Plan No 5617/Jun/09<sup>12</sup> included within the volumetric survey data, with the contour levels of Fig. 7 of the LMP 2009 referenced in the EPL No 11395, we find that the design contour level should be 325 m AHD. However, the contour level in June 2009 was 340.36 m AHD. This means there is a difference of 15 m between the plans referenced in the volumetric survey and those in the LMP 2009 which is included within the EPL.

55. In addition to the concern of the inclusion of LMP 2009 into EPL No 11395 as discussed in the preceding paragraphs with the fifth, sixth, seventh, eighth and ninth variations of the EPL No 11395, due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirms that as of 1 July 2010, 588,952 m<sup>3</sup> of material was in Area B. <sup>(13)</sup> This is 7.4 times the volume of material permitted by the Consent issued by the fGCC.

56. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 9 July 2010 in my view is invalid as it has not followed the statutory requirements.

57. A review of the eleventh variation of the EPL No 11395 at the initiative of Verde Terra Pty Ltd identifies:

- Licence holder Verde Terra Pty Ltd trading as Central Mangrove Waste
- All other major clauses discussed in the tenth variation remained unchanged except for amendments to clauses O11.1, O11.2 and O11.3 modified to include reference to Cells W, X, Y and Z.

58. As discussed with the fifth, sixth, seventh, eighth, ninth and tenth variations in the preceding paragraphs due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence. An examination of the registered survey plans submitted to the EPA confirms that as of 1 July 2010, 588,952 m<sup>3</sup> of material was in Area B. <sup>(14)</sup> This is 7.4 times the volume of material permitted by the Consent issued by the fGCC.

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<sup>12</sup> Survey Plan No 5617/Jun/09 is attached to the Heads of Agreement. A copy of the Heads of Agreement was obtained via a GIPA application.

<sup>13</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>14</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

59. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 30 August 2010 in my view is invalid as it has not followed the statutory requirements.
60. A review of the twelfth variation of the EPL No 11395 issued on 7 November 2011 at the initiative of Verde Terra Pty Ltd identified that a **major** review had been undertaken. Multiple clauses were amended including the addition of Sections 6, 7, 8 and 9 into the licence.
61. As a major review of the EPL had been undertaken and as discussed with the fifth, sixth, seventh, eighth, ninth, tenth and eleventh variations due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying the licence. An examination of the registered survey plans submitted to the EPA confirms that as of 13 July 2011, 732,864 m<sup>3</sup> of material was in Area B. <sup>(15)</sup> This is 9.2 times the volume of material permitted by the Consent issued by the fGCC.
62. As the EPA had undertaken a **major** variation of EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act, the evidence indicates that the EPL issued on 7 November 2011 in my view is invalid as it has not followed the statutory requirements.
63. A review of the thirteenth variation of the EPL No 11395 issued on 3 May 2012 at the initiative of Verde Terra Pty Ltd identified no major changes in comparison to the twelfth EPL No 11395 issued.
64. As discussed with the fifth, sixth, seventh, eighth, ninth, tenth, eleventh and twelfth variations of the EPL No 11395 due to amendments to the POEO Act in 2006, the EPA must consider the Council Consent and the contents of the EIS prior to varying a licence.
65. An examination of the registered survey plans submitted to the EPA confirms that as of 31 January 2012, 753,188 m<sup>3</sup> of material was in Area B, <sup>(16)</sup> which is 9.4 times the volume of material permitted by the Consent issued by fGCC.

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<sup>15</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, see reference 003

<sup>16</sup> Data obtained from Attachment A 'Index of Survey plans and Volume Information EPL 11395' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, see reference 003

66. As the EPA varied EPL No 11395 without taking into consideration sections 45(i) and 50 of the POEO Act as required, the evidence indicates that the EPL issued on 3 May 2012 in my view is invalid as it has not followed the statutory requirements.

67. In my view given the fact that on nine (9) occasions the EPA did not follow the correct statutory process to vary EPL No 11395 resulting in a significant departure from the original approval, I would request the Court not to ignore this fact, and to decline any further variations of the EPL.

#### *PRESENTATION OF FALSE OR MISLEADING INFORMATION*

68. As discussed in paragraph 1(g)(iv), I hold the view that Verde Terra Pty Ltd may have presented false or misleading information in requesting a variation to EPL No 11395 on multiple occasions. The reason I hold this view is because after reviewing LMP 2009 the following concerns arise:

- a. Section 2.5.2 of the LMP 2009 provides a detail discussion on the designed LCS and LBS which is supposed to be under the active landfill in 2009. However, based upon the photographic evidence presented in Annexure E this is a false statement. Evidence in the photographs, documents that no LBS or LCS has been installed under the waste.
- b. Section 2.5.3 of the LMP 2009 states:

*“The planned landfill area covered by this LMP (Landfill Area B Cells W, X, Y and Z) has been designed in order to maintain a playable golf course at the site (Figure 5)*

However, there is no Figure 5 in the GIPA A688 – EPA276 released documents. This may be a simple oversight in the GIPA released documents, a simple typing error or is a deliberate action not to direct the reader to the planned landfill area covered by this LMP 2009.

- c. Section 2.5.4 of the LMP 2009 states:

*“Figure 3 shows the balance of the site covered by the development consent (Areas A and C) where future landfill cells are intended but yet to be designed*

I believe the above statement is misleading. The reason why it is misleading is that you need to compare Fig 3 of LMP 2009 with Fig 3 in the EIS. Both figures from the respective documents are presented below in this submission. Due to numbering sequence Fig 3 of the LMP 2009 is labelled Fig 3 in this submission and Fig 3 of the EIS is labelled Fig 4 in this submission.





- The approved excavation area located between A and B in Fig 3 of the EIS has been omitted from Fig 3 of the LMP 2009. The fact that the approved authorisation area has been omitted in my view is a serious misrepresentation of the facts as the LMP 2009 discusses excavation of Cells W, X, Y and Z creating a void space of 955,488 m<sup>3</sup>.

d. Section 2.6 of the LMP 2009 states:

*“The project waste intake is 200,000 tonnes per year (T yr<sup>-1</sup>), with an allowance of 10% of additional material for daily cover the final figure is 220,000 T yr<sup>-1</sup>. Based on survey records, the compaction rate achieved at the site is approximately 1 T m<sup>3</sup>. The staging of future landfill development and the final contour plan are shown on Figure 5 and 7 respectively. The capacity of each of the four cells (W through Z) is provided below*

Table 4: Landfill Staging		
Stage	Capacity (m <sup>3</sup> )	Capacity (months)
W	164582	9
X	292314	17
Y	277625	16
Z	220967	13

In the above text it uses the phrase ‘The projected waste intake is ...’ the text goes on to explain that up to 220,000 m<sup>3</sup> is to be imported annually. In Table 4 it presents landfill staging over periods of time receiving a total of 955,488 m<sup>3</sup>. I believe the information presented in the manner in section 2.6 is misleading because it implies the importation of 220,000 m<sup>3</sup> annually is approved and the staging of importation of waste into Stages W, X, Y and Z is approved and the amount of waste material to be imported into Area B has increased from 80,000 m<sup>3</sup> to 955,488 m<sup>3</sup>.

- The above text also refers to Fig 5 and Fig 7. A copy of Fig 7 of the LMP 2009 is labelled Fig 1 in this submission at page 22. Examining Fig 7 of LMP 2009 the following facts emerge:
  - Figure 7 is labelled “Approved Contours”. This is a false statement. The reason it is a false statement is because if you compare the approved contour levels in Fig 4.6 Final Land Form of the LEMP 1997 identified as Fig 2 in this submission at page 23 you will observe the height of the contour levels are different and the extent of the lengths of variation in contour levels is different.



- The combined effect of increasing the height and lateral extension of the contours results in a significant difference in the void space. Increasing the void space changes the objective of works from a remodelling of the golf course to a waste facility.
- ii. The above text provides an interesting insight into how the waste operations have operated since the Verde Terre Pty Ltd took charge of the operations. In the above text it clearly states that based on survey compaction rates achieved by the previous operators a compaction rate of 1 tonne to 1 m<sup>3</sup> was achieved. Yet in the Court Order in August 2014, the Company informed the Court that the average compaction rate over a 10-year period was only one tonne to 1.28 m<sup>3</sup>. The difference in compaction rates is conflicting. An explanation of the different compaction rates is discussed in paragraphs 76 to 78.

e. Section 3.4 of the LMP 2009 states:

*“Present filling operations at Central Mangrove Waste Facility are based on the formation of operating cells excavated into the Hawkesbury Sandstone bedrock ... The cell floor contours are shown in Fig 8.”*

I believe the above text is false and misleading. The reason it is false and misleading is because:

- i. The text uses the phrase “present filling operations ...” this implies the present filling operations would be operating in accordance with its consent. However, when the report was prepared in November 2009, the registered volumetric survey plan submitted to the EPA in February 2009 showed there was 405,402 m<sup>3</sup> of material in Area B. <sup>(17)</sup> This is 5 times the volume of material permitted by the Consent issued by the fGCC.
- ii. The text uses the phrase “Waste Facility”. This implies the consent is for a waste facility. However, the original consent is for the remodelling of a golf course, not a waste facility.
- iii. The text uses the phrase “... cells excavated into the Hawkesbury Sandstone bedrock”. This implies that cell excavation is a major component of the consent and that there is no size limit on the amount of excavation. The consent authorised for excavation is a defined area to remove a knoll of a hill to obtain

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<sup>17</sup> Data obtained from Attachment A ‘Index of Survey plans and Volume Information EPL 11395’ attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

- iv. When you examine Fig 8 of the LMP 2009 presented as Fig 5 in this submission the excavation into the Hawkesbury Sandstone bedrock is 300m in length, up to 190m wide and at the western end at Cell Y is approximately 48m deep. The scale, size, dimension and location of excavation of Cells W, X, Y and Z was not authorised under the consent.
- v. Introducing the major excavation of Cells W, X, Y and Z changes the DA from the remodelling of a golf course to a waste facility.



69. As discussed in paragraph 1(g)(v), *prima facie* evidence is available that indicates that Verde Terra Pty Ltd has not implemented or followed all licence conditions contained within multiple EPLs. The *prima facie* evidence is contained on page 23 of document 1 of the items placed on public exhibition titled *Environment Protection Licence 11395* and attachment B1 in the Heads of Agreement.

70. To understand the alleged breach of the current EPL No 11395, I wish to direct the Court's attention to clause E8 & E8.1 which states:-

***E8 Construction of Leachate Barrier and Leachate Collection Systems- Cells W, X, Y & Z.***

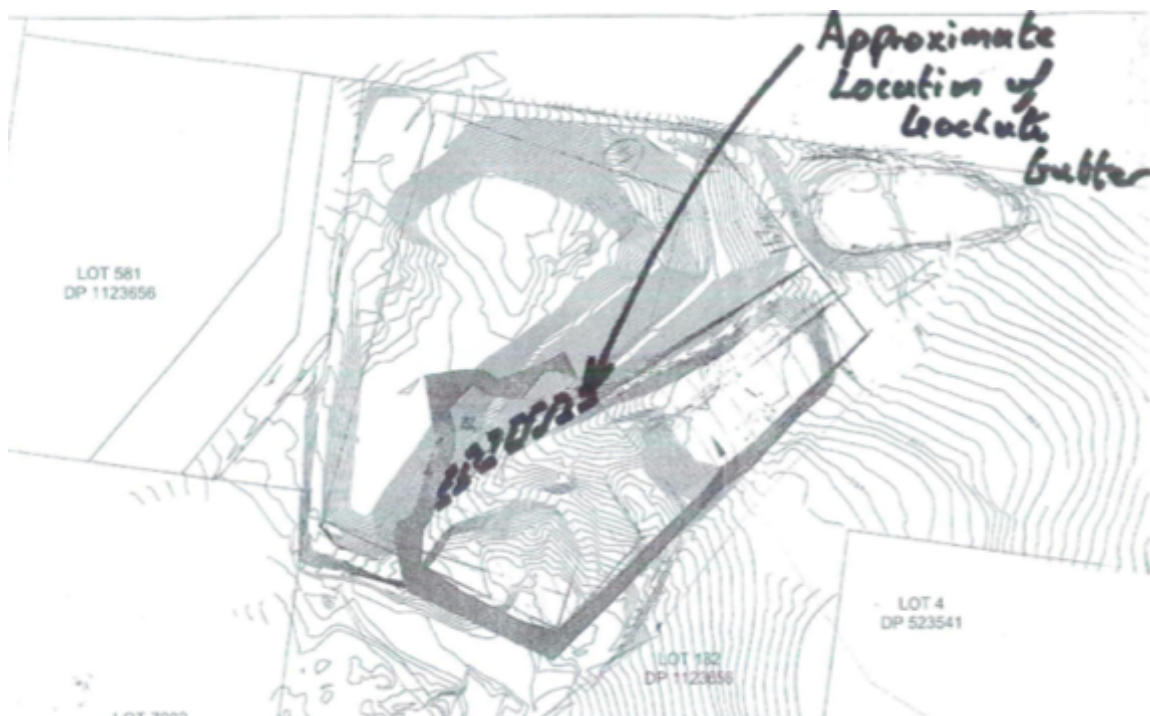
*E8.1 The Licensee must install the leachate barrier systems and leachate collection and conveyance systems for Cells W, X, Y and Z in accordance with the specifications and procedures detailed in the reports titled "Leachate Management Plan" (dated 30 November 2009) prepared by Consulting Earth Scientists and "Soil and Water Management Plan & Additional Information" (dated 11 May 2010) prepared by Consulting Earth Scientists. (Reference: Document 1 items placed on public exhibition Environmental Protection Licence 11395)*

The wording in clause E8 and E8.1 specifies that the Licensee **must** install both a LBS and a LCS in accordance with the LMP 2009. The wording in clause E9 of EPL No 11395 goes on to require that within 60 days upon completion of the LBS and LCS that the Licensee **must** provide to the EPA a separate Construction Quality Assurance Report.

71. I would now like to request the Court to view Fig 7 and 8 in the LMP 2009 which is presented as Fig 1 and at page 22 of this submission and Fig 5 at page 30 in this submission.

- a. When examining Fig 1 in the submission, I would direct the Court's attention to the layout of Cells W, X, Y and Z with particular attention to the location of Cell Z which is located in the top left-hand side.
- b. When examining Fig 5 in the submission, I would direct the Court's attention to the fact that Cells W, X, Y and Z are to be excavated.
- c. As discussed in paragraph 68(e)(iv) this excavation is 300m in length, up to 190m wide and at the western end at Cell Y is approximately 48m deep. In the location of Cell Z due to the slope of the land the excavation would be up to 30m deep.

72. I would now like to request the Court to view the attached Fig 6 which is a copy of annexure B1 in the Heads of Agreement.



**Figure 6. Composite figure of the ground surface levels in September 2012 and the location of Cells W, X, Y and Z A** (Reference source: Annexure B1 on Heads of Agreement).

73. Taking into consideration the location of Cell Z in Figs 1 and 5 in this submission and comparing the location of Cell Z in Fig 6 of this submission it documents that Cell Z is currently under the southern section of the existing waste mound.

- a. This means that Cell Z has not been excavated and that waste has been placed in this location without the benefit of any LBS or LCS.
- b. The current waste operator Verde Terra Pty Ltd based upon the *prima facie* evidence present appears to be operating in breach of conditions E8, E8.1 and E9 of EPL No 11395 issued on 3 May 2012.

