



IP 0001/13

WASTE MANAGEMENT FACILITY AT DDE ATTARD LTD, LUQA

VOLUME 3: RESPONSE TO FEEDBACK ON IPPC APPLICATION



Version 3: April 2019



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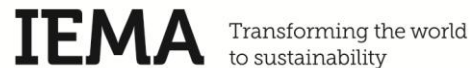
Waste Management Facility at DDE Attard Ltd, Luqa Volume 3: Response to Feedback on IPPC Application Version 2 April 2019

Report for: **DDE Attard Ltd**

Revision Schedule

Rev	Date	Details	Written by:	Checked by:	Approved by:
00	Oct. 2018	Submission to client	Rachel Decelis Senior Consultant	Rachel Xuereb Director	Adrian Mallia Managing Director
01	Mar. 2019	Submission to ERA	Rachel Decelis Senior Consultant	Rachel Xuereb Director	Adrian Mallia Managing Director
02	Apr. 2019	Updated Earthworks Method Statement & paving programme	Rachel Decelis Senior Consultant	Rachel Xuereb Director	Adrian Mallia Managing Director

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It is pointed out that ISO14001 certification covers the management system only and not the contents of this report.

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- Attachment 1: Approval of minor amendment to PA 1876/15
- Attachment 2: Updated Scheme drawings
- Attachment 3: Updated sewer discharge permit application
- Attachment 4: Updated flow diagrams
- Attachment 5: Excavation and fill drawing
- Attachment 6: Fuel road tanker licence
- Attachment 7: Engineer's report on oil-water interceptors
- Attachment 8: Shredder specifications
- Attachment 9: Fire safety report
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RESPONSE TO FEEDBACK ON IPPC APPLICATION

ERA FEEDBACK

Form A

Section	Duly made	ERA response (16 th February 2017)	Applicant response (9 th October 2017)	ERA response (12 th February 2018)	Applicant response (1 st October 2018, updated on 13 th March 2019)
A1.1	✓	Noted	-	-	-
A1.2	✓	Noted	-	-	-
A1.3	✓	Noted	-	-	-
A1.4	✓	Kindly note that as part of the consolidated version of the application, the latest valid Environmental Permit and Trade Licence is submitted in Appendix 1	Noted. However, this activity is now exempt from requiring a Trade Licence according to LN 420 of 2016, the Trading Licences Regulations (SL 441.07).	Noted.	-
		In view that applicant has applied for a Minor Amendment of PA 1876/15, which appears to have not yet been decided by the Planning Authority, this is to be included as part of the pending applications. Alternatively a copy of the decision notice is to be submitted.	Noted. The approval to the minor amendment is included as Attachment 1 .	Noted.	-
		Kindly confirm whether the development application with PA to revise site boundary has been submitted and if so, kindly provide reference number.	PA 04172/16 has been submitted. The drawings under this application are also being revised to reflect the updates being made as a result of the feedback provided on the IPPC application. Updated Scheme drawings are included in Attachment 2 .	Updated drawings have been noted. We have been recently consulted on a development application for the extension of the adjacent waste management installation over the area covered by sheds 8, 9, 11 and 19 in PA 4172/16 and this IP application. Applicant is to provide any agreements with third parties on the transfer of operations occurring within that area so as to enable the Authority to permit activities in these areas.	The areas covered by the current IPPC application are the property of DDE Attard Ltd, and the site boundary of the third-party application was incorrectly defined. However, minor amendments to the site boundary are being made to improve access to a third-party site. Updated drawings showing the revised site boundary are included in Attachment 2 .
		Kindly provide an updated regarding the Sewer Discharge Application provided the WSC application reference number.	A Sewer Discharge Permit application has been submitted to WSC. The updated sewer discharge permit application is included in Attachment 3 ; the application reference number is DMU 7400.	Noted. Applicant is to provide WSC the required information in order to obtain the sewer discharge permit. This shall be a requirement in the Improvement Program of the IPPC permit.	Noted.
A2.1	✓	Noted	-	-	-
A2.2	✓	Noted	-	-	-
A3.1	✓	Noted	-	-	-
A3.5	✓	Noted	-	-	-
A3.6	✓	Noted	-	-	-

Form B

Section	Duly made	ERA comments (16 th February 2017)	Applicant response (9 th October 2017)	ERA comments (12 th February 2018)	Applicant response (1 st October 2018, updated on 1 st April 2019)
B1.1	✓	Regarding the directly associated activities of ELV dismantling, kindly note that in view that depollution of ELVs shall be carried out on site, this is considered as an activity in the "stationary technical unit". This is in view that in various sections of the application, applicant is proposing to carry out depollution of ELVs which as an activity is considered under the IED as "Temporary storage of hazardous waste" from ELV as per Regulation 5.5 of Schedule I. Hence, applicant is to confirm the maximum storage capacity of such hazardous waste pending recovery. Should the maximum storage capacity exceed the 50 tonnes/day threshold in the IED, the original application fee shall be revised accordingly.	The maximum number of cars awaiting recovery will be 20 (the estimated weight is therefore approximately 20 tonnes).	Noted. A condition will be limiting the number of cars awaiting recovery to 20.	Noted.
B1.2	✓	<p>1. Operator is to ensure that relevant authorisation from the Planning Authority is obtained with respect to the proposed site boundary and all structures required for the upgrading of the installation. Comments in section B2.7 below refers.</p> <p>2. specifications for the proposed carbon filter utilised for composting shed is required.</p> <p>Also with reference to item 3.143, ERA notes that in a May 2016 site visit operator explained that the composter shed will not be covered with plastic sheeting and that all emissions from the composter shall be routed to a bio-filter nearby. Clarification in this regard is required with reference to our comment in section B2.2.5. Comment 3.120 may need to be updated accordingly to describe the complete emission abatement.</p>	<p>1. Noted.</p> <p>2. The composter has been sealed off and will not be operated unless the owners obtain the required permit variation. The responses in this document regarding the composter are provided for information only.</p> <p>The supplier has clarified that the filter is in fact a biofilter. The biofilter is composed of common pine bark as used in gardening. The relevant flow diagram has been updated (Attachment 4).</p> <p>No significant odours emissions are expected, given the scale of operation and the presence of a biofilter. Therefore the open side of the composter shed will not be covered with plastic sheeting. However, if ERA notes that significant odours are being generated by the composter, plastic sheeting can be installed in the future.</p>	<p>1. Noted.</p> <p>2. Noted. The permit will include the pre-operational conditions covering the use of the composter requiring the submission of analytical results.</p> <p>Any further mitigation for odours from the composter shall be evaluated by the Authority at a later date, should the composter resume operation.</p>	<p>1. –</p> <p>2. Following an agreement that has been reached with the owners of the composter (the Local Councils' Association) it has been decided that composter will be operated. Testing can be carried out as required by the IPPC permit.</p>
B1.3	✓	Noted	-	-	-
B1.4.1		1. Applicant is to indicate the depth of any excavation required for the installation of the remaining hardstanding and thereby calculating the estimated total volume of excavated material.	1. Prior to the installation of the hardstanding an excavation and fill exercise (including soil-cement stabilisation) will be carried out, whereby any material to be excavated will be shifted to locations within the site requiring filling to achieve proposed levels, and the soil will be stabilised with cement (to improve its geotechnical properties as is usual practice). A Method Statement for this procedure will be submitted by the architect. A drawing showing the excavation and fill areas, and corresponding calculations, are included in Attachment 5 .	<p>1. Noted.</p> <p>2. The Method Statement referred to in the consultant's reply shall include the following information which has already been requested through PA 4172/16:</p> <p style="padding-left: 40px;">a. the submission of the assessment/description of pre-treatment requirements for the cement stabilized site material.</p> <p style="padding-left: 40px;">1. The proposed method for</p>	<p>1. –</p> <p>2. A Method Statement prepared by the architects was submitted to ERA on 6th July 2018, and updated on 5th and 25th March 2019. A copy of the latest version is included in Attachment 11. The existing site slope will now be kept (refer also to the section drawings), thus reducing the quantity of ground material to be excavated to around 1,700 m³; the material will be disposed of at authorised</p>

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		<p>2. With regards to the results of the site investigation report, it appears that the top 1 meter of soil from the whole proposed site is contaminated by heavy hydrocarbons, heavy metals and PCBs and therefore any excavation waste cannot be retained on site. Therefore applicant is to suggest appropriate disposal and/or remediation options for ERA's approval.</p>	<p>The construction of the underground reservoirs necessitates the excavation of <i>circa</i> 1,877 m³ for the storm-water reservoir, and <i>circa</i> 308 m³ for the fire-fighting reservoir. This volume of excavated material will be retained on site and also used for site levelling and earthworks.</p> <p>2. Please refer to the previous point.</p>	<p>solidification/stabilisation of the excavated contaminated material shall ensure that the treated fill/soil material achieves end of waste</p> <p>status in accordance with the legal provisions of Regulation 6 of the S.L. 549.63 – the Waste Regulations and should be accompanied by the “End-of-waste Criteria declaration” found in Schedule 10 of the abovementioned Regulations.</p> <p>II. In order to achieve I. above ERA requires an assessment/description of pre-treatment requirements, suitable reagents and additives for dealing with the relevant contaminants, potential processes (ex-situ) and type of plant and equipment used for the solidification/stabilisation process shall be carried out prior to the commencement of the excavation/remediation works.</p> <p>b. details for sampling and bench-scale testing of the cement stabilized site material.</p> <p>Bench-scale tests are to be carried out prior to the commencement of the excavation/remediation works in order to evaluate the efficacy of various binder formulations using representative samples from the site:</p> <p>Number of representative samples proposed should reflect the level of contamination found in an area, i.e. areas which have higher contamination levels should have a higher frequency of samples. (<i>for example the area near sampling point 2 (southern part) is to be sampled with higher frequency since it is highly contaminated</i>)</p> <ul style="list-style-type: none"> • assessing whether any pre-treatment steps are necessary (screening to remove material over a particular size, processing to re-grade the particle size distribution of the material); • assessing the ability of potential mixes to achieve remedial criteria with regard to leaching and physical characteristics (e.g. strength, permeability); • identifying the potential for volatile emissions during works; • assessing the physical and chemical uniformity of the treated material; • determining the likely volume increase associated with the treatment; and • assessing the long-term performance of the treated material. <p>It is important that the samples prepared for</p>	<p>waste management facilities. In view of this the excavation / fill drawing in Attachment 5 has been updated.</p>

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		<p>3. With reference to 2.4.1, applicant is to provide an authorisation from MRA/REWS to operate the diesel dispensing facilities. When the required standards are not currently achieved, an engineer's report showing the proposed improvements and associated time-frames is required. This is also to include calculations as to whether the bund capacity achieves at least 110% of the capacity of the diesel tank and how any fill-points are contained within the bund.</p> <p>4. All fresh and waste oils/chemicals/lubricants and batteries shall be stored within a designated covered and bunded area.</p> <p>5. All fuel road tankers are to be registered with Transport Malta and a copy of such licence is to be provided.</p> <p>6. With regards to the proposed quarantine area, applicant is to note that this is to be covered and any liquid wastes stored within this area are to be suitably bunded.</p>	<p>3. An engineer has been commissioned to prepare the application to REWS; the relevant documentation will be submitted at a later stage.</p> <p>4. Noted; as described in Table 3.2 of the IPPC application, these will be stored inside a covered shed with secondary containment.</p> <p>5. A copy of the fuel road tanker licence is included in Attachment 6.</p> <p>6. The quarantine area has been shifted to the shed and will therefore be in a covered area; updated drawings are included in Attachment 2. Liquid hazardous wastes will be bunded.</p>	<p>bench-scale testing are as representative as possible of the anticipated full-scale field conditions. It is not appropriate to conduct studies on a sub-set of the material (e.g. a single stockpile or from a small part of the site to be treated) for the purpose of scaling up to implementation for the whole site.</p> <p>Physical and leachate testing methods also need to be suitable for long term assessment (if they don't fulfil ERA's requirements, leaching properties can be modified by the use of a secondary binder and/or additives.)</p> <p>Once the above is established, a waste management permit for the operation would be required. This may be addressed through the EP currently issued to the operator.</p> <p>When the excavated material ceases to be waste, the tensile strength of the remediated material needs to be provided. Having said so, the holder of the end-of-waste material would need to ensure that this material is compliant with chemical and product legislation and standards, especially with requirements in the Construction Products Regulation. The product standards to be met shall also be disclosed in view that these may be requested during consultation with the appropriate regulators (MCCA, BRO).</p> <p>3. Applicant is to immediately submit to ERA an engineer's report showing the proposed improvements and associated time-frames is required. This is also to include calculations as to whether the bund capacity achieves at least 110% of the capacity of the diesel tank and how any fill-points are contained within the bund. The required information is to be submitted to REWS as part of this IPPC application.</p> <p>4. Noted</p> <p>5. Noted</p> <p>6. Noted.</p>	<p>3. An engineer has been commissioned to prepare the REWS report and application. It is proposed that this item is included as an Improvement Programme item in the IPPC permit, with a target date for submission of six months after the IPPC permit issue.</p> <p>4. –</p> <p>5. –</p> <p>6. –</p>
BI.4.2	x	Applicant is to ensure that this permit shall cover all activities in the whole applicant's site associated with the operations currently covered by WM 0009/06. Any adjacent storage areas referred to in "Figure 4.7: Surrounding land-uses" must be covered by the necessary development consent as required by the Planning Authority. Should these be included in the	The Applicant confirms that there is no storage of waste or directly associated activities outside the proposed site boundary.	Noted.	-

