

The leachate analysis results returned values of all parameters for all samples which were below the respective limit values stipulated for waste acceptable at a non-hazardous landfill. The TOC values for the two hazardous samples (A and D) exceeded the limit value, however, the waste may still be sent to a non-hazardous landfill on the basis of a caveat that allows exceedance of this limit if the DOC value is within limit, which, when measured at the material's own pH, was not exceeded for both samples.

However, the Client has opted to send the non-hazardous waste for End-of-Waste processing rather than disposal. The hazardous waste was taken by PTMatic Environmental Services Ltd., which is an authorised waste broker.

A summary of the results of interest from samples collected from BH 5, reported on a *dry weight* basis, and the respective limit values, are shown in **Table 10**.

**Table 10:** Summary of results

Laboratory Report Code	2422193.006	2422193.007	Soils	Soils
Sample Number	5 (top)	5 (bottom)	intended for use in	intended for use in
Sample Description	Soil	Soil	Public / Private	Commercial
Sampling Point	Zone 5	Zone 5	/ Residential	/ Industrial
Sample Depth	0 – 1 m	1 – 1.3 m	mg/kg dw	mg/kg dw
Hydrocarbons C <sub>≤12</sub> (mg/kg)	< 1.0	< 1.0	10	250
Hydrocarbons C <sub>&gt;12</sub> (C <sub>12</sub> -C <sub>40</sub> ) (mg/kg)	79	110	50	750

Results marked in **YELLOW** indicate an exceedance of L1 limit values, whereas results marked in **RED** indicate an exceedance of L2 limit values. This means that the only parameter which was found in levels which exceeded any L1 limit values was Hydrocarbons C<sub>>12</sub> (C<sub>12</sub>-C<sub>40</sub>). This makes it ineligible for backfilling in a local quarry. The material shall be sent for End-of-Waste processing.

*Reference: Waste Characterisation Report for the material below the concrete layer only v2 dated 12/11/24*

## 6.2 PHASE 2

Based on the findings of the Phase 1 investigation, further testing shall be carried out in the infill layer of the area that is immediately adjacent and downstream (by site gradient) of the filling area, which also happens to contain the zone that returned hazardous levels of hydrocarbons. The site area has now been split into twelve equal zones, as shown in **Figure 20**. A further two non-contiguous zones were also included in the investigation. Zone 13 was designated in the area that contained the bowser refilling point of the USTs, while zone 14 was designated in the area that contained the oil interceptor, since this was found cracked during its removal. The location of the number on the plan indicates the sampling point, and the legend lists the geo-coordinates.

Samples of the infill layer from zones 10, 11, 12, and 13 will be collected to determine the extent of contamination of this infill material. Sampling points 10 to 12 are directly downstream of the refuelling area due to the site gradient, whereas sampling point 13 is beneath the bowser refilling point. No infill exists at BH 7, 8, 9 and 14 since these were backfilled pits that contained the fuel tanks (7 – 9) and oil interceptor (14) which were partially dug into bedrock.

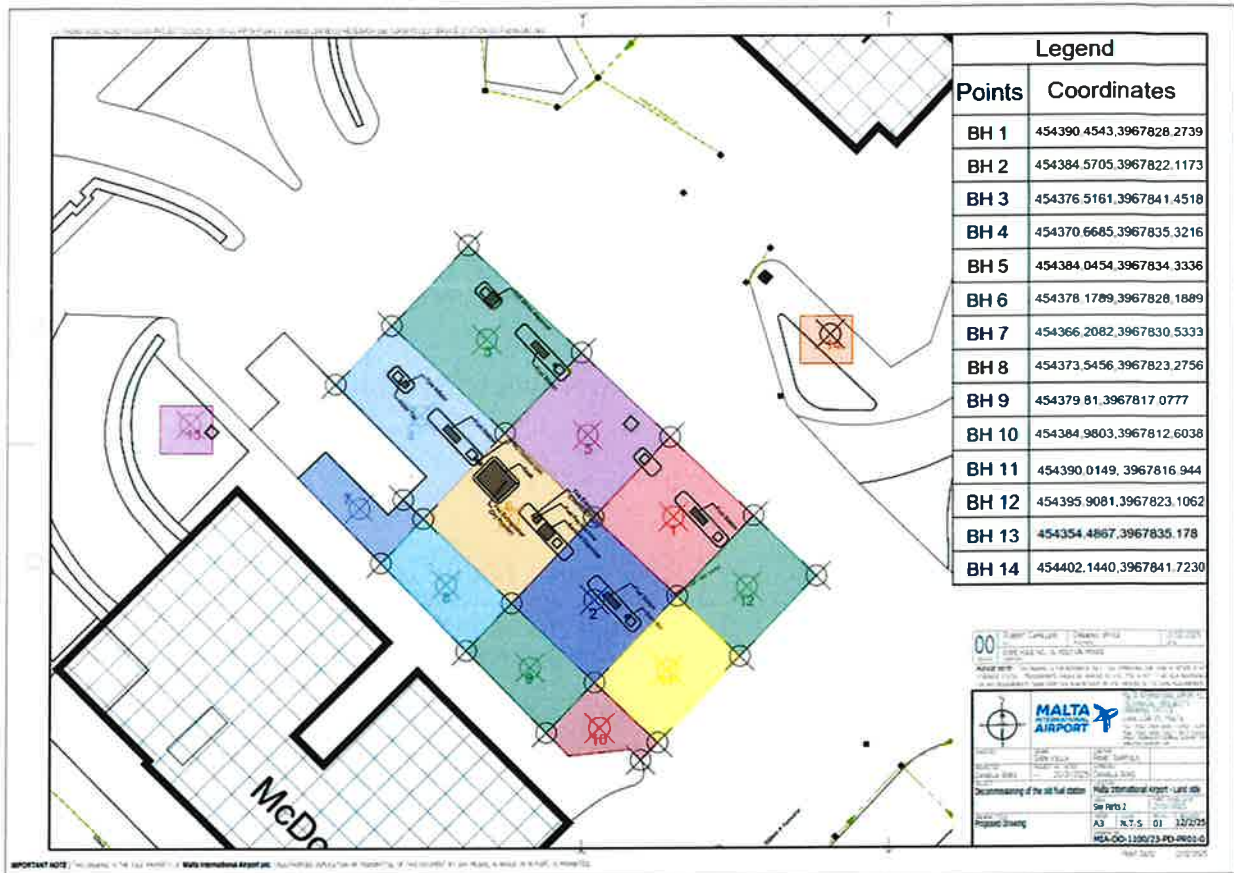


Figure 20: Site plan showing the 14 zones

### 6.2.1 Sampling and Analysis of the infill material at BH10 – BH13

Dry core sampling will be performed using a Beretta T43 drill rig fitted with an auger. The coring at BH13 shall be performed at a slight angle to penetrate beneath the concrete structure of the filling point.

Samples shall be placed into appropriate amber glass bottles and septum-capped vials, tightly sealed, stored and maintained in the dark at 4°C – 8°C upon immediate extraction from the ground to prevent any potential losses of volatile substances until delivery to the analysing laboratory. At least 2 kg per sample will be collected, whereby 1 kg will be designated to be sent to the laboratory while the rest will be kept cool locally to serve as a counter-sample.

The samples shall be subjected to a two-stage waste characterisation analysis procedure, as described earlier (under Section 6.1.2).

## 6.3 PHASE 3

Following decommissioning and removal of the eight USTs, the buried fuel lines and the four dispensers, the oil/water separator and the bowser filling point, bedrock core samples shall be collected from BH 1 – BH 14, as shown in **Figure 20**, to determine whether the bedrock has been contaminated by the operations, as well as the extent of contamination.

### 6.3.1 Sampling and Analysis of the bedrock at BH1 – BH14

Samples of the bedrock from zones 1 – 14 shall be collected to determine the extent of contamination of the bedrock. All cores shall extend down to 6 m from beneath the tarmac layer, which is level with the forecourt's concrete layer, thus levelling the 0 m mark throughout the investigation area. The 6 m mark was chosen as this is the maximum excavation depth. The length of the cores collected depended on the topography of the site, as the top contour of the bedrock varies.

Wet core sampling will be performed using a Beretta T19-C drill rig fitted with a hollow corer. Samples shall be placed into appropriate amber glass bottles and septum-capped vials, tightly sealed, stored and maintained in the dark at 4°C – 8°C upon immediate extraction from the ground to prevent any potential losses of volatile substances until delivery to the analysing laboratory. At least 2 kg per sample will be collected, whereby 1 kg will be designated to be sent to the laboratory while the rest will be kept cool locally to serve as a counter-sample. The samples shall be subjected to a two-stage waste characterisation analysis procedure, as described earlier (under Section 6.1.2).

The top bedrock metre and the last bedrock metre (5 – 6 m) shall be analysed only. Should the bedrock be found to be contaminated (presumably with hydrocarbons only), this shall be assigned the appropriate EWC, being 170503\* or 170504, and if hazardous, the material will be exported, whereas if non-hazardous, the material will be excavated and taken for End-of-Waste processing. If the top bedrock metre is contaminated but the last bedrock metre (5 – 6 m) is not, then the middle bedrock layer shall be assumed to be similarly contaminated to that of the top metre without analysis and treated similarly to material from the top metre.

## 6.4 PHASE 4

The bedrock core samples used for Phase 3 which do not return a presence of hydrocarbon contamination shall be analysed in accordance with legislation Parte IV, Allegato 5, Tabella 1 of Italian Decreto n. 152 of 2006 to determine whether the excavated material may be sent for backfilling in a quarry.

The proposed list of parameters that shall be analysed and reported as *dry weight* are given in **Table 11**.

**Table 11:** List of parameters proposed for the ground investigation analysis

Parameter	Method	LOD	
Moisture Content	DM 13/09/1999 SO n° 185 GU n° 248 21/10/1999 Met.II.2	0.1	%
Antimony	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Arsenic	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Beryllium	EPA 3050B 1996 + EPA 6020B 2014	0.1	mg/kg
Cadmium	EPA 3050B 1996 + EPA 6020B 2014	0.1	mg/kg
Chromium (total)	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Chromium (VI)	EPA 3060A 1996 + EPA 7199 1996	0.2	mg/kg
Cobalt	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Copper	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Lead	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Mercury	EPA 3050B 1996 + EPA 6020B 2014	0.1	mg/kg
Nickel	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Selenium	EPA 3050B 1996 + EPA 6020B 2014	0.1	mg/kg

Thallium	EPA 3050B 1996 + EPA 6020B 2014	0.1	mg/kg
Vanadium	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Zinc	EPA 3050B 1996 + EPA 6020B 2014	1	mg/kg
Hydrocarbons C <sub>≤12</sub> (6 – 12)	EPA 5021A 2014 + EPA 8015C 2007	1	mg/kg
Hydrocarbons C <sub>≥12</sub> (12 – 40)	ISO 16703:2004	5	mg/kg
PAHs <sup>1</sup>	EPA 3550C 2007 + EPA 8270E 2018	0.01	mg/kg
BTEXS <sup>2</sup>	EPA 5021A 2014 + EPA 8260D 2018	0.05	mg/kg

<sup>1</sup> Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Benzo(k)fluoranthene, Benzo(e)pyrene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene, Phenanthrene, Fluoranthene, Fluorene, Indeno(1,2,3-c,d)pyrene, Naphthalene, Pyrene, Summation

<sup>2</sup> Benzene, Toluene, Ethylbenzene, m-/p-/o-Xylene, Styrene, Summation

The LODs and methods are in accordance with Parte IV, Allegato 5, Tabella 1 of Italian Decreto n. 152 of 2006. The LODs proposed are indicative based on the type of matrix. These may need to be raised should dilutions be necessary in samples that are highly contaminated.

## 6.5 SUMMARY

The investigations carried out so far resulted in:

- Phase 1 – The filling area was split into six equal zones and infill material was subjected to waste characterisation analysis to determine whether it is Hazardous and assigned EWC 170503\* or Non-Hazardous and assigned EWC 170504. BH1 (0-1m) and BH2 (0-1m) was found to be Hazardous, assigned EWC 170503\*, and carted away by PTMatic Environmental Services Ltd. for eventual export and disposal. The infill material at BH1 (1-3m), BH2 (1-3m), and the entire column infill depth profile at BH3 (0-3m), BH4 (0-2m), BH5 (0-2m), BH6 (0-2m), was found to be Non-Hazardous, assigned EWC 170504, and taken for End-Of-Waste Processing.

The pending investigations include:

- Phase 2 – The original area of investigation is widened to encompass the area immediately adjacent and downstream (by site gradient) of the filling area, which also happens to be besides the zones that returned hazardous levels of hydrocarbons. The site area is now split into twelve equal zones. A further two non-contiguous zones are also included in the investigation. Zone 13 is designated in the area that contains the bowser refilling point of the USTs, whereas zone 14 is designated in the area that contained the oil interceptor, since this was found cracked during its removal. The infill layer from zones 10, 11, 12, and 13 shall be sampled and subjected to a similar waste characterisation analysis to determine the extent of contamination of this infill material.
- Phase 3 – The bedrock at zones 1 – 14 shall be subjected to waste characterisation analysis to determine whether it is Hazardous and assigned EWC 170503\* or Non-Hazardous and assigned EWC 170504. If any area is found Hazardous, this shall be excavated and carted away by PTMatic Environmental Services Ltd. for eventual export and disposal. Areas found Non-Hazardous but contaminated with hydrocarbons shall be excavated and taken for End-Of-Waste Processing.
- Phase 4 – The bedrock core samples used for Phase 3 which do not return a presence of hydrocarbon contamination shall be analysed in accordance with legislation Parte IV, Allegato 5, Tabella 1 of Italian Decreto n. 152 of 2006 to determine whether the excavated bedrock material may be sent for backfilling in a quarry.