74. To understand a further alleged breach of the current EPL No 11395, I wish to direct the Court's attention to the *prima facie* evidence in clause O6.10 of EPL No 11395 which states:

*O6.10 The Licensee must provide the EPA written notice no less than 30 days prior to the completion of each of cell W, X, Y and Z. That notice must specify the date upon which completion is expected to occur. (Reference: Document 1 items placed on public exhibition Environmental Protection Licence 11395)*

- a. Clause O6.10 requires notification to the EPA of when the Cells are completed. As EPL No 11395 refers to the LMP 2009, the final contour levels over cells W, X, Y and Z are presented in Fig 7 of LMP 2009.
- b. A copy of Fig 7 of the LMP 2009 is presented in Fig 1 of this submission at page 22.

- c. From left to right the height of the 'Approved Contour' levels over the existing waste mound from left to right are RL 330, RL 325 and RL 320.

75. As the Court now has an appreciation of the 'Approved Contour' levels contained in EPL No 11395 issued on 3 May 2012, I now wish to draw the Court's attention to a copy of the surveyors plan illustrating the present day contour levels which is annexed to this submission at page 66 and marked Attachment B<sup>18</sup>.

- a. Examining this survey plan indicates the height of the existing waste mound extends to RL 345 over an area of Fig 7 of LMP 2009 where the height should be RL 330 to RL 325.
- b. This means the Company has placed waste over the existing waste mound up to 20 to 15 metres higher than authorised under EPL No 11395.
- c. Based upon this *prima facie* evidence it appears the Company is in breach of condition O6.10 of EPL No 11395 as they have placed waste above the 'Approved Contour' levels.

#### *VOLUME OF FILL AND TONNAGE WASTE INCONSISTENT*

76. As discussed in paragraph 1(g)(vi), I hold the view that based upon *prima facie* evidence it appears that Verde Terra Pty Ltd may have hidden the obligation to pay significant sums of environmental levy to the State Government. The evidence the Court needs to consider is contained in Attachment A in annexure B at page 65 in this submission. For ease of review I have reproduced a screen shoot of Attachment A

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<sup>18</sup> A copy of this plan was obtained via a *Government Information Public Access (GIPA)* application.

Attachment A

INDEX OF SURVEY PLANS AND VOLUME INFORMATION - EPL 11395 F57610							
PERIOD ENDING	REPORTED TONNAGE	CHANGE IN VOID VOLUME BY SURVEY (M³)	CUMULATIVE TOTAL OF CHANGE IN VOID BY SURVEY (m³)	STOCKPILE	REMAINING VOID VOLUME (M³)	29/01/2013 TONNE/M³	ADJUSTED TONNE/M³ WITHOUT STOCKPILE
01/01/03 to 08/07/03	Not Provided	2,167	2,167	1,390	461,833	Not Available	
01/01/03 to 31/12/03	Not Provided	{5,585}	7,752	501	492,248	Not Available	
28/07/04	8,727	12,300	20,052	3,138	479,948	0.71	0.95
21/01/05	26,735	34,700	54,752	Nil	445,248	0.77	
14/07/05	20,530	29,750	84,502	425	415,498	0.69	
27/01/06	17,494	31,900	116,402	Nil	383,598	0.55	
03/07/06	19,223	33,500	149,500	Nil	350,098	0.57	
21/12/06	18,293	36,900	186,802	290	313,198	0.5	
11/07/07	23,782	33,000	219,802	Nil	280,198	0.72	
21/12/07	Not Provided	37,800	257,602	Nil	242,398	Not Available	
30/06/08	Not Provided	41,500	299,102	Nil	200,898	Not Available	
20/02/09	71,299	106,300	405,402	26,280	94,598	0.67	0.89
25/06/09	125,556	70,150	475,552	3,370	24,448	1.79	1.88
18/12/09	Not Provided	63,100	538,652	Nil	1461,348	Not Available	
01/07/10	31,504	50,300	588,952	780	411,048	0.63	
12/01/11	57,905	81,800	670,752	21,300	329,248	0.71	0.96
13/07/11	44,589	62,112	732,864	18,654	267,136	0.72	
31/01/12	Not Provided	20,188	753,188	Nil	246,948	Not Available	
31/07/12	28,958	21,094	774,146	Nil	255,667	1.37	
19/06/12							

77. In the above screen shot the Court will observe that on 21/12/17, 30/6/08, 18/12/09 and on 31/07/12 that no reported tonnage information was provided. Although no reported tonnage was provided on the respective dates there is a change in volume of 37,800, 41,500, 63,100 and 20,188 which adds to a total volume of 162,588 m³.

- a. The only logical explanation is that on the dates where no reported tonnage information was provided that waste entered the site.
- b. This means that instead of a total of 494,595 tonnes of waste reported on site by the EPA in media releases there is in fact 657,183 tonnes of waste on site or 32.9% more waste than publicly reported.

78. As a member of the community I do not have access as to whether or not any environmental levy was paid to the EPA during the reporting periods of 21/12/17, 30/6/08, 18/12/09 and on 31/07/12. If an environmental levy was paid to the EPA at the unreported dates, I do not have



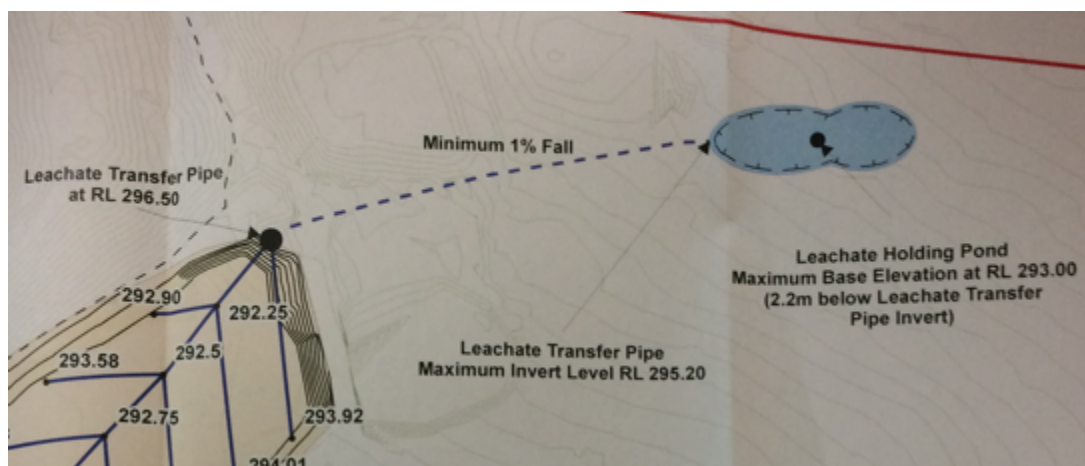
access as to whether or not the sum of the environmental levy paid to the EPA is equal to the change in volume. However, it appears by not reporting the tonnage of waste at the specified dates, it does explain why the Company advised the Court in 2014 that by reviewing the tonnage of waste over the last 10 years the company only achieved a compaction rate of one tonne to 1.28 cubic metres. I believe the compaction rate specified by the Company to the Court in 2014 is a reflection of the fact that they did not include the unreported tonnage of waste.

*LMP 2014 DATED OCT 2016 AND LMP 2014 OCT 2016 HAVE NOT ADDRESSED ALL KNOWN ENVIRONMENTAL CONCERNS*

79. As discussed in paragraph 1(g)(vii), I hold the view that LMP 2014 dated Oct 2017 and the LEMP 2014 dated Oct 2016 have not addressed all known environmental risks. The reason I hold this view is because of the following factors.

Factor 1

- a. As stated in paragraph 4, between September 2010 – June 2014, I was employed by the fGCC. In late 2013, I received a copy of a draft LMP 2013.
- b. Upon receipt of the draft LMP 2013, I would have informed the Company that it was not acceptable on multiple grounds. One of the grounds that I would not have accepted the document is the fact the LCS was not in accordance with the Heads of Agreement in that the LCS was required to be gravity drained.

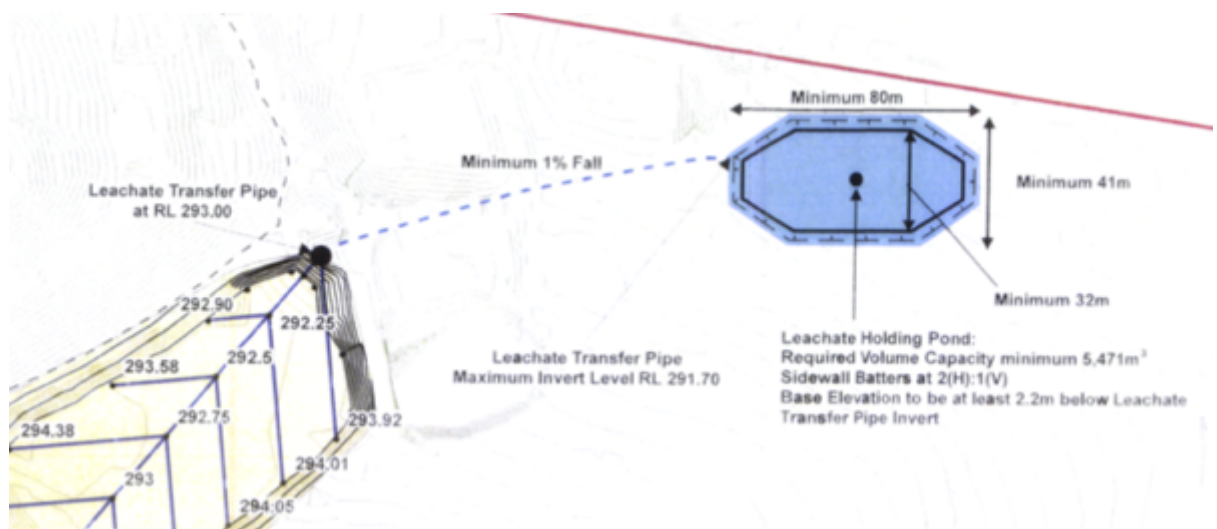


**Figure 7. Details of leachate transfer pipe and leachate holding pond in the Draft LMP 2013**  
(Reference source: LMP 2013 dated 1 November 2013 Fig 4).

- c. In Fig 7 the Court will observe the base of Cell W is a RL 292.25. Yet the leachate transfer pipe is set at RL 296.50. This means the leachate transfer pipe inlet is set at 3.25 meters above the base of Cell W. As the leachate pipe outlet is set higher than the base of Cell

W the leachate drainage system is not gravity drained. As the leachate drainage system is not gravity drained this means that the draft LMP 2013 dated 1 November 2013 is not in accordance with the Heads of Agreement.

- d. When examining Fig 7, I wish to draw the Court's attention to the fact that the width, length, depth and volume of the leachate holding pond is not specified.
- e. As stated in paragraph 3, I left the fGCC in June 2014. At the time of my departure I do not recall having the opportunity to review the LMP 2013. Through GIPA applications I have been able to view Fig 4 of the LMP 2013 which is referenced in Order 2 in Court Order issued by the LEC on 29 August 2014.



**Figure 8. Details of leachate transfer pipe and leachate holding pond in the LMP 2013**  
 (Reference: Document 4 in the documents placed on public exhibition titled Class 4 proceedings  
 Sealed Court Orders dated 29 August 2014).

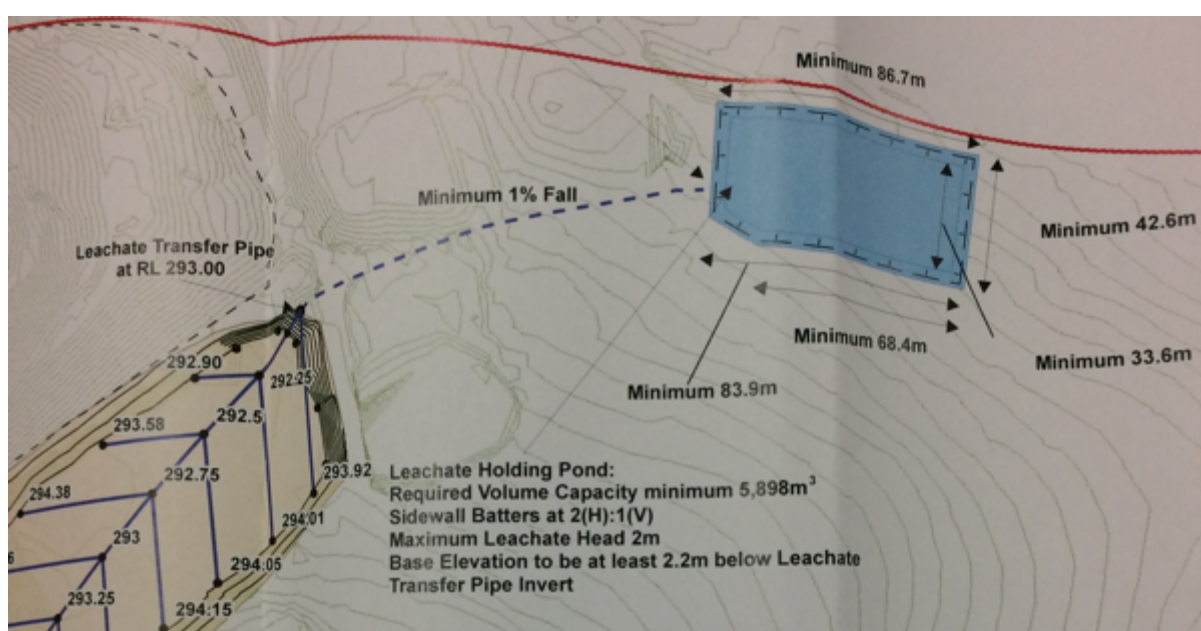
- f. I wish to request the Court to compare the different information presented in Fig 7 and Fig 8. In Fig 7, the Leachate Transfer Pipe is set at RL 296.50. In Fig 8 the Leachate Transfer Pipe is set at RL 293.00. In Fig 7, there is no width, length, depth or volume of the Leachate Holding Pond. In Fig 8, the Leachate Holding Pond width is 41m, the length is 80m the depth is at least 2.2m below the Leachate Transfer Pipe Invert resulting in a volume of 5,471 m<sup>3</sup> which is equal to 5,471,000 litres.
  - i. In my view either the fGCC staff or the consultant who prepared the LMP 2013 should have addressed the fact the existing leachate holding pond is grossly undersized.
  - ii. The LMP 2013 is the original document upon which the LMP 2014 dated Oct 2017 was prepared.



- iii. As the LMP 2013 has not addressed all known environmental risks in respect to the leachate generated from the existing waste on site, the LMP 2014 dated Oct 2017 likewise has not addressed all known environmental risks.

## Factor 2

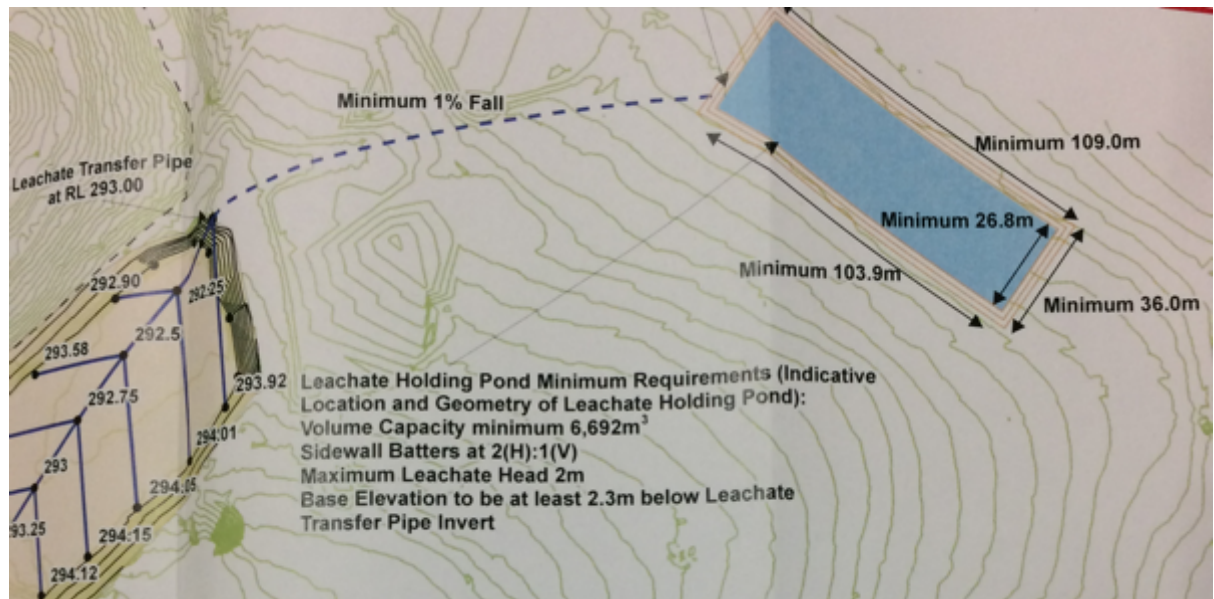
- a. It is noted that the existing appeal on the EPA refusing to vary EPL No 11395 is based upon the LMP 2014 dated Oct 2017. I understand prior to the refusal the EPA requested the Company to address numerous concerns which resulted in the submission of multiple LMPs with different dates. I therefore direct the Court's attention to the following series of figures which have been copied from different LMP's with different dates.