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		IPPC application, site boundary is to be updated accordingly.			
B1.4.3	✓	<p>With reference to the rain water management plan in page 37, applicant is to provide the technical specifications of the proposed oil-water interceptor and the concentrations it shall achieve following treatment. This shall include the capacity of this oil-water separator showing how it shall be designed to cater for the largest possible accidental spill envisioned.</p> <p>Kindly indicate whether units marked as “I-4, 6-11” in Figure 3.3 shall be completely covered and protected from the elements.</p>	<p>Please refer to the engineer’s report in Attachment 7. As recommended by the engineer, two interceptors will be installed, each covering approximately half of the site catchment area; these will be placed side-by-side in the same location. Clean rainwater from roofed areas will be received in the underground reservoir without pre-treatment; an updated surface water and wastewater management drawing is included in Attachment 2.</p> <p>Yes. This will be a covered shed.</p>	Noted.	The report in Attachment 7 has been updated to take into account the revised rainwater catchment areas.
B2.1	✓	Kindly provide time-frames by when the proposed EMS will be implemented.	The EMS will be implemented within two years from granting of the IPPC permit.	Noted.	-
B2.2:- B2.2.1	x	<p>1. Applicant is responsible for the content and storage of any containerised waste and therefore further details on the expected origin and type of waste that shall be kept in containers is to be obtained and made available to the Authority by the applicant immediately upon request.</p> <p>Applicant is to clarify whether any containerised radioactive waste shall be accepted on site (and the necessary containment/safety measures).</p> <p>A specific emergency response plan for dealing with any spills/fires involving these sealed containers is to be provided and describe the various responsibilities for accessing and managing the content of these containers.</p> <p>Furthermore applicant is to clarify on when will area 20 (Item No.90) be used provided that around 2 containers will be accepted on site in area 17 per month (Item No. 88) and exported within a few weeks (Item. No. 91).</p> <p>2. Kindly clarify whether the refrigerant degassing will be carried out using equipment described in Annex 4 or another system built-in the equipment in Annex 3.</p> <p>With reference to the proposed refrigerant recovery system in Annex 4, applicant is to provide: details of the scales or other procedures used in order to prevent the refrigerant storage tank from being overfilled, the technical specifications of such storage tank indicating that they are refillable, clarification in view that the proposed system does not appear to be indicated for</p>	<p>Noted. Records will be kept on site.</p> <p>Low-level radioactive waste may be accepted, e.g. smoke detectors. Radioactivity levels will be checked with a handheld Geiger-counter.</p> <p>Noted. It is suggested that the requirement for a specific emergency response plan is included in the improvement programme in the IPPC permit.</p> <p>Area 20 is expected only to be used if area 17 is temporarily full (for example due to delayed export) or unavailable.</p> <p>As stated in paragraph 3.42, the refrigerant recovery system to be used is as described in Annex 4 of the IPPC application. This is as recommended by the supplier of the depollution rig.</p> <p>The system has a gauge to indicate when the tank is full, and the tank does not allow overfilling.</p> <p>The system is recommended by the depollution</p>	<p>Noted. No containerised waste shall be accepted prior to the submission of a specific emergency response plan is submitted to the Authority for onward forwarding to the CPD.</p> <p>ERA shall be consulting with the Radiation Protection Board, following which further comments may ensue.</p>	<p>Noted. A specific emergency response plan will be submitted before accepting containerised waste.</p> <p>We understand that the Radiation Protection Board has provided comments as described in the section below containing feedback from statutory consultees.</p> <p>The design of the tank is the same as in Annex 4 (only the label is different). It is confirmed that only refillable storage tanks will be used.</p>

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		<p>use on automobile systems but on "commercial and residential units" utilising a specified list of gases.</p> <p>With regards to this equipment no other waste equipment containing ozone depleting substances or fluorinated greenhouse gases shall be accepted on site. In case such equipment enters the site, it is to be immediately stored in a designated quarantine area and subsequently disposed of at an authorised facility.</p>	<p>rig supplier for use on passenger cars, as also indicated on the supplier's website.¹</p> <p>Noted.</p>		
		<p>3. Applicant is to clarify how the following ELV depollution processes shall take place: draining of any hydraulic arms, hubs and hub reduction systems, seat-belt pre-tensioners and removal of any grease reservoirs.</p> <p>With regards to any LPG-powered ELVs, applicant is to provide further details on a designated area where the vehicle will be left idling until complete exhaustion of the LPG fuel and further details on how the LPG tank shall be safely removed and stored pending disposal. This is to include information and details on whether any LPG recovery activity is being considered.</p>	<p>It is noted that most vehicles do not have hydraulic arms. However, any hydraulic fluids will be removed as described in paragraph 3.36.</p> <p>It is noted that only certain heavy goods vehicles contain such oils in hub / hub reduction systems. Oils in such systems will be drained where required as part of stage 2 when the vehicle is raised on the depollution rig. The procedure would be to remove the drain plug, and the oil would be collected into a container for 5 minutes or until no further draining is observed.</p> <p>Grease reservoirs are typically only found in certain heavy goods vehicles. These will be removed in their entirety.</p> <p>If seatbelt pre-tensioners are installed that have explosive devices, these will be removed with the airbags as part of stage 3.</p> <p>It is proposed that vehicle idling be carried out outdoors in area 20. LPG recovery is not being considered for the time being.</p> <p>As mentioned in paragraph 3.26, the LPG tank is removed by turning off the isolating valve, cutting through the connecting pipes and the retaining clamps / straps, and removing the tank. LPG vehicles will only be disassembled by mechanics authorised by the Malta Resources Authority (now the Regulator for Energy and Water Services) as competent installers for autogas-driven vehicles. Removal of the LPG tank will also be carried out in an outdoor area on site to minimise the risk of build up of LPG gas; it is proposed that this activity be carried out in area 20.</p>	<p>Noted.</p> <p>Applicant is to clarify the expected time-frames a full tank of autogas shall take to be completely emptied of gas in order to proceed for disposal. Furthermore the maximum amount of such autogas powered ELVs awaiting depollution at any one time is to be provided.</p> <p>Applicant to confirm that only LPG powered ELVs and operator's vehicles undergoing maintenance in the dedicated area, shall be kept idling on site. Should other vehicles be envisaged to be left idling, applicant is to propose appropriate air abatement measures to minimise pollution to the surrounding environment.</p>	<p>-</p> <p>Most vehicles will arrive with the tank nearly empty; however, if an LPG tank is received full the tank would be sealed and removed as is without vehicle idling. In this case the tank would not be shredded but sent to an authorised disposal / recycling facility.</p> <p>Autogas-powered ELVs are not very common locally; therefore it is not envisaged that more than two vehicles will be awaiting depollution at any time.</p> <p>Confirmed.</p>

¹ STH Anlagenbau (2010) Recycling equipment http://www.sth-anlagenbau.de/index.php?option=com_content&view=article&id=82%3Arecycling-equipment&catid=35%3Aprodukte&Itemid=94&lang=en (Minimax set).

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		4. Applicant is to confirm whether any processing (e.g. washing, shredding, cutting etc.) of LPG cylinders or tanks shall take place on site. If this is being proposed, applicant is to submit a method statement for such activity showing how such activity will not contaminate the surrounding environment especially by effluent discharge and odours.	LPG tanks will only be accepted on site if emptied and pre-cleaned by an authorised facility or industrial operator; the cleaning process removes any residual gases and odorisers. Such empty and pre-cleaned LPG tanks will be shredded; information on the shredding process is already included in the IPPC application. Information on potential effluent discharges from shredding are included in paragraph 3.72 of the IPPC application. No significant odour emissions are expected.	Further to the LPG tank removal process described above, applicant to confirm that no emptying of LPG tanks (including those fitted in End of Life Vehicles) will be done on site since they will all be received in an empty state or have all the LPG consumed through engine idling. Should no emptying of LPG tanks be done on site, applicant is to confirm how it will be ensured that all such tanks shall be rendered gas free prior to any associated hot/cold works and non-hazardous prior to further processing including shredding.	Confirmed. The tanks will either have been certified by the originating facility as empty, or emptied by means of vehicle idling. Tanks emptied on site by vehicle idling will be sent for cleaning to Liquigas Malta Ltd before being returned for shredding. Additionally, as mentioned in paragraph 3.25 of the IPPC applications, LPG vehicles will be checked for any gas leaks using gas detection equipment.
		5. Applicant is to clarify whether the dismantling of non-hazardous components from ELVs is carried out manually or using specific equipment. In the case that specific equipment is used, technical specifications are to be provided.	Manual dismantling is envisaged. It is noted that the extent of manual dismantling in Stage 4 will now be limited to the removal of bumpers and electronics, and that wheels will not be removed in Stage 1. The remaining frame will be fed into the shredder, which includes a sorter that is able to distinguish and separate the various fractions automatically. An updated flow diagram is included in Attachment 4 .	Applicant is to provide details on the technology employed in order to separate: glass, waste tyres/rubber and upholsters fractions from the shredding process for further separate dedicated treatment off-site. This shall include calculations showing how the proposed process shall reach the relevant re-use and recycling targets in accordance with S.L. 549.36, Waste Management (End of Life Vehicles) Regulations.	The sorting technology is based on ferromagnetic separation, which is followed by manual sorting to recover non-ferrous components; it is clarified that this does not separate the glass / rubber / upholstery into different fractions. However, in order to improve recycling rates, the tyres are being removed manually before shredding. The flow diagram in Attachment 4 has been updated; it is noted that most of the data in stage 4 is based on actual data from the current dismantling, shredding and sorting operations. A comparison of the above proposal against the targets in SL 549.36 is included as Attachment 13 . Since this assessment indicates that the targets in SL 549.36 would not be met using the above method (Option 1), Attachment 13 includes a plan (Option 2) on how these targets will be met, including use of an Eddy current separator, and manual removal of upholstery (for reuse) before shredding.
		6. Kindly note that Sant'Antnin Waste Treatment Plant is not authorised to accept EWC codes 19 12 04 and 19 12 05 which are indicated to originate from the processing of washing machines, cookers, wood and wire stripping. With regards to wood processing, applicant is to distinguish between wood treated with hazardous substances and that which is not. Any processed waste which shall be sold as a product (e.g. wood for use in fireplaces, compost) is to be covered by an End-of-Waste Certificate. Kindly find attached End-of-Waste application form and contact the Waste Team at ERA on georgesam.mizzi@era.org.mt for further assistance	Noted. The receiving waste management facility permits will be checked before transfers of waste, and when required alternative authorised waste management facilities will be used. Noted.	Alternative permitted facilities or waste broker permits are to be immediately suggested to dispose of such wastes. Flow diagrams are to be updated accordingly. End-of-Waste applications are to be submitted immediately to the Environmental Permitting Unit as part of the IPPC application.	Green Skip Services Ltd will be used; this is permitted by IP 0001/12/A for this EWC code ² . However, as mentioned, alternative licensed facilities will be used during operation of the Scheme as the need arises. The applicant has decided not to pursue the sale of shredded wood. This will instead be sent to the Ta' Żwejra or Ghallis non-hazardous engineered waste facilities (permitted by IP 0001/05/B and IP 0001/06/B respectively). Updated flow diagrams for these processes are included in Attachment 4 .

² The permit is currently undergoing renewal (Bjorn Borg, ERA, email dated 13th August 2018).

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		on the relevant procedure.			
		7. Regarding item 3.97, kindly clarify what material (EWC codes) will be shredded in the new shredder and provide a time-frame by when the specifications will be submitted to ERA prior to commissioning of this equipment.	As stated in paragraph 3.97, typically tree prunings will be shredded (EWC 02 01 03, 02 01 07, 20 02 01); however paper and cardboard (EWC 15 01 01, 19 12 01, 20 01 01) may also be shredded, or pre-shredded paper may be inserted in the composter. The flow diagram has also been updated to include paper and cardboard, as per Attachment 4 . Technical details and operating instructions for the shredder are included in Attachment 8 .	Noted. Applicant is to provide the maximum processing capacity of the composter and associated equipment including the shredder.	- As stated in the IPPC application (paragraph 3.92), the composter is a pilot plant with a capacity of 270 kg/day (up to around 100 tonnes annually). The shredder is a very small-scale plant with an estimated capacity of less than 200 kg/hour.
		8. Regarding item 3.101, further details on the “heating sling” including its source of power and heat production technique are required.	The supplier has clarified that the material is not heated with an outside source, since heating of the mix is the result of the composting process. The only heaters are those to regulate the incoming air humidity, and these are electrically operated.	Noted. Air monitoring plan requested above is required.	An air monitoring plan is now included as part of Attachment 14 .
		9. Applicant is to provide a contingency plan for the waste being treated and that awaiting treatment in case the composter is down for maintenance or malfunctioning.	In this case such waste will be sent for disposal at the Ghallis non-hazardous landfill.	Noted.	-
		10. Applicant is to provide details on how any potential run-off from the compost maturing area is prevented from escaping to the surrounding environment.	The compost is dry and will be in a covered shed; therefore run-off is not expected. However, the area is concreted and laid to fall towards the sewer connection, thus preventing escape to the surroundings.	Noted.	-
		11. Any application of compost to land is subject to a clearance from the Department of Agriculture and a certificate showing that the End of Waste Criteria application form attached) have been achieved.	Noted. These applications are being prepared separately.	Such applications are to be submitted as part of the IPPC application process prior to the commissioning of the composter.	The Department of Agriculture has been contacted and there is no clearance procedure for application of compost. An end of waste application for the compost has been submitted; see Attachment 14 .
		12. Disposal of condensate from the composter to the sewer is subject to a clearance from the WSC. Such a clearance is to be submitted.	A sewer discharge permit application has been submitted to WSC.	Noted.	-
		13. Applicant is to label and delineate all designated waste storage areas described in the layout plan.	Noted.	-	-
		14. Operator is reminded that as a follow up to ERA letter dated 31 st January 2017, the method statement for waste processing as described in the IPPC application shall be binding. Should any variations be envisaged, their implementation shall be subject to a review and approval process by ERA.	Noted.	-	-
				Additional feedback from ERA (Simon Farrugia, by email, 24 th September 2018): Since ERA is aware that washing machines are currently being	Updated method statements for washing machines and cookers are included in Volume 2 (section B2.2.1); flow diagrams have also been