## 7. CSM-MS REVISION HISTORY

---

A revision history is present in **Table 12**.

**Table 12:** Report Revision History

<b>Version N°</b>	<b>Date Issued</b>	<b>Status</b>
1	04 April 2025	Superseded
2	25 April 2025	Superseded
3	02 June 2025	Current



## **Annex 3 – EOW Concrete Report**





Membership  
N°.: 440777

Dr. Robert Cortis  
B.Sc.(Hons.)(Melit.) M.Sc.(Melit.) Ph.D.(Strathclyde) MRSC  
*Industrial & Environmental Chemist*

7, Little Danny Fl. 2,  
Dun Xand Cortis Street,  
Birkirkara, BKR 1530,  
Malta, EU.

VAT N°.: MT 1852-1917

Tel N°.: +356 21440144

Mob N°.: +356 79069621

E-mail: robert.cortis.02@um.edu.mt

## End-of-Waste Material Characterisation Report Leachate tests on concrete blocks

### Details of Client and Project Site

Client:	Malta International Airport plc
Address:	Malta International Airport
	Luqa, LQA 4000, Malta
Project Site:	Ex-Fuel Station, Malta International Airport

### Introduction

The filling area of the ex-Fuel Station is a rectangular plot of land formerly covered by a canopy. The eight underground storage tanks (USTs) were buried in a strip of land that served as a fishbone parking area between the filling area and the adjacent McDonald's restaurant building. The site area is shown in Figure 1.



Figure 1: Site area (denoted within the red perimeter)

Following decommissioning and removal of the eight USTs, the buried fuel lines and the four dispensers, the oil/water separator and the bowser filling point, core samples were collected to determine whether the surrounding infill material has been contaminated by the operations, as well as the extent of contamination. It should be noted that the fuel lines were above a concrete platform that was buried ~0.40 m from the ground level. The analysis revealed the presence of hazardous (EWC 17 05 03\*) and non-hazardous waste (EWC 17 05 04).

### Sampling

The hazardous infill waste was collected and sent for export by an authorised waste broker, while the non-hazardous infill waste was collected and mixed with cement to create concrete by a contractor. The detail is presented in *Method Statement to Excavate, Store and process Ex-Fuel Station Contaminated Material*, Revision 4.0, dated 02/04/2025, prepared by Malta International Airport.

In brief, MIA intends to utilise the non-hazardous infill waste as a replacement for compacted backfill in the major Apron 9 Stand Rehabilitation Works which are ongoing. The waste material is to be processed into concrete. Testing by the contractor has shown that the right grade of concrete, C15, can be achieved using a mix whereby the 60 % (of the total mix) of clean, new aggregate can instead be replaced with 40% of contaminated aggregate and 20% new aggregate, whilst keeping the remaining ingredients constant (water, cement).

Three trial concrete blocks, named TM3, TM4 and TM5 were prepared using surface material (infill above the concrete layer in the ex-fuel station forecourt) from Zone 3, 4 and 5 respectively. The trial blocks were provided and subjected to analysis as part of the process of obtaining its End-of-Waste.

### Analysis

The End-of-Waste Criteria established by ERA required the samples to be sent to the laboratory for leachate analysis following EN 12457-2:2002 in accordance with the Council Decision 2003/33/EC. The methods listed in Table 1 are in accordance with the said legislation.

**Table 1:** List of parameters and respective methods

Leachate Parameter	Method	LOD	
As	EN 12457-2:2004 + EPA 6020B:2014	< 0.01	mg/kg
Ba	EN 12457-2:2004 + EPA 6020B:2014	< 1	mg/kg
Cd	EN 12457-2:2004 + EPA 6020B:2014	< 0.005	mg/kg
Cr	EN 12457-2:2004 + EPA 6020B:2014	< 0.05	mg/kg
Cu	EN 12457-2:2004 + EPA 6020B:2014	< 0.1	mg/kg
Hg	EN 12457-2:2004 + EPA 6020B:2014	< 0.001	mg/kg
Mo	EN 12457-2:2004 + EPA 6020B:2014	< 0.1	mg/kg
Ni	EN 12457-2:2004 + EPA 6020B:2014	< 0.01	mg/kg
Pb	EN 12457-2:2004 + EPA 6020B:2014	< 0.01	mg/kg
Sb	EN 12457-2:2004 + EPA 6020B:2014	< 0.01	mg/kg
Se	EN 12457-2:2004 + EPA 6020B:2014	< 0.01	mg/kg
Zn	EN 12457-2:2004 + EPA 6020B:2014	< 1	mg/kg
Chloride	EN 12457-2:2004 + UNI EN ISO 10304-1:2009	< 25	mg/kg
Fluoride	EN 12457-2:2004 + UNI EN ISO 10304-1:2009	< 0.25	mg/kg
Sulphate	EN 12457-2:2004 + UNI EN ISO 10304-1:2009	< 25	mg/kg
Total Dissolved Solids (TDS)	EN 12457-2:2004 + APAT CNR IRSA 2090 A Man 29 2003	< 2000	mg/kg
Dissolved Organic Carbon (DOC)	EN 12457-2:2004 + UNI EN 1484:1999	< 50	mg/kg
Phenol Index	UNI EN 12457-2:2004 + UNI EN ISO 14402:2004	< 0.1	mg/kg

pH	CNR IRSA 1 Q 64 Vol 3 1985 + APAT CNR IRSA 2060 Man 29 2003	1 – 14	Scale
Electrical Conductivity	UNI EN 12457-2:2004 + UNI EN 27888:1995	< 147	µS/cm

### Testing Laboratory

Samples were sent for analysis to **BIOCHEMIE LAB srl** of Via di Limite 27/G, 50013, Campi Bisenzio (FI), Italy. The laboratory is ISO 17025:2017 Accredited by ACCREDIA, having Accreditation Number 0195. The analytical reports issued by the laboratory are attached to this covering report.

### Results

One laboratory report has been issued for each sample. Each report includes the list of parameters tested, their respective standard analytical method, the unit of measure (UM), and the analytical result. Where values are preceded by the “ < ” symbol, this indicates that the result obtained was below the instrumental limit of detection (LOD). The respective laboratory report numbers are listed in Table 2.

**Table 2:** Laboratory report numbers

Sample	Lab Report N.
TM3	2504176.005/01
TM4	2504176.006/01
TM5	2504176.007/01

The leachate results presented in the laboratory report are expressed in mg/l or µg/l given that this analysis is carried out on a liquid extract. However, since that the liquid:solid leachate extract procedure shall follow a ratio of 10:1 as per EN 12457-2:2002, a simple multiplication x10 converts the mg/l or µg/l result to mg/kg or µg/kg result, respectively. This converted data is presented in Table 4 to Table 6. This same data set has been colour coded with comparison to WAC limits values for disposal at the different landfill types. The colour coding key used is given in Table 3.

**Table 3:** Colour coding key

Key
Levels falling within inert limits
Levels falling within non-hazardous landfill limits
Levels falling within hazardous landfill limits
Levels exceeding hazardous landfill limits
Values in red denote levels are < Instrumental LOD

**Table 4:** Leachate Results for Sample TM3

Sample Code	2504176.005/01		
Matrix	TM3	Leaching limit values for waste accep	
Sampling Date	24/01/25	Values obtained from Directive 20	
Location	MIA	Inert Landfill	Non-Hazardous La
As (mg/kg)	0.0142	0.5	2
Ba (mg/kg)	<1	20	100
Cd (mg/kg)	< 0.005	0.04	1
Cr (mg/kg)	<0.05	0.5	10
Cu (mg/kg)	<0.1	2	50
Hg (mg/kg)	0.001	0.01	0.2
Mo (mg/kg)	<0.1	0.5	10
Ni (mg/kg)	0.0544	0.4	10
Pb (mg/kg)	<0.01	0.5	10
Sb (mg/kg)	<0.01	0.06	0.7
Se (mg/kg)	<0.01	0.1	0.5
Zn (mg/kg)	<1	4	50
Chloride (mg/kg)	<250	800	15000
Fluoride (mg/kg)	5.8	10	150
Sulphate (mg/kg)	<250	1000	20000
Total Dissolved Solids (TDS) (mg/kg)	32100	4000	60000
Dissolved Organic Carbon (DOC) (mg/kg)	90	500	800
Phenol Index (mg/kg)	0.104	1	-
pH at T=25°C	8.00		
Electrical Conductivity at T=25°C (µS/cm)	5400		

LODs of chloride and sulphate were raised 10-fold due to a 10-fold dilution that was necessary prior to undertaking the analysis due to the

**Table 5:** Leachate Results for Sample TM4

Sample Code	2504176.006/01		
Matrix	TM4		
Sampling Date	24/01/25		
Location	MIA	Inert Landfill	Non-Hazardous La
Leaching limit values for waste accep			
Values obtained from Directive 20			
As (mg/kg)	0.02	0.5	2
Ba (mg/kg)	<1	20	100
Cd (mg/kg)	< 0.005	0.04	1
Cr (mg/kg)	<0.05	0.5	10
Cu (mg/kg)	<0.1	2	50
Hg (mg/kg)	<0.001	0.01	0.2
Mo (mg/kg)	<0.1	0.5	10
Ni (mg/kg)	0.209	0.4	10
Pb (mg/kg)	<0.01	0.5	10
Sb (mg/kg)	<0.01	0.06	0.7
Se (mg/kg)	<0.01	0.1	0.5
Zn (mg/kg)	<1	4	50
Chloride (mg/kg)	<250	800	15000
Fluoride (mg/kg)	3.9	10	150
Sulphate (mg/kg)	<250	1000	20000
Total Dissolved Solids (TDS) (mg/kg)	28300	4000	60000
Dissolved Organic Carbon (DOC) (mg/kg)	62	500	800
Phenol Index (mg/kg)	<0.1	1	-
pH at T=25°C	8.00		
Electrical Conductivity at T=25°C (µS/cm)	4720		

LODs of chloride and sulphate were raised 10-fold due to a 10-fold dilution that was necessary prior to undertaking the analysis due to the

**Table 6:** Leachate Results for Sample TM5

Sample Code	2504176.007/01		
Matrix	TM5	Leaching limit values for waste accep	
Sampling Date	24/01/25	Values obtained from Directive 20	
Location	MIA	Inert Landfill	Non-Hazardous La
As (mg/kg)	<0.01	0.5	2
Ba (mg/kg)	<1	20	100
Cd (mg/kg)	< 0.005	0.04	1
Cr (mg/kg)	<0.05	0.5	10
Cu (mg/kg)	<0.1	2	50
Hg (mg/kg)	<0.001	0.01	0.2
Mo (mg/kg)	<0.1	0.5	10
Ni (mg/kg)	0.0182	0.4	10
Pb (mg/kg)	<0.01	0.5	10
Sb (mg/kg)	<0.01	0.06	0.7
Se (mg/kg)	0.0122	0.1	0.5
Zn (mg/kg)	<1	4	50
Chloride (mg/kg)	<250	800	15000
Fluoride (mg/kg)	4.8	10	150
Sulphate (mg/kg)	<250	1000	20000
Total Dissolved Solids (TDS) (mg/kg)	29400	4000	60000
Dissolved Organic Carbon (DOC) (mg/kg)	59.8	500	800
Phenol Index (mg/kg)	<0.1	1	-
pH at T=25°C	8.00		
Electrical Conductivity at T=25°C (µS/cm)	4800		

LODs of chloride and sulphate were raised 10-fold due to a 10-fold dilution that was necessary prior to undertaking the analysis due to the

The leachate analysis results of the three concrete samples returned levels of TDS which exceeded the limit stipulated for waste acceptable at an inert landfill, but did not exceed the limit stipulated for waste acceptable at a non-hazardous landfill. This does not come as a surprise since concrete is composed of metal oxides and hydroxides, a portion of which readily dissolves in water.

**Conclusion**

The leachate analysis results showed that TDS levels of the three concrete blocks were rather high, exceeding the limit for inert landfills, though not the limit for non-hazardous landfills. However, high TDS is expected when performing a leachate test on concrete. Levels of all other parameters fell below respective inert landfill limit values.

**Report Revision History**

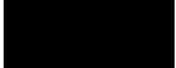
A revision history is present in Table 7.

**Table 7: Report Revision History**

Version N°	Date Issued	Status
1	10 April 2025	Superseded
2	24 April 2025	Current

**Report issued on:** 24 April 2025      **Name of Consultant:** Dr. Robert Cortis  
 B.Sc. (Hons.) M.Sc. Ph.D. MRSC

© **Disclaimer:** This report is a strictly confidential document and may only be viewed by:  
 -Authorised representatives of the abovementioned Client & Project Site  
 -Authorised representatives of the Competent Authorities  
 Distribution to other parties is strictly prohibited, unless by mutual consent of the Author and of the abovementioned authorised representatives.

