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MALTA ENVIRONMENT AND PLANNING AUTHORITY

IPPC Compliance Audit Report of: Ghallis Landfill (IPPC Permit Number IP 0001/06/B)

Summary Report for Ghallis Landfill

January 2014

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MALTA ENVIRONMENT AND PLANNING AUTHORITY**IPPC Compliance Audit Report of: Ghallis Landfill (IPPC Permit Number IP 0001/06/B)****Summary Report for Ghallis Landfill**

January 2014

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1 INTRODUCTION

- 1.1 Malta Environment and Planning Authority (herein referred to as MEPA) commissioned Wardell Armstrong LLP to undertake a formal Integrated Pollution Prevention and Control (IPPC) Compliance Audit of the WasteServ Malta Ltd (WasteServ) Ghallis Landfill, I/o Naxxar, Naxxar. The Ghallis site is an engineered landfill for the receipt and disposal of non-hazardous wastes.
- 1.2 The audit fieldwork was completed between 11th and 13th November 2013. The audit was undertaken by Stephen Barnes (Technical Director) and Robert Tinsley (Consultant).
- 1.3 The following summary report has been designed and developed based upon the information contained within the IPPC Compliance Audit Report of Ghallis Landfill (IPPC Permit Number IP 0001/06/B) and Ta Zwejra Landfill (IPPC Permit Number IP 0001/05) issued in December 2013. This summary report should be read in conjunction with the above referenced report should further detail or explanation be required.
- 1.4 The principal objective of the IPPC Compliance Audit was to provide MEPA with a formal report that clearly indicates the level of compliance at the Ghallis Landfill Site with respect to their IPPC Permit, in line with the requirements of the EU Directives.

2 SITE DESCRIPTION

- 2.1 Ghallis Landfill is located in the north east of Malta, close to the Tul Il-Kosta Coast Road, east of the town of Bugibba.
- 2.2 The site has been engineered into nine separate cells, namely Cells 1A, 1B, 2A, 2B, 5, 5A, 5B, 5C and 5D. The basal and side wall liner of each cell comprises the following sequential layers (from bottom upwards): 0.5m thick foundation layer, geosynthetic clay liner, 2mm thick high density polyethylene liner (HDPE), geotextile protection layer, 0.5m thick granular leachate drainage layer.
- 2.3 Cells have been tipped with non-hazardous waste and traversed by wheeled compactor to form progressive layers of fill.

- 2.4 Leachate is extracted from the base of cells and recirculated through parts of the fill via additional leachate wells or sumps located towards the periphery of a cell and within the engineered liner system. There is no leachate treatment on site or discharge to sewer or removal off-site to an authorised treatment facility.
- 2.5 Gas is extracted from the cells and drawn to a Combined Heat and Power (CHP) Plant for combustion and electricity generation. The electricity is used parasitically, with surplus exported to the National Grid. A back up flare is installed to burn landfill gas when the CHP Plant is off line for maintenance or repair or in the event that gas production rates exceed the capacity of the CHP Plant. A Regenerative Thermal Oxidiser is also installed for the combustion of any low quality gas, which predominantly arises from the adjacent Maghtab Landfill.
- 2.6 Vehicles delivering wastes for disposal at the site enter via the site access road and are weighed on the site weighbridge. Documentation checks are undertaken by the weighbridge operator, before the vehicles proceeds up the site access road to the tipping area. CCTV is installed which views the top of the vehicle, including any non enclosed containers or skips.

3 SUMMARY REPORT

The following summary structure is based on the formal sections as described in the Ghallis Landfill IPPC Permit (IPPC Permit Number IP 0001/06/B). A copy of the Ghallis Landfill IPPC Permit is publicly available on the MEPA website. Below each summary report section is a series of tables that detail any non-conformances identified during the audit along with the specific permit sections that they relate to.

3.1 General Conditions

Permitted Activities

- 3.1.1 The current permit (IP0001/06/B) restricts activities at the landfill to Waste Management Operation D1 – Tipping waste above or below ground (landfill). Waste management related activities are classed as a series of recovery (R) or disposal (D) as defined in the Waste Framework Directive (2006/12/EC). During the audit a number of additional waste activities were observed being undertaken within the permitted boundaries of the site. These activities included the hand sorting of non 'black bag' or mixed municipal waste delivered to the site in skips or in tipper type

vehicles. These activities relate to recovery codes which are not currently permitted. Waste shredding activities were also being undertaken including wood and mattresses.

- 3.1.2 Non-permitted waste was observed entering the site. Examples of this included tyres and gypsum based material. Tyres were being manually removed from incoming waste at the established sorting area and transferred to the onsite 'Quarantine Area' however gypsum material was clearly observed in the main tipping areas at the landfill.

Site

- 3.1.3 Waste disposal activities were not undertaken outside the site boundary and there was compliance with the permit condition.
- 3.1.4 An area of the site had been tipped to a high point of 62.9m AOD. The pre-settlement contours are to a high point of 60.0m AOD (as stipulated in the permit). The Site Manager explained that waste deposits above 60m AOD will be regraded across the site so that stipulated levels are not breached and that the deposits were temporary storage only.