Section	Duly made	ERA comments (16 th February 2017)	Applicant response (9 th October 2017)	ERA comments (12 th February 2018)	Applicant response (1 st October 2018, updated on 1 st April 2019)
				<p>shredded as a whole, and the applicant verbally indicated that such practice shall be continued following the issue of the permit, applicant is to provide an updated method statement for the treatment of washing machines and indicate how such practice shall be conducted in accordance with the recycling targets and the "Selective treatment for materials and components of waste electrical and electronic equipment referred to in regulation 8(2)" in accordance with S.L. 549.89 Waste Management (Electrical and Electronic Equipment) Regulations.</p> <p><i>Clarification from ERA (Simon Farrugia, by email, 15th October 2018):</i> With reference to your query regarding WEEE recycling targets, kindly note that Part 3(a) of Schedule 5, refers "...WEEE falling within category 1 or 4 of Schedule 3.." and not to the individual type of WEEE. You may thus wish to amend IPPC application accordingly. Furthermore below request to update the method statement is still applicable and thus the WEEE recycling targets are to be calculated accordingly.</p>	<p>updated (Attachment 4).</p> <p>An assessment against the targets set out in of S.L.549.89 is included in Attachment 15.</p>
B2.2.2	✓	See comments in Section 2.2.1. Applicant is to ensure that any fuel utilised for road vehicles complies with the requirements of Transport Malta, the Regulator for Energy and Water Services and any other relevant Authority or Department.	Noted.	-	-
B2.2.3	✓	<p>1. Provide further details on why the high voltage batteries or electronic equipment is not being considered as hazardous.</p> <p>2. Any relevant updates to the description of specific waste management activities in section B2.2 are to be reflected in updated flow diagrams.</p> <p>3. Applicant is to provide details on how it shall be ascertained that only clean (non-hazardous) wood shall be accepted on site.</p>	<p>1. High-voltage batteries are typically lithium ion cells; the hazardous waste codes for batteries only cover lead batteries, Ni-Cd batteries, and mercury batteries (other batteries are categorised under EWC 16 06 05, which is not categorised as hazardous). A high-voltage electrical system would be mainly composed of plastic insulation and copper wiring, and would therefore not be expected to be hazardous.</p> <p>2. Updated flow diagrams are included in Attachment 4.</p> <p>3. Only wood falling under the specified non-hazardous waste codes will be accepted; wood will be inspected to ensure it is not painted / varnished as part of the waste acceptance procedures.</p>	Noted.	-
B2.2.4	✓	<p>Further to the below comments, kindly refer to specific queries being requested in sections referred to in the operator's replies to BAT as "Status at the Scheme" column:</p> <p>a) With reference to point 2, as part of the IPPC permit, operator will be required to obtain an internationally accepted voluntary system such as EMAS and EN ISO 14001:2015.</p> <p>b) With reference to point 12 the IPPC permit will</p>	<p>a) An in-house Environmental Management System is proposed; this is also in accordance with BAT.</p> <p>b) Noted.</p>	Noted.	-

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		<p>include a condition to maintain an operational diary.</p> <p>c) With reference to point 24, operator is to ensure that at any time he is aware of the waste volumes actually stored on site and that any request for additional wastes are refused until free capacity is restored.</p> <p>d) With reference to point 27, in cases when unidentified waste types are inadvertently accepted on site, operator shall either return them back immediately or else take the necessary actions in order to properly characterise the waste for authorised disposal. Operator shall maintain a log of non-accepted waste including details of the waste carriers delivering such waste.</p> <p>e) With reference to point 29, kindly note that any tests required by landfill operators to authorise disposal on their site, are to be carried out at the applicant's expense.</p> <p>f) With reference to point 61, in view that applicant shall be accepting, storing and exporting sealed containers; further details are required on how he will ensure that the actual waste is actually permitted to be kept on site. This shall take place without posing any risk to the environment or health and safety of people within the facility and surrounding areas.</p>	<p>c) Noted. An inventory system is already in place.</p> <p>d) Noted.</p> <p>e) Noted.</p> <p>f) The waste containers will be sealed by DDE Attard Ltd staff at the site of generation.</p>		
B2.2.5	✓	With reference to the last inspection report and as instructed in ERA letter dated 31st January 2017, this shed shall be enclosed prior to the commencement of composter operations. Any opening required in the course of day-to-day running shall be covered by overlapping HDPE curtains.	No significant odours emissions are expected, given the scale of operation and the presence of a biofilter. Therefore the open side of the composter shed will not be covered with plastic sheeting. However, if ERA notes that significant odours are being generated by the composter, plastic sheeting can be installed in the future.	Noted. Above requirement in Section B1.2 regarding emission monitoring refers.	Noted.
B2.3	✓	Noted	-	-	-
B2.4	✓	Noted. No waste containing ozone depleting substances or fluorinated greenhouse gases, other than that normally found in ELVs shall be accepted on site. In case such equipment enters the site, it is to be immediately stored in a designated quarantine area and subsequently disposed of at an authorised facility.	Noted.	-	-
B2.5	✓	Noted	-	-	-
B2.6	✓	With regards to the upgrading of vehicle fleet with fuel cells, applicant is to provide estimated time-frames in this regards. Records of energy consumption are to be kept and updated regularly for annual reporting purposes.	This proposal has been scrapped in favour of upgrading of the vehicle fleet to Euro VI (already implemented).	Noted.	-
B2.7	✓	Noted	-	-	-
B2.8	✓	1. To provide timeframes by which a determined number of personnel that shall be trained on the relevant emergency procedures (e.g. Spills, first-aid, fire response etc.).	This will be carried out not later than 6 months from issue of the IPPC permit.	Noted	-
		2. Applicant is to indicate how the effluent from the wheel-wash system will be managed until final disposal.	Effluent will be collected in gutters and diverted for treatment in the silt trap and oil-water	Noted. The Improvement Program in the permit will require the applicant to propose an effluent monitoring plan for the oil-water	Noted.

Section	Duly made	ERA comments (16 th February 2017)	Applicant response (9 th October 2017)	ERA comments (12 th February 2018)	Applicant response (1 st October 2018, updated on 1 st April 2019)
			interceptor prior to being received in the main reservoir. This arrangement is shown in the rainwater management drawing in Attachment 2 .	separator overflow which considers the materials handled and activities carried out on site as proposed in this IPPC application.	
		3. Further details on whether any air filtration system shall be fitted with audible/visual alarms, in case of any malfunctions. Applicant is to indicate the procedures in place in case of any malfunction is detected in the composter atmospheric filtration system (e.g. replacement filter shall be available at all times, composter operations shut-down until malfunction is remedied etc.).	The supplier has clarified that no alarms are present. However, the only precaution required is to keep the bark moist, and in case it becomes dry and degraded to, replace it. Replacement is usually required every two years. Replacement bark will be kept on hand as required. Additionally, waste will only be accepted on site if treatment in the composter can commence within 48 hours. Composter operations are stopped during a filter change.	Should applicant intend to operate the composter, an air emissions monitoring plan covering operations of the composter and an EoV application including a method statement as requested in section B2.11 below shall be required as requested in B1.2 above. Unless these are duly submitted to the satisfaction of ERA, the IPPC permit will prohibit any composting activities on site.	The Applicant now intends to operate the composter. An end of waste application for the compost has been submitted, and includes an air emissions monitoring programme; see Attachment 14 .
		4. Applicant is to provide a site layout plan indicating the location and type of spill response equipment. With reference to comment 3.183, applicant is to provide further details on how specific type of hazardous spills shall be managed in such a way to prevent further contamination of the surrounding waste storage areas within the facility.	As mentioned in paragraph 3.189, two sets of spill kits will be available on site. The first set, a sawdust spill kit, will be stored next to the diesel tank and is intended to service any spills arising from diesel tank and leaks from vehicles, equipment and maintenance. The second set will be stored in the shed and will service any spills in the shed (including spills from the ELV depollution facility and any other hazardous waste) and spills from containerised waste. This spill kit will consist of a commercial set that includes absorbent pads and booms. As stated, spills can be collected by trained site operators using spill kits. A Spill Response Procedure is included in the IPPC application, which identifies how spills will be contained (thus preventing spread of the spill and contamination of the surrounding waste areas).	Noted.	-
		5. Kindly note that the provided "Pollution Control" number is not in use. Please provide an alternative contact number.	ERA's general contact number will be used for notification (2292 3500); alternatively notifications can be provided by email if not urgent.	Noted.	-
		6. Provision of certification from a competent company or engineer that the relevant fire safety procedures and equipment are in place will be required as part of the Improvement Program in the IPPC Permit.	Noted.	-	-
		7. The fire and spill response plans need to be made available on site as a stand-alone document.	Noted.	-	-
B2.9	✓	Noted	-	-	-
B2.10	✓	Noted	-	-	-
B2.11	✓	Noted	-	-	-
B3.1.1, B3.1.2,		1. Any potentially hazardous waste kept in the quarantine area is to be kept in a closed skip or an otherwise covered area.	The quarantine area has been moved to the shed and will therefore be in a covered area; updated drawings are included in Attachment 2 .	Noted.	-

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		<p>Since the quarantine area is envisaged to be a temporary storage area pending the disposal of waste therein at other permitted facilities, applicant is to indicate the maximum capacity of the quarantine area and confirm that no such waste will be kept there for a period longer than one calendar year.</p> <p>In this regards, applicant is to identify facilities which are authorised to accept waste which is expected to be generated from the quarantine area.</p>	<p>The internal dimensions of the quarantine area are 12.5 m by 11.5 m (the approximate internal floor area is 144 m²). It is confirmed that waste will not be kept in this area for longer than one year.</p> <p>The facilities to be used will depend on the types of unauthorised waste received, and it is not possible to anticipate such waste in advance. However, authorised waste management facilities will be identified according to the waste types, with records of transfers kept and reported to ERA as required.</p>		
		2. With reference to Table 4.1: Incoming Waste, applicant is to confirm that no contaminated wood or metal (hazardous waste) shall be accepted on site.	Confirmed.	Noted.	-
		3. It is understood that various EWC codes for the same WEEE has been indicated as incoming in view that the operator may be in receipt of whole units or part thereof. Nonetheless the IPPC permit will specify which types of WEEE can be accepted on site.	Noted.	-	-
		4. With reference to the Table 4.2 listing the applicant's waste carriers may we note that GBR 334/08 has been cancelled on 24.11.15. Should vehicle with registration No. DDE 001 be used to transport waste, it needs to be covered by a valid waste carrier permit for that type of waste.	Noted.	Alternative authorised waste carriers are to be provided.	Alternative authorised waste carriers for this category of waste (A5) were already provided in Table 4.2 of the IPPC application.
		5. With reference to Table 4.4, the lab utilised to certify the compost is to be specifically accredited for that purpose and not just certified to ISO 17025.	It is proposed that ISO 17025 certification is sufficient, since this is a small-scale operation.	Proposed certification will be subject to the Authority's approval following further consultation.	Noted.
		6. With reference to section B2.2.1, application for end-of-waste certificates covering waste from wood and food processing are to reach ERA prior to decision of the IPPC permit. Should such certificates not be obtained by the time a decision on the IPPC permit is taken, alternative waste disposal routes are to be provided.	Noted. The application for the composter is being prepared.	<p>Noted. As indicated above, application for end-of-waste certificates covering waste from wood is to reach ERA prior to decision of the IPPC permit.</p> <p>Should such applications not be obtained by the time a decision on the IPPC permit is taken, alternative waste disposal routes are to be provided.</p>	DDE Attard Ltd has decided not to pursue the sale of shredded wood. This will instead be sent to the Ta' Żwejra or Ghallis non-hazardous engineered waste facilities (permitted by IP 0001/05/B and IP 0001/06/B respectively).
		7. In case condensate from the composter will be discharged to the sewer, operator shall provide a clearance from the Water Services Corporation. If this shall be used for irrigation, a clearance from the Department of Agriculture is required.	A sewer discharge permit application has been submitted to WSC. The proposal to use the condensate for irrigation is not being considered further.	Noted.	-
		8. B3.1.1 - Applicant is to confirm which component of the cookers is being classified under EWC Codes: 16 02 16 and 20 01 36.	This is referring to any non-hazardous parts, or cookers which have had any hazardous components removed prior to receipt on site.	The Authority shall only permit the acceptance of EWC Codes: 16 02 16 and 20 01 36 from cookers and water meters only and not from any other WEEE or separately collected waste.	Noted.
B3.1.3	✓	Noted	-	-	-
B3.2	✓	Noted	-	-	-
B3.3	✓	Application for discharge permit is to be submitted immediately to WSC and reference number provided.	A sewer discharge permit application has been submitted to WSC. The proposal to use the	Noted. The discharge of the condensate into the sewer shall be subject to the issue of a sewer discharge permit and satisfaction of	Noted.

Section	Duly made	ERA comments (16 th February 2017)	Applicant response (9 th October 2017)	ERA comments (12 th February 2018)	Applicant response (1 st October 2018, updated on 1 st April 2019)
		Application of condensate from composter for agricultural purposes is to be cleared by the Department of Agriculture after all the relevant information is submitted to this Department. Applicant is to provide a suitably contained area for the temporary storage of such effluent. Disposal of this condensate would require inclusion in the sewer discharge permit of the WSC.	condensate for irrigation is not being considered further. The condensate is stored inside a built-in container within the composter (as mentioned in paragraph 3.108 of the IPPC application). In case of any leaks, the drains in this area lead to the sewer, as shown in the Rainwater Management drawing (Attachment 2).	the above ERA requirements with regards to the operation of the composter. In the absence of a valid sewer discharge permit covering this discharge, operator is to store such effluent within a suitably bunded area for disposal through authorised facilities.	
B3.4	✓	Noted	-	-	-
B3.5	✓	Noted	-	-	-
B3.6	x	<p>Applicant is being notified that the hardstanding shall have to be completely installed in accordance with PA prior to the issue of this permit.</p> <p>The IPPC permit shall include provisions for ambient air monitoring to be carried out during specific operations such as shredding. Based on the results obtained, the Authority may request further mitigation measures.</p> <p>Applicant is to provide further details on how wetting will be applied during metal shredding.</p>	<p>It is proposed that the installation of hardstanding be included as part of the improvement programme of the IPPC permit.</p> <p>Noted.</p> <p>The wetting system is described in paragraph 3.72.</p>	<p>The IPPC permit will require the installation of hardstanding in accordance with the approved time-frames and method statement. Acceptance of polluted end-of-life vehicles will only be permitted once all the hard standing has been certified by a third party warranted engineer or architect to the satisfaction of the Authority.</p> <p>Kindly note that the consolidated application shall include the conclusion of this issue as requested in Section BI.4.1 above.</p>	<p>It is proposed that end-of-life vehicles can start to be accepted once the hardstanding in areas 2-4, the separator and reservoir have been installed. A phasing plan is included in Attachment 2.</p>
B3.7	✓	Noted. See comments on composter shed enclosure/ventilation above.	-	-	-
B3.8	✓	Previous comments regarding hardstanding refers.	-	-	-
B3.9	✓	Applicant is to include the "Hammel" shredder as a potential source of noise emissions, and propose suitable noise mitigation measures. As part of the IPPC permit, applicant will be required to update the noise monitoring survey to include all operational equipment on site.	<p>At the time of the noise study the shredder was not in operation; however, as noted in paragraph 4.80, 'Given the existing noise output from the Scheme as a whole (as measured at NMP B), the distance to the NSRs, and the noise output of other noise generating activities in the area, it is unlikely that the addition of the shredders will have any significant impact on the noise climate at the sensitive receptors.'</p> <p>However, if the updated noise study requested as part of IPPC permit conditions reveals a significant impact from the shredder, mitigation will be proposed.</p>	A noise monitoring method statement is to be proposed by the applicant for approval by the Authority as part of the IPPC permit.	Noted.
B3.10	✓	Noted. Below comment on future monitoring refers.	-	-	-
B3.11	✓	Noted	-	-	-
B4.1	✓	Noted	-	-	-
B4.2	✓	The Civil Protection Department will need to be consulted on the Emergency Plan. A layout plan with the type and location of suitable response equipment is required.	Noted. It is understood that the CPD are statutory consultees under local IPPC legislation, and are therefore consulted as part of the review process. The layout plan requested was already included in Figures 3.37 and 3.38 of the IPPC application; these drawings have been superseded by the	Noted.	-