**Figure 9. Details of leachate transfer pipe and leachate holding pond in the LMP 2014 dated 6 November 2014**

*(Reference: Figure 4 from LMP 2014 dated 6 November 2014)*

- b. The first information that I wish to direct to the Court's attention is Fig 9 which has been obtained from the LMP 2014 dated 6 November 2014. To understand the change, it is necessary to compare Fig 8 and Fig 9.
  - i. In Fig 8 and 9 the Leachate Transfer Pipe retains the inlet level at RL 293.00
  - ii. In Fig 9 the dimensions of the leachate holding pond have been increased and adjusted from 80m x 41m x 2.2m in Fig 8 to 86.7m x 42.6 x 2.2 in Fig 9.
  - iii. Increasing the dimensions of the leachate holding pond increases the capacity from 5,471 m<sup>3</sup> in Fig 8 to 5.898 m<sup>3</sup> capacity in Fig 9. This represents a volume of 5,898,000 litre capacity.



**Figure 10. Details of leachate transfer pipe and leachate holding pond in the LMP 2014 dated 14 June 2016**

(Reference: Figure 4 from LMP 2014 dated 14 June 2016)

- c. I now wish to request the Court to compare Figs 8, 9 and 10
  - i. In Figs 8, 9 and 10 the Leachate Transfer Pipe remains the same at RL 293.00
  - ii. In Fig 10 the dimensions of the leachate holding pond have been increased and adjusted from 86.7m x 42.6m x 2.2m in Fig 9 to 109.0m x 36.0m x 2.3m in Fig 10.
  - iii. Increasing the dimensions of the leachate holding pond increases the capacity from 5.898 m<sup>3</sup> in Fig 9 to 6,692 m<sup>3</sup> in Fig 10. This represents a volume of 6,692,000 litre capacity.
- d. Notwithstanding LMP 2014 dated Oct 2017 appears to be the latest LMP, an examination of the LMPs dated 6 November 2014 and 14 June 2016 indicates the Leachate Holding Pond should be 6,692,000 litre capacity, not 5,471,000 litre capacity. In my view the LMP dated Oct 2016 does not address all known environmental risks as the leachate holding pond is not the correct size.

### Factor 3

- a. It is noted that the existing appeal on the EPA refusing to vary EPL No 11395 is based upon the LEMP 2014 dated Oct 2017. I wish to bring to the Court's attention the following.
  - i. The LEMP 2014 dated Oct 2017, was prepared on the basis that the existing waste mound proposed no risk to the environment. However, an independent review and assessment of the LEMP 2014 dated June 2016 has been

undertaken. The independent review and assessment have presented 61 recommendations. I support all the recommendations contained in the independent report as they are aimed at addressing the new environmental risks that were not considered by the fGCC or the LEC in the Court Order of 29 August 2014, resulting in the drafting of LEMP 2014 dated Oct 2017. In supporting all recommendations, I hold the view that if:

- Recommendations 2, requiring design details connecting the south-western and north-eastern walls of existing Cell 1B to future LBS and LCS;
- Recommendation 9, requiring three-dimensional groundwater modelling;
- Recommendation 10, requiring subgrade groundwater depressurisation drains;
- Recommendation 11, requiring detailed specifications of groundwater pipework;
- Recommendation 12, requiring groundwater relief on the cell walls;
- Recommendation 18, alternate leachate barrier system;
- Recommendation 32, leachate collection gutter;
- Recommendation 35, installation of an interface liner between Cells W, X and Y and the existing fill mound; and
- Recommendation 51, 3D modelling of groundwater surface

were to be adopted by the LEC that the changes within the LEMP and LMP are of such magnitude that they do not fall within the provisions of s 4.55 of the EPA Act (cf previous s96). In my view as they do not fall within the parameters of s 4.55 of the EPA Act a new DA and EIS should be presented to the Central Coast Council.

- ii. It is noted that from page 7 to page 11 of the LEMP 2014 dated Oct 2017, a copy of the Heads of Agreement is contained. In the Heads of Agreement there are multiple requirements including the requirement that *“leachate shall be managed by tying the landfill liner in the northern part of Cell Z into the fill mound liner ... the original leachate pond, now buried, ... to be connected to leachate gutter.”* The Heads of Agreement goes into great detail into how to connect the leachate liner under Cell Z into Cell W, X and Y.

- The inclusion of such detail into the Heads of Agreement was a direct insistence of my participation in the mediation processes.

- The rationale being that any leachate being generated from the existing waste mound had to be captured and collected to ensure it posed no long-term environmental risk.
- As discussed in paragraphs 20 to 32 along with the photographic evidence presented in the annexures in this submission there is no LCS or LBS under Cell Z. Consequently, key components of the Heads of Agreement cannot be implemented.
- In fact, based upon evidence presented in photos 24 and 25 taken in Aug 2008; photo 30 taken in Aug 2009; photos A, B and C taken in Aug 2012 and the following photo 27 taken from the InSitu Assessment of Interim Environmental Controls dated Dec 2017, I hold the view that behind the clay remedial works is an internal leachate dam within the existing waste mound.

Photo 27 – Clay remedial works to historic leachate side slope outbreak, eastern landfill side slope, looking north-east.



InSitu Advisory Pty Ltd

Authority under the GIPA Act. Ref: GIPA EPA493

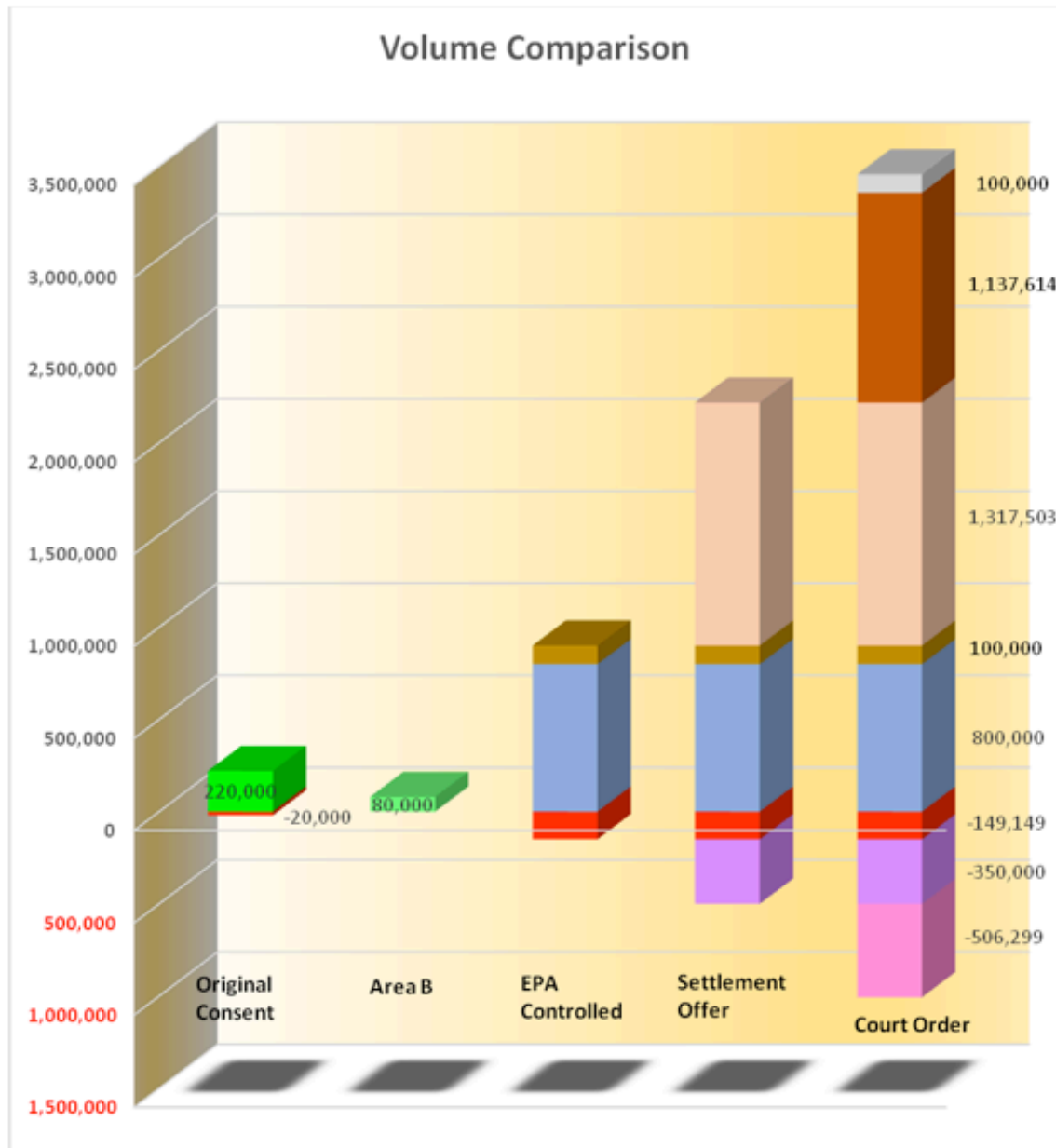
- The reason I believe there is an internal leachate dam is because there is no LBS or LCS within the existing waste mound to redirect leachate out of the existing waste mound. As leachate is not being collected and redirect out of the existing waste mound the leachate is filling void space within the existing waste mound. As it is filling void space it is rising to a level that it can escape the waste mound.
  - In my view if the Court were to approve the variation to EPL No 11395 as currently drafted constructing a leachate gutter into the buried leachate pond in Cell Z it is highly likely to breach the internal leachate dam. Breaching this internal leachate dam without undertaking additional works would result in an uncontrolled discharge of leachate of unknown volume into the adjacent stormwater drain.
- iii. It is noted on page 59 of the LEMP 2014 dated Oct 2017, it lists the Development Consent and modifications.
- It is noted on page 218 of the LEMP 2014 dated Oct 2017, a copy of the first modification under section 96(2) of the EPA Act is enclosed. An examination of this first modification documents that conditions 3, 4, 31 and 45 were replaced. However, condition 1 and 2 were not replaced or modified. Therefore, the consent is limited to 80,000 m<sup>3</sup> in Area B to receive waste with a small area of excavation to obtain VENM for cover material.
  - It is noted on page 220 of the LEMP 2014 dated Oct 2017, a copy of the second modification under section 96(1A) of the EPA Act is enclosed. An examination of this second modification documents that conditions 42 and 43 were modified. Therefore, the consent is limited to 80,000 m<sup>3</sup> in Area B to receive waste with a small area of excavation to obtain VENM for cover material.
  - I hold the view that when the fGCC received the Amended LEMP 2013 and the LMP 2103 which are referenced in Order 1, 2 and 3 of the Court Order of 29 August 2014, the fGCC had the opportunity and should have followed the statutory process to formally amend the Consent. To formally amend the consent the fGCC should have consulted with the public and other relevant government agencies.
  - I understand that in accordance with s8.14 of the EPA Act (cf previous s 39(6A) *Land and Environment Court Act*, specifically subsection 8.14(3)(a) the Court may determine and appeal whether or not the consultation has taken place.

Although s 8.14 of the EPA Act gives the discretion to the Court to determine an appeal without following consultation given the issues raised in this consultation processes, I believe the Court should reflect upon the Court's decision of 29 August 2014. Reflecting upon the previous decision the Court needs to consider the significant environmental risk and the fact the current LEMP 2014 dated Oct 2017 does not address all known environmental risks.

- I hold the view that in accordance with Section 50 and 48 of the POEA Act the I would request the Court to assess the EPL No 11395 against the EIS and LEMP 1997 as the Court Order of 29 August 2014 did not amend the Consent.

*SCALE AND MAGNITUDE OF EPL No 11395 NOT IN ACCORDANCE WITH THE ORIGINAL CONSENT*

80. As discussed in paragraph 1(g)(vii), I hold the view that the scale and magnitude of the works proposed under LMP 2014 dated Oct 2016 and LEMP 2014 dated Oct 2016 no longer fall within the parameters of a DA to remodel a golf course but fall within the definition of a regional waste facility. The reason I hold this view is best explained in the following graph.



- a. In the accompanying graph the left-hand column represents the volume of material approved in accordance with DA 23042/1998 and is labelled *Original Consent*. The second column represents the volume of material approved in Area B in accordance with the DA 23042/1998 and is labelled *Area B*.
- b. The third column represents what was recorded on site in September 2012 and is labelled *EPA Controlled*. The fourth column represents the outcome of the mediation that was undertaken in September 2013 and is labelled *Settlement Offer*. The right-hand column represents the outcome of the court proceedings concluded in August 2014 and is labelled *Court Order*.
- c. In the column labelled *Original Consent* this column consists of two parts. The green colour represents the 220,000 m³ of inert fill approved to be imported to the site. The

purple colour represents the 20,000 m<sup>3</sup><sup>(19)</sup> of VENM to be relocated on site. The Consent consists of Areas A, B, C and D with a cut area located between Areas A and B.

- d. The middle column represents the volume of material approved in Area B in accordance with DA 23042/1998 and is labelled *Area B*. The teal colour represents the 80,000 m<sup>3</sup> approved under the Consent. In the column labelled *Area B* no excavation is approved within the boundary of Area B under the Consent.
- e. The right-hand column represents what was recorded on site in September 2012 and is labelled *EPA Controlled*. This column consists of three parts. The red represents the 149,149 m<sup>3</sup><sup>(20)</sup> of material that had been excavated from Cells W, X and Y. Cells W, X and Y are located partly within the boundary of Area B and partly to the south of Area B. The excavation has taken place and is proposed to take place in a location that was not authorised under the Development Consent.
- f. The blue represents the 800,000 m<sup>3</sup><sup>(21)</sup> of material that has been deposited in Area B. The coffee colour represents the 100,000 m<sup>3</sup><sup>(22)</sup> of VENM and ENM recorded on site outside of Area B. It is estimated that approximately 10,000 m<sup>3</sup> has been deposited within the boundary of Area A and the remaining 90,000 m<sup>3</sup> has been deposited to the west of Area A.
- g. The column marked Settlement Offer consists of five parts. The areas coloured red, blue and coffee have been described above. The additional colour of lavender represents an estimation of 350,000 m<sup>3</sup><sup>(23)</sup> of material that has been agreed to be excavated. The beige colour represents the 1,317,503 m<sup>3</sup><sup>(24)</sup> of additional void space between the existing land and the proposed new land surface that can be filled with either waste or VENM.
- h. In the column marked *Court Order* made in August 2014, the brown represents additional VENM and ENM to be placed across the golf course as a result of excavating cells W, X, Y and Z, the grey represents additional capping over the waste in Area B and the pale pink represents additional excavation. Combining the brown, grey and pale pink areas results in a combined total of 1,743,913 m<sup>3</sup><sup>(25)</sup> above the settlement offer.