**Signed:** 





## Annex 4 – NULL





## **Annex 5 - Laboratory Certificates**



TEST REPORT N°: 2504176.005/01 ON

SAMPLE N°: 2504176.001

Dr. Robert Cortis

7, Little Danny F1.2 - Dun Xand Cortis Street  
1852-1917 Birkirkara - Malta

This Test Report cancel and replace the Test Report N° 2504176.001/ITA

**DATA SAMPLE**

Transport made by: Courier

Reception date: 18/02/2025 - Reception hour: 12:00:00

Login date: 18/02/2025

**DATA SUBMITTED BY CUSTOMER**

Sample description: Soil - ID Sample: 10758 TM 3

Sampling place: MIA - Malta International Airport

Sampling made by: customer

Sampling date: 24/01/2025

2504176.005/01

**ANALYTICAL RESULTS**

Analyses start date: 18/02/2025

Parameter Method	UM	Result	Uncertainty	Note
Tests performed on eluate in deionized water:				
Arsenic UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.00142		
Barium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		
Cadmium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000500		
Total chromium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00500		
Copper UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Mercury UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.000100		
Molybdenum UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Nickel UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.00544		
Lead UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Antimony UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Selenium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Zinc UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		

## FOLLOWING TEST REPORT N° 2504176.005/01 ON

This Test Report cancel and replace the Test Report N° 2504176.001/ITA

## ANALYTICAL RESULTS

Parameter Method	UM	Result	Uncertainty	Note
Chlorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l Cl	< 25.0		
Fluorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l	0.580	±0.071	
Sulphates UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l SO4	< 25.0		
TDS UNI EN 12457-2:2004, APAT CNR IRSA 2090 A Man 29 2003	mg/l	3210	±340	
Dissolved Organic Carbon (DOC) UNI EN 12457-2:2004 + UNI EN 1484:1999	mg/l	9.00	±2.96	
Phenol Index UNI EN 12457-2:2004, UNI EN ISO 14402:2004	mg/l	0.0104	±0.0021	
Information about eluation test: UNI EN 12457-2:2004				321
Conductivity at the end of the elution test brought back to the temperature of 25°C UNI EN 12457-2:2004, UNI EN 27888:1995	µS/cm	5400		
pH at the end of the elution test UNI EN 12457-2:2004 + APAT CNR IRSA 2060 Man 29 2003	pH units	8.00		
Ratio of moisture content MC UNI EN 12457-2:2004	%	3.0		
Mass of the laboratory sample UNI EN 12457-2:2004	Kg	1.9		
Sample portion start drying date UNI EN 12457-2:2004		26/03/2025		
Raw mass of the sample to be tested for elution UNI EN 12457-2:2004	Kg	0.093		
Leaching agent volume added for extraction UNI EN 12457-2:2004	l	0.897		
Elution test start date UNI EN 12457-2:2004		28/03/2025		
Elution test end date UNI EN 12457-2:2004		29/03/2025		
Eluate temperature UNI EN 12457-2:2004 + UNI 10500:1996	°C	21.5		

Analyses end date: 04/04/2025

**FOLLOWING TEST REPORT N° 2504176.005/01 ON****This Test Report cancel and replace the Test Report N° 2504176.001/ITA****Parameter's Notes**

**321**: The preparation of the test portions of the sample was carried out as required by the UNI EN 15002:2015 standard. The granulometric reduction was carried out manually with a mortar. The subsequent homogenization phase was carried out in accordance with the sequence of operations (flow sheet) on page 11 of the technical standard UNI EN 15002:2015. Elution test performed in a 1 litre polyethylene container using a tilting mixing device (10 rpm). Liquid-solid separation by vacuum filtration with a cellulose nitrate filter (0.45 µm).

In the conformity assessment formulation, when a decision rule is not explicitly defined in the applicable legislation or technical standards, the laboratory considers a sample NON-CONFORMING when the obtained result, if necessary rounded to the number of decimal places defined for the legal limit, exceeds the maximum allowed limit without accounting for the contribution of the expanded uncertainty measurement. The risk level of making an incorrect conformity assessment is 50% ( $R_{\text{rounded}} > ML$ , where:  $R$  = result,  $ML$  = maximum allowed limit).

The storage/archiving times of the sample are stated in the quality document "Condizioni generali di fornitura" (Mod PG 42/02), available for download in its updated version from the company's website [www.biochemielab.it](http://www.biochemielab.it).

For the expanded uncertainty calculation of a summation, the laboratory considers the algebraic sum of the expanded uncertainties of the summation individual components. Unless otherwise specified, summations are calculated using the lower bound (L.B.) criterion. When the medium bound (M.B.) criterion is used, for values below the limit of quantification (LOQ) — conventionally considered in the sum as ½ of the LOQ itself, an expanded uncertainty equal to 100% of that value is assigned. Similarly, when the upper bound (U.B.) criterion is used, for values below the limit of quantification (LOQ), conventionally considered in the sum as equal to the LOQ, an expanded uncertainty equal to 100% of that value is assigned.

Uncertainty is expressed with the same unit of measure of the referred analysis. Cover factor is  $k=2$  with 95% probability. For microbiological tests on aqueous matrices, including Most Probable Number (MPN) techniques, and for ecotoxicological tests, the uncertainty of measurement is expressed as 95% confidence interval. For microbiological tests of the food chain, the reported expanded measurement uncertainty has been estimated in accordance with ISO 19036 and is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%. Combined standard uncertainty has been taken as equal to the intralaboratory reproducibility standard deviation.

In the case of methods that provide for preconcentration or purification phases, where not expressly indicated, recovery is to be understood as falling within the specific acceptability limits provided for by the test method or by current legislation. Unless specifically stated, recovery was not used in the calculations.

Results are referred exclusively to the sample tested in the Laboratory. If sampling is not performed by Biochemie Lab Srl, results are referred just to the sample as received.

The Laboratory declines all responsibility relating to the information provided by the customer and reported in this Test Report.

**Emendment reason:****Correction of analytical set after subsequent interfacing with the customer.**

The determination of some parameters may have been carried out in derogation to the holding times provided by the analysis methods used, stabilising and storing the samples as reported in UNI EN ISO 5667-3:2024, PART 136 - GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS : 01-07-2018, EPA 8315A 1996, APHA 3500-Cr method C and specified in Mod PG 14/36.

Test Report can't be partially reproduced without laboratory's authorisation.

END TEST REPORT N° 2504176.005/01



TEST REPORT N°: 2504176.006/01 ON

SAMPLE N°: 2504176.002

Dr. Robert Cortis

7, Little Danny F1.2 - Dun Xand Cortis Street  
1852-1917 Birkirkara - Malta

This Test Report cancel and replace the Test Report N° 2504176.002/ITA

**DATA SAMPLE**

Transport made by: Courier

Reception date: 18/02/2025 - Reception hour: 12:00:00

Login date: 18/02/2025

**DATA SUBMITTED BY CUSTOMER**

Sample description: Soil - ID Sample: 10759 TM 4

Sampling place: MIA - Malta International Airport

Sampling made by: customer

Sampling date: 24/01/2025

2504176.006/01

**ANALYTICAL RESULTS**

Analyses start date: 18/02/2025

Parameter Method	UM	Result	Uncertainty	Note
Tests performed on eluate in deionized water:				
Arsenic UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.00200		
Barium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		
Cadmium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000500		
Total chromium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00500		
Copper UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Mercury UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000100		
Molybdenum UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Nickel UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.0209		
Lead UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Antimony UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Selenium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Zinc UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		

## FOLLOWING TEST REPORT N° 2504176.006/01 ON

This Test Report cancel and replace the Test Report N° 2504176.002/ITA

## ANALYTICAL RESULTS

Parameter Method	UM	Result	Uncertainty	Note
Chlorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l Cl	< 25.0		
Fluorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l	0.390	±0.048	
Sulphates UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l SO4	< 25.0		
TDS UNI EN 12457-2:2004, APAT CNR IRSA 2090 A Man 29 2003	mg/l	2830	±300	
Dissolved Organic Carbon (DOC) UNI EN 12457-2:2004 + UNI EN 1484:1999	mg/l	6.20	±2.04	
Phenol Index UNI EN 12457-2:2004, UNI EN ISO 14402:2004	mg/l	< 0.0100		
Information about elution test: UNI EN 12457-2:2004				321
Conductivity at the end of the elution test brought back to the temperature of 25°C UNI EN 12457-2:2004, UNI EN 27888:1995	µS/cm	4720		
pH at the end of the elution test UNI EN 12457-2:2004 + APAT CNR IRSA 2060 Man 29 2003	pH units	8.00		
Ratio of moisture content MC UNI EN 12457-2:2004	%	4.3		
Mass of the laboratory sample UNI EN 12457-2:2004	Kg	1.8		
Sample portion start drying date UNI EN 12457-2:2004		26/03/2025		
Raw mass of the sample to be tested for elution UNI EN 12457-2:2004	Kg	0.094		
Leaching agent volume added for extraction UNI EN 12457-2:2004	l	0.896		
Elution test start date UNI EN 12457-2:2004		28/03/2025		
Elution test end date UNI EN 12457-2:2004		29/03/2025		
Eluate temperature UNI EN 12457-2:2004 + UNI 10500:1996	°C	21.5		

Analyses end date: 04/04/2025

**FOLLOWING TEST REPORT N° 2504176.006/01 ON****This Test Report cancel and replace the Test Report N° 2504176.002/ITA****Parameter's Notes**

**321:** The preparation of the test portions of the sample was carried out as required by the UNI EN 15002:2015 standard. The granulometric reduction was carried out manually with a mortar. The subsequent homogenization phase was carried out in accordance with the sequence of operations (flow sheet) on page 11 of the technical standard UNI EN 15002:2015. Elution test performed in a 1 litre polyethylene container using a tilting mixing device (10 rpm). Liquid-solid separation by vacuum filtration with a cellulose nitrate filter (0.45 µm).

In the conformity assessment formulation, when a decision rule is not explicitly defined in the applicable legislation or technical standards, the laboratory considers a sample NON-CONFORMING when the obtained result, if necessary rounded to the number of decimal places defined for the legal limit, exceeds the maximum allowed limit without accounting for the contribution of the expanded uncertainty measurement. The risk level of making an incorrect conformity assessment is 50% ( $R_{\text{rounded}} > ML$ , where: R = result, ML = maximum allowed limit).

The storage/archiving times of the sample are stated in the quality document "Condizioni generali di fornitura" (Mod PG 42/02), available for download in its updated version from the company's website [www.biochemielab.it](http://www.biochemielab.it).

For the expanded uncertainty calculation of a summation, the laboratory considers the algebraic sum of the expanded uncertainties of the summation individual components. Unless otherwise specified, summations are calculated using the lower bound (L.B.) criterion. When the medium bound (M.B.) criterion is used, for values below the limit of quantification (LOQ) — conventionally considered in the sum as ½ of the LOQ itself, an expanded uncertainty equal to 100% of that value is assigned. Similarly, when the upper bound (U.B.) criterion is used, for values below the limit of quantification (LOQ), conventionally considered in the sum as equal to the LOQ, an expanded uncertainty equal to 100% of that value is assigned.

Uncertainty is expressed with the same unit of measure of the referred analysis. Cover factor is  $k=2$  with 95% probability. For microbiological tests on aqueous matrices, including Most Probable Number (MPN) techniques, and for ecotoxicological tests, the uncertainty of measurement is expressed as 95% confidence interval. For microbiological tests of the food chain, the reported expanded measurement uncertainty has been estimated in accordance with ISO 19036 and is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%. Combined standard uncertainty has been taken as equal to the intralaboratory reproducibility standard deviation.

In the case of methods that provide for preconcentration or purification phases, where not expressly indicated, recovery is to be understood as falling within the specific acceptability limits provided for by the test method or by current legislation. Unless specifically stated, recovery was not used in the calculations.

Results are referred exclusively to the sample tested in the Laboratory. If sampling is not performed by Biochemie Lab Srl, results are referred just to the sample as received.

The Laboratory declines all responsibility relating to the information provided by the customer and reported in this Test Report.

**Emendment reason:****Correction of analytical set after subsequent interfacing with the customer.**

The determination of some parameters may have been carried out in derogation to the holding times provided by the analysis methods used, stabilising and storing the samples as reported in UNI EN ISO 5667-3:2024, PART 136 - GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS : 01-07-2018, EPA 8315A 1996, APHA 3500-Cr method C and specified in Mod PG 14/36.

Test Report can't be partially reproduced without laboratory's authorisation.