Hours of Operation

- 3.1.5 The audit revealed that the weighbridge opening times differ from the permitted operational hours:
- Weighbridge opening hours - Monday - Saturday 07.00 to 19.00.
 - Permit opening hours - Monday – Saturday from 06.00 to 22.00*
- * *Disposal operations of wastes originating from the transfer station on Gozo can enter the site at any time.*
- 3.1.6 WasteServ have instructed their customers with regard to the weighbridge closure time of 19.00 and in any case waste would not be allowed to enter the weighbridge post 19.00 hours.
- 3.1.7 In the rare occurrences when waste from Gozo arrives at the landfill (post 19.00 hours) the waste is put into a holding area adjacent to the weighbridge (vehicle or

container) and is weighed onto the weighbridge at the next opening time. Observations witnessed this operation occurring during the three day audit.

Overarching Management Conditions

3.1.8 The permit does require the full implementation of an Environmental Management System (EMS) however it does not necessarily require certification to ISO14001. Although ISO9001 (Quality Management) and ISO 14001 (Environmental Management) standards have been implemented by WasteServ at other organisational units within the Group, these have yet to be fully 'rolled out' to incorporate Ghallis Landfill Site. WasteServ have drafted and implemented a Site Management System for Ghallis Landfill Site that covers elements of environmental, safety and quality for the activities of the site.

3.1.9 Although the Site Management System does cover specific aspects that would be covered within an EMS, the permit requires that WasteServ submitted a formal EMS to MEPA by no later than the end of March 2013.

Improvement Programme

3.1.10 At the time of the audit, improvement condition No. 18 submission date had not expired. The clauses relating to submission of the Improvement No. 14 - Inspection and Maintenance Contract were being breached, as the necessary document had not been submitted. Improvement No. 20 relates to the implementation of a formal EMS which up to the time of this audit had not been completed. However, evidence was observed of a series of documents that had been drafted in association with the implementation of the EMS.

Operational Changes

3.1.11 This section of the permit relates to any operational changes that may be required at the Ghallis Landfill Site and the written submissions and agreements that must be corresponded between WasteServ and MEPA.

3.1.12 The audit has revealed that since the issue of the initial Integrated Pollution Prevention & Control (IPPC) permit WasteServ has submitted one major variation to MEPA. A renewal and variation request was submitted on the 8th August 2011 and

after requests for further information, a consolidated permit and public consultation the variation was determined and the new permit issued (IP0001/06/B).

This application for permit variation was suitable evidence observed to show conformity with the permit.

Pre-operational Conditions

3.1.13 Pre-operational Conditions require that before waste disposal commences in a cell, the permit holder must submit a detailed design, construction quality assurance programme and validation report to MEPA and that these details must be agreed in writing by the Authority.

3.1.14 It was confirmed by MEPA that the validation reports had been submitted and approved. There was no breach of pre-operational Conditions.

Cessation and Re-commencement of Specified Waste Management Operations

3.1.15 This condition requires that in the event that the site ceases receiving waste for longer than 15 days the permit holder is required to provide written notification. During discussions with the permit holder and MEPA it was confirmed that waste disposal had never ceased for 15 working days at Ghallis Landfill and that there is no breach of permit condition.

Off-site Conditions

3.1.16 The permit stipulates a series of off-site conditions that should be conformed too by WasteServ. The off-site conditions relate to the releases of waste and chemicals beyond the site boundary.

3.1.17 This condition would be difficult to comply with due to the limited control WasteServ has over incoming and outgoing third party hauliers. They can ensure that when third party outgoing vehicles leave the weighbridge checks are made to ensure the waste load is secure prior to exiting the weighbridge. However, beyond that and with incoming waste carrying vehicles there is little control that can be enforced.

Other General Conditions

3.1.18 This section of the permit implements additional conditions and obligations such as:

- The permit is without prejudice to other regulatory authorities or regulations, conditions or code of practices that may be applicable;
- The rights of MEPA to carry out compliance checks and audits at a frequency influenced by WasteServ's compliance with the permit;
- MEPA's rights to inspect every part of the site and ask for any plans and documents to be made immediately available.

3.1.19 No non-conformances with this section of the permit were identified.

TABLE 1: NON-CONFORMANCES RELATING TO SECTION 1 GENERAL CONDITIONS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
1.1 - Permitted activities	1.1.1	Additional Waste Management Operations being undertaken beyond the permitted D1-Tipping activity. This specifically relates to the manual sorting of wastes into various recyclates for further off site processing and shredding of waste such as wood and mattresses.	Category 2 - Significant
	1.1.2	Evidence of non-permitted wastes entering and being disposed of at the site. Specifically relating to gypsum based material.	Category 2 - Significant
1.2 – Site	1.2.2, 3.10.1.6	Part of site tipped above pre-settlement contours by up to 2.9m. Site Manager aware of over tipping and explained that material will be regarded to comply with levels in due course.	Category 3 - Minor
1.4 - Overarching management conditions	1.4.2, 1.5.1	EMS not submitted by end of March 2013.	Category 2 - Significant
1.5 - Improvement programme	1.5.1	Inspection and Maintenance Programme and EMS not submitted by end of March 2013.	Category 2 - Significant
	1.5.2	Revised and consolidated Monitoring Programme not submitted by end of March 2013.	Category 2 - Significant
1.9 - Off-site conditions	1.9.1, 5.2.2	Litter had escaped part of the site onto adjoining land, contravening the requirement to ensure that waste does not escape to the environment.	Category 2 - Significant
	1.9.3	The annual average Hydrogen Sulphide and Methane concentrations at the majority of the nine off-site monitoring locations exceeded the respective limit values of 0.15mg/m ³ and 10ppm. However, it is considered that off-site factors may influence the results.	Category 2 - Significant

