

# **GHALLIS NON-HAZARDOUS WASTE LANDFILL**

## **Application for Variation of IPPC permit IP 0001/06/C for the conversion of an un-used existing hazardous cell into non-hazardous cell, including extension of cell boundary**



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## Introduction & Non-Technical Summary

1. Wasteserv Malta Ltd. has submitted a development permit application PA 03144/19 titled '*Proposed conversion of an un-used existing hazardous cell into non-hazardous cell, including extension of cell boundary and sanctioning of excavation*'. The scope of this application is the conversion and extension of the hazardous landfill within the confines of the Maghtab Environmental Complex (approved through PA 4834/04) to a non-hazardous cell, and the continued excavation (and sanctioning) of the south-eastern end of the existing hazardous cell.
2. The limited void space remaining at the adjacent Ghallis non-hazardous landfill (now being designated Ghallis 1) is the most significant waste management issue at the national level. This facility is the only disposal option – barring export at a prohibitive cost – for non-hazardous waste streams where diversion to recovery or recycling is not an option. Remaining approved landfill void space as of June 2022 is estimated at 550,000m<sup>3</sup>. The remaining landfill void space is expected to be filled rapidly, given current waste deposition rates (an average of 21,500 tonnes per month during 2016).
3. The operations of this facility were originally permitted on the 6<sup>th</sup> April 2007 through the issue of the integrated pollution prevention and control permit IP001/06/A; the latest renewal of this permit was decided on 6<sup>th</sup> March 2020 through the issue of IP001/06/C.
4. Construction of the landfill proceeded in phases consisting of independent cells; the latter were certified via Construction Quality Assurance reports that were prepared during the construction of each cell. The engineering specifications were derived from the results of hydrogeological, landfill gas and stability risk assessments, to ensure that operations at the installation would not result in an adverse effect on the surrounding environment. Each cell has its own leachate collection/extraction system, as well as a gas extraction system connected to a central gas management facility.
5. Effort to increase landfill void space have included PA 01586/18 titled '*To amend permit PA 964/11 and alter the internal lateral landfill profile to increase volume capacity of Ghallies non-hazardous Landfill while retaining site area*', as approved in July 2019. The objective of this application was to introduce specialised engineering techniques to increase the steepness of the profile of the eastern side of the Ghallis landfill, to increase the void space of the landfill. These engineering works are currently being implemented, and are extending the Ghallis landfill lifetime by around 9 to 12 months, increasing available void space by circa 315,000m<sup>3</sup>.

6. The objective of this application is to operate additional landfill cells (designated as Ghallis 2) to increase void space for disposal of waste. This is intended to accommodate the demand for landfill services for the foreseeable future. The availability of new void space is essential once the void space in the existing landfill facilities is exhausted, and this must be provided in a manner that does not disrupt provision of service. Furthermore, the project must ensure best utilisation of land available within the ECOHIVE complex. In order to optimise operations and use of void space, Ghallis 1 and 2 may be operated in parallel).
7. A description of this project is described within the Project Description Statement (Annex 1). Since the submission of this document to ERA, the plans have been modified to include a slight lateral extension to the southwestern boundary of the landfill contour. The scope of this extension was to optimise use of space within the landfill complex, thereby achieving a total waste volume capacity of approximately 1,483,000m<sup>3</sup>, an increase of approximately of 164,000m<sup>3</sup> over the previous design.
8. The modification to the southwestern boundary introduces a bench structure within the landfill section, to remove a section of the underlying geological material. Furthermore, the configuration of the benches, internal cell layout (from 2 cells to one) and placement of the leachate collection points have been reconfigured as part of an optimisation process. Refinements on the definition of the vertical wall support structures have also been added. All plans assessed within this IPPC process are those of the final design.
9. This permit variation seeks the competent authority's consent for eventual operation of non-hazardous landfill cells (Ghallis 2) at the site of the ex-hazardous cell (after conclusion of the construction process).
10. This variation should be considered as part of an ongoing effort to upgrade the Ecohive Complex in a holistic manner. Besides the planned development of a Waste to Energy plant and an Organic Processing Plant, the following projects are currently in the pipeline, or under development, to ensure appropriate management of the landfill facility:
  - The implementation of **leachate management** solutions;
  - The **improvement of pre-treatment facilities** by providing a Skip Management Facility for skip loaders and other wastes not suitable for the bulky line;
  - Small scale MRF (MN-AD);
  - MMRF (Hal-Far); and
  - A holistic review of the Maghtab Environmental Complex hydrology and water management, to upgrade and optimise water management on site.

11. The National Waste Management Plan required by The Waste Regulations, S.L. 549.63 sets various targets for waste management that aim '*to reduce the generation of waste and to increase source separation so as to promote recycling and reduce landfilling*'. Wasteserv has implemented various management and infrastructure projects – that are not within scope of this IPPC permit - that are aimed towards achievement of the above targets.

## Scope of the application

12. This permit variation seeks the competent authority's consent for extension of available landfill void space through conversion of an un-used existing hazardous cell into two non-hazardous cells, including extension of cell boundary.
13. The application includes the following documentation (as annexes), to facilitate review of implementation of permit requirements and operations:
  - Form A
  - Form C
  - ANNEX 1: Project Description Statement
  - ANNEX 2: Improvement Programme of IP 0001/06C
  - ANNEX 3: Plans
  - ANNEX 4: EIA documents
  - ANNEX 5: blank
  - ANNEX 6: Wind Rose
  - ANNEX 7: Specifications & CQA Plan
  - ANNEX 8 – blank
  - ANNEX 9 – Draft Closure Plan
  - ANNEX 10 – Emergency Response Plan
  - ANNEX 11 – Site Management System
  - ANNEX 12 – Certification of Incorporation
  - ANNEX 13 – Hydrological Risk Assessment and Surface Water Management
  - ANNEX 14 – Stability Risk Assessment
  - ANNEX 15 – Site Report
  - ANNEX 16 – blank
  - ANNEX 17 – EMS Structure
  - ANNEX 18 – Environmental Monitoring Plan
  - ANNEX 19 – Construction Management Plan
  - ANNEX 20 - Permits

## **ANNEX 1: Project Description Statement**

## **ANNEX 2: Improvement Programme of IP 0001/06/C**



## **ANNEX 3: Plans**

## **ANNEX 4: EIA documents**

## ANNEX 5 – annex left blank

## **ANNEX 6: Wind Rose**

## **Annex 07 - Specification & CQA Plan**

## **ANNEX 9 – Draft Closure Plan**

## **ANNEX 10 – Emergency Response Plan**

## **ANNEX 11 – Site Management System**





## **ANNEX 12 – Certification of Incorporation**

## **ANNEX 13 – Hydrological Risk Assessment and Surface Water Management**

## **ANNEX 14 – Stability Risk Assessment**

## **ANNEX 15 – Site Report**

## **ANNEX 16 – annex left blank**

## **ANNEX 17 – EMS Structure**

## **ANNEX 18 – Environmental Monitoring Plan**



## **ANNEX 19 – Construction Management Plan**

## **ANNEX 20 - Permits**