END TEST REPORT N° 2504176.006/01



TEST REPORT N°: 2504176.007/01 ON

SAMPLE N°: 2504176.003

Dr. Robert Cortis

7, Little Danny F1.2 - Dun Xand Cortis Street  
1852-1917 Birkirkara - Malta

This Test Report cancel and replace the Test Report N° 2504176.003/ITA

**DATA SAMPLE**

Transport made by: Courier

Reception date: 18/02/2025 - Reception hour: 12:00:00

Login date: 18/02/2025

**DATA SUBMITTED BY CUSTOMER**

Sample description: Soil - ID Sample: 10764 TM 5

Sampling place: MIA - Malta International Airport

Sampling made by: customer

Sampling date: 24/01/2025

2504176.007/01

**ANALYTICAL RESULTS**

Analyses start date: 18/02/2025

Parameter Method	UM	Result	Uncertainty	Note
Tests performed on eluate in deionized water:				
Arsenic UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Barium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		
Cadmium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000500		
Total chromium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00500		
Copper UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Mercury UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000100		
Molybdenum UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Nickel UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.00182		
Lead UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Antimony UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Selenium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.00122		
Zinc UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		

FOLLOWING TEST REPORT N° 2504176.007/01 ON

This Test Report cancel and replace the Test Report N° 2504176.003/ITA

## ANALYTICAL RESULTS

Parameter Method	UM	Result	Uncertainty	Note
Chlorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l Cl	< 25.0		
Fluorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l	0.480	±0.059	
Sulphates UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l SO4	< 25.0		
TDS UNI EN 12457-2:2004, APAT CNR IRSA 2090 A Man 29 2003	mg/l	2940	±312	
Dissolved Organic Carbon (DOC) UNI EN 12457-2:2004 + UNI EN 1484:1999	mg/l	5.98	±1.97	
Phenol Index UNI EN 12457-2:2004, UNI EN ISO 14402:2004	mg/l	< 0.0100		
Information about eluation test: UNI EN 12457-2:2004				321
Conductivity at the end of the elution test brought back to the temperature of 25°C UNI EN 12457-2:2004, UNI EN 27888:1995	µS/cm	4800		
pH at the end of the elution test UNI EN 12457-2:2004 + APAT CNR IRSA 2060 Man 29 2003	pH units	8.00		
Ratio of moisture content MC UNI EN 12457-2:2004	%	4.7		
Mass of the laboratory sample UNI EN 12457-2:2004	Kg	1.7		
Sample portion start drying date UNI EN 12457-2:2004		26/03/2025		
Raw mass of the sample to be tested for elution UNI EN 12457-2:2004	Kg	0.094		
Leaching agent volume added for extraction UNI EN 12457-2:2004	l	0.896		
Elution test start date UNI EN 12457-2:2004		28/03/2025		
Elution test end date UNI EN 12457-2:2004		29/03/2025		
Eluate temperature UNI EN 12457-2:2004 + UNI 10500:1996	°C	21.5		

Analyses end date: 04/04/2025

**FOLLOWING TEST REPORT N° 2504176.007/01 ON****This Test Report cancel and replace the Test Report N° 2504176.003/ITA****Parameter's Notes**

**321**: The preparation of the test portions of the sample was carried out as required by the UNI EN 15002:2015 standard. The granulometric reduction was carried out manually with a mortar. The subsequent homogenization phase was carried out in accordance with the sequence of operations (flow sheet) on page 11 of the technical standard UNI EN 15002:2015. Elution test performed in a 1 litre polyethylene container using a tilting mixing device (10 rpm). Liquid-solid separation by vacuum filtration with a cellulose nitrate filter (0.45 µm).

In the conformity assessment formulation, when a decision rule is not explicitly defined in the applicable legislation or technical standards, the laboratory considers a sample NON-CONFORMING when the obtained result, if necessary rounded to the number of decimal places defined for the legal limit, exceeds the maximum allowed limit without accounting for the contribution of the expanded uncertainty measurement. The risk level of making an incorrect conformity assessment is 50% ( $R_{\text{rounded}} > ML$ , where: R = result, ML = maximum allowed limit).

The storage/archiving times of the sample are stated in the quality document "Condizioni generali di fornitura" (Mod PG 42/02), available for download in its updated version from the company's website [www.biochemielab.it](http://www.biochemielab.it).

For the expanded uncertainty calculation of a summation, the laboratory considers the algebraic sum of the expanded uncertainties of the summation individual components. Unless otherwise specified, summations are calculated using the lower bound (L.B.) criterion. When the medium bound (M.B.) criterion is used, for values below the limit of quantification (LOQ) — conventionally considered in the sum as ½ of the LOQ itself, an expanded uncertainty equal to 100% of that value is assigned. Similarly, when the upper bound (U.B.) criterion is used, for values below the limit of quantification (LOQ), conventionally considered in the sum as equal to the LOQ, an expanded uncertainty equal to 100% of that value is assigned.

Uncertainty is expressed with the same unit of measure of the referred analysis. Cover factor is  $k=2$  with 95% probability. For microbiological tests on aqueous matrices, including Most Probable Number (MPN) techniques, and for ecotoxicological tests, the uncertainty of measurement is expressed as 95% confidence interval. For microbiological tests of the food chain, the reported expanded measurement uncertainty has been estimated in accordance with ISO 19036 and is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%. Combined standard uncertainty has been taken as equal to the intralaboratory reproducibility standard deviation.

In the case of methods that provide for preconcentration or purification phases, where not expressly indicated, recovery is to be understood as falling within the specific acceptability limits provided for by the test method or by current legislation. Unless specifically stated, recovery was not used in the calculations.

Results are referred exclusively to the sample tested in the Laboratory. If sampling is not performed by Biochemie Lab Srl, results are referred just to the sample as received.

The Laboratory declines all responsibility relating to the information provided by the customer and reported in this Test Report.

**Emendment reason:****Correction of analytical set after subsequent interfacing with the customer.**

The determination of some parameters may have been carried out in derogation to the holding times provided by the analysis methods used, stabilising and storing the samples as reported in UNI EN ISO 5667-3:2024, PART 136 - GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS : 01-07-2018, EPA 8315A 1996, APHA 3500-Cr method C and specified in Mod PG 14/36.

Test Report can't be partially reproduced without laboratory's authorisation.

END TEST REPORT N° 2504176.007/01



TEST REPORT N°: 2504176.008/01 ON

SAMPLE N°: 2504176.004

Dr. Robert Cortis

7, Little Danny F1.2 - Dun Xand Cortis Street  
1852-1917 Birkirkara - Malta

This Test Report cancel and replace the Test Report N° 2504176.004/ITA

**DATA SAMPLE**

Transport made by: Courier

Reception date: 18/02/2025 - Reception hour: 12:00:00

Login date: 18/02/2025

**DATA SUBMITTED BY CUSTOMER**

Sample description: Soil - ID Sample: Boulders

Sampling place: MIA - Malta International Airport

Sampling made by: customer

Sampling date: 12/02/2025

2504176.008/01

**ANALYTICAL RESULTS**

Analyses start date: 18/02/2025

Parameter Method	UM	Result	Uncertainty	Note
Tests performed on eluate in deionized water:				
Arsenic UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Barium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		
Cadmium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000500		
Total chromium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	0.0140		
Copper UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Mercury UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.000100		
Molybdenum UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.0100		
Nickel UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Lead UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Antimony UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Selenium UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.00100		
Zinc UNI EN 12457-2:2004 + EPA 6020B 2014	mg/l	< 0.100		

## FOLLOWING TEST REPORT N° 2504176.008/01 ON

This Test Report cancel and replace the Test Report N° 2504176.004/ITA

## ANALYTICAL RESULTS

Parameter Method	UM	Result	Uncertainty	Note
Chlorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l Cl	< 2.50		
Fluorides UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l	0.389	±0.048	
Sulphates UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009	mg/l SO4	5.38	±0.63	
TDS UNI EN 12457-2:2004, APAT CNR IRSA 2090 A Man 29 2003	mg/l	< 200		
Dissolved Organic Carbon (DOC) UNI EN 12457-2:2004 + UNI EN 1484:1999	mg/l	< 5.00		
Phenol Index UNI EN 12457-2:2004, UNI EN ISO 14402:2004	mg/l	< 0.0100		
Information about elution test: UNI EN 12457-2:2004				321
Conductivity at the end of the elution test brought back to the temperature of 25°C UNI EN 12457-2:2004, UNI EN 27888:1995	µS/cm	< 147		
pH at the end of the elution test UNI EN 12457-2:2004 + APAT CNR IRSA 2060 Man 29 2003	pH units	8.00		
Ratio of moisture content MC UNI EN 12457-2:2004	%	10.9		
Mass of the laboratory sample UNI EN 12457-2:2004	Kg	1.9		
Sample portion start drying date UNI EN 12457-2:2004		26/03/2025		
Raw mass of the sample to be tested for elution UNI EN 12457-2:2004	Kg	0.100		
Leaching agent volume added for extraction UNI EN 12457-2:2004	l	0.890		
Elution test start date UNI EN 12457-2:2004		28/03/2025		
Elution test end date UNI EN 12457-2:2004		29/03/2025		
Eluate temperature UNI EN 12457-2:2004 + UNI 10500:1996	°C	21.5		

Analyses end date: 04/04/2025

**FOLLOWING TEST REPORT N° 2504176.008/01 ON****This Test Report cancel and replace the Test Report N° 2504176.004/ITA****Parameter's Notes**

**321:** The preparation of the test portions of the sample was carried out as required by the UNI EN 15002:2015 standard. The granulometric reduction was carried out manually with a mortar. The subsequent homogenization phase was carried out in accordance with the sequence of operations (flow sheet) on page 11 of the technical standard UNI EN 15002:2015. Elution test performed in a 1 litre polyethylene container using a tilting mixing device (10 rpm). Liquid-solid separation by vacuum filtration with a cellulose nitrate filter (0.45 µm).

In the conformity assessment formulation, when a decision rule is not explicitly defined in the applicable legislation or technical standards, the laboratory considers a sample NON-CONFORMING when the obtained result, if necessary rounded to the number of decimal places defined for the legal limit, exceeds the maximum allowed limit without accounting for the contribution of the expanded uncertainty measurement. The risk level of making an incorrect conformity assessment is 50% ( $R_{\text{rounded}} > ML$ , where: R = result, ML = maximum allowed limit).

The storage/archiving times of the sample are stated in the quality document "Condizioni generali di fornitura" (Mod PG 42/02), available for download in its updated version from the company's website [www.biochemielab.it](http://www.biochemielab.it).

For the expanded uncertainty calculation of a summation, the laboratory considers the algebraic sum of the expanded uncertainties of the summation individual components. Unless otherwise specified, summations are calculated using the lower bound (L.B.) criterion. When the medium bound (M.B.) criterion is used, for values below the limit of quantification (LOQ) — conventionally considered in the sum as ½ of the LOQ itself, an expanded uncertainty equal to 100% of that value is assigned. Similarly, when the upper bound (U.B.) criterion is used, for values below the limit of quantification (LOQ), conventionally considered in the sum as equal to the LOQ, an expanded uncertainty equal to 100% of that value is assigned.

Uncertainty is expressed with the same unit of measure of the referred analysis. Cover factor is  $k=2$  with 95% probability. For microbiological tests on aqueous matrices, including Most Probable Number (MPN) techniques, and for ecotoxicological tests, the uncertainty of measurement is expressed as 95% confidence interval. For microbiological tests of the food chain, the reported expanded measurement uncertainty has been estimated in accordance with ISO 19036 and is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%. Combined standard uncertainty has been taken as equal to the intralaboratory reproducibility standard deviation.

In the case of methods that provide for preconcentration or purification phases, where not expressly indicated, recovery is to be understood as falling within the specific acceptability limits provided for by the test method or by current legislation. Unless specifically stated, recovery was not used in the calculations.

Results are referred exclusively to the sample tested in the Laboratory. If sampling is not performed by Biochemie Lab Srl, results are referred just to the sample as received.

The Laboratory declines all responsibility relating to the information provided by the customer and reported in this Test Report.

**Emendment reason:****Correction of analytical set after subsequent interfacing with the customer.**

The determination of some parameters may have been carried out in derogation to the holding times provided by the analysis methods used, stabilising and storing the samples as reported in UNI EN ISO 5667-3:2024, PART 136 - GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS : 01-07-2018, EPA 8315A 1996, APHA 3500-Cr method C and specified in Mod PG 14/36.

Test Report can't be partially reproduced without laboratory's authorisation.

END TEST REPORT N° 2504176.008/01



## **Annex 6 - APARK-MLT Ltd. Method Statement – Batching & Placing of C15 Concrete (Rev R1)**



APARK-MLT LTD.

**METHOD STATEMENT FOR THE  
BATCHING AND PLACING OF C15  
CONCRETE USING CONTAMINATED  
MATERIAL**

## APARK-MLT LTD.

### INTRODUCTION

This Method Statement has been prepared by APARK-MLT Ltd. to provide a clear Works Methodology of how the batching process of contaminated material will be organized and implemented in line with requirements provided by MIA. The methodology will also extend to the placing of the resultant C15 concrete as a sub-base layer for concrete apron slabs.

### CONTROL OF THE BATCHING AND PLACEMENT PROCESS

Key to the successful implementation of this project will be a strong site presence from the site management team assigned by the Contractor. This team will work in conjunction with the Client and its representatives to ensure the smooth running of the project.

The Contractor has nominated persons competent in their respective fields and, together with support staff, possess an extensive knowledge and experience of projects of a similar nature and will be responsible for:

1. The day-to-day implementation and supervision of the works;
2. Regular meetings with the Client and its representatives to discuss operations and the progress of work;
3. Meetings necessary with the relevant Authorities involved in the project;
4. The procurement of all plant, labour and material needed for the works;
5. The GPP requirements of the project;
6. The Health and Safety aspect, including enforcement on site;
7. Traffic Management;
8. Site Traffic Safety and Control;
9. Environmental considerations on site.

## APARK-MLT LTD.

### **PRACTICES TO BE IMPLEMENTED TO MINIMISE ENVIRONMENTAL IMPACT**

#### **Environmental Policy Statement**

APARK-MLT Ltd. recognizes that its activities have an impact on the environment and is committed to improve its environmental performance and minimize the harmful effects through environmental policies and effective management.

APARK-MLT Ltd. accepts and acknowledges its obligations and responsibilities under legislation and guidance dealing with environmental issues that affect or arise because of its business.

APARK-MLT Ltd. will apply the methodology of its Environmental Management System to identify and determine the environmental issues requiring attention and implement appropriate measures to achieve improvement.

During the execution of all contracts, APARK-MLT Ltd. is committed to reach the following environmental objectives:

Environmental awareness amongst those working for or on behalf of the company, providing training as necessary and encouraging subcontractors and suppliers to adopt sound environmental practices.

The considerate use of land undergoing development having special regard to archaeology finds and the storage, treatment, and disposal of any waste, hazardous or potentially toxic materials to avoid environmental harm.

The use and re-use of materials to minimize and curtail creating waste and, whenever practicable, using materials and products from sustainable sources.

Control the emission of pollutants, noise and dirt, and the use of potentially harmful substances and treatments during construction activities.

Conserve energy through sensible selection, use and management of resources, equipment, plant and transport.