3.2 Site Engineering

Provision & Maintenance of Site Containment and Drainage Systems

- 3.2.1 This section of the permit stipulates the engineering requirements for a non-hazardous waste landfill.
- 3.2.2 Additionally this section of the permit also states that no waste shall be deposited or disposed of until the engineered containment and drainage system has been constructed in accordance with the permit specification and that engineering systems shall be designed, constructed, validated, maintained, documented and recorded in accordance with the permit specification.
- 3.2.3 Site roads and hard standing were generally constructed to a suitable standard. There was some rutting of the site access road, which was relatively minor. There was no significant standing water on the site access road although there was considerable run off towards the site weighbridge area during periods of rainfall. There was no drainage system associated with the site access road.
- 3.2.4 The quarantine area comprised a concrete pavement with drainage sump. During periods of heavy rain the sump overflowed and water freely ran off the concrete onto uncontained ground.
- 3.2.5 Although the site had a small building used for the storage of fuel and oil drums etc there was a gap beneath the door through which liquids could escape in the event of spillage or leakage from the tank or a drum.
- 3.2.6 Several 200 litre drums used for waste oil storage located outside this building on uncontained ground. One of the drums was full with the potential that any leak or spillage may contaminate uncontained ground.

Construction Quality Assurance of New Site Containment and Drainage Systems

- 3.2.7 New areas of site containment and drainage systems shall be subject to Construction Quality Assurance (CQA) and validation. Written details must be provided to and agreed by MEPA before waste is disposed of or handled in such areas.

3.2.8 New landfill cells to be used for waste disposal are subject to detailed design, CQA and validation by suitably qualified engineers. Copies of the various reports were reviewed during the audit field work (refer to Section 6.1 of the IPPC Compliance Audit Report for further details of the CQA reports) .

3.2.9 No non-conformances with this sub-section of the permit were identified.

Construction Quality Assurance of Existing Site Containment and Drainage Systems

3.2.10 Existing areas of site containment and drainage systems should be subject to CQA and validation. Written details must be provided to and agreed by MEPA before waste is disposed of or handled in such areas.

3.2.11 Landfill cells currently used for waste disposal were subject to detailed design, CQA and validation by suitably qualified engineers, evidence that the quarantine area was subject to CQA and validation was not provided during the audit.

Landfill Capping

3.2.12 Landfill capping had not occurred on site. Cells remain to be capped once final waste disposal levels are reached. No non-conformances with this sub-section of the permit were identified.

TABLE 2: NON-CONFORMANCES RELATING TO SECTION 2 SITE ENGINEERING (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
2.1 - Site engineering	2.1.1.5 (Table 2.1.1 - b, c and f)	<p>During a period of heavy rainfall, water overfilled the sump in the quarantine area and flowed off the concrete pavement onto uncontained ground.</p> <p>The building used to store diesel, engine oil, hydraulic oil and gear oil was not fully bunded. The building incorporated a concrete floor. Access was gained through a metal, lockable door. There was a gap beneath the door through which liquids could escape in the event of spillage or leakage from the tank or a drum.</p> <p>200 litre drums used to store waste oil were placed on uncontained ground.</p>	Category 2 - Significant
	2.3.1	No evidence that the Quarantine Area has been subject to CQA.	

3.3 Site Operations

Landfilling Controls

- 3.3.1 Landfilling operations at the site are required to be operated using the techniques and methods as described in both the original IPPC application and the conditions defined within the permit. Any non-conformances identified during routine inspections by MEPA and those identified as part of this audit report can be classed as a non-compliance in relation to the above regulations. In practice MEPA do not prosecute every breach of conditions identified; however, MEPA can at any point initiate proceedings if they choose to do so. No non-conformances with this sub-section of the permit were identified.

Prevention of Mud & Debris on Road

- 3.3.2 The permit stipulates a series of measures that are required for the prevention of mud and debris arising from the site entering onto the public road network.
- 3.3.3 All vehicles are required to access the wheel wash facility. However, during the audit at least one exiting vehicle did not mount the wheelwash on its way to the weighbridge. Due to the location of the wheel wash (distance from the main complex office and weighbridge) it is difficult to see how use of the wheel wash can be adequately policed.
- 3.3.4 During the audit the water feed tank for the wheel wash was empty and therefore the wheel wash facility was not working to its full potential.
- 3.3.5 The permit requires that a daily inspection should be taken with regards to wheel cleaning facilities, main access road and public roads beyond the installation boundary. No evidence was observed of the Site Manager undertaking any inspections of the wheel wash facilities as required.