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<sup>19</sup> Data obtained from page 11 of the letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>20</sup> Data obtained from the survey plan 'Attachment B' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>21</sup> Data obtained from the survey plan 'Attachment B' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>22</sup> Data obtained from the survey plan 'Attachment B' attached to Letter from Gosford City Council to the EPA dated 18 July 2014, copy contained in Annexure B

<sup>23</sup> The value of 350,000 m<sup>3</sup> is an estimate based upon the transfer of VENM outside of Area B to create a void space of 1,317,503 m<sup>3</sup>

<sup>24</sup> Value obtained from clause 8 of the Heads of Agreement

<sup>25</sup> Calculation 1,137,614 m<sup>3</sup> + 100,000 m<sup>3</sup> + 506,299 m<sup>3</sup> = 1,743,913 m<sup>3</sup>



81. In the accompanying graph labelled 'Volume Comparison' if you compare the original consent to the Court Order in my opinion the remodelling of the golf course has been abandoned and replaced with a regional waste facility. This opinion is based upon the following facts.

a. Fact One

- i. In the original Consent the total amount of material approved for the remodelling of the golf course was **240,000 m<sup>3</sup>**. However, implementing the court order will allow a total amount of **3,455,117 m<sup>3</sup>** of material. This represents a 14.4-fold increase. <sup>(26)</sup>
- ii. To gain an appreciation of the magnitude of change, the transfer of 240,000 m<sup>3</sup> of waste, VENM and Excavated Natural Material (**ENM**) over the entire golf course would have resulted in a modest increase in the land surface height of 0.6 m. <sup>(27)</sup>
- iii. In comparison, the Court Order allowing the transfer of 3,455,117 m<sup>3</sup> of waste, VENM and ENM over the entire golf course would result in an increase in the land surface height of 8.6 m. Spreading up to 8.6 m of waste, VENM and ENM over every square cm of land surface of the golf course compared to 0.6 metres is not a remodelling of the golf course, but a change in use.

b. Fact Two

- i. In addition to the substantial increase in volume of material involved in the Court Order, the percentage of VENM involved in the project changes from 8.3% <sup>(28)</sup> to 28.8%. <sup>(29)</sup>
- ii. The question arises why shift so much VENM as a percentage of the total amount of work? The only logical explanation for such a large volume of VENM to be relocated is to create a larger void space in Area B. Creating a larger void space in Area B means that more waste can be imported onto the site; again, a change in use.

c. Fact Three

- i. When one examines the location of Cell Z in Figure D of the LEMP 2013 dated Feb 2014 which is document 5 of the documents placed on exhibition or Figure 2 of the LEMP 2014 dated June 2016 which is copied below in this submission and is

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<sup>26</sup> Calculation  $3,455,117 / 240,000 = 14.39$  rounded to 14.4

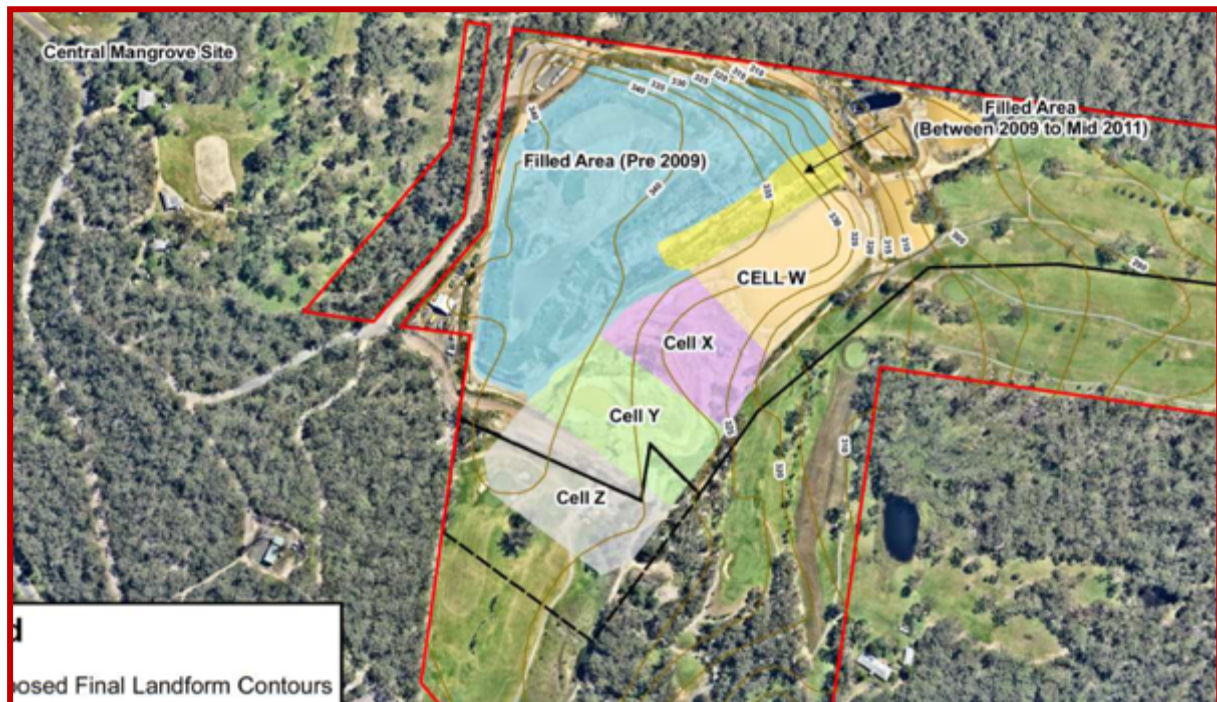
<sup>27</sup> Calculation  $240,000 / 400,000 \text{ square metres} = 0.6 \text{ metres}$

<sup>28</sup> Calculation  $20,000 \text{ m}^3 / 224,000 \text{ m}^3 \times 100 = 8.3\%$

<sup>29</sup> Calculation  $995,448 \text{ m}^3 / 3,455,117 \text{ m}^3 = 28.8\%$

labelled Fig 6, you will observe that Cell Z is located in a location that has already been remodelled.

- ii. The question arises, why undertake excavation of VENM in a location that has already been remodelled? The only logical explanation to excavate an area of the golf course which has already been remodelled is to create additional void space. Creating additional void space means that more waste can be imported onto the site. In my view this represents a change in use.



**Figure 6. Cell Z in Figure 2 of the LEMP 2014 dated 14 June 2016 is proposed in an area of the golf course that has already been remodelled (Source: LEMP 2014 dated 14 June 2016).<sup>(30)</sup>**

d. Fact Four

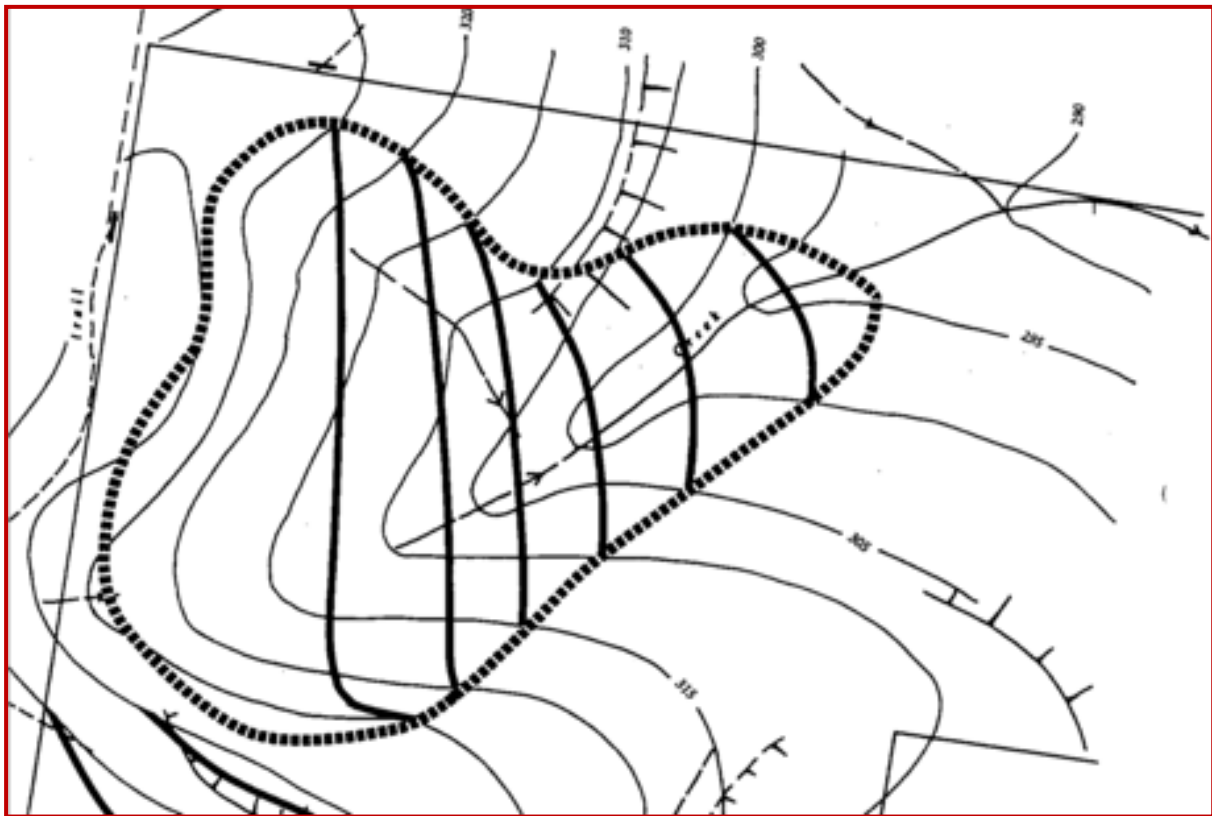
- i. If one compares the location of Cell Z in Figure 1 in this submission at page 22 with Figure 6 of this submission the location of Cell Z has shifted 180 m in a south westerly direction. The only logical explanation for relocating Cell Z is to create a larger void space in Area B. Creating a larger void space in Area B means that more waste can be imported onto the site. In my view this represents a change in use.

e. Fact Five

- i. When one compares the change in the proposed land surface from the original DA to the Court Order, the final land surfaces are very different. To appreciate the difference, we need to compare the following two plans.

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<sup>30</sup> LEMP 2014, dated 14 June 2016



**Figure 7. Proposed landform of the golf course for Area B in accordance with DA 23042/1998.**  
*(Reference source: Fig. 4.6 Final Land Form LEMP 1997).*

- ii. In Figure 7, the light lines represent the existing surface of the land prior to the commencement of any work. The heavier darker lines represent the proposed land surface in accordance with the proposed remodelling in DA 23042/1998.<sup>(31)</sup> The difference between the heavy and light contour lines indicates the intent of the remodelling was to fill in a small creek gully. Where the heavy 310 m contour line intersects the light 300 m contour line, it indicates that the depth of fill in this location will be 10m.
- iii. Once the area had been filled in accordance with DA 23042/1998 if you moved along the proposed 325 m contour line in a northerly direction you do not come across any proposed new contours. This indicates that the proposed land surface was going to infill the creek gully, removing the steep slopes of the gully and making the land flat. Once the gully was filled in accordance with DA 23042/1998, moving from the proposed 325 m contour in an easterly direction you cross several of the original contours. When you reach the proposed 300 m contour line you would have travelled 210 m with a change in elevation of 25 m. This

<sup>31</sup> Contour plan for Figure 11, which is Figure 4.6 in the LEMP 1997, located on page 51

results in a gentle slope of 11.9%.<sup>(32)</sup>



**Figure 8. Proposed landform of golf course for Area B in accordance with Court Order.**

*(Reference source: Fig. E Final Landform Contours Part Lot 582 DP 1123656 Mangrove Mountain – LEMP 2013 Feb 2014 Amended October 2017 – document 5 of the documents placed on exhibition)*

- iv. Figure 8 shows the final landform as presented in the Court Order.<sup>(33)</sup> The top of the hill has been removed to create a flat surface on the left-hand side of the Figure. However, the surrounding sides of the waste mound are very steep as indicated by the clustering of contour lines.
- v. When the final landform of the DA is compared with the Court Order, we find that the infilling of a 10-metre gully has changed to a 20-metre high hill (Figure 8). Instead of removing steep land from the golf course, as illustrated by the proximity of the contour lines, the slopes around the new hill are very steep. The slope of the northern side of the waste mound between the 340 m contour level to the 320 m contour level has a slope of 48.5%<sup>(34)</sup>, which results in an angle of 25.87 degrees. So rather than removing steeply sloping land from the golf course, the Court Order is creating even steeper slopes on the golf course over larger areas. Consequently, the primary purpose of remodelling the golf course to remove steeply sloping land to increase the playable area of the course has to all intents and purposes been abandoned.

## CONCLUSION

**82. Based upon the information presented in this submission I request the Court not to vary EPL No 11395.**

<sup>32</sup> Calculation  $(25 / 210) \times 100 = 11.9\%$

<sup>33</sup> Figure 12 has been copied from Plan 3 in the Amended LEMP 2013, located on page 58

<sup>34</sup> Calculation  $20 / 41.4 \times 100 = 48.5\%$

## Annexure A

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### **EDUCATION QUALIFICATIONS**

#### **Bachelor of Natural Resources**

University of New England, Armidale NSW 1973 - 1978

#### **Master of Science**

Colorado State University, Fort Collins United States 1979 - 1980

#### **Bachelor of Legal Studies**

Macquarie University, Sydney NSW 1990 – 1994


#### **Master of Business Administration**

LaTrobe University and the Association of Professional Engineers, Scientists and Managers of Australia (APESMA) 2001 – 2005

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Annexure B

		
Telephone (02) 4325 8222	Please Quote 15265579 Your Ref: MD14/468-2	<b>Gosford City Council</b>
18 July 2014		PO Box 21 Gosford NSW 2250 DX 7211 Gosford Telephone 02 4325 8222 Facsimile 02 4323 2477 gocity@gosford.nsw.gov.au www.gosford.nsw.gov.au www.facebook.com/likeusygosford www.twitter.com/mygosford ABN 78 303 458 861
<b>Mr Barry Buffier</b> Chair & CEO Environment Protection Authority NSW PO Box A290 <b>SYDNEY SOUTH NSW 1232</b>		
Dear Mr Buffier <i>Barry</i>		
<p>Further to our discussions on 4 February 2014 and your letter of 6 February 2014 regarding Central Mangrove Landfill, we note that an initial response from Gosford City Council was provided on 13 February 2014, however there has been a delay in this further reply due to the time taken to conduct further investigation.</p> <p>I would like to present the following observations and concerns regarding the Environment Protection Licence (EPL). This licence permits the scheduled waste activity of "inert waste" land filling at Hallards Road, Central Mangrove identified as Licence No 11395. Council understands that the original licence would have been based on a licence application which would have included the conditions of development consent number 23042 of 1998 (the Consent) and the Environmental Impact Statement (EIS), which was referred to and incorporated into the development consent by virtue of condition 2.</p> <p>Council appreciates that the EPL has imposed various operational controls, landfill design and monitoring obligations upon the various operators since the Consent was granted. Council recognises that the Consent issued by Council was issued in accordance with the <i>Environmental Planning and Assessment Act 1979 (EP&amp;A Act)</i>. The Consent issued by Council takes into consideration the broader planning and environmental issues, such as size, location, land use and traffic movements.</p> <p>By undertaking a detailed analysis of all the variations to the EPL issued by the Environment Protection Authority (EPA) from 21 November 2001 to the present Council is concerned that it appears that not all licences issued after 11 July 2003 have adequately considered section 45(i) of the <i>Protection of the Environment Operations Act 1997 (PEO Act)</i>. As I am sure you appreciate before the Authority may grant a licence, it is required to consider the contents of any Environmental Impact Statement prepared or obtained by the applicant under the <i>EP&amp;A Act</i>.</p>		