Section	Duly made	ERA comments (16 th February 2017)	Applicant response (9 th October 2017)	ERA comments (12 th February 2018)	Applicant response (1 st October 2018, updated on 1 st April 2019)
			drawings in Attachment 2 (notably Drawings 002 and 004). An updated fire safety report is included in Attachment 9 . In addition to the fire safety measures already mentioned in the IPPC application, the Applicant has clarified that a watchman will be on site outside normal operating hours, thus reducing the response time in case of an emergency situation when the facility is closed.		
B5.1	✓	Noted	-	-	-
B6.1	✓	Noted	-	-	-
B6.2		Applicant is to include the neighbouring "Metalco" waste management facility and any particular street whose semi-industrial or residential units may be affected by the proposed operations.	The sites identified in the answer to this question already take into account the emissions and risks identified in the preceding sections of the IPPC application, including the presence of mitigation, as described in section B4.2 ('Effect on other sites'). No further additions are considered necessary.	The Authority considers the adjacent "Metalco" waste management facility as a site which may be affected by emissions from the proposed installation. Should such affect be considered otherwise by the operator, adequate justifications are to be provided.	As described in detail in section B4.2 and section B2.8 (paragraph 3.196) of the IPPC application, emissions from the Scheme are not expected to affect Metalco, both due to the mitigation measures that will be implemented at the Scheme as well as Metalco being an industrial site (therefore less sensitive to certain emissions such as noise).
B6.3	✓	Noted	-	-	-
B7.1		1. Operator is to ensure that relevant authorisation from the Planning Authority (PA) is obtained with respect to the proposed site boundary and all structures required for the upgrading of the installation. In this regard applicant is to provide the PA any requested information which is required to continue processing PA 4172/16 which appears to cover the proposed structures in this IP Application. Furthermore, the information to be approved by the PA is to match that being processed in this IP application. The subsequent compliance certificate will be requested at a later stage.	Noted.	With reference to email from ERA dated 19th December 2017 on PA 4172/16 applicant is still to provide: 1. Clarification on how waste such as aluminium and plastic which shall be stored in the open air storage areas shall be confirmed to be clean from any potentially hazardous substance. 2. With reference to the submitted drawing (minute 81b) in PA 4172/16, a bunded fuel storage of 9m ³ is being proposed on site. Such fuel storage is not being referred to in the engineers report dated 10th November 2017 by Ing. Liana Zerafa. Thus, applicant is still to indicate how this fuel storage shall comply with relevant REWS Standards and engineer's report updated accordingly.	1. Only waste aluminium falling under the specified non-hazardous waste codes will be accepted; such waste will be inspected to ensure it is not contaminated as part of the waste acceptance procedures. Plastic waste generated will also be inspected visually prior to storage outdoors. 2. The engineer's report referred to (dated November 2017) pertains specifically to the generator and its associated fuel tank. A second engineer has been commissioned to prepare the REWS report and application to cover the larger diesel tank. It is proposed that this item is included as an Improvement Programme item in the IPPC permit, with a target date for submission of six months after the IPPC permit issue.
B8.1	✓	Noted	-	-	-
B8.2	✓	Noted	-	-	-
B8.3	✓	Noted	-	-	-
B9.1		Expenditure plan needs to be updated to include costs related to site reorganisation and housekeeping associated with the upgrading to the standard described in the IPPC application and PA 4172/16 including the installation of the hardstanding, oil-water interceptor etc. Applicant is required to allocate a realistic budget for	An updated expenditure plan is included in Attachment 10 .	Noted.	-

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		<p>the containment and remediation of any major spill resulting should the proposed mitigation measures (e.g. Damaged/unmaintained oil-water interceptor, a spill or leak from a bulk tank within a sealed container etc.) fail.</p> <p>Moreover, budget allocation for ambient air and noise monitoring shall be included.</p>			
B10.1	✓	A letter signed by the applicant shall be required when submitting the consolidated version of the application forms including this review document with replies.	Noted.	-	-

FEEDBACK FROM STATUTORY CONSULTEES

External Consultees

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018, updated on 13 th March 2019)
Environmental Health Directorate	<p>1. For the continuation of the operation and upgrading the existing waste management installation the Directorate has no objection.</p> <p>2. The Directorate is particularly concerned that the Scheme lies within the Drinking Water Protection Zone and a Drinking Water Safeguard Zone. Also there are five private groundwater boreholes distance 235m to 390m and two Water Services Corporation groundwater boreholes located over 500m from site. It is important that this area is covered with geotextile material so that to avoid any infiltrations from any possible leakages into the ground which may have an effect on the ground water sources. It has been noted that from boreholes drilled on site, samples have confirmed that there was indication of ground contamination.</p> <p>3. Safe and proper handling of raw materials on site should also be ensured. Adequate preventive measures are to be taken regarding the potential accidental spillage of hazardous fluids, fuel and lubricants which are also to be well managed and adequately stored.</p> <p>4. All water for human consumption and personal use at said facilities is to be adequate, potable and from an approved source (preferably from the Water Utility Supply i.e. Water Services Corporation).</p> <p>5. It is highly recommended that the proposed installation of hard standing surface and surface water management including the oil-water interceptor are to be included.</p> <p>6. The reservoir-harvested rain water should not be used for human consumption and/or personal hygiene. Reservoir overflow should be directly discharged onto the street after it has passed from the oil/ water separator.</p> <p>7. If second class water, (from rain water reservoir), is used to sprinkle dust emission this should be treated for Legionella bacteria.</p> <p>8. Odours especially fuels from activities should be controlled.</p> <p>9. Mitigation measures are to be adopted to prevent noise and air pollution generated from shredding machine and baling machine.</p> <p>10. With respect especially to points 8 and 9 (dust, odours and noise generation), it is being highly recommended that a landscaping plan be proposed and carried out. Mature trees and shrubs will aid in limiting emissions of dust and noise from the establishment.</p> <p>11. Pest treatment must be carried out along the entire scheme since it is prone to rodent attraction. Especially</p>	<p>1. No feedback required.</p> <p>2. The "D003 - Proposed Lighting and Paving Plan_Rev_E" drawing indicates that the whole site will include a geotextile material. Nonetheless considering the site situation and activities, applicant is also to justify why the oil-resistant slurry seal is not being proposed to be applied throughout the whole site but to a very limited waste management area.</p> <p>3. Such measures are indicated in the application and relevant conditions in this regard will be included in the IPPC permit.</p> <p>4. Applicant is to confirm the source of the water for human consumption and personal use.</p> <p>5. and 6. Noted. Such provisions have been indicated as part of the application and relevant conditions in this regard will be included in the IPPC permit. Response to Bat NO. 82 indicates that the overflow of the surface-water reservoir shall discharge to road surface.</p> <p>7. This will be included as permit condition.</p> <p>8. Operator is to confirm the throughput (in m3) of petrol handled within the installation in a calendar year. Provisions within S.L.549.52 in terms of vapour recovery may apply depending on the throughput indicated.</p> <p>9. Such measures and associated monitoring shall be included in the IPPC permit.</p> <p>10. Landscaping is being addressed to the current PA application.</p> <p>11. Applicant is to propose a pest management program in view that</p>	<p>1. –</p> <p>2. The slurry seal was originally proposed to protect the asphalt from oil in that area. However, this is no longer required due to the installation of impermeable concrete with an underlying geotextile throughout the site; updated drawings have been prepared (Attachment 2). The asphalt layer has also been removed.</p> <p>3. Noted.</p> <p>4. Mains and bottled water will be used.</p> <p>5. Noted.</p> <p>6. Noted.</p> <p>7. Noted.</p> <p>8. The only petrol handled will be that recovered from end-of-life vehicles. As indicated in Table 4.3 of the IPPC application, this is estimated at 12,000 L annually (although this quantity is dependent on the actual number of vehicles treated).</p> <p>9. Noted.</p> <p>10. Noted.</p> <p>11. A pest control company will be engaged for this purpose.</p>

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018, updated on 13 th March 2019)
	<p>since food waste will be received on site.</p> <p>12. Mitigation measures mentioned to minimise the production of leachate are to be adopted. In case that any leachate is collected for agricultural use ONLY, this must be enclosed in a leak proof container prevent any foul smells.</p> <p>13. Organic waste that will not be used for compost, as mentioned in, 3.119 pg 94, must not be kept on site for weeks but removed and disposed accordingly as soon as possible. As mentioned these waste must be kept in a sealed and leak proof container.</p> <p>14. Any storage of fluids and fuel tanks such as diesel must be enclosed in a leak proof container. Where possible double sink containers should be used to prevent any leakage. Said containers are to be included in the monitoring programme.</p> <p>15. Inspection and maintenance programmes of machinery, vehicles, infrastructure and temporary storage containers are to be adopted.</p> <p>16. Proposed storage of asbestos on site must be in sealed containers as mentioned to prevent any health risk to employees and any nearby residential area.</p> <p>17. Moreover, any other unpredicted impacts and nuisances which may arise from this operation and that may have a significant adverse effect on public health are to be immediately addressed by the applicant and the necessary mitigation measures taken.</p> <p>18. Complaints lodged by the public regarding any adverse impacts/nuisances should be immediately addressed by the applicant. All complaints lodged and actions taken are to be recorded and such records are to be readily available to the Competent Authorities when requested.</p>	<p>the site may be prone to rodent attraction.</p> <p>12. In the applicant's reply to ERA's feedback, the use of condensate from the composter for agriculture is no longer being considered and will not be allowed in the IPPC permit. Nonetheless any such condensate or leachate shall be required to be stored in a leak proof container prevent any foul smells.</p> <p>13. As per reply to question 12, the composter shall not be put into operation unless the required monitoring results are submitted to the satisfaction of ERA. Should the composter be satisfactorily be put into operation, storage of organic waste be limited through permit conditions.</p> <p>14. Relevant conditions related to bunding requirements will be included as part of the IPPC permit.</p> <p>15-18. Provisions related these comments will be included as permit conditions.</p>	<p>12. Noted.</p> <p>13. As clarified above, the Applicant now plans to operate the composter. The comment regarding storage of organic waste is noted.</p> <p>14. Noted.</p> <p>15. -18. Noted.</p>
<p>Malta Resources Authority</p>	<p>Page 73 point 3.26 – the reference to MRA should be replaced by REWS Page 22 point 53; page 28 point 73; page 41 point 2.61; - the MRA does not have any role in ground water protection or monitoring</p> <p>Furthermore, on page 51, point 2.58, the report states that “the mean sea level aquifer is located around 56 to 60 m below the site. This reduces the risk of significant contamination of the aquifer considerably.” This is further amplified by the statement on page 61 point 2.83 that “Considering that the groundwater at the Scheme site is found at a depth of around 56 to 60 m below the land surface, the substantial attenuation in contaminant concentrations observed from 0 to 2 m is expected to continue up to this depth, thus significantly reducing the risk of groundwater contamination.” Although this does not fall within the remit of the MRA, the authors may wish to note that for pollutants that are soluble in water and that do not change form with time, all the pollution at the surface will, in general and eventually, reach the aquifer, the timing, location and concentration varying depending on geology, abstraction rates, natural discharge flows, and rainfall patterns.</p>	<p>Applicant is to provide feedback accordingly.</p>	<p>Paragraph 3.26: Change in regulator noted Paragraph 2.61: The reference to MRA was made in case information was required on the location of existing boreholes; however, the results do not indicate that groundwater monitoring is warranted.</p> <p>Comment noted. However, the concentration gradient indicates that much of the contamination is currently being retained by the land, and the concentration of pollutants in groundwater is expected to be much reduced (compared to a situation where the groundwater is directly beneath the land surface). As mentioned, the plans for site resurfacing will also help reduce the future risk of contamination of groundwater from the Scheme.</p>