Remediation of Mud and Debris on Road

- 3.3.6 Mud and debris was noted on the public roads at the immediate exit area to the site. However, some of this debris was not a result of surface water run-off from the main site haul road but could be attributed to the nearby construction site and local skip hire and waste management company. No further observations could be made due to the heavy rain conditions occurring during the audit. As such, no non-conformances with this sub-section of the permit were identified.

Potentially Polluting Leaks and Spillages from Vehicles, Plant and Equipment

- 3.3.7 The permit requires that all plant and equipment is operated and maintained to prevent pollution leaks into the environment. Mobile plant drivers complete routine visual inspections of the plant prior to its use and would report any defects so that suitable repairs can be undertaken although no written records of the inspections can confirm this.
- 3.3.8 The mobile plant is serviced and maintained to ensure the vehicles are kept in good operating condition so as to reduce the frequency of any leaks from the plant.

Potentially Polluting Leaks and Spillages from Skips, Drums and Other Mobile Containers

- 3.3.9 The permit states that the storage of containers must be clearly labelled regarding its contents and containers should be inspected and maintained to prevent leaks.
- 3.3.10 The building used to store diesel, engine oil, hydraulic oil and gear oil was not fully bunded. The building incorporated a concrete floor. Access was gained through a metal, lockable door. There was a gap beneath the door through which liquids could escape in the event of spillage or leakage from the tank or a drum.

Control and Remediation of Leaks and Spillages

- 3.3.11 This section of the permit requires that a series of documented procedures should be implemented and recorded and shall meet the necessary standards in the event of any pollution leak or spillage occurring at the site. Section 22.6 – “Spillage and Leakage” of the site management system provides a documented procedure and a series of measures that are associated with spillage and leakage from site activities.
- 3.3.12 Discussions with WasteServ personnel did not reveal any evidence of any major spillage and leaks that have occurred at the site. In addition, MEPA were not aware of any such situations that would have given rise to them being informed immediately. There was no evidence of spillage and leaks observed at the site during the audit.

Fires on the Site

- 3.3.13 The site is required to have a continuous supply of water at a pressure of 5-10 bars from a 64mm hose and be made permanently available. Discussions with WasteServ have revealed that this is not available at the site, although alternative measures are in place.

Prohibition of Unauthorised Fires on Site

- 3.3.14 The permit states that no waste shall be burned or incinerated at the site. During the audit anecdotal evidence was observed or discussed to identify that wastes may have been burned at the site. Although this area was clearly some distance from any other combustible material sources and therefore did not present any immediate danger it indicates a breach of this permit condition may have occurred.

Actions to be Taken in the Event of a Fire

- 3.3.15 Discussions with MEPA have revealed that they are historically aware of fires that have occurred in operational areas of the site, however, they have only been informed retrospectively by WasteServ management and in most cases have not received any form of written incident report as stated in the permit and within the Site Management System.

Control Monitoring and Reporting of Dusts, Fibres and Particulates

- 3.3.16 Visual dust monitoring is undertaken by the site manager and is recorded in the site diary. Excerpts of the site diary were taken during the audit and clear references were made as to visual assessments of dust on both the site haul road and the tipping face areas. No significant dust issues were observed during the site audit.
- 3.3.17 The permit requires that visual monitoring and assessment of dust should be undertaken at the site by WasteServ operatives and remedial actions in the form of dust suppression should be immediately undertaken if it appears that any site generated dust is likely to cause a nuisance beyond the site boundary.

Monitoring and Control of Pest Infestations

- 3.3.18 The permit requires that throughout the operational life of the site monitoring and control for pest infestations should be undertaken.

3.3.19 Observations during the audit noted that Comtec Service Ltd use a carded number system for all locations of rodent traps etc. which are placed in strategic locations for both pest control and identification. However, during the site walkover some of the identified locations were noted to be empty with no traps, baited lines or poisoned grain noted.

3.3.20 No fly infestations were noted during site walkovers undertaken over the three day audit.

Control of Scavenging Birds and Other Scavengers

3.3.21 The permit requires site monitoring and control for scavenging birds and other scavengers should be undertaken. The permit states that stored waste areas should be inspected at least weekly by the site supervisor and should be recorded in the Site Diary.

3.3.22 During the site walkover no evidence of scavenging birds was noted.

3.3.23 The site walkover did reveal the presence of a number of dogs (approximately 5) located in the southern tip of the Maghtab Environmental Complex. Discussions held with the WasteServ representatives explained that they feel the dogs are from adjacent farms and often migrate onto the site; rather than them being a feral set that permanently live within the site boundary. During the site walkover around the boundary fence of the southern tip of the complex there were several areas where there were holes in the boundary fence that would allow access for dogs.

3.3.24 No notes were observed in the site diary with respect to the known presence of the dogs as required by the permit condition.