Further, under section 50 of the PEO Act, the EPA must not grant or vary a licence for development that requires consent under the EP&A Act unless development consent has been granted for the development.<sup>1</sup>

In Council's view the first and second iterations of Licence No 11395 issued for the site were generally consistent with the EIS and the terms of the development consent and so were generally in accordance with sections 45(i) and 50 of the PEO Act. However, it is Council's view that all later iterations of the licence issued by the Authority show greater and greater departure from the original EIS and therefore of Council's Consent. The position of Council is based upon the following observations and questions:

**Observations on EPL No 11395 issued on 21 November 2001**

A review of the first licence identifies:

- Licence issued to Planet Earth Support Company Pty Ltd
- Pursuant to clause A2.1 the licence applied to the entire parcel of land at the time described as Lot 584 DP 809570
- Pursuant to clause A5 information supplied to the EPA included 'The Landfill Environment Management Plan (LEMP) titled Mangrove Mountain Golf Course Remodelling Project prepared by Perram and Partners dated March 1997', which is incorporated into the Consent by virtue of condition 1 of the Consent
- Pursuant to clause L5.3 the type of waste is restricted to inert Waste Class 1 and 2
- Pursuant to clause L5.4 the amount of Class 1 and Class 2 waste is restricted to 250,000 tonnes/per annum
- Pursuant to clause O7.2 the drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into sedimentation basins SB1 to SB7 on Figures 4.2, 4.3 and 4.4 of the LEMP
- Pursuant to clause O10.1 the licensee must manage the disposal of waste at the premises in accordance with the progressive filling plan contained in section 4 of the LEMP
- Pursuant to clause O11.1 the licensee must ensure the landfill cells are capped progressively and in accordance with condition O15 during operations and specifically at times when the level of waste reaches final heights as detailed in section 4 of the LEMP

*Comment*

It is noted the licence applies to the entire parcel of land; the licence has been prepared on documentation consistent with the Consent. Implementing the provisions of clauses O7.2, O10.1 and O11.1 restricts the amount of fill placed into Area B to 80,000 m<sup>3</sup> plus the plans contained in section 4 of the LEMP restrict the height of fill to a final contour level.

It is noted that Council's Consent limited the type of waste permitted to be brought on to the site to building and demolition material. However, the licence permits Class 1 and

<sup>1</sup> In *Weston Aluminium v EPA* [2007] HCA 50 the High Court found that a variation allowing the importation of aluminium dross to a site fell outside what was allowed by the development consent and was therefore prohibited by s50(2) of the PEO Act and the variation was held to be invalid.

Class 2 inert waste. Council appreciates that the EPA does not have a definition for waste that restricts waste to building and demolition material.

It is noted that pursuant to clause L5.5 the volume of inert waste for Class 1 and Class 2 is not to exceed to 250,000 tonnes/per annum. This clause in isolation is of concern but acknowledging that the provisions of clauses O7.2, O10.1 and O11.1 plus referencing the plans to a final contour places a limitation on this clause.

In summary the licence is consistent with the Consent issued by Council and various clauses inserted in the licence ensure the volume, location and height of fill is clearly linked to the Consent. In Council's view the authority has taken full consideration of section 45(i) of the PEO Act, and the issue of the licence was compliant with section 50 of the PEO Act.

#### **Observations on EPL No 11395 issued on 5 April 2002**

A review of the second licence compared to the first licence identifies:

- Licence holder not changed
- Clause A2.1 same as 21 November 2001
- Clause A5 same as 21 November 2001
- Clause L5.3 amended to delete reference to inert waste Class 2
- Clause L5.4 same as 21 November 2001
- Clause O7.2 same as 21 November 2001
- Clause O10.1 same as 21 November 2001
- Clause O11.1 same as 21 November 2001

#### **Comment**

Retention of above clauses ensures the volume, location and height of fill is clearly linked to the consent. In Council's view the Authority has taken full consideration of section 45(i) of the PEO Act, and the issue of the licence was compliant with section 50 of the PEO Act.

Plus the deletion of inert waste Class 1 removes the provision of the disposal of asbestos onto the site. In summary the licence is generally in accordance with the Consent issued by Council.

#### **Observations on EPL No 11395 issued on 11 July 2003**

A review of the third licence compared to the second licence identifies:

- Licence holder not changed
- Clause A2.1 same as 21 November 2001
- Clause A5 becomes clause A4.2 – plus the clause is completely redrafted. Reference to "The Landfill Environment Management Plan (LEMP) titled Mangrove Mountain Golf Course Remodelling Project prepared by Perram and Partners dated March 1997" is deleted and inserts reference to "The Mangrove Mountain Golf Course Remodelling Project Amended Landfill Environmental Management Plan prepared by Planet Earth Support Company Pty Ltd dated 14 March 2003 (hereafter referred to as the LEMP)".
- Clause L5.3 same as 5 April 2002



- Clause L5.4 same as 21 November 2001
- Clause O7.2 is amended with the deletion of reference to 'sedimentation basins SB1 to SB7 on Figures 4.2, 4.3 and 4.4 of the LEMP'
- Clause O10.1 deleted. New clause O10.1 'The licensee must ensure that a compaction of 0.950 tonnes per cubic metre is achieved for each 25,000 tonnes of waste disposed of at the premises'
- Clause O11.1 deleted. New clause O11.1 states 'The licence must manage the disposal of waste at the premises in accordance with the progressive filling plan as shown in the drawing "Filling Sequence for Phase 1" contained within the Appendix of the LEMP'

*Comment*

Please note the document titled 'The Mangrove Mountain Golf Course Remodelling Project Amended Landfill Environmental Management Plan prepared by Planet Earth Support Company Pty Ltd dated 14 March 2003 (LEMP 2003)' has never been submitted to or approved by Council.

Council only received a copy of the LEMP 2003 via the bundle of documents subpoenaed from the EPA as a result of commencing the legal proceedings presently before the Land & Environment Court. Further, in the copy of the LEMP 2003 received there are no appendix documents. As Council does not have access to the 'Filling Sequence for Phase 1' there is no information to determine whether or not the volume, location and height of fill are linked to the consent. As the title of the plan refers to Phase 1, Council has no knowledge of what is involved in phase 1 or in the other phases.

*Question 1*

As the EPA has full knowledge of the 'Filling Sequence for Phase 1', please confirm whether or not this filling plan is in accordance with the Consent, which permits only 80,000 m<sup>3</sup> in Area B?

*Question 2*

If the 'Filling Sequence for Phase 1' is not in accordance with the Council Consent, please advise what internal assessment process was undertaken to allow the inclusion of the 'Filling Sequence for Phase' into clause 11.1?

*Question 3*

In granting the third licence did the Authority give full consideration to section 45(j) of the PEO Act, and section 50 of the PEO Act?

**Observations on EPL No 11395 issued on 9 September 2004**

A review of the fourth licence compared to the third identifies:

- Licence holder not changed
- Clause A2.1 same as 21 November 2001
- Clause A4.2 same as 11 July 2003
- Clause L5.3 same as 5 April 2002
- Clause L5.4 same as 21 November 2001

- Clause O7.2 same as 11 July 2003
- Clause O10.1 same as 11 July 2003
- Clause O11.1 same as 11 July 2003

*Comment*

No change to the licence from Council perspective. However, there is a high degree of uncertainty on how the EPL ensures the volume, location and height of fill is linked to the consent

*Question 4*

In granting the fourth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

**Observations on EPL No 11395 issued on 27 April 2006**

A review of the fifth licence compared to the fourth licence identifies:

- Licence holder not changed
- Clause A2.1 same as 21 November 2001
- Clause A4.2 same as 11 July 2003
- Clause L5.3 same as 5 April 2002
- Clause L5.4 same as 21 November 2001
- Clause O7.2 same as 11 July 2003
- Clause O10.1 same as 11 July 2003
- Clause O11.1 same as 11 July 2003

*Comment*

No change to the licence from Council perspective. Although Council cannot examine the 'Filling Sequence for Phase 1', by undertaking a review of the registered survey plans submitted to the EPA as part of the monitoring program, it is recorded as at 27 January 2006 that 116,402 m<sup>3</sup> of material is located in Area B (see Appendix A of this document). This is 1.5 times above the volume of material permitted by the consent for Area B.

*Question 5*

As the EPA has full knowledge of the 'Filling Sequence for Phase 1' in accordance with clause O11.1, is the volume of 116,402 m<sup>3</sup> consistent with this plan?

*Question 6*

If the volume of 116,402m<sup>3</sup> is not consistent with 'Filling Sequence for Phase 1' why did the EPA not take corrective action to the then operator to cease operations?

*Question 7*

In accordance with clause O10.1 the licensee must ensure a compaction of 0.950 tonnes per cubic metre. The following table has been prepared from information in Appendix A.

Date	Compaction Tonnes
21 January 2005	0.77
14 July 2005	0.69
27 January 2006	0.55

Council notes by examining all data presented in Appendix A that compaction ratios have varied from 0.5 to 1.88 tonnes per cubic metre. The question arises that as the compaction ratio was not achieved for the immediate period as presented in the above table prior to renewing the licence why did the EPA not take corrective action to the than operator to cease operations due to non-compliance with clause O10.1?

#### Question 8

In granting the fifth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

#### **Observations on EPL No 11395 issued on 19 July 2008**

A review of the sixth licence compared to the fifth licence identifies:

- Licence holder changed to Verde Terra Pty Ltd
- Clause A2.1 modified to read – part of lot 584 of DP 809570 as depicted on plan showing proposed limits of EPA licence Plan No 5617/Lease Issue A
- Clause A4.2 same as 11 July 2003
- Clause L5.3 same as 5 April 2002
- Clause L5.4 same as 21 November 2001
- Clause O7.2 same as 11 July 2003
- Clause O10.1 deleted
- Modified new clause O12.1 inserted which states "The licensee must manage the disposal of waste at the premises in accordance with the progressive filling plan as shown in the drawing 'Filling Sequence for Phase1' contained within the Appendix of the LEMP". This was previously numbered clause O10.1 in the 11 July 2003 licence.

#### Comment

As stated above although Council cannot examine 'Filling Sequence for Phase 1', by undertaking a review of the registered survey plans submitted to the EPA as part of the monitoring program it is recorded as at 30 June 2008 that 299,102 m<sup>3</sup> of material is located in Area B (see Appendix A of this document). This is 3.7 times above the volume of material permitted by the consent for Area B.

Council notes that from the 21 November 2001 up until the 19 July 2008 which is a period of seven years the EPA licensed the entire parcel of land. Council was not informed until the commencement of these proceedings that the EPL only applied to part of the property.

#### Question 9

As the EPA has full knowledge of the 'Filling Sequence for Phase 1' in accordance with clause O12.1 is the volume of 299,102 m<sup>3</sup> consistent with this plan?

*Question 10*

If the volume of 299,102 m<sup>3</sup> is not in accordance with 'Filling Sequence for Phase 1' why did the EPA issue a new licence and make reference to the 'Filling Sequence for Phase 1' in clause O12.1?

*Question 11*

Could the Authority please explain the rationale for reducing the EPL from the entire site to only a portion of the site?

*Question 12*

Could the Authority please explain the rationale for deleting clause O10.1?

*Question 13*

In granting the sixth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

**Observations on EPL No 11395 issued on 3 October 2008**

A review of the seventh licence compared to the sixth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 as per 19 July 2008
- Clause A4.2 same as 19 July 2008 which contains same text as 11 July 2003
- Clause L5.3 same as 5 April 2002
- Clause L5.4 same as 21 November 2001
- Clause O7.2 as per 11 July 2003
- Clause O12.1 as per 19 July 2008 which contains same text as 11 July 2003

*Comment*

From Council's perspective the seventh licence raises the same concerns and questions as the previous licences.

**Observations on EPL No 11395 issued on 8 December 2008**

A review of the eighth licence compared to the seventh licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 changes premises to new Lot and DP licence applied to Plan Form 2 (approved form 3) - Drawing Ref No 3707170 - Banister and Hunter Pty Limited D X 7212 Gosford
- Clause A4.2 same as 19 July 2008 which contains same text as 11 July 2003
- Clause L5.3 reference to inert waste class 2 is deleted and a new definition of the types of waste is inserted under clause L5.1.
- Clause L5.4 deleted
- Clause O7.2 as per 11 July 2003
- Clause O12.1 as per 19 July 2008 which contains same text as 11 July 2003

*Comment*

From Council's perspective the eighth licence raises similar concerns and questions as the previous licences. Plus the additional concern that with the deletion of clause L5.4 there is no limit to the tonnage of waste received annually. Consequently the volume and tonnage of waste is not limited by the licence.

*Question 14*

Could the Authority please explain the rationale for deleting clause OL5.4?

*Question 15*

In granting the eighth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

***Observations on EPL No 11395 issued on 13 May 2009***

A review of the ninth licence compared to the eighth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.as per 8 December 2008
- Clause A4.2 extensively modified to include clause A4.2 (a), A4.2 (b), A4.2 (c) and A4.2 (d). Although reference to the LEMP 2003 is retained in clause A4.2 (a) new clause A4.2 (b) includes reference to 20 documents prepared by Quadro Australia relating to stage 1 works. Clause A4.2 (c) includes reference to seven documents from Quadro and Coffey Geotechnics presenting detailed drawings and leachate systems. Clause A4.2 (d) includes reference to details on cell lining for an area identified as Landfill Cell Stage 1B.
- Clause L 5.1 same as 8 December 2008
- Clause O7.2 as per 11 July 2003
- Wording of clause O12.1 deleted. New wording inserted reference to filling plan depicted licence condition A4.2 b xix - which is sheet 26 of 27 - Erosion and Sediment Control Plan
- Inserted new clauses U1 to U 3 which all relate to the construction and lining of Cell Stage 1B

*Comment*

Please note none of the 20 documents prepared by Quadro Australia relating to stage 1 works referred to in clause 4.2 (b); the seven documents from Quadro and Coffey Geotechnics referring to detailed drawings and leachate systems referred to in clause 4.2 (c) or the details on cell lining for an area identified as Landfill Cell Stage 1B referred to in clause 4.2 (d) have ever been submitted or approved by Council.

The first time Council became aware of the above documents was by reviewing the text in the eighth licence. Furthermore Council has not been able to locate a copy of all the references in the bundle of subpoenaed documents.

By examining the survey plans containing volume information Council notes that on 20 February 2009 405,402m<sup>3</sup> of material is located within Area B (see attachment A). This

is five (5) times above the volume of 80,000m<sup>3</sup> approved by Council in the original consent.

It is noted the construction of Cell Stage 1B falls within Area B of the original consent issued by Council. The extent of excavation would be consistent with the consent as it involves the removal of topsoil to provide a solid base to place a leachate barrier.

*Question 16*

Please advise what internal assessment process was undertaken to accept the inclusion of the 20 documents prepared by Quadro Australia relating to stage 1 works referred to in clause 4.2 (b); the seven documents from Quadro and Coffey Geotechnics referring to detailed drawings and leachate systems referred to in clause 4.2 (c) or the details on cell lining for an area identified as Landfill Cell Stage 1B referred to in clause 4.2 (d) into the EPL without any checking as to the status of these documents with Council?