The continued development, monitoring and investigation of systems, practices, and procedures at each stage of construction to ensure the environment remains a foremost consideration.

Monitor energy consumption on a regular basis and implement appropriate energy reduction and efficiency improvement programs.

Establish objectives and targets to secure continual environmental improvements.

Obey all instructions issued by the Client and his representatives in respect to environmental performance of the works procedures, materials, and equipment.

## APARK-MLT LTD.

### **WORK METHOD STATEMENT FOR BATCHING OF C15 CONCRETE USING CONTAMINATED MATERIAL**

#### **Outline Methodology for the batching of C15 Concrete using Contaminated Material**

The methodology for processing of contaminated material, more specifically crushing of the said material, is covered by a separate Method Statement. After processing, the material will be stockpiled with the configuration shown in Attachment 4 and the area will be physically segregated by means of concrete blocks to restrict access to it only to the wheel shovel. Non-contaminated aggregates will be brought to site, already mixed in the proportions required by the C15 Design Mix being presented in Attachment 1. The specific Mix Design that will be used for this purpose will be that indicated as Batch No. 10342 (using 40% contaminated material) in the same Attachment 1. The pre-mixed non-contaminated aggregate serves the purpose of minimising on space on site (avoiding multiple stockpiles for various sizes of aggregate) and reducing dust emissions on site during the mixing process. In essence therefore, the non-contaminated material will be transported to site using concrete mixers or trucks using the shortest route to site and placed outside the segregated area, or fed directly into the batching plant, thus avoiding trucks accessing the contaminated material area.

The shovel (Model Caterpillar 966M as per attached specifications in Attachment 2) will be used to load the processed crushed contaminated material into the respective hoppers of the batching plant (as per attached specifications in Attachment 3). The arrangement within the site will be as shown in Attachment 4. The operator will ensure accurate loading of each aggregate fraction into the correct batching plant compartments, with due care being taken to minimise spillage and maintaining clean loading areas. If any spillage occurs during the loading of material into the hoppers, it will be immediately swept and placed back into the contaminated material stockpile.

Cement will be loaded from bulk tankers into the batching plant's silo via pneumatic conveying. Once the concrete is batched, concrete trucks will then take the fresh concrete to site for placement. The access routes to be used for the transport of fresh concrete to the works site will be determined in by MIA. It was determined that the stretch of road leading to the batching area (and shown in Attachment 4) will be swept daily by MIA.

## APARK-MLT LTD.

### SPECIFIC DUST MITIGATION MEASURES

*Mitigation Measures that will be taken to limit dust emissions from the batching plant are as follows:*

- **Optimal Feed Rate** – Maintaining a consistent and optimal feed rate will prevent overloading and minimize excessive material agitation, which can contribute to dust generation.
- **Enclosures / Screens** – Where feasible, temporary screens or partial enclosures may be erected to contain dust.
- **Minimizing Drop Heights** – Material will be loaded and discharged onto stockpiles with minimal drop heights to reduce impact and subsequent dust liberation.
- **Regular Maintenance** – The plant and its dust suppression systems will be regularly inspected and maintained to ensure optimal performance.
- **Weather Monitoring** – Operations will be temporarily halted or adjusted during periods of high winds to prevent dust dispersion. It is being determined that suspension of operations will take place at wind forces higher than 4 and where the prevailing wind is blowing in a North Easterly direction.

*Mitigation Measures that will be taken to limit dust emissions from stockpiles are as follows:*

- **Strategic Stockpile Location** – Stockpiles are earmarked for location against the concrete block enclosure of the site, in such a way that the enclosure shields the stockpiles.
- **Minimizing Stockpile Height and Slopes** – Stockpiles will be kept to a height not exceeding the height of the enclosure to ensure that the area exposed to wind is minimized, thus reducing material displacement.
- **Compaction** – Where appropriate, the surface of inactive stockpiles may be lightly compacted to create a crust that reduces dust generation.
- **Covering of Inactive Stockpiles** – Inactive spoil heaps and potentially long-term aggregate stockpiles will be kept covered. This will be done using heavy duty PVC or UV-stabilized tarpaulins or geotextile membranes. These will be kept securely fastened using ropes, sandbags, or other appropriate means to prevent displacement by wind. This method prevents wind erosion, minimizes dust generation, and protects the material from adverse weather conditions, that can lead to runoff.

## APARK-MLT LTD.

### **WORK METHOD STATEMENT FOR THE PLACEMENT OF C15 CONCRETE BACKFILL INCORPORATING RECYCLED AGGREGATE**

As per MIA specific requirements, the placement of C15 concrete backfill incorporating recycled aggregate will be carried out in Section C, Zone 2. The composition of the material will be determined on the approved mix design for the product.

Works shall commence with the levelling and cleaning of the surface on which the C15 concrete is to be cast. The surface would have been exposed after excavation works to reach the appropriate levels are done. Following the levelling and cleaning of the surface, Plate Bearing tests at the frequency determined by contract conditions are carried out, to ensure that an EV2 of 100MN/sq.m. is achieved.

After following the batching of concrete procedure, the concrete is loaded onto concrete delivery trucks and delivered from the on-site batching plant via the route previously agreed to with MIA. The truck shall drive to the location of works and discharge its load accordingly. It is stipulated that a thickness of circa 0.8m of concrete is to be discharged into the designated zone. This depth will be filled in stages.

The concrete will be tested as per quality assurance system required in the tender dossier and according to the respective European Standards. It is to be noted that MIA will be performing independent testing as per ERA indications, and that if the resulting testing protocol indicates failure, the material will be removed. Particular attention will be given to the required surface levels, falls and tolerances. String lines and lasers will be setup to ensure that the correct levels and slopes are obtained.

### **HEALTH, SAFETY AND ENVIRONMENTAL CONSIDERATIONS**

- All personnel involved will be trained on safe operating procedures for the handling of all equipment and materials.
- Appropriate PPE, including dust masks, safety glasses, gloves, and high-visibility clothing will be mandatory.
- Regular site inspections will be conducted to ensure compliance with health, safety and environmental regulations.
- A Risk Assessment will be drawn up, upon approval of this Method Statement.

APARK-MLT LTD.

# ATTACHMENT 1

Design Trial Mixes




**ZRAR  
LIMITED**
**A member of the Bonnici Group**

Address: **Bonnici House, Sardin Street,  
Burmarrad, SPB 6073, Malta.**  
Telephone: **+356 2359 6000, +356 2157 3267**  
Fax: **+356 2157 6511**  
Email: **info@bbg.com.mt**  
Web site: **www.bbg.com.mt**

**FRESH / HARDENED CONCRETE TEST CERTIFICATE**

Chit No. / Cert. Ref.	N.A.	Client
Project	Bonnici Internal - Checks	Client Address
Site Location	Ta' Zuta Ta' Zuta	
Work Location	Trial Mix1 MIA 40% Contaminated Material	Client Phone N.A.
Date of Certificate	2025-11-17	Attn.

**Delivery Note Information**

Concrete Origin	Bonnici Bros	Concrete Dispatch Date and Time	N.A.
Truck No.	N.A.	Weather Conditions (°C, COND)	no weather data
Concrete Grade (N/mm <sup>2</sup> )	N.A.	Sample Date	25. Oct 2025
Quantity (m <sup>3</sup> )	0.000	Additive	None
Max. Agg. Size (mm)	N.A.		

**Sampling /Testing Fresh Concrete EN 12350-1:019 Slump /Testing Fresh Concrete EN 12350-2:019 Specimen /Making & Curing EN 12390-2:019**

Extraction (Chute, Pump tremie)	Mixer	Location of Test	Site	Method of Compaction	Tamping
Sampling Type (Spot or Composite)	Composite	Type of Slump (True/Shear)	True	Date received	25. Oct 2025
Sampling Date, Time	25. Oct 2025, 11:15	Measure True Slump (mm)	N.A.	Storage Cond. onsite	Covered
Technician (Sampling)	Thankappan Naveen	Concrete Temperature (°C)	24.7	Specimen making time	11:17
Deviation	None	Time	N.A.	Curing after demoulding	Yes
		Technician (Slump)	Thankappan Naveen	Technician (Cube)	Thankappan Naveen
		Deviation	None	Deviation	None

**Testing Hardened Concrete Compressive Strength of Test Specimens / EN 12390-3:019**

Cube Reference	C25/62628	C25/62629	C25/62630	C25/62631	C25/62632	C25/62633
Date Tested	3	3	7	7	28	28
Age of Test in Days	2025-10-28	2025-10-28	2025-11-01	2025-11-01		
Condition Received	Moist	Moist	Moist	Moist		
Method of Curing	Curing in water at 20°C (±2°C)	Curing in water at 20°C (±2°C)	Curing in water at 20°C (±2°C)	Curing in water at 20°C (±2°C)		
Sample condition at time of test	Saturated Surface Dry	Saturated Surface Dry	Saturated Surface Dry	Saturated Surface Dry		
Dimension (Height) (mm)	150	150	150	150		
Dimension (Width) (mm)	150	150	150	150		
Dimension (Breadth) (mm)	150	150	150	150		
Weight in air (g)	6516	6530	6693	6635		
Density by Measurement (kg/m <sup>3</sup> )	1931	1935	1983	1966		
Failure Load (kN)	257	260	312	317		
Compressive Strength (N/mm <sup>2</sup> )	11.4	11.6	13.9	14.1		
Type of Failure	Normal	Normal	Normal	Normal		
Technician (Cube Crushing)	Sharafali Chakkungal Jabbar	Sharafali Chakkungal Jabbar	Thankappan Naveen	Thankappan Naveen		


**ZRAR  
LIMITED**
**A member of the Bonnici Group**

Address: **Bonnici House, Sardin Street,  
Burmarrad, SPB 6073, Malta.**  
Telephone: **+356 2359 6000, +356 2157 3267**  
Fax: **+356 2157 6511**  
Email: **info@bbg.com.mt**  
Web site: **www.bbg.com.mt**

**FRESH / HARDENED CONCRETE TEST CERTIFICATE**

Chit No. / Cert. Ref.	N.A.	Client	
Project	Bonnici Internal - Checks	Client Address	
Site Location	Ta' Zuta Ta' Zuta	Client Phone	N.A.
Work Location	Trial Mix1 MIA 40% Contaminated Material	Attn.	
Date of Certificate	2025-11-17		

**Delivery Note Information**

Concrete Origin	Bonnici Bros	Concrete Dispatch Date and Time	N.A.
Truck No.	N.A.	Weather Conditions (°C, COND)	no weather data
Concrete Grade (N/mm <sup>2</sup> )	N.A.	Sample Date	25. Oct 2025
Quantity (m <sup>3</sup> )	0.000	Additive	None
Max. Agg. Size (mm)	N.A.		

**Sampling /Testing Fresh Concrete EN 12350-1:019 Slump /Testing Fresh Concrete EN 12350-2:019 Specimen /Making & Curing EN 12390-2:019**

Extraction (Chute, Pump tremie)	Mixer	Location of Test	Site	Method of Compaction	Tamping
Sampling Type (Spot or Composite)	Composite	Type of Slump (True/Shear)	True	Date received	25. Oct 2025
Sampling Date, Time	25. Oct 2025, 11:15	Measure True Slump (mm)	N.A.	Storage Cond. onsite	Covered
Technician (Sampling)	Thankappan Naveen	Concrete Temperature (°C)	24.7	Specimen making time	11:17
Deviation	None	Time	N.A.	Curing after demoulding	Yes
		Technician (Slump)	Thankappan Naveen	Technician (Cube)	Thankappan Naveen
		Deviation	None	Deviation	None

**Testing Hardened Concrete Compressive Strength of Test Specimens / EN 12390-3:019**

Cube Reference	C25/62634	0	0	0	0	0
Date Tested	28	0	0	0	0	0
Age of Test in Days		0	0	0	0	0
Condition Received		0	0	0	0	0
Method of Curing		0	0	0	0	0
Sample condition at time of test		0	0	0	0	0
Dimension (Height) (mm)		0	0	0	0	0
Dimension (Width) (mm)		0	0	0	0	0
Dimension (Breadth) (mm)		0	0	0	0	0
Weight in air (g)		0	0	0	0	0
Density by Measurement (kg/m <sup>3</sup> )		0	0	0	0	0
Failure Load (kN)		0	0	0	0	0
Compressive Strength (N/mm <sup>2</sup> )		0	0	0	0	0
Type of Failure		0	0	0	0	0
Technician (Cube Crushing)		0	0	0	0	0

EN 12390-1:2009 states that the first and last parts of a batch should be ignored when sampling. Consequently the sample taken from this batch of concrete could potentiall; non-representative due to insufficient concrete quantity./n

Additional Comments: N.A.

Deviation from Standard: N.A.

**Bonello James**  
Technician - Laboratory



**ZRRAR  
LIMITED**

A member of the Bonnici Group

Address: **Bonnici House, Sardin Street,  
Burmarrad, SPB 6073, Malta.**  
Telephone: **+356 2359 6000, +356 2157 3267**  
Fax: **+356 2157 6511**  
Email: **info@bbg.com.mt**  
Web site: **www.bbg.com.mt**

MIX 6							
	%	Kg	1m <sup>3</sup> kg				
Local Washed sand	11	6.6	211	7days	7days	28day	28days
Local Washed 4/8	8	4.8	154				
Local Washed 8/16	19	11.4	365				
Local Washed 16/22	7	4.2	134				
<b>Contaminated MIA Material Delivered on 22/10/2025</b>							
Cement	40	24	768				
Total Water	15	9	288				
<b>Total</b>	<b>100</b>	<b>60</b>	<b>2106</b>				
Batch ID	12799						



APARK-MLT LTD.