Control of Litter

3.3.25 During the site walkover evidence was identified with respect to litter that has left the site boundary and could be seen on adjacent properties.

3.3.26 Although there is a boundary fence, periods of high winds are likely to elevate any light waste fractions over the height of the fence.

3.3.27 There appeared to be a lack of cover material in landfilled areas and no final capping had taken place. The use of minimal or no daily cover has given an increase in the possibility of wind-blown litter across the site.

3.3.28 The permit requires that complaints including litter nuisance should be recorded and investigated, although no evidence could be observed in any available records.

Waste Acceptance Procedures

3.3.29 The permit details a number of waste categories that are prohibited for disposal at the landfill. As a consequence of those prohibited wastes and other requirements specified in the permit, Wasteserv have implemented a series of waste acceptance procedures for the movement of waste in and out of the site. A detailed description of the WasteServ 'Waste Acceptance Procedures' can be read in the IPPC Compliance Audit Report.

3.3.30 The permit requires that visual inspection of waste should occur at both the site entrance and also at the point of deposit to ensure it conforms to the customers waste description and permit requirements. Although checks are made at the weighbridge there was little evidence to suggest that checks are made at the disposal zone.

3.3.31 The permit requires that WasteServ should refuse entry of any unauthorised waste carriers and that such instances shall be recorded and the authority notified. A register was observed in the weighbridge recording all rejected loads (and their reasons) MEPA confirmed that they are not immediately notified of the rejection as stated in the permit.

3.3.32 There was no evidence to suggest that there was a method for rejecting waste at the tipping face.

Waste Despatch Procedures

3.3.33 Any items of non-conforming wastes which have been detected after acceptance at the weighbridge are required to be removed from the tipping area and placed into quarantine ready for their safe despatch from the site.

- 3.3.34 Previous concerns have been raised to WasteServ by MEPA regarding the lack of a suitable quarantine area at the site. The current quarantine area does not meet the standards stipulated within the permit.
- 3.3.35 Waste that had been placed in the quarantine area primarily consisted of construction and demolition waste with some evidence that the material had been sorted into recyclate piles such as wood and timber (an activity that is not currently permitted).
- 3.3.36 No evidence was apparent in the site diary regarding the recording of rejected waste from the tipping area.
- 3.3.37 Throughout 2012 there was no recorded outbound movement of any hazardous or liquid waste, no rejection of gypsum based material and no recording of any waste electrical equipment.

Waste Quantities

- 3.3.38 The permit requires that the weight of all wastes accepted and dispatched at the site shall be determined by means of a weighbridge. As previously mentioned there are two weighbridges in use at the site at the entrance and exit of the site. As required by the permit, both weighbridges are currently calibrated and certified by the Malta Competition and Consumer Affairs Authority (MCAA) in accordance with EN 45501:1992 on an annual basis.
- 3.3.39 WasteServ currently use a customised Integrated Weighbridge Software package for the site which allows them to accurately record all incoming and outgoing wastes from the site and their respective quantities.
- 3.3.40 The weighbridge software allows WasteServ to generate a number of various reports for statistical analysis and for submission to MEPA as part of the required quarterly and annual environmental reports.

3.3.41 Various report types were generated from the software as part of the audit and confirmed suitable and appropriate recording of waste quantities as required by the permit and for reporting submissions to MEPA.

3.3.42 No non-conformances with this sub-section of the permit were identified.

Handling and Storage of Wastes

3.3.43 Wastes were not being held in temporary storage at the time of the audit other than in the engineered quarantine area and no breach of this condition was observed.

Waste Produced from Site

3.3.44 Any outgoing wastes generated through waste quarantine processes are handled in line with the requirements of Section 3.10.2 – Waste Despatch Procedures and 3.11 – Waste Quantities.

3.3.45 This permit section may relate to any general office waste produced at the site and weighbridge office however only incidental amounts are generated. Records of how this material is handled were not recorded, however due to the small quantities involved this is not considered significant.

Removal of Residual Waste from Site

3.3.46 This condition relates to the closure or temporary closure of the site. As no such circumstances have occurred this condition does not apply.

Waste Composition and Analysis

3.3.47 The operator is required to carry out an investigation every four years on the waste composition (DOC, dDOC and other applicable parameters) of various waste streams to assist in calculating methane generation for the landfill.

3.3.48 As the current variation of the permit was only issued in July 2013 the submission of this information will not be required until July 2017. This was confirmed by MEPA during audit discussions.