*Question 17*

In granting the ninth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

***Observations on EPL No 11395 issued on 29 June 2010***

A review of the tenth licence compared to the ninth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 changes premises to Landfill Area B on Figure titled 'Coordinates of landfill Area A, B, C on drawing CES090706-CMW Dated 11/05/2010 by consulting earth scientists
- Clause A4.2 (a), A4.2 (b), A4.2 (c) and A4.2 (d) as per 13 May 2009. However new clause A4.2 (e) referring to Leachate Management Plan for landfill area B, Cells W, X, Y and Z are inserted
- Clause L 5.1 same as 8 December 2008
- Clause O7.2 as per 11 July 2003
- Wording of clause O12.1 deleted. New wording inserted requires all landfill cells are capped progressively within six months after the level of waste in each cell reaches final height.
- Clauses U1 to U 3 deleted.

*Comment*

***Please note none of the documents referred to in clause A4.2(e) relating to the Leachate Management Plan for landfill area B, cells W, X, Y and Z have ever been submitted or approved by Council.***

The first time Council became aware of the Leachate Management Plan for landfill area B, Cells W, X, Y and Z was by reviewing the text in the tenth licence. Council notes by examining the plans for Cells W, X, Y and Z there is a lack of detail as to the depth and volumes of the excavated cells being proposed.

is five (5) times above the volume of 80,000m<sup>3</sup> approved by Council in the original consent.

It is noted the construction of Cell Stage 1B falls within Area B of the original consent issued by Council. The extent of excavation would be consistent with the consent as it involves the removal of topsoil to provide a solid base to place a leachate barrier.

*Question 16*

Please advise what internal assessment process was undertaken to accept the inclusion of the 20 documents prepared by Quadro Australia relating to stage 1 works referred to in clause 4.2 (b); the seven documents from Quadro and Coffey Geotechnics referring to detailed drawings and leachate systems referred to in clause 4.2 (c) or the details on cell lining for an area identified as Landfill Cell Stage 1B referred to in clause 4.2 (d) into the EPL without any checking as to the status of these documents with Council?

*Question 17*

In granting the ninth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

***Observations on EPL No 11395 issued on 29 June 2010***

A review of the tenth licence compared to the ninth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 changes premises to Landfill Area B on Figure titled 'Coordinates of landfill Area A, B, C on drawing CES090706-CMW Dated 11/05/2010 by consulting earth scientists
- Clause A4.2 (a), A4.2 (b), A4.2 (c) and A4.2 (d) as per 13 May 2009. However new clause A4.2 (e) referring to Leachate Management Plan for landfill area B, Cells W, X, Y and Z are inserted
- Clause L 5.1 same as 8 December 2008
- Clause O7.2 as per 11 July 2003
- Wording of clause O12.1 deleted. New wording inserted requires all landfill cells are capped progressively within six months after the level of waste in each cell reaches final height.
- Clauses U1 to U 3 deleted.

*Comment*

***Please note none of the documents referred to in clause A4.2(e) relating to the Leachate Management Plan for landfill area B, cells W, X, Y and Z have ever been submitted or approved by Council.***

The first time Council became aware of the Leachate Management Plan for landfill area B, Cells W, X, Y and Z was by reviewing the text in the tenth licence. Council notes by examining the plans for Cells W, X, Y and Z there is a lack of detail as to the depth and volumes of the excavated cells being proposed.

From Council's perspective the approval of the eleventh licence raises major and significant concern to Council. The reasons for the concerns are

1. Council notes that the surface areas of Cells W, X, Y and Z do not correspond to Area B as defined in the EIS. A small portion of Cells W, X and Y fall within Area B as defined in the EIS. The majority of Cells W, X and Y falls outside Area B as defined in the EIS and LEMP 1997. The footprint of Cell Z falls within Area B as defined in the EIS.
2. The approved area of excavation in the EIS is limited between Area A and Area B. The volume of excavation is to be approximately 7 metres deep, winning approximately 20,000m<sup>3</sup> of Virgin Excavated Natural Material (VENM). Council notes by examining Figure 8 of the LMP that the excavation at the deepest point in Cell Y is 52 metres below natural ground level which is 7.4 times greater than the EIS and LEMP 1997. Plus the extent of excavation in Cells W, X, Y and Z requires the relocation of 955,448m<sup>3</sup> of VENM (see page 15 LMP). This results in an excavation forty-seven point seven (47.7) times above the amount approved in the EIS.
3. Figure 7 of the LMP is titled Approved Contours. The contours presented in Figure 7 have never been submitted or approved by Council and do not correspond to the approved final land form presented in the EIS or Section 4 of the LEMP 1997 as they extend beyond the approved footprint. Although they extend beyond the approved footprint the final finished levels are generally in accordance with Council's approved plan.

Council acknowledges that on 15 July 2009 the EPA had received from the Central Mangrove Waste Facility - Licence No 11395 survey period December 2008 to June 2009 a volumetric survey. By comparing the contour levels of Plan No 5817/Jun/09 included within the volumetric survey data with the contour levels of Figure 7 of the LMP 2009 we find the design contour level should be 325 the surveyed in June 2009 was 340.36. This means there is a difference of 15 metres higher than the approved plans.

#### Question 21

Please advise what internal assessment process was undertaken to review the LMP in context with the six monthly volumetric survey data to determine whether or not the placement of fill was proceeding on site in accordance with the stated intention of the LMP?

#### Question 22

In granting the eleventh licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

#### Observations on EPL No 11395 issued on 30 August 2010

A review of the twelfth licence compared to the eleventh licence identifies:

- Licence holder as per 19 July 2008



- Clause A2.1 as per 9 July 2010
- Clause A4.2 (a), A4.2 (b) as per 9 July 2010
- Clause L 5.1 same as 8 December 2008
- Clause O7.2 as per 11 July 2003
- Clause O11.1, O11.2 and O11.3 all modified to make reference to Cells W, X, Y and Z with reference to letter from applicant dated 30 November 2009
- Clause O12.1 substantially the same as per 29 June 2010 only very minor alterations

*Comment*

From Council's perspective the twelfth licence raises similar concerns and questions as the eleventh licence. However Council notes in accordance with clause O11.3 that no work is to commence in Cells X, Y and Z unless the EPA is notified 60 days in advance prior to the commencement of the construction of the cells.

Council acknowledges that on 15 July 2009 the EPA had received Central Mangrove Waste Facility - Volumetric Survey - June 2009. The survey plans presented show the construction of a leachate pond in the area of Cell Z.

Council acknowledges that on 27 July 2010 the EPA had received the Central Mangrove Waste Facility - Hallards Road, Central Mangrove Volumetric Survey dated June 2010. This survey plan shows the current land filling in the area of Cell Z.

Council commissioned its surveyor to compare the current land surface (see attachment B) with the documentation submitted on 30 November 2009 and has determined an area of approximately 5,000 square metres in size has received waste material in the area identified as Cell Z. Council officers have reviewed all documentation received via the subpoena to produce and have not been able to locate a notification letter that waste material is to be deposited into Cell Z.

According to the Volumetric Survey plans dated June 2010 held by the Authority the depth of fill across Cell Z is approximately 7 metres deep. Please note the depth of waste placed on Cell Z as at September 2012 now extends up to 20 meters deep.

In addition to waste material being placed in Cell Z examination of Council's survey plan undertaken on 28 September 2012 has identified that 34,669m<sup>3</sup> of VENM has been excavated from Cells X and Y (see attachment B). Council officers have undertaken an extensive examination of all documentation received through the subpoena to produce and have not been able confirm that any notification was forwarded to the EPA in accordance with the licence requirements regarding these excavations

*Question 23*

Could you please clarify whether or not clause O11.3 of the EPL has been breached?

Supplementary Question: If the EPL has been breached what action will the Authority implement?

#### Question 24

In granting the twelfth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

#### Observations on EPL No 11395 issued on 7 November 2011

A review of the thirteenth licence compared to the twelfth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 as per 9 July 2010
- Clause A4.2 (a), A4.2 (b) as per 9 July 2010 is re-labelled A3.1 and A3.2 text remains the same
- Clause L 5.1 as at 8 December 2008 is re-labelled L3.1 text remains the same
- Clause O7.2 deleted becomes incorporated into Section 9 under E5 Sediment and Erosion Control Works
- Clause O11.1, O11.2 and O11.3 all deleted becomes incorporated into Section 9 under clauses E7, E8 and E9
- Clause O12.1 deleted
- Section 6 and subsequent clauses inserted
- Section 7 and subsequent clauses inserted
- Section 8 and subsequent clauses inserted
- Section 9 and subsequent clauses inserted

#### Comment

From Council's perspective the inclusion of sections 6, 7, 8 and 9 all deal with various operational controls, landfill design and monitoring obligations. All the operational designs refer to leachate management control and monitoring into Cells W, X, Y and Z. As stated in the review of licence variation numbers nine (9) and (10) none of the documentation referred to in section 3 under clauses A3.1 and A 3.2 have been referred to Council.

Council acknowledges that on 26 October 2010 officers of the EPA undertook a site inspection of the licenced premises located at Hallards Road, Mangrove Mountain (the 'Premises') on 26 October 2010, a 'Show Cause' letter was sent to Verde Terra Pty Ltd (the Licensee) on 16 December 2010.

Council understands the 'Show Cause' letter outlined a number of concerns including

- o Lack of sediment and erosion control measures
- o Drainage and surface water management
- o Management of active land filling area and covering of land filling waste
- o Management of sediment and leachate ponds; and
- o Some aspects of general housekeeping.

Due to the number of concerns the letter outlined potential non-compliance with conditions O1.1, O2.1, O6.1, O7.2, O 7.3 and 14.1 of the Licence.

Council acknowledges that on 27 July 2010 the EPA had received the Central Mangrove Waste Facility - Hallards Road, Central Mangrove Volumetric Survey dated June 2010

*Question 25*

As the EPA identified a number of breaches of the licence in respect to lack of erosion and sediment control and the like why was not the potential breach of condition O11.3 considered based upon a review of the volumetric survey plans?

*Question 26*

In granting the thirteenth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

**Observations on EPL No 11395 issued on 3 May 2012**

A review of the fourteenth licence compared to the thirteenth licence identifies:

- Licence holder as per 19 July 2008
- Clause A2.1 as per 9 July 2010
- Clause A3.1 and A3.2 as per 7 November 2011
- Clause L3.1 as per 7 November 2011
- Section 6 as per 7 November 2011
- Section 7 as per 7 November 2011
- Section 8 deleted
- Section 9 re-numbered to section 8. Text is generally in accordance with section 9 as per 7 November 2011

*Comment*

From Council's perspective the fourteenth licence raises similar concerns and questions as the thirteenth licence.

*Question 27*

In granting the fourteenth licence did the Authority give full consideration to section 45(i) of the PEO Act, and section 50 of the PEO Act?

**Ongoing Monitoring**

To ensure the ongoing operations of the site are adequately monitored by both Council and the EPA it is recommended that

- 1 No new licence is granted by the EPA until such time that Council has confirmed and advised in writing that the current operator is proceeding in full accordance with its development consent.
- 2 If any amended Landfill Environmental Management Plan (LEMP) is submitted by any future operator that the amended LEMP plan must be approved by Council prior to the EPA issuing a new licence.
- 3 As the holder of the EPL No 11395 must submit audit reports to the EPA in January and July of each year, it is proposed that a joint site inspection be undertaken by both the Authority and Council to ensure the site works are proceeding in accordance with both the consent and licence provisions.

- 4 No new licence is granted by the EPA until such time as the EPA has satisfied itself that the licence application is consistent with a suitably relevant development consent (in accordance with section 50 of the PEO Act), and the EPA has issued a written notification to Council of the intention to issue the licence.

Council looks forward to receiving your response at your earliest convenience.

Yours faithfully



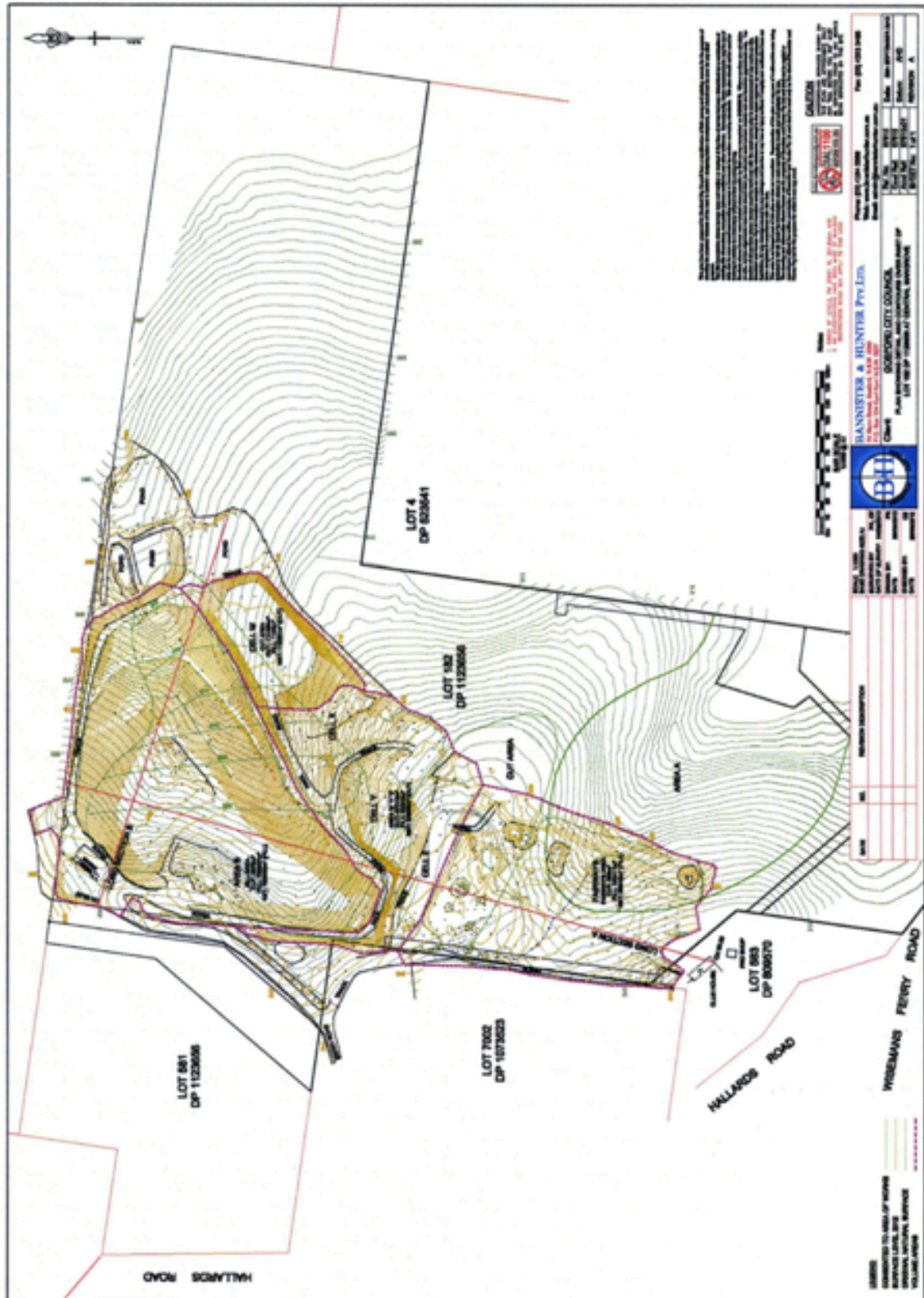
Paul Anderson  
**Chief Executive Officer**