# ATTACHMENT 2

SHOVEL SPECIFICATIONS

[Home \(/cmms/v2?&lid=en&sc=US&nc=1\)](#) / [Equipment \(/cmms/v2?&f=class&it=group&cid=406&lid=en&sc=US&gid=406&nc=1\)](#) / [Wheel Loaders \(/cmms/v2?&f=class&it=group&cid=406&lid=en&sc=US&gid=483&nc=1\)](#) / [Medium Wheel Loaders \(/cmms/v2?&f=subfamily&it=group&cid=406&lid=en&sc=US&gid=325&nc=1\)](#)

# 966M NON-CURRENT

966M - 2017, Tier 4 Final, Stage IV, NACD, EU

- [OVERVIEW](#)
- [SPECIFICATIONS](#)
- [BENEFITS & FEATURES](#)
- [EQUIPMENT](#)
- [RELATED PRODUCTS](#)
- [VIEW 360](#)

## Specifications

### Engine

Net Power - ISO 9249

#### Emissions

Maximum Net Power - 1,700 rpm - SAE J1349

Maximum Power - 1,800 rpm - SAE J1995 - Metric

Maximum Net Power - 1,700 rpm - SAE J1349 - Metric

Peak Gross Torque - 1,200 rpm - SAE J1995

Maximum Power - 1,800 rpm - ISO 14396 - Metric

#### Displacement

Maximum Power - 1,800 rpm - ISO 14396

Peak Gross Torque - 1,200 rpm - ISO 14396

Maximum Power - 1,800 rpm - SAE J1995

#### Engine Model

Maximum Net Torque - 1,000 rpm

Maximum Net Power - 1,700 rpm - ISO 9249 - Metric

Maximum Net Power - 1,700 rpm - ISO 9249

Note

The air conditioning system on this m  
R134a (Global Warming Potential = 14

**Weights**

Operating Weight

Note

Weight based on a machine configur  
operator, standard counterweight, cold st  
axles (front/rear), power train guard, sec

**Buckets**

Bucket Capacities

**Operating Specifications**

Static Tipping Load - Full 37° Turn - With Tire Deflection

Static Tipping Load - Full 37° Turn - No Tire Deflection

Breakout Force

Note (2)

Full compliance to ISO 143971:2007

Note (1)

**Transmission**

Forward - 1

Forward - 3

Reverse - 2

Forward - 4

Reverse - 4

Forward - 2

Reverse - 3

Reverse - 1

Note

Maximum travel speed in standard ve

### Hydraulic System

Implement System - Maximum Operating Pressure

Hydraulic Cycle Time - Total

Implement System - Maximum Pump Output at 2,200 rpm

Implement Pump Type

### Service Refill Capacities

Fuel Tank

Differential - Final Drives - Front

Crankcase

Transmission

Differential - Final Drives - Rear

Hydraulic Tank

DEF Tank

Cooling System

### Sound

With Cooling Fan Speed at Maximum Value - Operator Sound Pressure Level (ISO 6396:2008)

With Cooling Fan Speed at Maximum Value - Exterior Sound Pressure Level (SAE J88:2013)

With Cooling Fan Speed at Maximum Value - Exterior Sound Power Level (ISO 6395:2008)

With Cooling Fan Speed at 70% of Maximum Value - Operator Sound Pressure Level (ISO 6396:2008)\*\*

Note (3)

\*\*\*Europear

With Cooling Fan Speed at 70% of Maximum Value - Exterior Sound Power Level (ISO 6395:2008)\*\*

Note (1)

\*Diste

Note (2)

\*\*For machines in European Uni

**Dimensions - High Lift**

Tread Width

Hinge Pin Height at Maximum Lift

Hinge Pin Height at Carry

Ground Clearance

Overall Length - Without Bucket

Height - Top of ROPS

Lift Arm Clearance at Maximum Lift

Centerline of Rear Axle to Edge of Counterweight

Rack Back at Ground

Height - Top of Hood

Centerline of Rear Axle to Hitch

Note

All

Height - Top of Exhaust Pipe

Maximum Width over Tires

Wheel Base

Rack Back - Maximum Lift

Rack Back - Carry Height

**Dimensions - Standard Lift**

Hinge Pin Height at Maximum Lift

Ground Clearance

Centerline of Rear Axle to Hitch

Lift Arm Clearance at Maximum Lift

Height - Top of ROPS

Height - Top of Exhaust Pipe

Rack Back - Maximum Lift

Wheel Base

Tread Width

Note

Hinge Pin Height at Carry

Centerline of Rear Axle to Edge of Counterweight

Overall Length - Without Bucket

Height - Top of Hood

Maximum Width over Tires

Rack Back at Ground

Rack Back - Carry Height

**Bucket Capacities**

Bucket Range

**Engine - Tier 4 Final/Stage IV**

Emissions

APARK-MLT LTD.

# ATTACHMENT 3

BATCHING PLANT SPECIFICATIONS



Dear:  
**BONNICI BROS Ltd**  
 SARDINE STREET,  
 BURMARRAD SP B08 (MALTA)  
 VAT N.

EUROMECC SRL  
 SS 192 Km 79 CT-EN  
 95045 - Misterbianco (CT) - ITALIA  
 Cod.Fiscale e P.Iva: 02671040877  
 C.C.I.A.A. CATANIA 177826

## Specifications N. 0079/25

THIS DOCUMENT CONSISTS OF ABOUT # 12 PAGES.

### MOBIL FAST 2 MIX-MC

**AA mobile plant - storage 30/39 m<sup>3</sup> real geometric volume - suitable for seismic zone with maximum PGA  
 D,20g - Cement control through loading cells - continuous mixer 150 m<sup>3</sup>/h - FULLY GALVANISED**

Q.ty :1

**PRODUCTION: 150 m<sup>3</sup>/h (maximum aggregates' size: 35 mm)**

**AGGREGATE BINS STORAGE: EFFECTIVE GEOMETRIC VOLUME 30 m<sup>3</sup>**

**AGGREGATE LOADING: SUITABLE FOR MECHANICAL SHOVEL**

Frame length 11800 mm, suitable for transport on deck truck of 13600 mm or in 20-40 feet open top container

**AGGREGATE STORAGE BINS:**

**N°2 compartments (length 3.450 x 4.400 mm each)**

**N°2 gates complete with n°2 electro-vibrators**

**CEMENT DRIVING FORCE:**

Cement driving force with geometric capacity 1 m<sup>3</sup>, complete with n°1 electric vibrator, plate-type fluidification system,

**N.1 rotary valve** with capacity adjustment. Variable-displacement through inverter. Range of loading output 3-12 m<sup>3</sup>/h. Magnetic sensor to control the rotary valve gears.

**Weighing control system** with n° 3 load cells up 500 kg each, end scale 1.000 kg and level indicator with rotary paddle. Digital Display with two automatic stops at the reaching of minimum and maximum threshold.

**WATER BATCHING:**

With pulse emission 2", sphere valve with electropneumatic closing, diaphragm fluxmeter, and valve with electropneumatic closing, servo-motor operated pressure control valve and piping 2". Highest capacity 15 m<sup>3</sup>/h. Digital display relative pipeline (water pump excluded).

Manual pressure reducer from 600 l / min to 250 l / min, for flow control through the valve.

**EXTRACTOR BELTS:**

**N. 2 extractor belts** with manual motor speed variator. Three-phase electric motor 3 kW, servo-ventilated.

Variable-displacement extraction through inverter. Range of loading output 10-120 m<sup>3</sup>/h for each belt.

Length 1.250 mm each of them and width sheet 800 mm each of them, class 315, with lateral pleated

rubber bands. Magnetic sensors to control the gears of the belt. Total belts' capacity (range) should be less or at least equal to the nominal range of the mixer.

**HORIZONTAL NECK CONVEYOR BELT - CONNECTING BINS TO MIXER:**

Capacity 180 m<sup>3</sup>/h - Sheet length 8.000 mm and width 800 mm – class 315 – th. mm 4+2; 3 sheet (total th. 9 mm)

Self-lubricating rollers arranged like a tern (diameter 89 mm)

Driving roller diameter 420 mm covered with anti-slip rubber

Three-phase electric motor 5,5 kW – orthogonal gear box

Galvanized safety barrier.

Safety system with emergency cable and manual reactivation.

**INCLINATED BELT FROM MIXER TO LOAD POINT:**

Capacity 180 m<sup>3</sup>/h - Sheet length 14.000 mm and width 800 mm – class 315 – th. mm 4+2; 3 sheet (total th. 9 mm)

Self-lubricating rollers arranged like a tern (diameter 89 mm)

Driving roller diameter 420 mm covered with anti-slip rubber

Three-phase electric motor 7,5 kW – orthogonal gear box

Safety system with emergency cable and protection screening.

**SCREW CONVEYOR:**

Capacity 30 m<sup>3</sup>/h. Exterior diameter 193 mm, changeable spiral step and three-phase motor. Length: nearly 3500 mm each.

Continuous mixer with horizontal axis MEC 150, with the following features:

- Theoretical hourly productivity at forced regime 150 m<sup>3</sup>/h
- Maximum grain size of the material to be treated: 35 mm
- OMEGA-shaped tank in steel sheet
- Cover with upper part equipped with inspection doors, with coded magnetic limit switches to interrupt the operation of the mixer or prevent it from starting when the inspection door is open
- Tank bottom and side walls covered with Hardox® 450 steel tiles th.10 mm
- Mixing arms screwed onto the shafts
- n. 36 mixing blades in chromium alloy CRA2 of 750 Hb th. 25 mm
- n. 4 scraping blades in chromium alloy CRA2 of 750 Hb th. 25 mm
- N. 1 motor of 22 kW (Hp 30)
- Operating voltage: 380V, 50Hz (other voltages available on request)
- Equipped with n. 1 unloading outlet, opposite to the upper loading port.

**CONTROL PANEL:**

Electromechanical panel of power and control for the management of the cement mixture mobile plant.

Star/delta starter for continuous mixer inside the control board on the side plant. Protection degree IP 55, silk-screen printed synoptic control panel provided with selectors, push buttons and warning lights.

Disconnecting switch with fuses.

Electronic module to protect auxiliary circuits, magnetothermic protection. Voltage indicator into panel.

Acoustic indicator to inform of belts start.

Emergency push button and manual reactivation. Auxiliar circuits start with key. Ammeter and Voltmeter.

Terminal board to link cables. All components used are Telemecanique.

Feeding voltage 400V.

The panel is provided with: complete electric plans, terminal board linking schemes, statement of compliance with Directives 2006/42/CE – 2006/95/CE – 2004/108/CE and following mod.

**PNEUMATIC PLANT:**

Compressor with tank I 270

F.R.L Group (Filter, pressure Regulator and Lubricator)

**THICKNESSES:**

Sidepanels – Separators - Aggregate cones **4 mm**.

Reinforcements applied on the points subject to higher wear and solicitations **8/12 mm**

**FINISHING:**

The plant is completely galvanized except the cement weighing hopper, mixer and concrete conveyor that will be painted according to the following cycle:

Preparation: P1 preparation degree, according to the ISO 8501 standard.

Painting: a two component, high build, acrylic polyurethane semi gloss primer/finish , containing zinc phosphate anticorrosive pigmentation. Medium thickness 160  $\mu\text{m}$ .

Completion accessories painted, according to the cycle described below, unless there are different specifications on the single item.

**ADDITIONAL INFORMATION:**

**Set of signs to inform about and to prevent possible accidents.**

Electrical installation in frame border with shunt box and galvanized raceway.

**PLEASE NOTE:**

The conditions assumed for the design of each component:

- Ground type: type B, medium consistency soil, average shear waves velocity in the top 30 m: between 360 m/s and 800 m/s,  $N_{SPT} > 50$  blows / 30 cm in coarsed-grained ground and  $C_{u,30} > 250$  kPa in fine-grained grounds (Eurocode 8);

- Seismic action: peak value of assumed horizontal acceleration of the elastic response spectrum for the lifesaving ultimate limit state:  $a_g/g = 0,20$ .

For further environmental design conditions, please refer to the proper section of the estimate "General Design Specifications".

**AB STORAGE CAPACITY INCREASE - FROM 30-39 m<sup>3</sup> TO 45-54 m<sup>3</sup> WITH AN ADDITIONAL 500 mm SIDE LEVEL FOR FAST 2 MIX PLANTS**

Q.ty :1

Increase of the storage capacity from 30 m<sup>3</sup> real geometric volume (39 m<sup>3</sup> at full capacity), to 45 m<sup>3</sup> (54 m<sup>3</sup> at full capacity) with the introduction of a side level with the following features:

Height: ar. 500 mm

Sheet Thickness 4 mm - HOT GALVANIZED

For FAST 2 MIX plants

**AC UPPER COVERING FOR STANDARD INCLINED BELT 14000 mm**

Q.ty :1

Upper covering for STANDARD inclined belt of 14000 mm realized with removable panels with galvanized plate mm 2.

**AD HOPPERTOP FILTER 1 m<sup>2</sup> FILTERING SURFACE for dust exhaustion of cement batching**

Q.ty :1

Euro Hoppertop Filter for dust exhaustion of cement batching with pneumatic washing with following technics features:

Filtering surface: 1 m<sup>2</sup>

Suction hose with polyester (POLYPLEAT)

Washing system with compressed air injected countercurrent, pressure between 5 and 6 bar.

Electric command card with pause-work timer.