TABLE 3: NON-CONFORMANCES RELATING TO SECTION 3 SITE OPERATIONS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
3.2 - Control of mud, debris and loose waste	3.2.1.1	Wheelwash not working effectively. Wheelwash is not located in the most efficient and effective location. No written evidence of daily inspections of wheel cleaning facilities and its effectiveness.	Category 2 - Significant
	3.2.1.2	Evidence of vehicles exiting the site without mounting the wheelwash.	Category 2 - Significant
3.4 - Leaks and spillages	3.4.1.2	The building used to store diesel, engine oil, hydraulic oil and gear oil was not fully bunded. The building incorporated a concrete floor. Access was gained through a metal, lockable door. There was a gap beneath the door through which liquids could escape in the event of spillage or leakage from the tank or a drum. 200 litre drums used to store waste oil were placed on uncontained ground.	Category 2 - Significant
3.5 - Fires on the site	3.5.3	There is no continuous supply of water at a pressure of 5-10 bars from a 64mm hose at the site.	Category 1 - Major
	3.5.4.1	Clear evidence of ash and burned textiles as a result of burning mattresses at the site.	Category 1 - Major
	3.5.5.2	No immediate notification or written incident reports have been provided to MEPA as a consequence of fires at the site.	Category 2 - Significant
3.7 - Monitoring and control of pest infestations	3.7.1	A number of rodent control locations where noted to be empty with no traps, baited lines or poisoned grain observed.	Category 3 - Minor
3.8 - Control of scavenging birds and other scavengers	3.8.1 (Table 3.8.1 b)	Presence of dogs within the boundary of the site. No notes observed within the site diary with regards to the presence of dogs on the site. Holes in the boundary fence allow access for dogs to migrate onto site.	Category 2 - Significant
3.9 - Control of litter	3.9.1	Evidence of litter from the site was observed on adjacent land and property.	Category 2 - Significant
3.10 - Waste acceptance and control procedures	3.10.1.1	There was no evidence to suggest that visual inspection of waste loads was being undertaken at the point of deposit. Evidence of non-conforming wastes being deposited.	Category 1 - Major
	3.10.1.2	Anecdotal evidence of waste inputs being allowed to tip initially without appropriate WAC testing.	Category 2 - Significant
	Table 3.10.2 b)	Current quarantine area does not meet the required engineering specification stipulated in the permit. Waste electrical equipment stored outside of the quarantine area and appears to have been stored longer than the maximum 5 working day period.	Category 1 - Major

3.4 Site Infrastructure

Provision of Site Identification Board

3.4.1 The permit requires a site notification board to be put up and contain key information such as:

- The site operates under the conditions of an IPPC permit issued by MPA;
- Details of the permit number and name of permit holder;
- 24 hour emergency contact name and telephone number for the permit holder.

3.4.2 No site identification board was observed during the walkover and this was later confirmed by WasteServ.

Site Security

3.4.3 The permit stipulates that site security systems shall be provided at all times during the life of the permit for the prevention of access by humans not authorised by the permit holder and livestock. All security measures should be installed, operated, maintained, documented and recorded.

3.4.4 Upon review of the security log book there was little information contained that would reflect the security requirements of the permit.

3.4.5 Areas of the boundary fence inspected showed evidence of damage, along with gaps below the base of the chain link. These gaps are of a size to allow both human and animal access to the complex.

3.4.6 There appeared to be no evidence of any daily inspections of the site perimeter or comments relating to the damage observed during the audit

TABLE 4: NON-CONFORMANCES RELATING TO SECTION 4 SITE INFRASTRUCTURE (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
4.1 - Provision of Site identification board	4.1.1	A site identification board with <u>all</u> the required information was not on display at the site entrance.	Category 3 - Minor
4.2 - Site security	4.2.1	Area of the site perimeter fence have poor structural integrity.	Category 2 - Significant
	Table 4.2.1 – Maintenance standards	Site perimeter fence defects and damage are not being recorded in the site diary. No evidence of daily temporary repairs.	Category 2 - Significant

3.5 Emissions

Emissions to Air (Excluding Odour, Noise or Vibration)

- 3.5.1 The Annual Reporting (January to December 2012) shows that the annual average concentrations of the pollutants specified in the Monitoring Plan at the weighbridge are breached for PM₁₀, Hydrogen Sulphide and Methane. The average annual concentration of PM₁₀ is 60.4µg/m³, which exceeds the 50µg/m³ limit specified in the Monitoring Plan. Hydrogen Sulphide and methane concentrations are significantly above thresholds, although overall the levels are still low.
- 3.5.2 PM_{2.5} was not recorded at the weighbridge because monitoring equipment was not considered reliable for data collection.
- 3.5.3 The Annual Reporting (January to December 2012) shows that concentrations of Hydrogen Sulphide and Methane at the nine off-site monitoring points are elevated at the majority of the locations, with concentrations significantly above thresholds, although overall the levels were still relatively low.

Discharges to Surface Water from Specified Points

- 3.5.4 The permit requires that there must be no discharges to surface waters or coastal waters. Inspection of the Annual Reporting (January to December 2012) shows that both surface waters and coastal waters are monitored in accordance with the Monitoring Plan.
- 3.5.5 No non-conformances with this sub-section of the permit were identified.

Emissions to Sewer

- 3.5.6 There are no discharges to sewer.

Emissions to Groundwater

Borehole 3 (BH3) was not monitored in 2012 otherwise groundwater monitoring boreholes were monitored in accordance with requirements. It is speculated that it may be no longer possible to monitor BH3. There are no direct emissions to groundwater.