Attch

## Attachment A

INDEX OF SURVEY PLANS AND VOLUME INFORMATION - EPL 11395 F57610							
PERIOD ENDING	REPORTED TONNAGE	CHANGE IN VOID VOLUME BY SURVEY (M³)	CUMULATIVE TOTAL OF CHANGE IN VOID BY SURVEY (m³)	STOCKPILE	REMAINING VOID VOLUME (M³)	29/01/2013 TONNE/M³	ADJUSTED TONNE/M³ WITHOUT STOCKPILE
01/01/03 to 08/07/03	Not Provided	2,167	2,167	1,390	461,833	Not Available	
01/01/03 to 31/12/03	Not Provided	{5,585}	7,752	501	492,248	Not Available	
28/07/04	8,727	12,300	20,052	3,138	479,948	0.71	0.95
21/01/05	26,735	34,700	54,752	Nil	445,248	0.77	
14/07/05	20,530	29,750	84,502	425	415,498	0.69	
27/01/06	17,494	31,900	116,402	Nil	383,598	0.55	
03/07/06	19,223	33,500	149,500	Nil	350,098	0.57	
21/12/06	18,293	36,900	186,802	290	313,198	0.5	
11/07/07	23,782	33,000	219,802	Nil	280,198	0.72	
21/12/07	Not Provided	37,800	257,602	Nil	242,398	Not Available	
30/06/08	Not Provided	41,500	299,102	Nil	200,898	Not Available	
20/02/09	71,299	106,300	405,402	26,280	94,598	0.67	0.89
25/06/09	125,556	70,150	475,552	3,370	24,448	1.79	1.88
18/12/09	Not Provided	63,100	538,652	Nil	1461,348	Not Available	
01/07/10	31,504	50,300	588,952	780	411,048	0.63	
12/01/11	57,905	81,800	670,752	21,300	329,248	0.71	0.96
13/07/11	44,589	62,112	732,864	18,654	267,136	0.72	
31/01/12	Not Provided	20,188	753,188	Nil	246,948	Not Available	
31/07/12	28,958	21,094	774,146	Nil	*255,667	1.37	
19/06/12							
Sep-12							
* NOTE: 1. ADDITIONAL VOID OF 500,000 CUBIC METRES ASSUMED BY OTHERS							
2. INCREASE IN VOID VOLUME FROM ACTIVE CELL VOLUME 29,813m³							
3. IMPACT OF EXPORTING STOCKPILED MATERIAL NOT KNOWN							

## Attachment B





## Annexure C



Photo A – Leachate discharge Aug 2012  
(Ref NSW Office of Water Photo 1)



Photo B – Leachate discharge Aug 2012  
(Ref NSW Office of Water Photo 2)

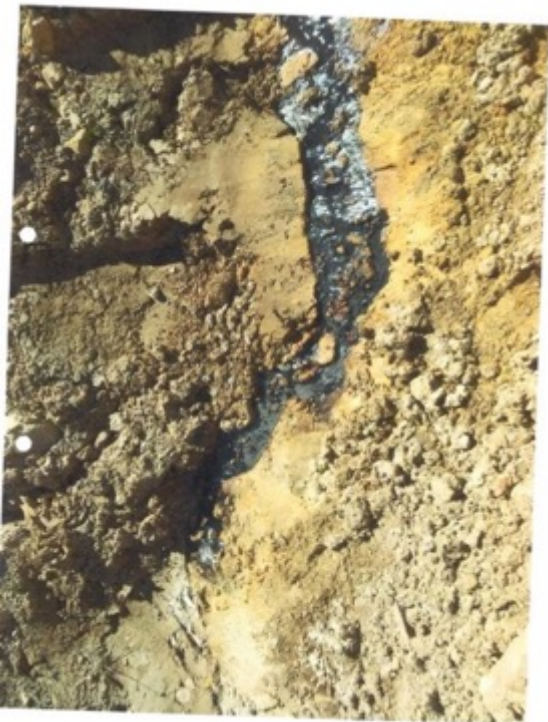


Photo C – Leachate discharge Aug 2012  
(Ref NSW Office of Water Photo 3)

**Inspection Report - Licensed**

Licence - 11395

**INSPECTION REPORT – LICENSED PREMISES**

**DATE/S OF INSPECTION:** 05-Oct-2012 **REPORT REF:** 1511206  
**LICENCE NUMBER:** 11395 **FILE NUMBER:** EF13/4833  
**LICENSEE:** VERDE TERRA PTY LTD  
 ABN  
**PREMISES:** MANGROVE MOUNTAIN MEMORAL GOLF CLUB  
 Part of LOT 582, DP 1123656, HALLARDS ROAD, CENTRAL  
 MANGROVE, NSW, 2250  
 SHOWN AS "LANDFILL AREA B" ON FIGURE TITLED  
 "COORDINATES OF LANDFILL AREAS A, B, C" ON  
 DRAWING CES090706-CMW DATED 11/05/2010 BY  
 CONSULTING EARTH SCIENTISTS  
**REGION:** **Waste & Resources - Waste Management**  
**LGA:** Gosford  
**ACTIVITY:** Waste Disposal (application to land)  
**OFFICER:** Grace Bell  
**OTHER OFFICERS/PEOPLE PRESENT:** Chris McElwain (EPA), Danielle Playford (EPA),  
 Mark Butler (Verde Terra), Gary Chessnut (Gosford  
 City Council), 3 other members of Gosford City  
 Council.  
**REASON FOR INSPECTION:** Council requested inspection to discuss their concerns over  
 potentially EPA or Licence related matters at the premises.

**DETAILS OF INSPECTION:**

The EPA met with Mark Butler of Verde Terra and four members of Gosford City Council ("Council") at Mangrove Mountain Landfill ("the premises") to discuss concerns Council had with the premises and its Environment Protection Licence.

During the inspection, Council identified a number of areas at the premises that they had concerns over, summarised as follows:

**Stormwater runoff from an internal, unsealed road along the northern perimeter of the premises.**

- Council mentioned that runoff from the unsealed road from the site office down to ponds drained into an external pond, north east of the landfill site, and that there were concerns over the quality of this water discharging into the pond as it is part of a drinking water catchment.
- Sediment controls along this point were highlighted as one of the main concerns for this runoff point, which the EPA agreed must be monitored to ensure that stormwater is not laden with sediment from the premises.

**Cell B runoff discharging into the leachate pond.**

- Runoff from Cell B is collected in a pipe which discharges above both Sediment Pond 1 (SP1) and the leachate pond (Photo 1).
- Council expressed concerns that this runoff could be unnecessarily discharging into the leachate pond.
- EPA agreed that the diversion of runoff into SP1 only is important for the premises, and that measures to ensure this is happening could improve.



## Inspection Report - Licensed



### Overflow of SP1 into the leachate pond.

- Council highlighted during the inspection that SP1 has the potential to overtop into the adjacent leachate pond, which is at a lower elevation than SP1 (Photo 1).
- Mr Butler confirmed that SP1 is emptied regularly and there is an overflow pipe into Sediment Pond 2 (SP2), and in addition, that Verde Terra was considering swapping SP1 and the leachate pond to eliminate this risk in emergency situations.
- SP1 was close to empty during the inspection, and Mr Butler confirmed that this water was used onsite daily for dust suppression and grass spraying.
- EPA advised it is up to the Licensee to operate their premises, however there is a risk of overtopping not only into the leachate pond, but further into the outside creek during a wet weather event.

### Integrity of sediment overflow point in SP2.

- The licence has a wet weather sediment discharge point that has been developed from SP2 into the adjacent creek.
- This point was observed to be a white pipe installed in the wall of SP2 wall as well as a depression the top of the pond wall lined with a tarp that leads over the pond bank directly into the creek which discharges into a drinking water catchment (Photos 2, 3 and 4).
- Council expressed their concerns that this feature could erode SP2 and potentially allow excess sediment into the drinking water catchment.
- Council alluded the EPA to incidents with sediment laden water (above 50 TSS) being reported in the downstream catchment. EPA confirmed that regulatory action has been taken previously for confirmed incidents of pollution from discharge, and that the EPA regulates this in a number of ways.
- EPA also confirmed that discolouration in external waterways does not equate to breaches of the licence or POEO Act; water samples are the tool for monitoring and regulatory action.

### Leachate Springs from Cell B entering SP1.

- Leachate springs from Cell B (none active at time of the inspection) are collected in a spoon drain that had been developed along the perimeter of the Cell which discharges into a check dam that subsequently releases into SP1 (Photos 5 and 6).
- Council held concerns that leachate could be collected in the drains, check dam, and SP1, contaminating these ponds.
- Mr Butler explained that spoon drains are checked daily and that there is potential to implement the use of tanking any leachate from springs in the Cell directly into the leachate pond; however this would require excavation of an additional channel and extra monitoring to ensure that water in sediment ponds was not being contaminated.
- The EPA agreed that this was an issue that should be managed by the licensee to comply with regulation.
- The spoon drains were observed to contain wastes such as cardboard, plastics, carpet and other non-putrescible waste (Photo 7). The EPA asked that the licensee clean the drains.

### Overflow from check dam into Cell W.

- A check dam was located between Cell B and Cell W, which stored runoff collected in spoon drains that were installed along the perimeter of Cell B.
- Council and EPA raised concerns that this check dam would overflow into Cell W in wet weather events.
- Mr Butler explained that a new stormwater management plan was in planning stages with Cell W, and that this would eliminate the issue of overflow into Cell W.
- Mr Butler also expressed that no waste was going to be taken to Cell W until all approvals had been met.

All present at the inspection continued back to the car park near the site office and recapped the main issues listed 1-6 above. The EPA agreed to address these issues with Verde Terra in writing and continue to assist Council with any other queries they may have with the licence.

### FOLLOW UP AND FURTHER ACTION REQUIRED:

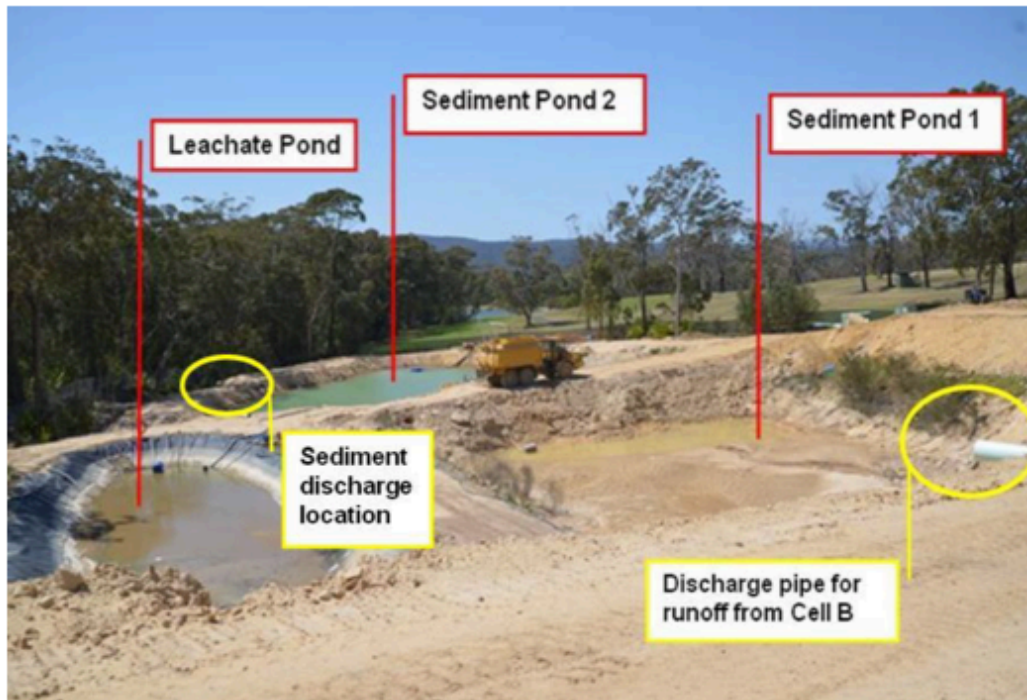
- Address the above concerns of Council with the licensee, seeking their suggestions and/or current management of these matters.

## Inspection Report - Licensed



- Continue to regulate the licence through inspections and correspondence with the licensee as needed.

Photographs (taken by D. Playford during the inspection)



**Photo 1:** Location of ponds at the north eastern corner of the landfill premises, including discharge locations. Tree line in left of photograph indicative of the licensed boundary and location of creek connected to a drinking water catchment.

EPA records released under GIPA828 EPA343

## Inspection Report - Licensed



**Photo 2:** Sediment discharge location from SP2 into creek.



**Photo 3:** Outside bank of SP2 at sediment discharge location. Pond seen in this photo is part of the creek system which connects to the drinking water catchment beyond the licensed boundary (Photo 4).

EPA records released under GIPA828 EPA343





**Photo 4:** Embankment of SP2 and creek that connects to drinking water catchment area.



**Photo 5:** Spoon drain leading towards check dam which discharges above SP1.

## Inspection Report - Licensed



**Photo 6:** One of the known leachate springs from Cell B which had been covered with overburden. Spoon drain located at the base of the Cell collects springs of leachate.



**Photo 7:** Non-putrescible wastes littering spoon drains that discharge into the check dam.

EPA records released under GIPA828 EPA343

## Annexure E

### Photographic Record – Placement of fill in May 2005

The following series of photographs documents that no leachate barrier or leachate membrane was placed at the base of the waste cell in accordance with section 3.1.2 of the LEMP 2003.

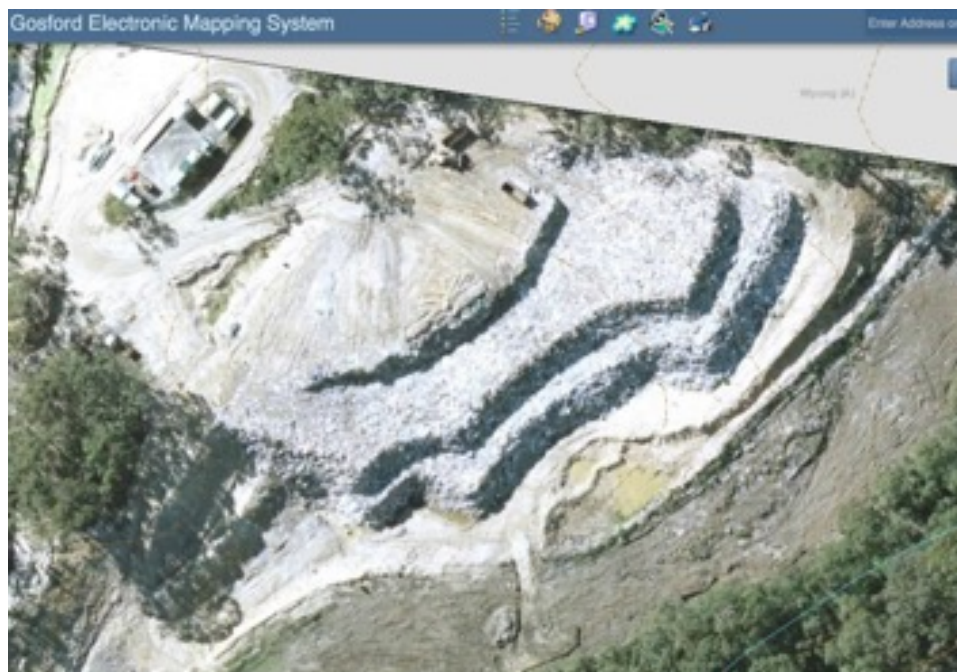


Photo 1 Aerial photo of site in 2005. Note the site consists of three waste lifts with an earth embankment on the south-east perimeter. This embankment is illustrated in photos 2, 4, 6 & 9. No earth embankment is visible on the north-eastern perimeter of the waste cell, which is illustrated in photos 10 & 11. An unlined sediment/leachate pond is located between the waste and south-east earth embankment. (Photo source: GCC Electronic Mapping).