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Planning Authority	No feedback provided.		-
Regulatory for Energy and Water Services	<p>In the third PDF document (named IPPC Application) on pages 116 and 210 there is an inaccuracy on the way EN 590 Diesel is classified. It is true that EN 590 diesel is a low sulphur fuel, but this fuel is virtually sulphur free with 0.001 per cent being the limit. Therefore the 0.1% documented in sections 3.145 and 4.31 respectively need to be changed from 0.1 % to read 0.001% Sulphur (when referring to EN 590 diesel). (If reference is made to Gasoil or diesel, usually used for boilers and generators, this sulphur content cannot exceed 0.10% Sulphur).</p> <p>Section 4.31 – ‘The installation will include a number of combustion plant operating on diesel most of which are mobile vehicle-type machinery’. This sentence is being understood as follows: Machinery operating on site is mobile. Hereby the operator is being advised that any mobile machinery used on site (whether these are road licensed or not) should always operate using EN 590 Diesel.</p> <p>Section 4.30 – Boiler/generator are mentioned. If there are boilers and /or generators on site, these may use gasoil or diesel with a sulphur content not exceeding 0.10 %. Also it is important that apart from the details mentioned in this section, the operator should quote the tank sizes of any boiler/ generator. This will help the REWS to guide the site operator to the correct application form(s) in order to regulate the fuel storages.</p> <p>Section 2.26 mentions Operator Vehicles and in more detail Ref 138 on page 340 of the ‘IPPC application’ PDF document, the following is quoted: The only types of wastes intended for use as fuel are:- Petrol / diesel from ELVs (used by the Directors in their vehicles). Conjointly throughout certain document sections and with reference to the photograph on page 85 in Section 3.86, an 8,000 litre tank (including a Dispenser and nozzle for vehicle refueling) is mentioned. Furthermore 3.231 states that Diesel will be stored inside a dedicated and bunded 8,000 litre tank. There is no reference towards the temporary storage of petrol that is removed from End of life Vehicles (ELV) or a similar tank to store this fuel. It is therefore important for the site operator to notify this office and register any storages of fuel found on site with the Regulator for Energy and Water Services (REWS).</p> <p>The storage of diesel EN 590 or gasoil used by boilers or generators on site would require a notification under S.L. 545.22 if the combined storage is between 300 and 3,000 litres, while if the storage is greater than 3000 litres a full scale authorization is required from the REWS. The storage of fuels in various 45-gallon tanks or large number of jerry cans is not excluded. The storage of petrol (without a dispenser) up to 300 litres requires a notification under S.L. 545.22. However the storage of petrol above 300 litres and /or the storage of diesel both coupled with a dispenser and nozzle, including the dispensing of fuel to company vehicles or vehicles used by the ‘Directors in their vehicles’ (as quoted) or the company forklifter trucks (section 4.34), requires an authorization of a Commercial petroleum Filling Station under the same legislation SL 545.22. Therefore although the REWS notes the various measures taken by the operator throughout the ‘IPPC application’ document provided e.g. signage and firefighting (section 3.231) spill kits (section 3.185), bunding (section 3.86) and risk assessments (Table 3.11, Table 3.13, etc), the onus is on the site operator to register these storage with the guidance of a ‘competent person’ in the field of petroleum. REWS also notes replies given in ‘Response to ERA feedback PDF’ document whereby in Section B 1.4.1 ‘An engineer has been commissioned to prepare the application to REWS; the relevant documentation will be submitted at a later stage’, however to date no application forms have been received.</p> <p>The application forms and list of competent persons may be downloaded from the REWS website under PETROLEUM FOR THE INLAND (RETAIL) FUEL MARKET (LN 53/2010))</p>	<p>Applicant is to provide feedback accordingly including the necessary engineer’s reports and applications to be submitted to REWS. When submissions are not readily available, time-frames by when these shall be satisfactorily addressed are to be provided.</p>	<p>Comment re sulphur content of diesel EN 590 / gasoil is noted.</p> <p>4.31: Mobile machinery will use EN 590 Diesel.</p> <p>4.30: A generator will be present; the fuel requirements quoted will be met. An engineer’s report has been prepared on the generator (Attachment 16); the maximum fuel capacity of the day tank will not exceed 220 L, and the bund capacity will not be less than 110% of the day tank capacity. No boilers are proposed.</p> <p>2.26: Petrol from ELVs will be stored in a 270 L storage tank, and diesel in a 270 L storage tank.</p> <p>An engineer has been commissioned to prepare the REWS report and application to cover the existing larger diesel tank and dispenser (and any other REWS applications required for fuel storage). It is proposed that this item is included as an Improvement Programme item in the IPPC permit, with a target date for submission of six months after the IPPC permit issue.</p>

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	https://www.rews.org.mt/#/en/a/70-fuels and https://www.rews.org.mt/#/en/a/135-authorized-providersfuel-sector respectively.																		
Transport Malta	No feedback provided.		-																
Civil Protection Department	<p>With reference to sections covering water supply for fire fighting purposes, fire and explosion risk assessments and training, all the listed risks and counter measures are agreed upon and the recommendations listed must constantly be observed.</p> <p>From previous experiences of very serious fires at this site and the close proximity on an LPG bottling plant we regret not to agree with just having a water reservoir for fire fighting purposes. The dimension of the reservoir of 175 meters cubed hence 175,000 litres is not being contested we agree on that volume but this IPPC plant should have included:</p> <ol style="list-style-type: none"> A fire pump operated by two different and independent power supplies with a capability of supplying 3000 litres per minute at a pressure of 8 bars to a ring main around the plant having strategically located double headed fire hydrant outlets conforming to CPD connections. Access to the water reservoir for fire trucks to reverse up to it and be able to lift water independently is also to be in place. Water reservoir to be maintained full 365 days a year. The site should have an adequate supply and type of fire fighting foam readily available as part of its fire fighting measures to be utilised. The materials found within the plant will require fire fighting foam for extinguishing efforts of any magnitude to be more effective. 	Operator to provide feedback in an updated Emergency Response Plan	The fire safety report (Attachment 9) has been updated to include these details.																
Water Services Corporation																			
		<table border="1"> <thead> <tr> <th></th> <th>Query</th> <th>WSC Feedback</th> </tr> </thead> <tbody> <tr> <td>1.1</td> <td>It is being noted that the bioreactor will be producing a liquid leachate waste. It is being mentioned that this waste water could possibly be used for irrigation. However, if this leachate is not suitable for this application, it will be discharged to sewer via waste road tanker.</td> <td>Any waste water can only be discharged to sewer directly or indirectly if in full compliance with SL 545.08 Schedules A, B & C and WSC imposed limits. In particular the waste water quality should not exceed the following concentrations: COD - <1000 mg/L BOD - <500 mg/L TSS - <500 mg/L TKN - <100 mg/L Chloride - <1000 mg/L Total P - <20 mg/L If this leachate water is not compliant with the above, it shall not be discharged either directly (through a sewer connection) or indirectly (through road tankers) unless appropriate treatment facilities are installed. Alternatively, this waste may be disposed of through another route not including discharge to sewer.</td> </tr> <tr> <td>1.2</td> <td>Presence of a canteen in offices.</td> <td>The application is not very descriptive however it is being assumed that the canteen specified will only include a kitchenette. If any cooking activities will be performed on-site, a suitably sized grease trap must be installed. Maximum permissible free and emulsified grease concentration shall not exceed 200 mg/L.</td> </tr> <tr> <td>1.3</td> <td>Storage of hazardous wastes including oils, containerised waste & fuel.</td> <td>These wastes & fuel shall be stored in bunded areas over an impermeable floor. Any spills must be taken care of appropriately using spill kits and such wastes shall be disposed of through appropriate waste carriers. Hazardous waste sent to authorised waste carriers should be documented as per ERA procedures and records are to be made available for inspection by DPU inspectors.</td> </tr> <tr> <td>1.4</td> <td>All rain water surface runoff will</td> <td>DPU positively notes that all surface runoff will be diverted</td> </tr> </tbody> </table>		Query	WSC Feedback	1.1	It is being noted that the bioreactor will be producing a liquid leachate waste. It is being mentioned that this waste water could possibly be used for irrigation. However, if this leachate is not suitable for this application, it will be discharged to sewer via waste road tanker.	Any waste water can only be discharged to sewer directly or indirectly if in full compliance with SL 545.08 Schedules A, B & C and WSC imposed limits. 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BAT Conclusion No. 82 indicates that all surface water will be discharged to the road surface following treatment. Applicant is to indicate whether the small fire-fighting reservoir shall require periodic emptying. If so periodic monitoring of chloride levels will be required. Applicant is to provide the necessary information to the WSC in order to obtain the sewer discharge permit. 	<ol style="list-style-type: none"> Noted. Noted. No cooking is planned. Noted. Noted. Periodic emptying will not be required. The application has already been submitted to WSC and no further information has been requested. It is understood that the permitting process will continue once construction works have been completed.
		Query	WSC Feedback																
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OHSA	<p>The Adi report mentions asbestos. Hence, besides all other relevant Occupational Health and Safety regulations, the employer is obliged to conform to the requirements of LEGAL NOTICE 323 of 2006 Protection of Workers from the Risks related to Exposure to Asbestos at Work Regulations [S.L.424.23]. Particular attention should also be give to the exposure of workers to noise and vibrations. The relevant regulations can be found on the OHSA website: http://ohsa.org.mt/</p> <p>The applicant is requested to submit a list of dangerous substances, including waste, and their maximum quantities stored on site at any one time. The classification of these substances under the COMAH regulations shall also be submitted.</p> <p>(Note 5 to Schedule I of the COMAH regulations, L.N. 179/2015 makes reference to the CLP-Regulation (EC) No 1272/20085 and mentions waste explicitly. Therefore, waste is treated on the basis of its properties as a mixture. It is the obligation of an operator to define the classification of this mixture. If the classification cannot be carried out by the procedures under the CLP-Regulation, other relevant sources of information may be used, e.g. information concerning the origin of the waste, practical experience, testing, transport classification or classification according to the European waste legislation). It should also be noted that this site lies in the vicinity of an existing COMAH site, Easygas Ltd. and any possible domino effects should be considered.</p>	<p>Noted. Raw materials including chemicals are listed in Table 3.2 of the IPPC Application document. Applicant's comment to BAT Conclusion No. 25 also indicates that a maximum of 50 tonnes of waste tyres shall be kept on site. A list of waste with the annual throughput that will be accepted on site is provided in Table 4.1 in page 181 of the IPPC Application document.</p> <p>Further to the above applicant is to provide the maximum site capacity together with any applicable classification under the COMAH regulations for each listed type of raw material, chemical and waste that shall be kept on site.</p> <p>Section "B4.2 Effects on Other Sites" on page 236 considers effects on the nearby COMAH site. Applicant is to obtain a clearance from the Planning Authority in this regard.</p> <p>Requirements will be included as permit conditions.</p>	<p>Please refer to the COMAH assessment in Attachment 17.</p> <p>The relevant planning permits are already included as part of the IPPC application. Additionally, as mentioned, PA 04172/16 has been submitted to the Planning Authority (PA), and the PA has been notified that the Scheme falls within the outer COMAH zone of the Easygas facility as part of this application. The PA has been contacted and it does not issue specific COMAH clearances; however, when a PA permit is issued, this can be considered as clearance from the PA regarding all the issues brought up during the planning process, including the COMAH Regulations. It is noted that the PA is also a consultee in the IPPC process.</p>									

Internal Consultees

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018)
Environmental Assessment Unit	No feedback received.		-
Biodiversity & Water Unit	No further comments		-

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018)
<p>Ambient Quality & Waste Unit</p> <p>Air Quality Team</p>	<p>Document 1 : IPPC Application forms.pdf <i>p. 34 Section 3.1.5 –Noise and Vibration</i> Reference to BS 4142:1997 should be amended to read, BS 4142:2014; and any revision thereof</p> <p>Document 2: IPPC Application.pdf <i>p. 223 section B3.9</i> As the study was undertaken in 2014, the use of the previous version of BS 4142:1997 is deemed adequate. However there was no residual sound assessed at NMP B, which should reflect the sound envisaged at the perimeter of the scheme site when the site is not operating. This is required to perform the assessment and compare the difference in noise level between the specific noise source and the residual sound, which is then used to compare with the background noise. From this, it should have been concluded whether the level of noise emitted from the installation at all operational times exceeded the background noise level by 5dB.</p> <p>As already provided in ‘ERA comments of Feb 2017’, As part of the IPPC permit, applicant will be required to update the noise monitoring survey to include all operational equipment on site. That is; the increase in noise levels with the addition of the shredder should be assessed, where the residual sound assessment would be required in order to analyse and compared to the background noise study at the receptors once the shredder is installed (NMP A).</p>	<p>A noise monitoring method statement is to be proposed by the applicant for approval by the Authority as part of the IPPC permit taking into consideration to requirements indicated in the previous column.</p> <p>A noise monitoring survey will be required to be conducted following the issue of the IPPC permit.</p> <p>The frequency of monitoring will be determined following submission of noise monitoring results.</p>	<p>Noted. It is understood that the survey is required after the planned upgrades to the Scheme are implemented. A method statement will also be submitted to ERA prior to commencement of the survey.</p> <p>The noise survey was undertaken following an initial reconnaissance of the area around the site, in order to ascertain the noise context. This reconnaissance is the initial step in any noise study, essentially also facilitating a scoping for the survey methodology. Given that the facility was operational at that time, this reconnaissance facilitated a very accurate determination of the ambient noise levels at the site boundary, and at the closest residential sensitive receptors, as well as an observation of how audible noise arising from the site was at both locations. Where ambient noise levels at the sensitive receptors were observed to be relatively low, and noise arising from the site wasn't audible at the sensitive receptors, it was decided that a measurement of the ambient noise levels was reasonable, and that it wasn't necessary to compare background noise levels with operational noise levels. The results of the noise measurements undertaken as part of the survey supported what was observed in the initial reconnaissance.</p>
<p>Ambient Quality & Waste Unit</p> <p>Waste Management Team</p>	<p>1. <i>Treatment of waste vehicles to remove hazardous components using specialised equipment, followed by dismantling;</i> With regards to the treatment of ELVs, the provisions in S.L. 549.36 – the Waste Management (End of Life Vehicles) regulations have to be adhered to with specific reference to regulation 6 and Schedule 2 on the Minimum technical requirements for treatment.</p> <p>2. <i>Dismantling of washing machines, cookers and water meters;</i> With regards to the dismantling of washing machines, cookers and water meters, the provisions in S.L. 549.89 – the Waste Management (Electrical and Electronic Equipment) Regulations have to be adhered to with specific reference to regulation 8, Schedule 7 and Schedule 8.</p> <p>3. <i>Temporary storage of containerised waste: to consist only of waste in sealed containers, received at the site for onward shipment without any on-site processing;</i> Clarification is required with regards to: - Whether or not the waste will be received completely sealed at the facility, or will be sealed on site. In document “Response to Feedback_FNL”, page 11 B2.2.4 (f) – Applicant’s response states that the waste containers will be sealed by DDE Attard Ltd staff at the site of generation. Does this imply that they will</p>	<p>1 and 2 – Requirements set in the legislations indicated shall be set as permit conditions.</p> <p>3. Applicant is to provide the requested clarifications regarding the temporary storage of containerised waste.</p>	<p>1. Noted.</p> <p>2. Noted.</p> <p>3. As mentioned, the waste containers will be sealed by DDE Attard Ltd staff at the site of generation, i.e. prior to receipt at the facility.</p> <p>The storage period will be</p>