Fugitive Emissions of Substances to Air

- 3.5.7 During the audit field work weather conditions comprised intermittent rainfall. Ground conditions were generally damp and fugitive emissions of dust were not observed.
- 3.5.8 It was observed that litter had escaped the site boundary to the east of the site entrance. Three mobile litter nets were observed in use adjacent to the working face. This number seemed inadequate to control litter in comparison to the size of the operational area.

Fugitive Emissions of Substances to Water and Sewer

- 3.5.9 During periods of heavy rainfall, rainwater filled the quarantine area sump and overflowed onto uncontained ground. Surface water runoff freely drained from the site access roads onto uncontained ground, flowing down gradient towards the weighbridge area. The building used to store diesel, engine oil, hydraulic oil and gear oil was not fully bunded. 200 litre drums used to store waste oil were placed on uncontained ground.

Odour

- 3.5.10 During the fieldwork odour was detected at various points in the site. It was observed that large areas of tipped waste were either inadequately covered or had no cover applied. Whilst it is recognised that maximising void usage for non-hazardous waste is important, domestic wastes that remain uncovered have the potential to give rise to odour.
- 3.5.11 Odour monitoring is undertaken in accordance with the requirements of IPPC Permit and Monitoring Plan. No non-conformances with this sub-section of the permit were identified.

Noise and Vibration

- 3.5.12 The results of off-site noise monitoring for January to December 2012 were inspected and show that at all three monitoring locations, noise levels recorded in 2012 were less than the attributed background levels, i.e. the levels without associated landfill noise.

3.5.13 Further background monitoring is due to take place in 2014 and this may help to clarify matters. No non-conformances with this sub-section of the permit were identified.

Emissions to Land

3.5.14 There is no waste disposal or other emission to ground outside the engineered cells.

3.5.15 The permit requires leachate and off-site soils monitoring. Review of the Annual Reporting (January to December 2012) shows that cyanide analysis was not included in the soil analysis, otherwise all leachate and soil monitoring was undertaken in accordance with requirements. No non-conformances with this sub-section of the permit were identified.

Monitoring

3.5.16 The permit requires that monitoring is undertaken in accordance with the requirements of the Monitoring Plan.

3.5.17 It is considered that the monitoring programme is comprehensive and undertaken, reported and submitted in accordance with permit requirements.

3.5.18 No non-conformances with this sub-section of the permit were identified.

TABLE 5: NON-CONFORMANCES RELATING TO SECTION 5 EMISSIONS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
5.7 – Odour	5.7.1, 5.7.3 (Table 5.7.1 - b), 5.7.4	Large areas of waste were either inadequately covered or had no cover applied. Strong smell of odour on parts of the landfill and site boundary.	Category 2 - Significant

3.6 Management and Technically Competent Persons

3.6.1 A copy of the current environmental permit is retained at the main site office and available for reference as required.

Training

3.6.2 No clear training requirements have been developed and implemented by WasteServ for operational staff at the site.

3.6.3 During the audit there were issues noted with respect to the level of awareness and internal training, relating to record keeping, waste acceptance and control and notifications to the authority.

3.6.4 In addition to the Technically Competent Person, the permit requires that all other staff are suitable trained and fully conversant with permit requirements relevant to their duties. These employees should be provided with adequate professional technical development and training with the provision of written operating instructions.

Maintenance

3.6.5 Where plant is owned by a contractor, such as the landfill compactors, the contractor is responsible for its maintenance and servicing.

3.6.6 Plant owned by WasteServ is serviced in accordance with a Maintenance Schedule. No non-conformances with this sub-section of the permit were identified.

Incidents and Complaints

3.6.7 Although there is a clear structure in place within WasteServ for the handling of incidents and complaints it would appear that many incidents and possible complaints are not being processed.

3.6.8 Appropriate training and communication for the relevant key staff would assist in improving the investigation and recording of incidents and complaints.

Attendance of Technically Competent Persons

3.6.9 The technically competent person is required to be present at the site for a minimum of 70% of the total weekly operational hours as stated in the permit. Attendance of the technically competent person should be recorded in the site diary on arrival and departure.

3.6.10 There was no evidence in the site diary of recording the attendance of the Technically Competent Person when on site and it is not possible to confirm whether the Technically Competent Person is in attendance for the minimum 70%

requirement. There is no additionally technically competent member of staff available in the absence of the Technically Competent Person.

Changes in Technically Competent Persons

3.6.11 MEPA are required to be informed of any changes to the technically competent persons including name and specific details of competency. This situation has yet to occur and therefore no non-conformances with this sub-section of the permit were identified.

TABLE 6: NON-CONFORMANCES RELATING TO SECTION 6 MANAGEMENT & TECHNICAL COMPETENT PERSON (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
6 – Management and technically competent person	6.2, 6.3, 6.4	Lack of awareness and internal training of key permit and management control requirements such as record keeping, waste acceptance, notifications and permissible activities.	Category 1 - Major
	6.6	No specific skills/training matrix has been developed.	Category 2 - Significant
	6.9, 6.10	Anecdotal evidence to suggest that not all non-conformances and complaints are being appropriately investigated in line with company procedures.	Category 2 - Significant
	6.12	No recording of site attendance for the technically competent person.	Category 3 - Minor

3.7 Efficient Use of Raw Material

3.7.1 The Annual Reporting (January to December 2012) did not include energy consumption figures. In addition, the specified energy efficient lighting did not appear to be in use and there was no energy efficiency plan.