Solenoid valves and bobbins outside of filter.  
Filter casing and cover realized with stainless steel.  
Positioned on cement batcher

**AE SETUP FOR THE INSTALLATION OF THE COVERING FOR THE AGGREGATES BINS (COST FOR SINGLE COMPARTMENT)**

Q.ty :1

Setup for the installation of the covering for the aggregates bins. (cost for single compartment).  
Note: Valid only for the installation of the covering designed and realised by the Seller.

**AF SETUP FOR THE INSTALLATION OF SAFETY BARRIERS (COST FOR SINGLE COMPARTMENT)**

Q.ty :2

Setup for the installation of safety barriers (cost for single compartment).

**AG CONTINUOUS WEIGHING SYSTEM to apply on extractor volumetric belt**

Q.ty :2

Weighing roller belt to put on every single extractor belt, made of:

- mechanic structure realized with carbon steel structure, developed according to the belt's dimension;
- two loading cells of C3 class inox calibrated each other;
- two safety carter, a joint box of the cells' signals;
- a group of speedy bearing constituted of encoder, coupling pin of the same to the belt's drum, safety carter and derivation box of the cable;
- output regulation system, to wire to the electric board panel.

**AH EUROFLOW - AUTOMATION FOR CEMENT MIXTURE PLANT PC + PLC - Management up to 4 aggregates - 1 cement - 1 water - 1 mixer - 100 formulas**

Q.ty :1

**THE AUTOMATION SYSTEM KIT INCLUDES:**

- 1 PC: set up, installed and tested by Elettrondata.
- 1 PLC OMRON to control automatically the starting processes, the setting up and the stopping of the I/O modules processes.
- 1 Software pack (ITA-ENG) of the FLOWMIX automation for road bases and mixed type cemented products, equipped with:
  - 1 CD-ROM for the software installation (user manuals included).
  - 1 security key for the software protection.
  - 1 software user license for only 1 installation and a license for SCADA supervisor.
  - 1 electrical scheme with the list of the PLC input/output.
  - 1 PLC software and a PC for the plant management.

**THE BASIC AUTOMATION SYSTEM MANAGES:**

- 4 volumetric extractor belts for aggregates, and speed control by inverter and ED645 continuous weighing system (not included in this product). Weighing triads and encoder are not included in our supply.
- 4 vibrator for aggregate hoppers.
- 1 extractor belt to collect the aggregate extractor belts with revolution control.
- 1 sloped belt for mixer loading with revolution control.
- 1 screw conveyor to fill the cement storage (activation depending on set points installed in the cement storage), min-max level visualisation and fluidication.

- 1 vibrator/fluidication for each cement hopper.
- 1 electrovalve for water batching.
- 1 volumetric pump for water batching controlled by inverter or proportional valve and managed with a 0-10V analog output and fed-back by pulses deriving from a pulse counter.
- 1 water pulse counter (excluded from the supply) with ratio: 1 pulse / 1 litre.
- 1 electrovalve for additives batching.
- 1 volumetric pump for additives batching controlled by inverter or proportional valve and managed with a 0-10V analog output and fed-back by pulses deriving from a pulse counter.
- 1 additives pulse counter (excluded from the supply) with ratio: 1 pulse / 1 litre.
- 1 continuous mixer with:
  - alarm management for motors, adaptors and greasing;
  - mixer high pressure washing management (only remote control for washing device).
- 1 mixer discharging belt with revolution control.
- 1 hopper under the mixer.

**GENERAL FEATURES:**

- At the cycle start-up, it is possible to set either the production time or the quantity to produce, and to stop the cycle with a button. It is possible to set the hourly production (editable even during the cycle).
- The start-button launches the cycle that follows the normal starting sequence until the end, when the cycle stops (empty/break plant).
- If the plant is equipped with material passage sensors and/or the flow rate control, there will be a controlling timer to stop the cycle in case a component of the plant is misses.
- Automatism controlled with a PLC and human-machine with a PC.
- Alarm management.
- Manual control for maintenance.
- Calibration of the extractor belts by using the database information.
- Auto-backup of plant data and settings.
- Management of the restore system.
- Formulas calculated in percentage, flow rate or cubic metres.
- Consumption management.
- Reports of: production, cycles, consumption.
- Reports for: operator, extractor.
- Multilanguage.
- Customizable colours for synoptic.

**AI HARDWARE AND SOFTWARE INTEGRATION OF THE AUTOMATION MANAGEMENT FOR CONTINUOUS WEIGHING**

Q.ty :1

Hardware and software integration of the basic packet for the automation management, for cement mixture plants, for aggregates and cement continuous weighing handling.

**AJ REMOTE TECHNICAL SUPPORT SERVICE FREE OF CHARGE DURING GUARANTEE PERIOD**

Q.ty :1

Remote Technical Support Service (it will be provided without any other added costs during the guarantee period): after receiving a request for remote assistance, our engineers can remotely connect to your PC and view the screen to directly give you assistance.

NB. connection to Internet at expenses of the Buyer company.

**AK UPS (ON-LINE TYPE) Battery life 6/20 minutes**

Q.ty :1

**UPS On-line type**, double conversion, output power 700/490 VA/Watt, input voltage 220V 50Hz, output voltage 220V +/- 2%, sinusoidal wave, time for battery activation 0 ms, automatic bypass for overload, efficiency > 88 %, internal battery without maintenance, battery life 6/20 min, display LCD, visual and sonorous alarm, serial gate RS232 for the linkage to PC, software for management and scheduling.

**AL INSULATED CABIN MAX 3000 mm; windows on 2 sides; panels/walls and roof th. 40 mm**

Q.ty :1

**Insulated signal cabin (RAL 9002)**, measurements max 3000 x 2400 x h. 2300 mm (max. distance 30000 mm from the aggregate bins) having the following features:

Sandwich panels max 40 mm, covering 40 mm + corrugated steel depth

Windows on 2 sides with glasses, made of pre-varnished aluminium sectional, access door incorporating a lock.

Floors of waterproof and linoleum hard-board 20 mm

Electric installation in accordance with law with outlet 220 V and light point

Reinforced hooks to lift

Predisposition for hot/cold conditioner

**AM SILOS MOBILE HORIZONTAL - CAPACITY 42 m<sup>3</sup>**

Q.ty :1

**MOBILE HORIZONTAL SILO - CAPACITY 42 m<sup>3</sup>**

The Mobile Horizontal Silo is designed for the storage and dosing of powder or granular materials, with a capacity of 42 m<sup>3</sup>. Thanks to its mobile structure, the silo can be easily transported by truck or Flat Rack container (by sea), allowing for quick placement and handling. It is equipped with an electronic weighing system that monitors the flow of materials during loading and unloading phases.

**MAIN FEATURES**

Total storage capacity: 42 m<sup>3</sup>

No.6 telescopic lifts for loading, unloading, and positioning the silo

Lifting attachment points on the roof for handling by lifting equipment

**MATERIAL**

No.1 internal loading tube Ø114 mm

No.1 wear-resistant curve for loading tube

Loading tube flange: Ø210-Ø114 mm (12 holes Ø20 mm)

No.1 internal venting tube Ø114 mm

No.1 horizontal screw (capacity: 17 m<sup>3</sup>/h)

No.1 manual butterfly valve at the horizontal auger discharge

No.1 vibration system to facilitate material flow

No.1 safety valve (pressure control) on the roof

No.1 bolted manhole on the roof for internal inspection

No.2 hinged manholes for internal inspection and maintenance

No.2 bolted hatches for maintaining horizontal auger supports

Electrical power supply: Three-phase 400V - 50Hz

Operation and maintenance manual

CE Declaration of Conformity II.1.B (quasi-machines)

Suitable for materials such as: Cement, lime, bentonite, filler, sand (specific accessories required for some materials). The silo's operation with quicklime, especially if crushed, is not guaranteed.

**HORIZONTAL SCREW CONVEYOR 40 m<sup>3</sup>/h**

Upgraded horizontal screw conveyor for discharging silaged materials.

#### MAIN FEATURES

Suitable for cement and similar materials

Capacity: 40 m<sup>3</sup>/h

Nominal auger diameter: Ø273 mm

#### FINISH:

Preparation: P1 preparation degree, according to the ISO 8501 standard.

Painting: a two component, high build, acrylic polyurethane semi gloss primer/finish , containing zinc phosphate anticorrosive pigmentation. Medium thickness 160 µm. Standard colour RAL9002

#### AN BUTTERFLY SAFETY VALVE AND QUICK COUPLING

Q.ty :1

##### BUTTERFLY SAFETY VALVE Ø100 mm (Electric Actuation)

Installed on the loading tube, this valve blocks material flow during the filling phase, ensuring protection against overpressure.

##### FEATURES

Ø100 mm, electric actuation

Manual control panel

Mechanical pressure gauge

##### COUPLING Ø100 mm

Device for quick connection of the loading pipe of supply vehicles, equipped with pins and bayonets for secure fastening.

#### AO MINIMUM LEVEL INDICATOR with rotary paddle

Q.ty :1

Minimum level indicator with rotary paddle (unit cost).

Device to monitor inside any kind of silos. It can be used with granulated dusts with low tendency to build furrings or agglomerates. It is normally used for materials with a density between 0,5 and 2 ton/m<sup>3</sup>. These devices cannot be used with dangerous materials such as explosive, toxic, flammable, harmful and/or similar ones.

The cable gland should be turned to the low side to assure a proper functioning and also to avoid water leakage inside the device.

#### AP MAXIMUM LEVEL INDICATOR with rotary paddle

Q.ty :1

Maximum level indicator with rotary paddle (unit cost).

Device to monitor inside the container and any kind of silos. It can be used with granulated dusts with low tendency to build furrings or agglomerates. It is normally used for materials with a density between 0,5 and 2 ton/m<sup>3</sup>. These devices cannot be used with dangerous materials such as explosive, toxic, flammable, harmful and/or similar ones.

The cable gland should be turned to the low side to assure a proper functioning and also to avoid water leakage inside the device.

#### AQ SILOTOP® ZERO - 14 m<sup>2</sup> installed on the cement silos

Q.ty :1

SILOTOP® ZERO is a circular filter for dust suction of cement silos, realized entirely with AISI 304 ( element's plate excluded) with flanged filter casing to fasten to the silo with a set of 24 bolts.

The POLYPLEAT® unit washing is made by a new shot system of solenoid valves "full immersion" and the shot pipes linked to the tank.

The tank have the following features:

- N° 4 filtering units;
- Compact structure (1100 mm heigth and 800 mm diameter) in stainless steel body with bottom flange;
- Filtering surface 14 m<sup>2</sup>;
- 3 solenoid valves with pneumatic washing;
- Dust emission < 1mg/Nm<sup>3</sup>;
- High filtration efficiency due to EPA-CLASS ABSOLUTE POLYPLEAT® filtering elements

**NOTE:** The Silotop filter is suitable for the silo loading with N° 1 cement truck at the time (no more cement trucks simultaneously)

**AR PRESSURE DIFFERENTIAL MEASURING DEVICE (MDPE) FOR MONITORING THE PRESSURE ON THE SILOTOP ZERO FILTER** Q.ty :1

Differential pressure gauge for monitoring the pressure on the Silotop Zero filter: by setting the two intervention pressure thresholds (minimum and maximum), it is possible to operate the cyclic cleaning of the filter only when actually necessary, thus allowing a certain degree of energy savings. Pre-set values: Activation pressure: 90 mm H<sub>2</sub>O / Deactivation pressure: 40 mm H<sub>2</sub>O.

**AS SCREW Ø 273 mm - LENGTH 4.500 mm – CAPACITY 80 TON/H TO LINK THE SILOS TO THE SILO-HOPPER - COMPLETE OF KNEE JOINT** Q.ty :1

Extractor tubular screw with high efficiency for discontinuous working; Ø 273 mm lenght 4.500 mm with variable pitch spiral, coaxial reduction unit R 1/7 and three-phase motor 7,5 kW (10 Hp). Capacity 80 Ton/h (1° and 2° silos). Complete of knee joint.

**AT AT CUSTOMER'S CHARGES: MONOLITHIC SILO AND ACCESSORIES max. Ø3000 mm** Q.ty :1

Monolithic silo supplied by the Customer, included accessories: parapet on silo roof, ladder, footpath platform for silos connection, safety valve, minimum and maximum level indicators, dust filter, electric and pneumatic plant and all that is not expressly mentioned.

The following are also excluded - unless explicitly offered in the offer: manual opening butterfly valve for silo outlet, tubular extraction screw, fluidization nozzles.

**AU MOVABLE TROLLEY (SKID) ON WHEELS** Q.ty :1

MOVABLE TROLLEY (SKID) realised with a main steel skid and two back wheels. The skid is suitable for handling of the empty unit. It requires a crane for pulling it around.

**AV GENERAL DESIGN SPECIFICATIONS FOR BATCHING PLANTS AND SILOS OF MAXIMUM DIAMETER 3500 mm** Q.ty :1

All the components are designed for the following environmental conditions:

- Soil roughness: flat area with low vegetation, isolated obstacles 20 times the height from the installation site
- Exposition Category II (Eurocode 1);
- Actions on structures:  
snow load: 1.00 kN/m<sup>2</sup>

wind load:  $v = 28 \text{ m/s} - 100 \text{ km/h}$ ;

- Ground type: type B, medium consistency soil, average shear waves velocity in the top 30 m: between 360 m/s and 800 m/s,  $N_{\text{SPT}} > 50$  blows / 30 cm in coarsed-grained ground and  $C_{u,30} > 250$  kPa in fine-grained grounds (Eurocode 8);

- Seismic action: peak value of assumed horizontal acceleration of the elastic response spectrum for the lifesaving ultimate limit state:  $a_{p/g} = 0,20$ ; - Outside air temperature: within  $-5^\circ$  (minimum winter temperature) and  $+40^\circ$  (maximum summer temperature), unless for the supply of insulated claddings on the concrete plants and/or the silos;

- Importance Class: Class I, buildings with occasional presence of people (Eurocode 1).