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018)
	<p>seal them prior to them being received at the facility? If they are sealed at the facility, this would contradict all the statements relating to the storage of containerised waste within the application.</p> <ul style="list-style-type: none"> - Period of time the containerised waste will be kept on site. In the application it is stated “few days/weeks”, however there is a large discrepancy within this time frame. Period for said storage should be better defined within the permit. <p>4. Furthermore, with regards to the export of waste, reference to shipments regulation on Page 197 point 4.14 should be amended in the following way: <i>“Exports of waste will be in accordance with Regulation (EC) No 1013/2006, 1379/2007 and 1418/2007 on shipments of waste. On a general note, shipments of non-hazardous waste will follow the Annex VII procedure, and hazardous waste shipments will be covered by a transfrontier shipment permit from AEEPA ERA.”</i></p> <p>5. <i>Composting of food waste: this is a pilot project processing around 100 tonnes of food waste each year;</i></p> <ul style="list-style-type: none"> a. Resulting compost should be subject to testing for parameters as per TORs dated 1st August 2017. Depending on the results, frequency of testing should be determined. b. Any woodclips/paper/cardboard used to regulate the water content should be uncontaminated i.e. do not contain paint, tar etc. c. Any tree prunings should be checked for diseases and any insects removed prior to usage since this could contaminate the end result. d. Transport of the wheelie bins both to and from the facility will need to follow the consignment note/consignment permit procedure. e. Further clarifications are required with regards to the proposed, separate wood shredder (mentioned in point 3.97). Will the shredder be placed in another area within the facility but outside the composter shed? If not, a designated area for the abovementioned shredder would need to be identified within Fig 3.17 Composter shed plan. 	<p>4. Applicant is requested to amend text as indicated.</p> <p>5a. The composter will not be permitted to be brought into operation until the required analyses (to be detailed in the IPPC permit) are submitted to the Authority’s satisfaction.</p> <p>b. to d. These will be included as permit conditions.</p> <p>e. With regards to the wood shredder referred to in the point 3.97, it is being understood that this is built-in with the existing composting equipment.</p>	<p>kept to a minimum but this is dependent on factors that are not always within the operator’s control (such as permitting delays).</p> <p>4. Noted.</p> <p>5. a-c: Noted. d: It is clarified that the wheelie bins will only contain non-hazardous food waste, and there is no reason to suspect that these might be contaminated with hazardous waste. It is noted that acceptance of food waste from homes for the elderly is no longer proposed. As mentioned in paragraph 3.95 of the IPPC application, an educational campaign will be run at the sites generating the waste to educate persons regarding which wastes can be placed in the bin designated for composting, and wheelie bins designated for food waste will also be appropriately labelled. As mentioned, the contents of the wheelie bins will also be visually checked before unloading into the composter. They will be completely emptied into the composter and but will be returned as soon as possible to the facilities supplying the waste; thus helping minimise the generation of odours.</p> <p>e: It is clarified that this is a very small standalone and mobile shredder; it is located within the composter shed (the current location is shown in Dwg002,</p>

Comment received from	Feedback	ERA reply and comment	Applicant response (1 st October 2018)
	<p>6. In Figure 3.30 Composting flow diagram, plastic rejects are given the wrong EWC code. The code quoted is EWC 19 12 05 refers to glass. Correct EWC code should be 19 12 04.</p> <p>7. Furthermore, applicant is to note that the quoted <i>Commission proposal to establish End-of-waste criteria for biodegradable waste subjected to biological treatment</i> is guidance and as per provisions of regulation 6 of S.L. 549.63 – the Waste regulations, the competent authority shall decide on a case by case basis whether a certain waste has ceased to be a waste.</p> <p>8. <i>Risks and mitigation measures</i> As identified in Table 2.1, it must be ensured that planned mitigation measures are carried out to avoid identified risks, since without these measures, associated risks would be quite high especially the impermeable hardstanding.</p>	<p>6. Applicant is to revise EWC code accordingly.</p> <p>7. Operator to take note of comment.</p> <p>8. Operator to take note of comment. Implementation of such measures will be verified through the necessary compliance procedures.</p>	<p>Attachment 2).</p> <p>6. This has been corrected in Attachment 4.</p> <p>7. Noted.</p> <p>8. Noted.</p>
Compliance & Enforcement	No further comments		-
Permitting Unit	Refer to Annex I for further comments.		-
Nature Permitting	No further comments		
Radiation Protection Board	<p>1 No organisation/person can store radioactive material, unless they have a permit from the Radiation Protection Board (RPB).</p> <p>2 The RPB currently only permits existing users to store their own material until such a time as there is a waste storage facility or the material is shipped to a foreign country under strict transport regulations.</p> <p>In view of the above, the applicant cannot handle or store any type of radioactive material and as such we ask ERA to ensure that at this stage such a clause is not granted to applicant. However, this does not exclude the fact that the applicant can apply separately to the RPB to acquire a storage licence.</p>	The IPPC permit shall not cover the storage and handling of any kind of radioactive material unless specifically approved and permitted by the RPB.	Noted.

Attachment I: Approval of minor amendment to PA 1876/15

Perit Joseph Bugeja
Maple Leaf
Handaq Road
Handaq Industrial Estate
Qormi QRM 4000

Date: 09 Jan 2017
Our Ref: PA/01876/15
Your Ref: J012 (Luqa)

Dear Sir/Madam

Application Number: PA/01876/15
Application Type: Request for minor amendments to permission
Location: Site at Don Kotra, Sqaq Fdal II- Hadid, Luqa, Malta

**Minor Amendment to Permission PA/01876/15
in terms of regulation 12 of Legal Notice 514 of 2010**

Reference is made to the request for minor amendments, to the above quoted development permission, submitted on 4 March 2016.

The changes you propose are acceptable as a minor amendment to the development permission. The following drawings/documents are being endorsed:

PA1876/15/MA/107B

This endorsement relates only to the changes described in your application form and specifically indicated on the drawings/documents. Any other changes from the original permission, which may be shown on the drawings/documents but which are not referred to in your application form, are not endorsed or accepted.

Consequently, this endorsement (including sanitary approval) is **only** for the proposed development as specifically indicated and does not cover any other development or sanctions any illegal development which may exist on site, even if shown on the drawings/documents.

Please note that the conditions and amendments in the original permission remain valid and are therefore applicable to the development as amended, including the condition on the validity period of the permission. The other provisions of regulation 12 of Legal Notice 514 of 2010 also apply.

Yours faithfully,

Jeffrey Vella B. Plan.
for Executive Chairperson

cc: Mr Disma Attard

Attachment 2: Updated Scheme drawings



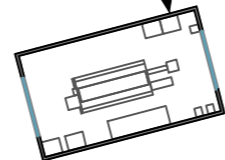
Boundary as per PA5538/07: 9,041sqm

Revised Boundary: 9,117sqm

AREA OF CONTAINMENT
BOUNDARY

Private Access Road

COMPOSTER SHED
Approved in PA/01876/15



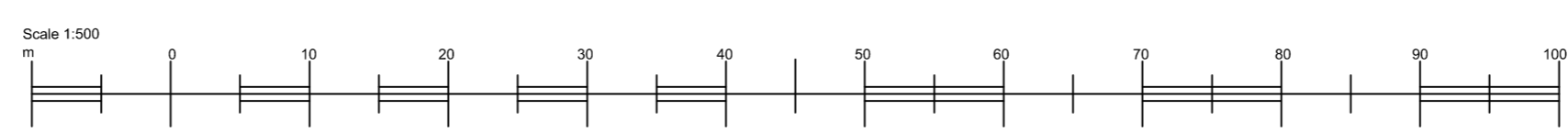
STOP

STOP

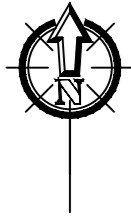
TRIQ IL-BELT VALLETTA

Farmhouse
Constructed Prior to 1968

SQAQ IL-FDAL IL-HADID



Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name EXISTING BLOCK PLAN	Drawn: EF Date: 24-04-2018 Approved: JB Scale: 1:500 (A2) Drawing No: 001 Rev: E File No: J012	 Joe Bugeja Associates Main Office: Havelock Road Havelock Industrial Estate, Qormi QRM 4000
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SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Reservoir Below

Farmhouse
Constructed Prior to 1998

TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

SQAQ IL-FDAL IL-HADID

LEGEND

1. BALING OF TYRES
2. E.L.V. (VEHICLES AWAITING DISMANTLING)
3. E.L.V. (EQUIPMENT FOR DEPOLLOUTION OF VEHICLES AND DISMANTLING)
4. E.L.V. (STORAGE OF DISASSEMBLED PARTS)
5. STAFF FACILITIES - OFFICE, TOILETS & CANTEEN
6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
7. WIRE STRIPPING
8. STORAGE OF SPARE PARTS (GENERAL)
9. STORAGE OF PROCESSED WOOD
10. SHREDDING/CRUSHING
11. GARAGE FOR PARKING & MAINTENANCE OF YARD EQUIPMENT
12. STORAGE OF TYRES
13. STORAGE OF SCRAP METAL
14. STORAGE OF WOOD
15. STORAGE OF ALUMINIUM
16. STORAGE OF PLASTIC
17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
18. QUARANTINE
19. PARKING AREA
20. TEMPORARY STORAGE
21. WEIGH BRIDGE
22. COMPOSTER SHED
23. TYRE WASH FACILITY
24. WEIGHBRIDGE OFFICE
25. GENERATOR
26. 9m³ FUEL STORAGE CONTAINER WITHIN 14m³ BUND
27. STORAGE OF COPPER

- OPEN YARD
- SHEDS
- STAFF FACILITIES
- ROAD
- LANDSCAPED AREA

FIRE SAFETY:

- 9L FOAM PORTABLE FIRE EXTINGUISHER & 9L WATER PORTABLE FIRE EXTINGUISHER
- WALL HAVING 60 MINUTES FIRE RATING
- RING MAIN WITH FIRE HYDRANTS

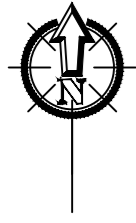
Site to be equipped with fire hydrants, positioned in line with the requirements of BS:9990

- STORM WATER FLOW
- STORM WATER CATCHPIT
- SEWAGE SYSTEM MANHOLE
- FOUL WATER SEWER
- GENERATOR EXHAUST FLUE - 11.5M HIGH



Project: SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name: PROPOSED BLOCK PLAN Drawing No: 002 Rev: G	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012
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SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Phase 3
Area: c. 1480 sq. m

Phase 2
Area: c. 1930 sq. m

Phase 4
Area: c. 1140 sq. m

Paving Phase 1
Area: c. 2190 sq. m
Area to include Storm-water Reservoir and areas 1 to 4






Area already paved

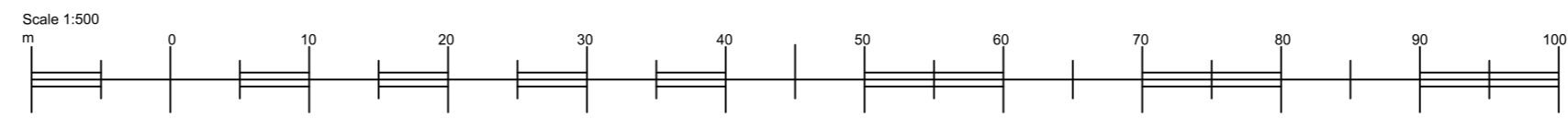
Farmhouse
Constructed Prior to 1990


TRIQ IL-BELT VALLETTA

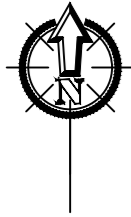
Assumed Public Road Sewer

SQAQ IL-FDAL IL-HADID

CONSTRUCTION PHASING - HARDSTANDING		
	Phase 1: Reservoir & Areas 1 to 4	2190 sq. m
	Phase 2	1930 sq. m
	Phase 3	1480 sq. m
	Phase 4	1140 sq. m
	Area already paved	2360 sq. m



Project: SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name: PROPOSED PAVING PROGRAMME	Drawn: JF Date: 20-03-2019 Approved: JB Scale: 1:500 (A2) File No: J102	 Joe Buggeja Associates 100, Gatt Road Heliport, Luqa Malta, QRM QMS 4000
	Drawing No: 002 Rev: 1	Date: 20-03-2019	
	Approved: JB	Scale: 1:500 (A2)	
	File No: J102	Date: 20-03-2019	



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Approved PA/01876/15



Reservoir Below

Assumed Public Road Sewer

TRIQ IL-BELT VALLETTA



Farmhouse
Constructed Prior to 1998

LIGHTING LEGEND

-  LIGHT - TYPE A (LOW POLES)
-  LIGHT - TYPE B (HIGH POLES)

PAVING LEGEND


PAVEMENT DETAIL

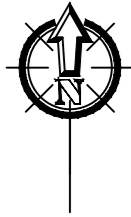
-  250mm DEEP IMPERMEABLE CONCRETE WITH A503 STEEL REINFORCING MESH
-  IMPERMEABLE GEOTEXTILE LINER
-  EXISTING SITE MATERIAL - COMPACTED BY ROLLERS

LEGEND

1. BALING OF TYRES
2. E.L.V. (VEHICLES AWAITING DISMANTLING)
3. E.L.V. (EQUIPMENT FOR DEPOLLUION OF VEHICLES AND DISMANTLING)
4. E.L.V. (STORAGE OF DISASSEMBLED PARTS)
5. STAFF FACILITIES - OFFICE, TOILETS & CANTEEN
6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
7. WIRE STRIPPING
8. STORAGE OF SPARE PARTS (GENERAL)
9. STORAGE OF PROCESSED WOOD
10. SHREDDING/CRUSHING
11. GARAGE FOR PARKING & MAINTENANCE OF YARD EQUIPMENT
12. STORAGE OF TYRES
13. STORAGE OF SCRAP METAL
14. STORAGE OF WOOD
15. STORAGE OF ALUMINIUM
16. STORAGE OF PLASTIC
17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
18. QUARANTINE
19. PARKING AREA
20. TEMPORARY STORAGE
21. WEIGH BRIDGE
22. COMPOSTER SHED
23. TYRE WASH FACILITY
24. WEIGHBRIDGE OFFICE
25. GENERATOR
26. 9m³ FUEL STORAGE CONTAINER WITHIN 14m³ BUND
27. STORAGE OF COPPER