TABLE 7: NON-CONFORMANCES RELATING TO SECTION 7 EFFICIENT USE OF RAW MATERIALS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
7 - Efficient use of raw materials	7.1	Energy consumption figures were not recorded. Energy efficient lighting did not appear to be in use. No energy efficiency plan.	Category 3 - Minor

3.8 Accident Prevention and Control

3.8.1 This section of the permit deals primarily with safety risks associated with the landfill activities in addition to those of pollution prevention and control.

3.8.2 The site Accident Management Plan is required to be reviewed at least every two years or as soon as practicable after an accident. MEPA has not been provided any notification with regards to any review of the Accident Management Plan that has been undertaken.

3.8.3 In general the site safety rules appeared to be followed. Although evidence of smoking by WasteServ employees in the weighbridge office, is in contravention of the site safety rules.

TABLE 8: NON-CONFORMANCES RELATING TO SECTION 8 ACCIDENT PREVENTION & CONTROL (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
8 – Accident prevention and control	8.1	No notification has been provided to the authority regarding the 2 year review of the Accident Management Plan.	Category 3 – Minor
	8.2	Evidence of smoking in areas of the site in contravention of the site health & safety rules.	Category 2 - Significant

3.9 Closure, Aftercare and Decommissioning

3.9.1 As the site is not closed it is not currently subject to closure, aftercare and decommissioning requirements of the permit.

3.10 Site Records

3.10.1 Records were generally legible, comprehensive and available on site during the fieldwork, in paper and/or electronic copy.

3.10.2 The permit requires that a site diary is maintained and made available for inspection by the Authority. The site diary is required to contain key pertinent information of activities at the site.

3.10.3 An extract of the site diary from the period of the 12th October 2013 – 12th November 2013 was obtained as part of the audit. It was clear from the content of the diary that many of the above permit requirements are being detailed and included.

3.10.4 Requirements of the permit that were not observed in the site diary included items such as waste rejection, environmental problems, dispatch of records and

complaints, defects and damage to security systems and technically competent management attendance on Site.

TABLE 9: NON-CONFORMANCES RELATING TO SECTION 10 SITE RECORDS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
10 – Site Records	10.4	No site diary entries are being recorded with regard to defects and damage to site security systems and technically competent management on site.	Category 3 – Minor

3.11 Reporting

3.12 The permit requires that WasteServ submit an Annual Environmental Report by the 31st March each year using the structure set out in Schedule 2 of the permit.

3.13 Review of the Annual Environmental Reports has revealed that energy consumption figures have not been included within reports even though this is a permit stipulation.

3.14 The Annual Environmental Report requires details in relation to the environmental management system. As the environmental management system was not fully implemented at the time of the audit no details were included in the annual environmental report

TABLE 10: NON-CONFORMANCES RELATING TO SECTION 11 REPORTING (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
11 - Reporting	11.2	Energy consumption figures are not being included in the previous Annual Environmental Report submissions.	Category 3 - Minor
	11.6	Records of waste types quarantined and removed from the site are not being accurately reported.	Category 2 – Significant

3.15 Notifications

3.15.1 The permit requires that notifications should be submitted to MEPA with regards to fugitive emissions from the site which has caused, is causing or may cause significant adverse environmental effect or harm to human health. Discussions with MEPA have revealed that they have not received any notifications regarding any fugitive releases from the site. However, MEPA is aware of incidences of fires at the site that were not formally notified with regards to the requirements of this section of the permit.

3.15.2 No notifications have been provided to MEPA with regards to rejected wastes.

TABLE 11: NON-CONFORMANCES RELATING TO SECTION 12 NOTIFICATIONS (IPPC PERMIT NUMBER IP 0001/06/B)			
IPPC NON CONFORMANCE SUMMARY (GHALLIS LANDFILL)			
Main Permit Section	Sub-section(s)	Details of Non-Conformance	Risk Rating
12 – Reporting	12.1.2, 12.2.4 & 12.2	Accidents & incidents that have the potential for significant environmental harm are not being formally notified as required by the permit.	Category 3 – Minor

4 NON CONFORMANCE ASSESSMENT SUMMARY

4.1 This summary report highlights non-compliance with the IPPC Permit as observed by the audit team during the fieldwork.

4.2 Non-compliance findings are classified in accordance with the Compliance Classification Scheme (CCS). This scheme categorises breaches of permit conditions based on their potential for environmental impact as shown in Table 12 below.

TABLE 12 COMPLIANCE CLASSIFICATION SCHEME	
CCS Category	Description
1	A non-compliance which has a potentially major effect.
2	A non-compliance which has a potentially significant effect.
3	A non-compliance which has a potentially minor effect.
4	A non-compliance which has no potential effect.

END OF SUMMARY REPORT

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