Photo 2 Illustrates the location of the placement of waste in Cell 1A in 2005. No leachate barrier of either a minimum of 900 mm of clay that has a permeability of less than  $K = 10^{-9} \text{ ms}^{-1}$  or a commercial geofabric liner of equal or greater specifications can be observed in the photo. (Photo source: NSW Office of Water (**NOW**) 8 March 2005 reference photo 26).





Photo 3 illustrates the height and location of the waste. By comparing photos 1, 2 and 3 it is evident that by May 2005 the top waste lift had reached the outer edge of the middle waste lift. The photos demonstrate that waste would have been deposited adjacent to the bulldozer and then the bulldozer operator would have pushed the waste over the edge of the waste lift. As each lift is approximately 5 m in height this would result in a depth of waste approximately 15 m in height. The unconsolidated nature of the waste placement would result in a large void space. This large void space would allow a large volume of leachate to be stored within the waste mound. Any additional waste placed on top of these combined lifts would result in the stored leachate being forced into the underlying porous Hawkesbury Sandstone. (Photo source: NOW 12 May 2005 reference photo 12).



Photo 4 Documents that in March 2005 waste was being placed directly onto an excavated ground surface which has not been prepared in accordance with section 3.1.2 of the LEMP 2003 which required *“a minimum of 900 mm of clay that has a permeability of less than  $K = 10^{-9} \text{ ms}^{-1}$  or a commercial geofabric liner of equal or greater specifications*’. As the base of the waste cell has no effective leachate barrier or liner the placement of waste is taking place in direct conflict with clause O5.1 and O5.2 of the EPL which requires that a leachate barrier system **must** be installed and a leachate collection system **must** be able to capture all leachate. EPA inspectors took photos of this in May 2005 so were aware of this breach. (Photo source: NOW 12 May 2005 reference photo 32).



Photo 5 Documents that in May 2005, soil and rock from the base of the waste Cell 1A had been used to construct the unconsolidated earth embankment. (*Photo source: NOW 12 May 2005 reference photo 3*).



Photo 6 Documents that the base of the waste cell has **not** been constructed in accordance with section 3.1.2 of the LEMP 2003 and that soil and rock from the base of the waste cell has been used to construct the unconsolidated earth embankment. (*Photo source: NOW 8 March 2005 reference photo 34*).





Photo 7 Taken in May 2005 from the middle section of Cell 1A looking in a north-east direction, this documents that the base of the waste cell has no leachate barrier or membrane. Waste is being placed directly onto the underlying porous Hawkesbury Sandstone. This photo substantiates that an alleged breach of clause O5.1 and O5.2 of the EPL had taken place. (Photo source: NOW 12 May 2005 reference photo 7).



Photo 8 Taken in May 2005 from the base of Cell 1A looking in a southerly direction to photo 7. It illustrates that the base of the future waste cell has been constructed into the underlying Hawkesbury Sandstone. At the time the photo was taken there was no evidence that any preparation had taken place to prepare the surface for a leachate barrier or membrane in accordance with 3.1.2 of the LEMP 2003. (Photo source: NOW 12 May 2005 ref photo 13).





Photo 9 Taken in May 2005 looking in a northerly direction outside of Cell 1A. It documents that an earth embankment had been placed at the outer edge of the waste cell. By carefully examining this photo it is noted that in the central section of the earth embankment there are three rock boulders visible within the embankment. This indicates that the earth embankment is unconsolidated and would allow any leachate to flow through this structure. Allowing leachate to flow uncontrolled is in direct conflict with clauses O5.1 and O5.2 of the EPL. (Photo source: NOW 12 May 2005 reference photo 15).



Photo 10 Taken in May 2005, documents that the northeast face of the waste lifts in Cell 1A is not contained by any barrier. Any leachate generated would flow directly away from the site. As illustrated in this photo along with photos 11(a) and 11(b) the type of waste being deposited was not restricted to Inert Waste Class 2 Landfill, the presence of treated timber is in direct conflict with clause L5.3 of the EPL in 2005. (Photo source: NOW 12 May 2005 reference photo 28).



Photo 11 Taken in May 2005 along with photo 10 provides *prima facie* evidence that any leachate generated on the eastern portion of the waste mound would flow directly away from the site without being intercepted or collected. Photos 10 & 11 prove that an alleged breach of the POEO Act has occurred. EPA and GCC officials were present. (Photo source: NOW 12 May 2005 reference photo 29).



Photo 11(a) Is taken immediately above photos 10 and 11 on top of the waste mound. The photo illustrates the presence of treated timber intermixed within the waste which is in direct conflict with clause L5.3 of the EPL in 2005. (Photo source: NOW 12 May 2005 reference photos 22).





Photo 11(b) Is taken immediately above photos 10 and 11 on top of the waste mound. The photo illustrates the presence of treated timber intermixed within the waste which is in direct conflict with clause L5.3 of the EPL in 2005. (Photo source: NOW 12 May 2005 reference photos 30).



Photo 12 Taken in May 2005 illustrates that an officer of the EPA was present on site with the NSW Office of Water officer who took photos 1 to 12. As the EPA officer was on site as the photos were being taken he should have observed multiple non-compliances with the EPL and alleged breaches of the POEO Act. (Photo source: NOW 12 May 2005 reference photo 5).

Photographic Record – taken by New South Wales Office of Water – Feb 2006



Photo 13 Taken in February 2006 documents a combined leachate/sediment pond located at the south-eastern corner of the existing waste mound. This structure is unlined and allows storm water or any leachate to overflow into the surrounding environment. This leachate/sediment pond structure is in direct conflict with clause 05.2 of the EPL which requires that a leachate collection system **must** be capable of capturing **all** leachate generated from the waste disposed of at the premises. (Photo source: NOW 15 February 2006 reference photo 3).



Photo 14 Taken in February 2006, this photo illustrates that the outer flank of the waste deposited on site up to 2006 has received an outer covering of soil to minimise the ingress of rainwater. Note within the lower earth embankment the three rock boulders representing the original land surface that were visible in 2005, are still present, and the fact that the earth embankment has not been compacted as a containment structure. (Photo source: NOW 15 February 2006 reference photo 9).





Photo 15 Taken in February 2006, this photo provides a close-up view of the south-eastern corner of Cell 1A. The dark colour material at the top of the waste mound is of shale origin which is present at the base of photo 17 indicating the source of the material. *(Photo source: NOW 15 February 2006 reference photo 10).*



Photo 16 Comprises two photos taken side by side in February 2006 illustrating the expansion of waste Cell 1A at the upper western section. Material excavated has been transported and used as cover material on the outer edge of the deposited waste. The excavation in this location is not in accordance with any plans within the EIS or LEMP 1997. *(Photo source: NOW 15 February 2006 reference photos 17 & 18).*



Photo 17 Comprises two photos taken side by side in February 2006 illustrating the drainage channel leading away from a newly excavated area in waste Cell 1A. Although the excavated area is fully constructed the outlet only leads to a combined leachate/sediment pond. As discussed in photo 16, the outlet structure in this location is not in accordance with any plans within the EIS or LEMP 1997. In addition, there is no attempt to separate any overland storm water flow from any leachate that may be generated. This containment structure is in direct conflict with clause O5.2 of the EPL which requires that a leachate collection system **must** be capable of capturing **all** leachate generated from the waste disposed of at the premises. *(Photo source: NOW 15 February 2006 reference photos 5 & 6).*

**Photographic Record – taken by New South Wales Office of Water – November 2007**



Photo 18 Comprises three photos taken in November 2007. This collage of photos illustrates that waste is being placed on the outer southern edge of the fill mound illustrated in photos 14 and 15. The placement of additional fill outside of the previous fill mound expanded the basal area of Cell 1A. (*Photo source: NOW 7 November 2007 reference photos 1, 2 & 3*).





Photo 19 Taken in November 2007, this photo documents that the base area of the expanded Cell 1A is allowing the placement of waste on a surface that has no LBS or LCS. In fact, the waste is being placed into an historical drainage channel which previously led to a leachate/sediment pond illustrated in photo 13. As the waste is being placed from east to west this means that overland runoff is being directed into the expanding waste mound. This photo provides *prima facie* evidence that an alleged breach of clauses O5.1 and O5.2 of the EPL took place. (Photo source: NOW 7 November 2007 reference photo 6).



Photo 20 Taken in November 2007 this photo documents a new combined unlined leachate/sediment pond that has been constructed to the south east of the leachate/sediment pond illustrated in photo 13. This photo provides further *prima facie* evidence that an alleged breach of clauses O5.1 and O5.2 of the EPL took place. (Photo source: NOW 7 November 2007 reference photo 19).



Photo 21 Taken in November 2007 in a similar position to photo 14, this photo illustrates how the base of Cell 1A had expanded to abut the historical creek located on the left-hand side of the photo. Although a new access road has been constructed, sediment can be observed washing directly into the adjacent creek channel. This photo provides *prima facie* evidence that an alleged breach of section 120 of the POEO Act took place as water has been polluted by the sediment leaving the access road. (Photo source: NOW 7 November 2007 ref photo 25).



Photo 22 Taken in November 2007, in a similar location to photo 21, this photo illustrates how the access road running parallel to the creek channel is allowing sediment to leave the site and directly pollute the water of the creek. This photo provides *prima facie* evidence that an alleged breach of section 120 of the POEO Act took place as water has been polluted by the sediment leaving the access road. (Photo source: NOW 7 November 2007 reference photo 32).



Photographic Record – taken by New South Wales Office Water – August 2008



Photo 23 Taken in August 2008 illustrates the expansion of the basal area of Cell 1A, in the location of photos 16 and 17 located at the western property boundary. It is noted under clause O15.1(a) that the need for daily cover of any area of exposed waste was reintroduced into the EPL on the 19 June 2008. (Photo source: NOW 2 August 2008 ref photo 007).



Photo 24 Taken in August 2008, this photo illustrates the expansion of the basal area of Cell 1A. This photo is taken approximately 150 m in a south easterly direction to photo 23. Looking at the shadows cast by the vegetation the photo is taken mid-morning. Looking at the surface area of the exposed waste the evidence indicates that the waste operator has not complied with clause O15.1(a) of the EPL as a daily covering has not been applied to all exposed waste over the previous day. (Photo source: NOW 2 August 2008 reference photo 012).



Photo 25 Taken in August 2008 looking in an easterly direction, this photo illustrates the location of a leachate/sediment pond in the central section of the photo. This leachate/sediment pond is in the north-eastern portion of proposed Cell Z located at the headwaters of the creek gully which becomes the footprint for Cell 1B. This leachate/sediment pond is identified on Plan No 5617/Jun/09 prepared by Stephen Thorne and Associates and is referenced in the Heads of Agreement dated 20 September 2013. *(Photo source: NOW 2 August 2008 reference photo 009).*



**Annexure F - Photographic Record – taken by EPA – April 2009 on construction of Cell 1B**



Photo 26 Taken in April 2009. It illustrates the placement of the HDPE and geofabric overlay within Cell 1B on the northern wall, base and southern wall. The western end fronting future Cell Z remains opened and is not lined with HDPE and geofabric overlay. (Photo source: EPA 6 April 2009 reference photo 25).



Photo 27 Taken in April 2009. It illustrates the placement of the HDPE and geofabric overlay within Cell 1B on the northern wall, base and southern wall. The eastern end of Cell 1B remains open. (Photo source: EPA 8 April 2009 reference photo 30).

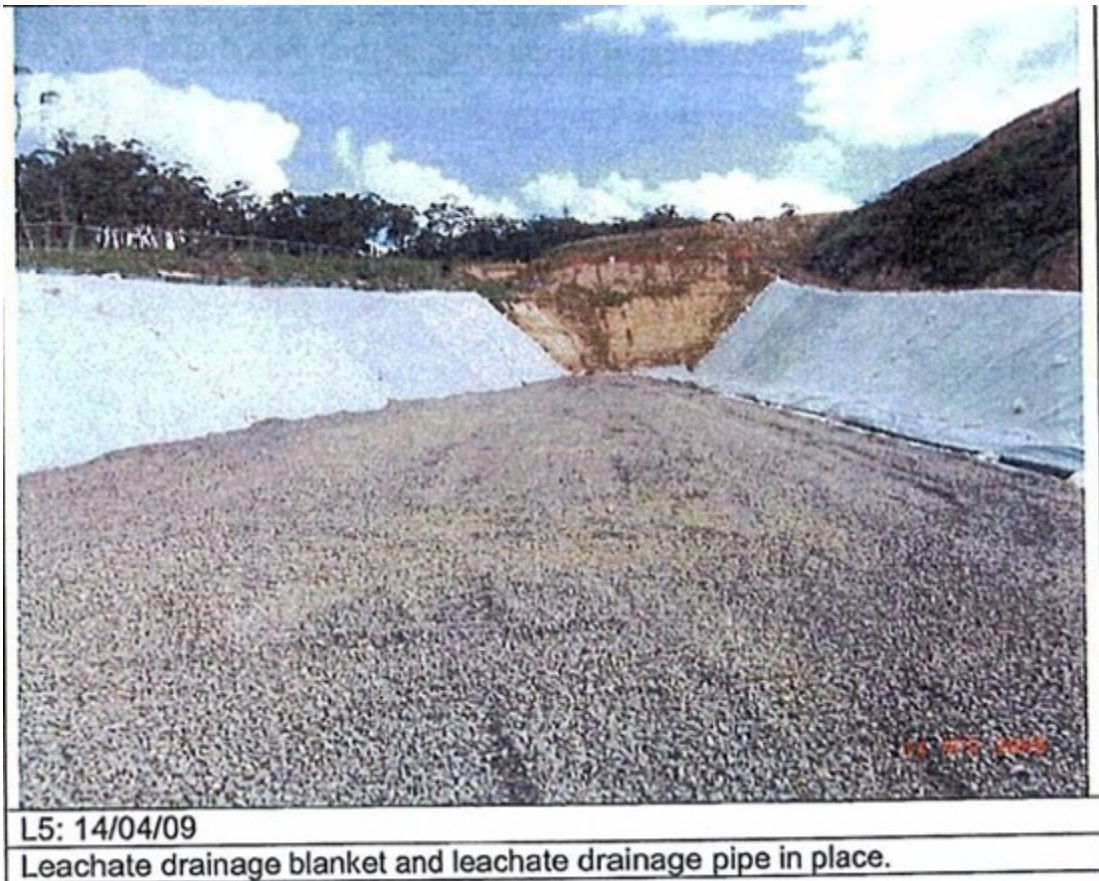


Photo 28 Taken in April 2009. Illustrates the leachate drainage blanket and the leachate drainage pipe on the right-hand side of the photo. The leachate blanket on the right-hand side of the photo only extends to the base of Cell 1A. This would indicate that any leachate generated from waste placed above the drainage blanket height could escape into the existing unlined area of Cell 1A. (Photo source: EPA 14 April 2009 reference photo L5).



**Annexure G Photographic Record – taken by EPA – August 2009 infilling of Cell 1B**



Photo 29 Comprises two photos taken in August 2009. The collage of photos illustrates that waste is being placed in Cell 1B. Looking at the surface area of the exposed waste the evidence indicates that the waste operator has not complied with clause O15.1(a) of the EPL as a daily covering had not been applied to all exposed waste over the previous day. In addition, waste is not being confined to the basal area of Cell 1B but is extending in a westerly direction across onto Cell Z. (Photo source: EPA Aug 2009 reference photo 2 & 3).



Photo 30 Taken in August 2009, this photo illustrates waste being placed in Cell 1B. Looking at the surface area of the exposed waste the evidence indicates that the waste operator did not comply with clause O15.1(a) of the EPL in providing a daily covering to all exposed waste over the previous day. In addition, waste is not being confined to the basal area of Cell 1B but is extending in a westerly direction across onto Cell Z. (Photo source: EPA August 2009 reference photo 13).

## Annexure H



The leachate pond is the dark green pond located in the top left-hand side of the photo. The other two ponds are sediment ponds.