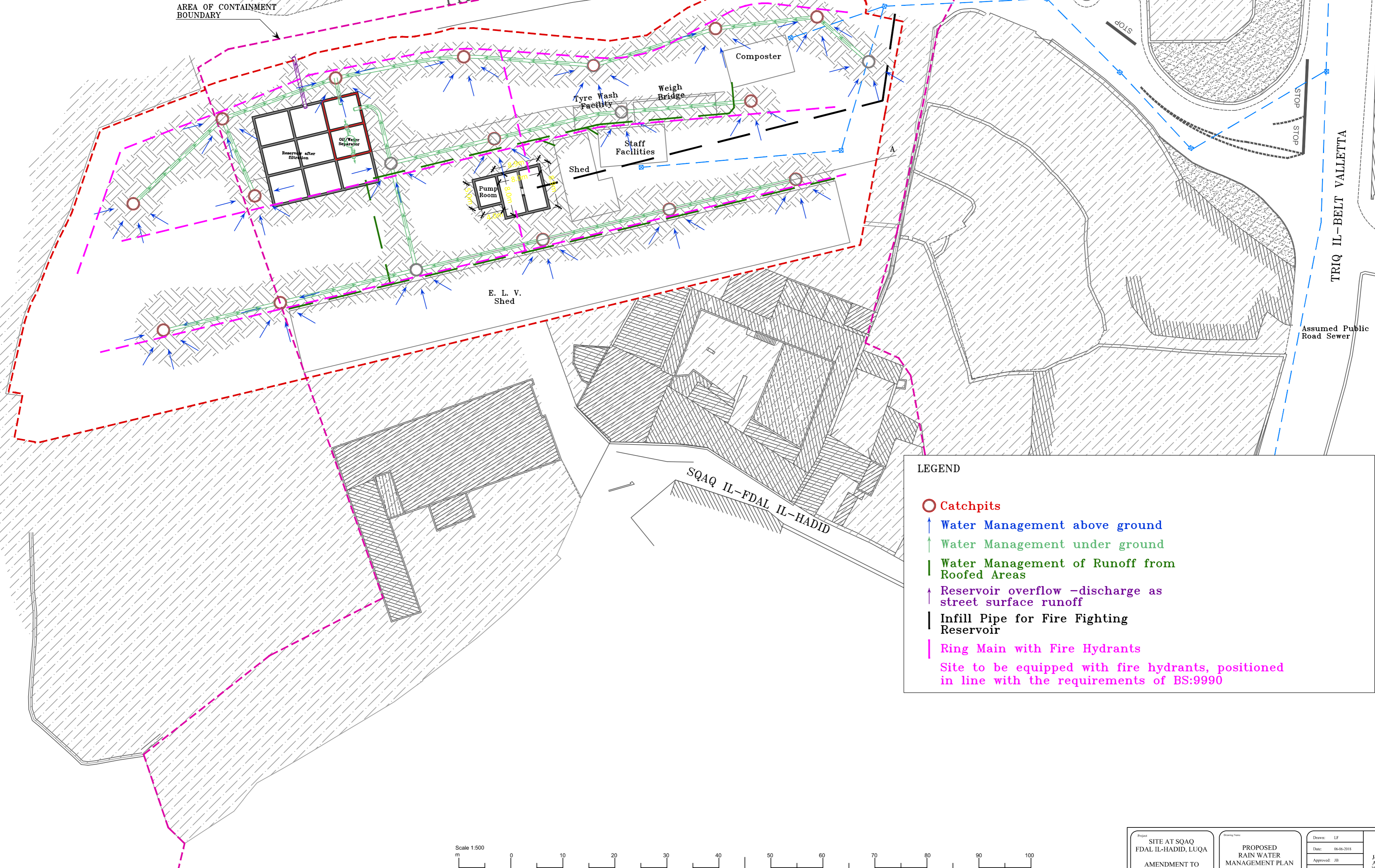


Project SITE AT SQAQ FDAL IL-HADID, LUQA Amendment to APPROVED PA/05538/07 AND PA/01876/15	Drawing Name PROPOSED LIGHTING AND PAVING PLAN	Drawn: LF Date: 21-11-2018 Approved: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates 100, Gattafiora Road Heliport Industrial Estate, Qormi QRM 4000
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Private Access Road

AREA OF CONTAINMENT BOUNDARY



TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

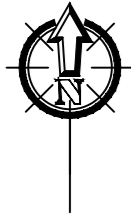
SQAQ IL-FDAL IL-HADID

LEGEND

- Catchpits
 - Water Management above ground
 - Water Management under ground
 - Water Management of Runoff from Roofed Areas
 - Reservoir overflow -discharge as street surface runoff
 - Infill Pipe for Fire Fighting Reservoir
 - Ring Main with Fire Hydrants
- Site to be equipped with fire hydrants, positioned in line with the requirements of BS:9990



Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name PROPOSED RAIN WATER MANAGEMENT PLAN	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates Trade Lic. Housing Lic. Energy Lic. Civil, General QMS 4000
Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Reservoir Below

Farmhouse
Constructed Prior to 1966

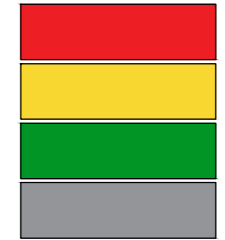
SQAQ IL-FDAL IL-HADID

TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

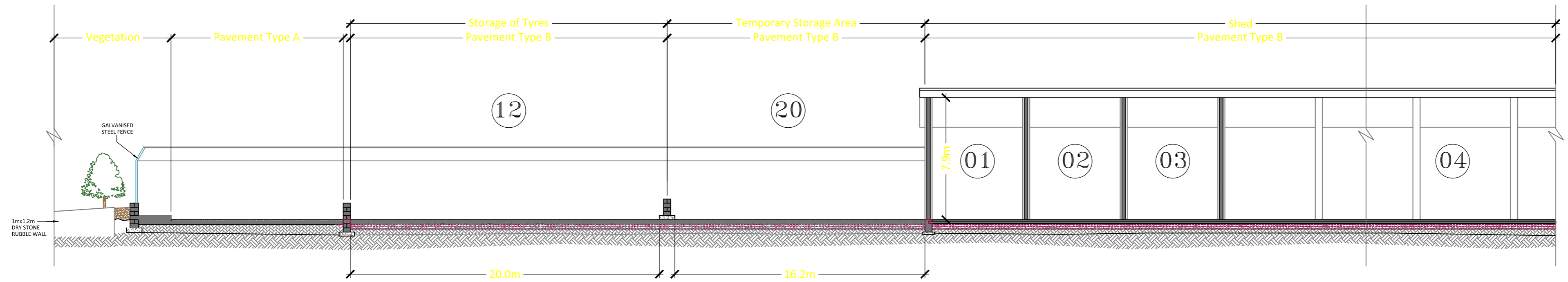
LEGEND

- 1. TOTAL SITE AREA 9,028 m²
- 1.1. Large ELV Shed 1,316 m²
- 1.2. Other smaller roofed areas 309 m²
- 1.3. Soft Landscaping areas 810 m²
- 1.4. Paved circulation and storage areas 6,749 m²



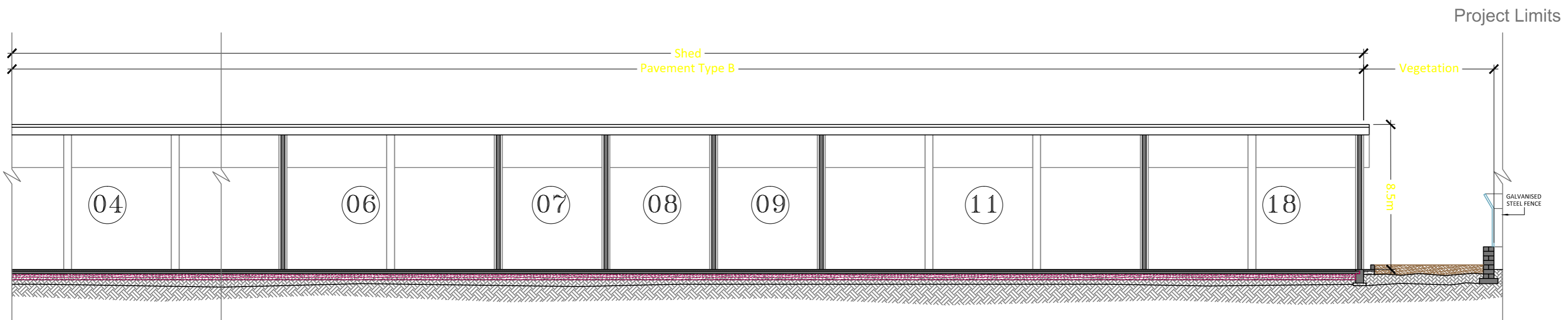
Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name RAINWATER CATCHMENT AREAS	Drawn: LF Date: 24-04-2018 Approval: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates Trade Lic. Planning, Building Survey, Quantity Survey, Quantity QMS 4000
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Project Limits



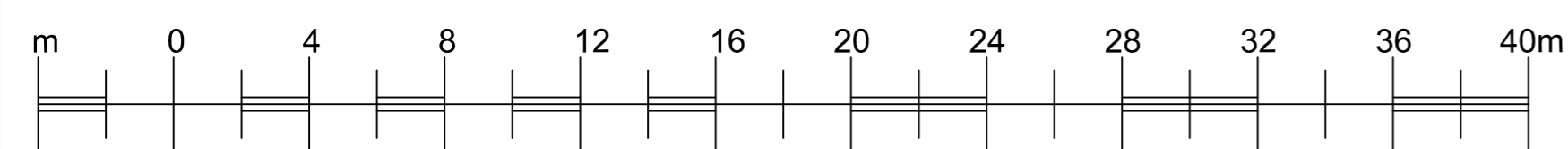
SECTION A-A

Scale 1:500 (A3)

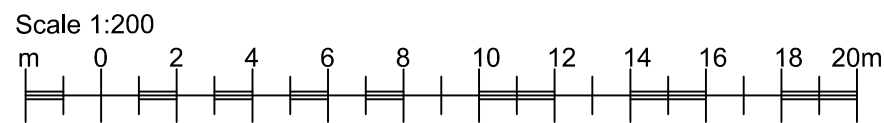
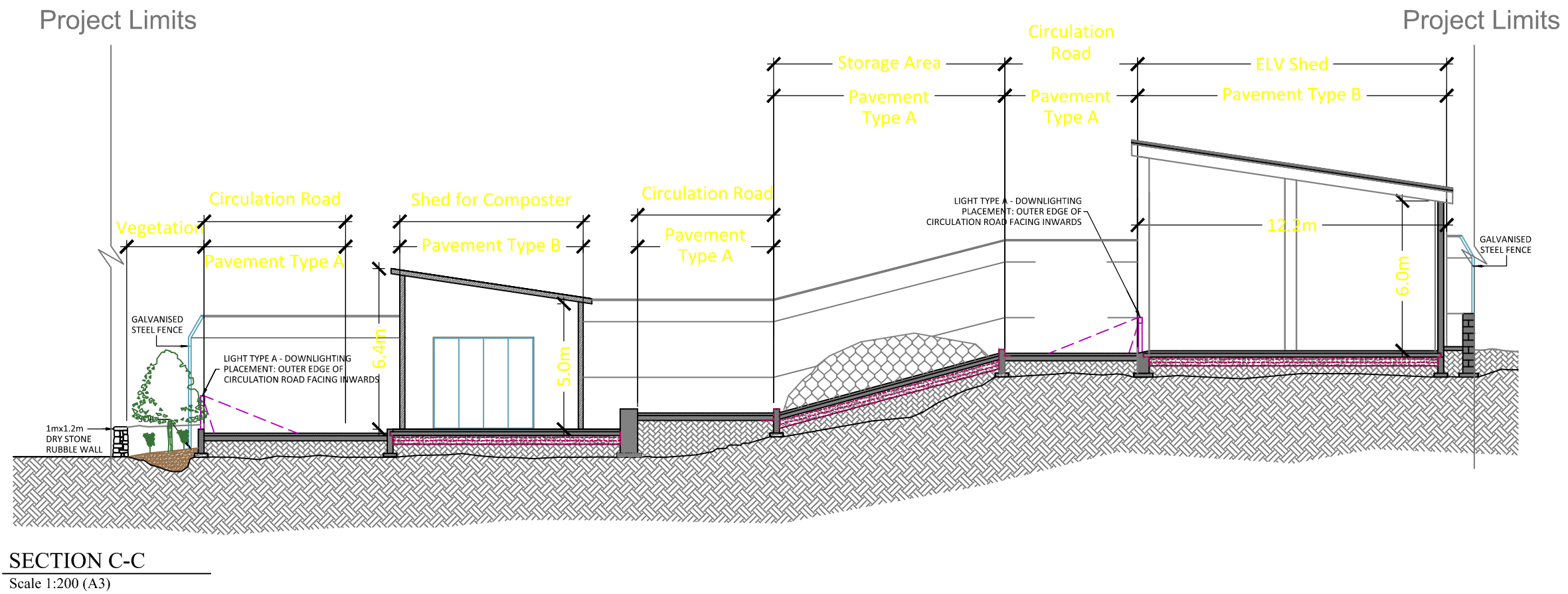
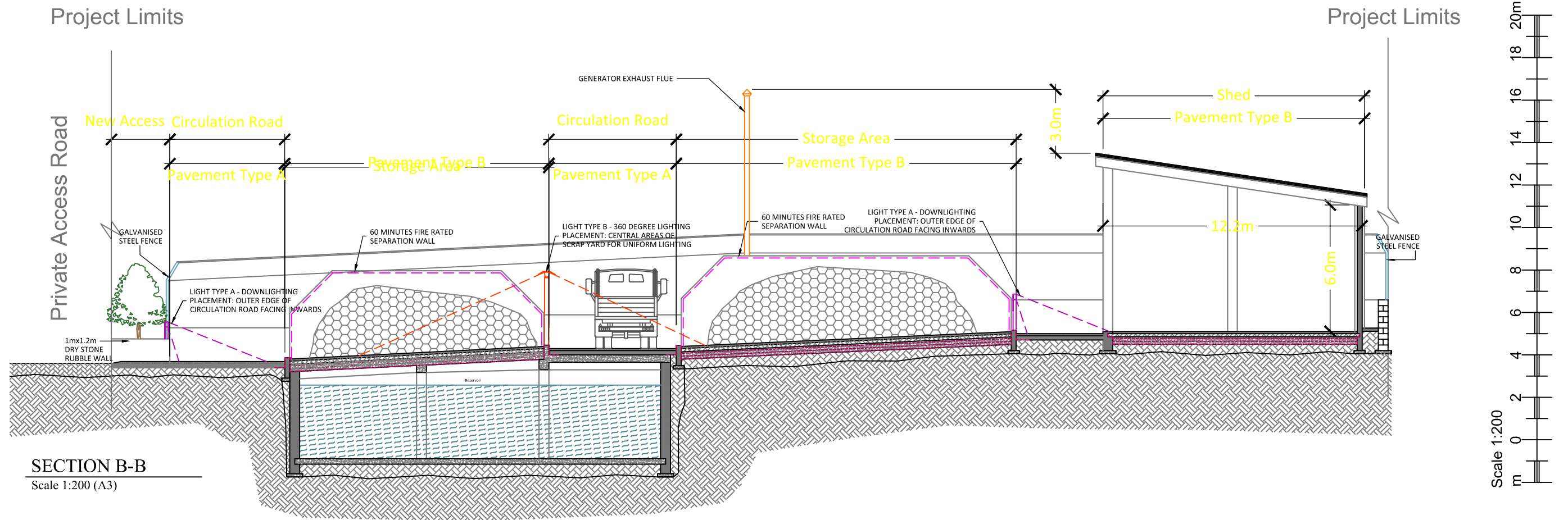