Steel for structural use: S275 or better quality, hot-rolled profiles, in accordance with the EN 10025 standards.

Alloy steel: S235 or better quality, in accordance with the UNI EN 10025 standards.

Weights and thicknesses detailed in this offer may be subject to changes in execution design stage. In case the aforementioned variations would entail extra-costs, Seller Company is entitled to charge such costs to the Buyer Company.

**AW FINISHING OF PAINTED COMPONENTS STANDARD COLOUR: RAL 9002 (GREY WHITE) / RAL 7015 (SLATE GREY)**

Q.ty : 1

#### FINISHING:

Preparation: Preparation grade P1 (according to ISO 8501)

Painting: a two component, high build, acrylic polyurethane semi gloss primer/finish, containing zinc phosphate anticorrosive pigmentation. Average thickness 160  $\mu\text{m}$ .

#### COLOUR:

For painted components, standard colors used by the Seller are:

- for the mixer (if any): **RAL 7015 (SLATE GREY)**

- for other painted components: **RAL 9002 (GREY WHITE)**, unless otherwise requested by the Purchasing Company.

Possible requests made by the Purchasing Company to apply a different finishing color is to be communicated sufficiently in advance to the Seller, and it will entail extra costs to be quantified.

**Carriage: EX WORKS - LOADED AND CLEARED FOR EXPORT. - 3 TRAILER 13,60 m.**

#### Assembly:

Assistance for erection with a technician of the Seller Company for 10 days (included travel days).

#### At Buyer Company's charge:

- N. 4 mechanical workers;
- N. 1 electromechanical worker;
- Lifting equipment for assembling (cranes and platform);
- Tools for assembling;
- Flight tickets (go/back);
- Meals and Hotel accommodation (European standard);
- Transport of our technician on site;
- Invitation letter for visa.

For any extra day over the days above specified, the Customer must pay 600,00 €/per day.



**The Buyer Company must notify a commissioning timetable at least 20 days prior the request of a technician, so that the Seller Company is able to schedule the intervention and do all the required paperwork.**



**Supplying Conditions** *Integrating part of Specifications 0079/25*

### SUPPLYING CONDITIONS

Exclusions from the supply (at Buyer Company's charge):

1. Executive design, calculations of verification and realization of building works corresponding to our drawings.
2. Metal plates of anchorage, equipment and bolts of foundation (in as of pertinence of the carpentry inherent the building works)
3. Perimeter protections of holes and load ramps
4. Lifting equipment adequate to the unloading and the installing of the plant, and also to the unload of the materials
5. Auxiliary staff suitable to develop jobs of assembly and carpentries (n 2 mechanical technical and n 2 electrical technical for all the necessary time)
6. Complementary equipment to the assembly (electric welder, oxyacetylene group, etc).
7. Water and electric connections in the points requested by us
8. Feeding cable from the transformation box to the power and command panel
9. Canalizations filled in and aerial to the use points by us shown for the passage of electric and water lines
10. Possible canalizations for electric and/or water lines outside the plant
11. Electric plant of putting to earth, box containing differential switch and, if necessary, adequate lightning rod
12. Oils and lubricants
13. Technical aid to the assembly (if not commissioned)
14. Metrical tests relating to the weighing systems and supply of the samples. Such test it will have to be made by personnel authorized by the supplier of the weighing systems.
15. Calculations for complaint to the competent bodies for works in masonry and for works in metal carpentry.
16. I.S.P.E.S.L acceptance for the compressor.
17. Expenses deriving from modifications of the project to the placement (after the acceptance of the itself one).
18. Board and lodging for our technician for all the transfer period.
19. Laboratory tests and / or materials for the purpose of issuing the certification. Testing on instrumentation for the purpose of issue of the certificate of calibration.
20. Euromecc is not responsible for any theft and / or tampering of components already delivered to the site.
21. All as other not expressly shown herein.

**WARRANTY:** Our standard is 12 months from putting into action and however 18 months at most from the delivery date. The responsibility for as it concerns the choice of the yard location and the respect of all the rules of law in assembly or labour matter is of exclusive pertinence of the Buyer. For every possible controversy, the place of lawful jurisdiction is that of Catania.

**VALIDITY:** offer valid until 30/06/2025

**DELIVERY TIME**(*unless anything unexpected happens*): The delivery will start in \_\_\_\_ from the later date between the days of the General Arrangement Drawings and Basic Engineering final approval and the one of the receipt of the earnest money (or of the opening of the LC). The General Arrangement Drawings and Basic Engineering will be sent from the Seller Company to the Purchaser Company by e-mail, within fifteen working days from the receipt of the earnest money.



The Purchaser Company must send a copy of the received General Arrangement Drawings back by e-mail within three working days from the reception, signed and stamped for acceptance. Shall the General Arrangement Drawings and Basic Engineering approval from the Purchaser Company to the Seller Company exceed the above timetable, the delivery will start consequently later of an equal number of days. The present supply conditions, in case of disagreement with the general sales conditions, shall prevail over the latter.

**TERMS OF PAYMENT: tba**

APARK-MLT LTD.

# ATTACHMENT 4

SITE ARRANGEMENT DRAWING

APARK-MLT LTD.



**LEGEND**

1. Batching Plant
2. Stockpile of un-Contaminated Aggregate
3. Line of Concrete Barriers to segregate the contaminated material
4. Stockpile of Contaminated Crushed Material
5. Stretch of Road to be cleaned daily by MIA

## **Annex 7 - RFQ – Consultancy Services for Material Testing and Validation (Apron 9 Works)**



## Request for Quotations (RFQ)

### Consultancy Services for Material Testing and Validation – Apron 9 Stand Rehabilitation Works

#### 1. Background

As part of the Apron 9 Stand Rehabilitation Works, the project scope involves the re-use of recycled material derived from fuel-contaminated excavation waste (classified as non-hazardous and bearing waste code **EWC 17 05 04**). While this material exceeds residential contamination thresholds, it falls within acceptable levels for **industrial use**. The intention is to assess its feasibility as a replacement for **compacted backfill**.

#### 2. Purpose of the Assignment

We are inviting qualified consultants to submit quotations for services to test, analyze, and validate the suitability of the recycled material. This includes:

- Preparation and testing of trial mixes to meet **C15 strength classification**.
- **Leachate testing** to confirm compliance with **ERA (Environmental Regulator Authority)** standards.
- Ongoing production testing and reporting during the **November works phase**.

#### 3. Scope of Services

##### 3.1. Trial Mix and Compressive Strength Testing

- Prepare **trial mix designs** using the recycled material.
- Perform **compressive strength tests** at 3, 7, and 28 days to verify compliance with **C15 concrete strength** class.
- Submit a detailed report confirming technical performance, composition, and suitability for use as compacted backfill.

##### 3.2. Leachate Testing and Environmental Validation

- Conduct **leachate testing** on trial mixes and during production.
- Ensure tests comply with ERA's **Terms of Reference (ToR)** and relevant environmental standards.

#### Sampling and Testing Requirements:

- Test each **distinct stabilized batch**.
- Assign a **unique Batch ID** and document:
  - Source, stabilization inputs, ratios, and treatment method.
- Collect samples under controlled conditions.
- Perform lab testing for:
  - **pH, heavy metals (Pb, Cd, Hg, Cr), hydrocarbons (TPH)**, and other ERA-specified parameters.



- Submit:
  - Accredited lab certificates (ISO 17025 or equivalent).
  - Date of sampling/testing.
  - Tabulated results compared against ERA limits.

#### Reporting:

- Maintain a **traceability log** and include **photographic evidence** of sampling.
- Submit results in **PDF and Excel format**.
- Ensure results are formatted for **ERIS submission** and be available to support discussions or clarifications with ERA.

### 3.3. On-Site Production Testing (November 2025)

#### 1. Daily Batching & Sampling

Each day of production will be treated as a separate batch. Collect and label samples daily with full traceability.

#### 2. Compressive Strength Testing

- Cast and label test cubes daily.
- Submit results according to the following:
  - 3-day results: by Day 4
  - 7-day results: by Day 8
  - 28-day results: by Day 30
- Maintain a **rolling log** of test results.
- Provide **weekly summary reports**.

#### 3. Leachate Testing

- Conduct representative sampling (e.g., 1 per 100–200 m<sup>3</sup> or per ERA ToR).
- Submit samples to lab within 24 hours and preserve under conditions as defined in ERA TOR.
- Lab results due within 7 working days.
- Flag any **non-compliant batches** immediately to the client.

#### 4. Weekly Reporting and Final Submission

- Weekly logs to include:
  - List of batches
  - Compressive strength results
  - Leachate results
  - Traceability documentation
- Submit **final consolidated report** within **10 working days** post-production.



#### 4. Deliverables

The consultant shall provide:

- Detailed **trial mix results report**.
- Lab certificates for **3, 7, and 28-day** compressive strength tests.
- Full **leachate analysis reports**.
- Technical opinion on material suitability.
- Weekly and final reports as outlined above.

#### Summary Timeline:

Activity	Frequency/Timeline
<b>Sample collection &amp; batch documentation</b>	Daily during production (Nov 2025)
<b>3-day &amp; 7-day strength testing</b>	Rolling submission (within 4–8 days)
<b>28-day strength testing</b>	Within 30 days of each production day
<b>Leachate testing</b>	Within 7 working days from sample date
<b>Weekly summary reports</b>	Every 7 days during production
<b>Final consolidated submission to ERA</b>	Within 10 working days post-production

#### 5. Consultant Requirements

Applicants must demonstrate:

- Experience in **materials and geotechnical engineering**.
- Access to **ISO 17025-accredited labs** (in-house or subcontracted).
- Familiarity with **waste-derived construction material testing**.
- Capability to work within **ERA environmental regulations**.

#### 6. Submission of Quotations

Quotations must include:

- **Technical proposal** (methodology, team, approach).
- **Financial proposal** (cost breakdown per activity as defined in the attached BOQ).
- **Qualifications** and relevant project experience.
- **HSE documentation** (method statements, risk assessments).
- **QA/QC plan**, including:
  - Internal controls
  - Replicate testing
  - Reporting tolerances
- **Lab accreditations** and credentials.

**Deadline for Submissions:**



## 8. Additional Conditions

### 8.1 Health and Safety

All work must comply with MIA Health & Safety protocols. On-site work requires approved risk assessments and method statements including supporting information that should be presented prior of works commencement.

### 8.2 Sample Retention & Disposal

Duplicate samples must be retained for **at least 60 days**. Safe and documented disposal of any waste-derived material is required.

### 8.3 Non-Conformance Protocol

Notify the Client of any non-compliance **within 24 hours**. Propose corrective actions and support any **ERA-required re-testing**.

### 8.4 Meetings & Coordination

Attend a **kick-off meeting** and participate in **weekly coordination meetings** during production.

### 8.5 Confidentiality & Data Ownership

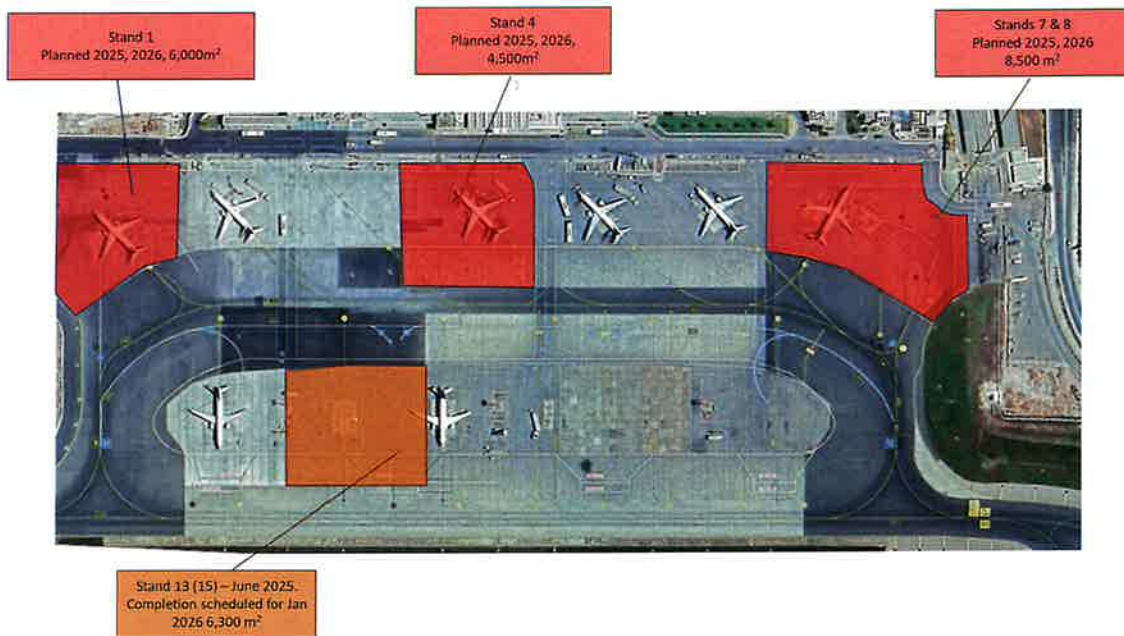
- All data, reports, and results are **property of the Client**.
- No external publication or sharing without **written authorization**.

## 9. Annexes

- **Annex A** – ERA Terms of Reference (ToR)
- **Annex B** – Mix Design & Batch Log Template



## Annex 8 - Apron 9 Rehabilitation Plan







---- End of Report ----