Scale 1:200

Scale 1:200



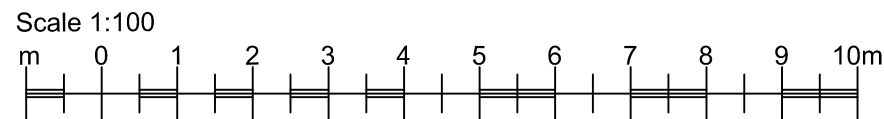
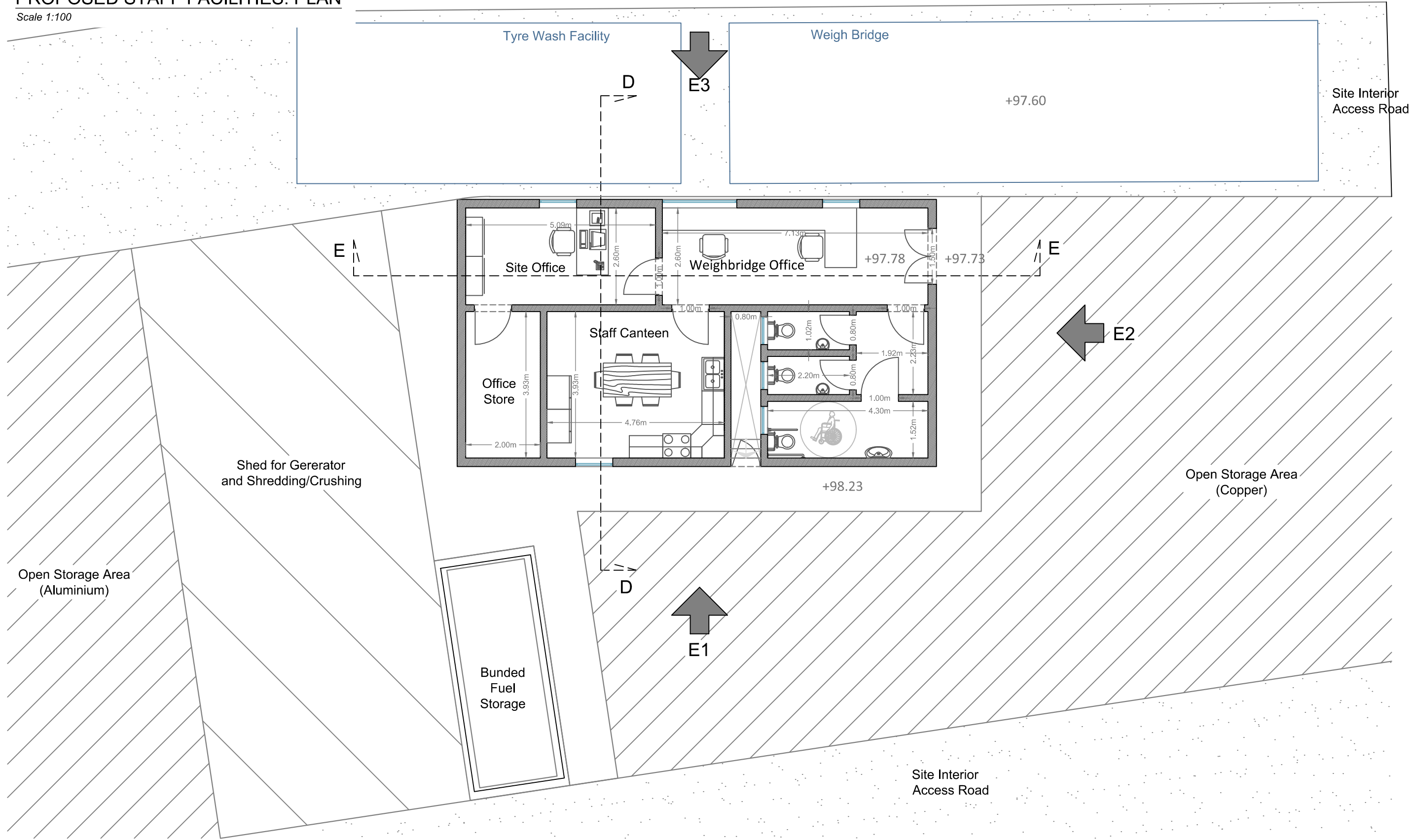
Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15		Drawing Name PROPOSED SECTION A-A		Drawn: LF Date: 08-06-2017 Approved: JB Scale: 1:200 (A2) File No: J 012		 Joe Bugaja Associates "Maple Leaf" Handaq Road Handaq Industrial Estate, Qormi QRM 4000
Dwg no: 005		Rev: D		File No: J 012		



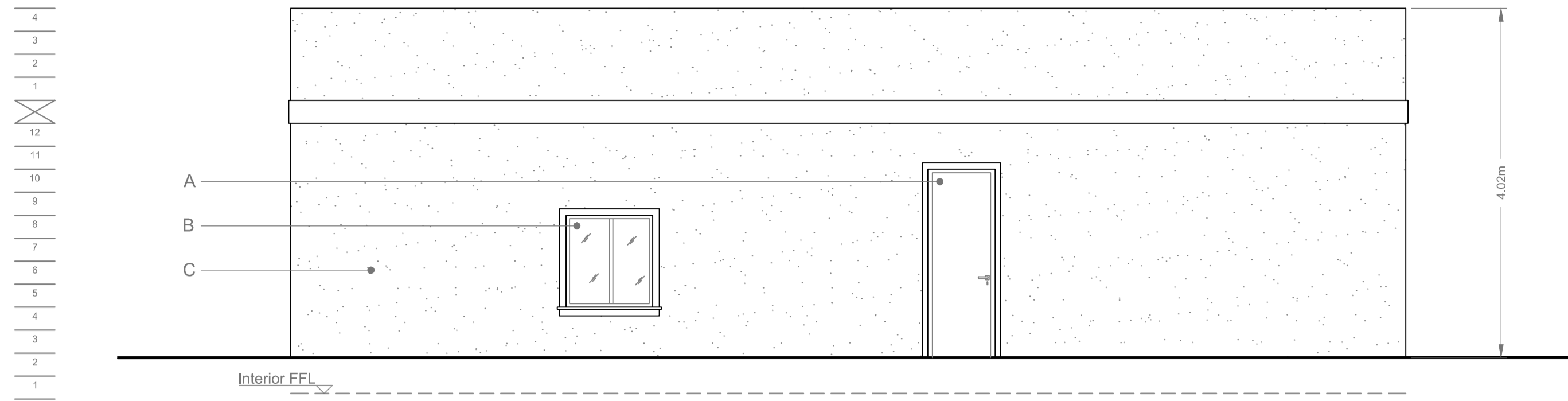
Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing Name PROPOSED SECTIONS B-B & C-C	Drawn: LF Date: 24-04-2017 Approved: JB Scale: 1:200 (A3) File No: J012	Joe Bugeja Associates 5 Maple Leaf Hamud Road Hamud Industrial Estate, Qormi QRM 4000
Dwg no: 006	Rev: F		

PROPOSED STAFF FACILITIES: PLAN

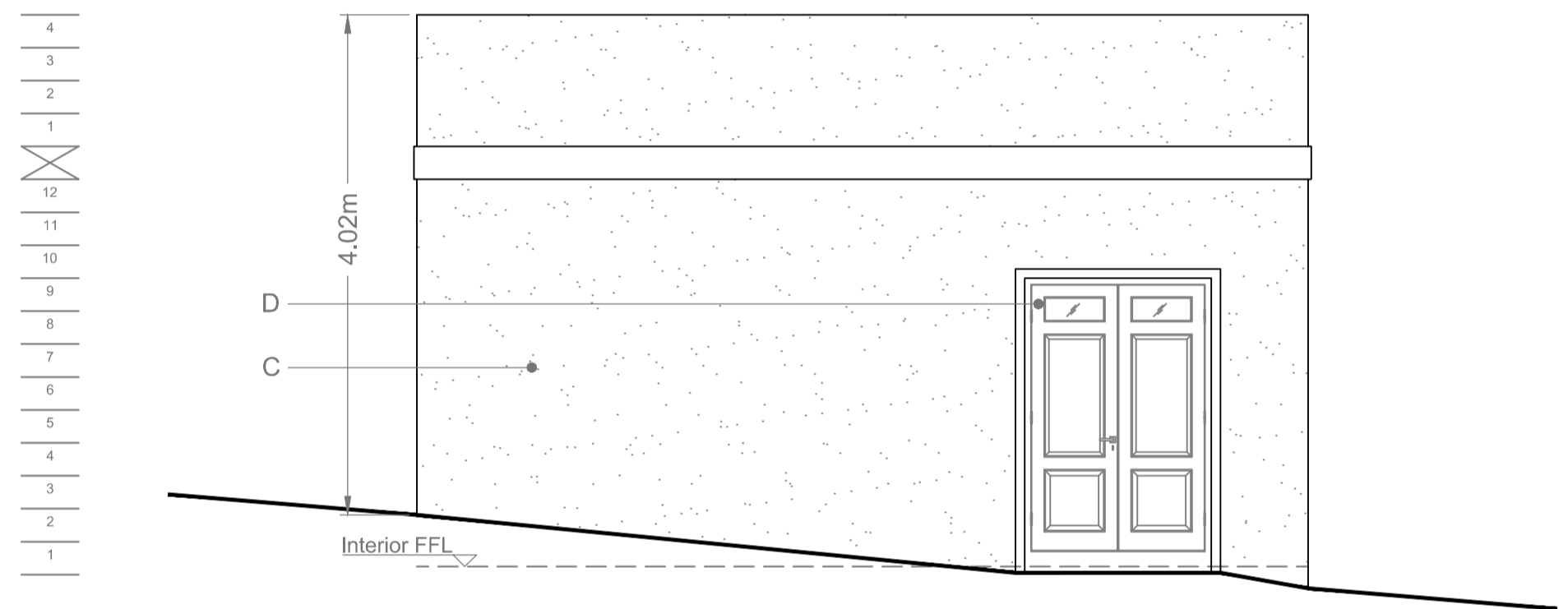
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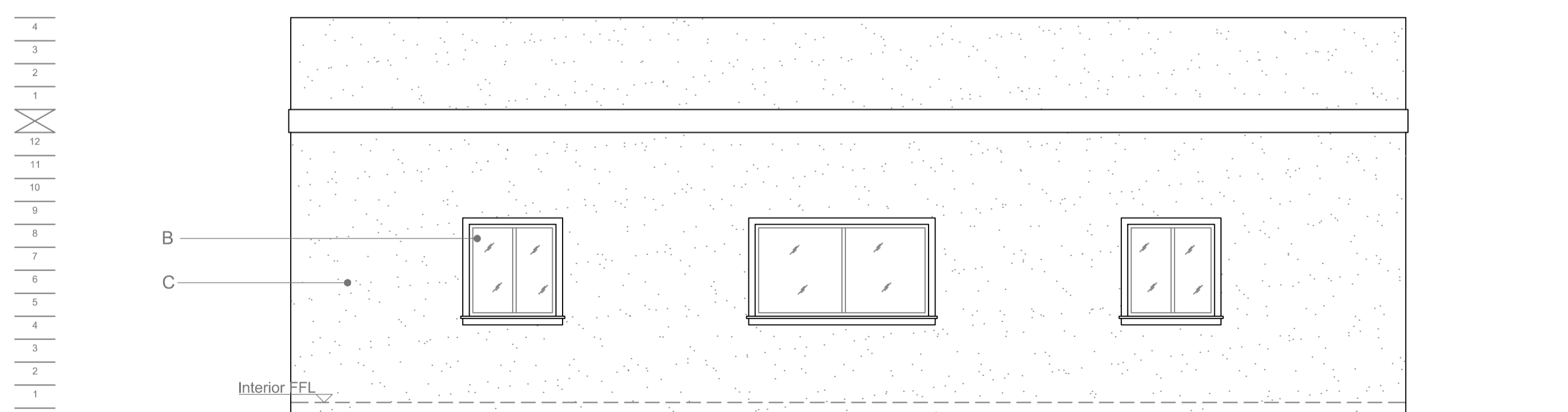
Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing Name PROPOSED STAFF FACILITIES PLAN	Drawn: LF Approved: JB Date: 23-04-2018 Scale: 1:100 (A3)	Joe Bugeja Associates "Maple Leaf" Handaq Road Handaq Industrial Estate, Qormi QRM 4000
	Dwg No: 012 Rev: -	File No: J012	
	Project Name PROPOSED STAFF FACILITIES PLAN		
	Date: 23-04-2018 Scale: 1:100 (A3)		



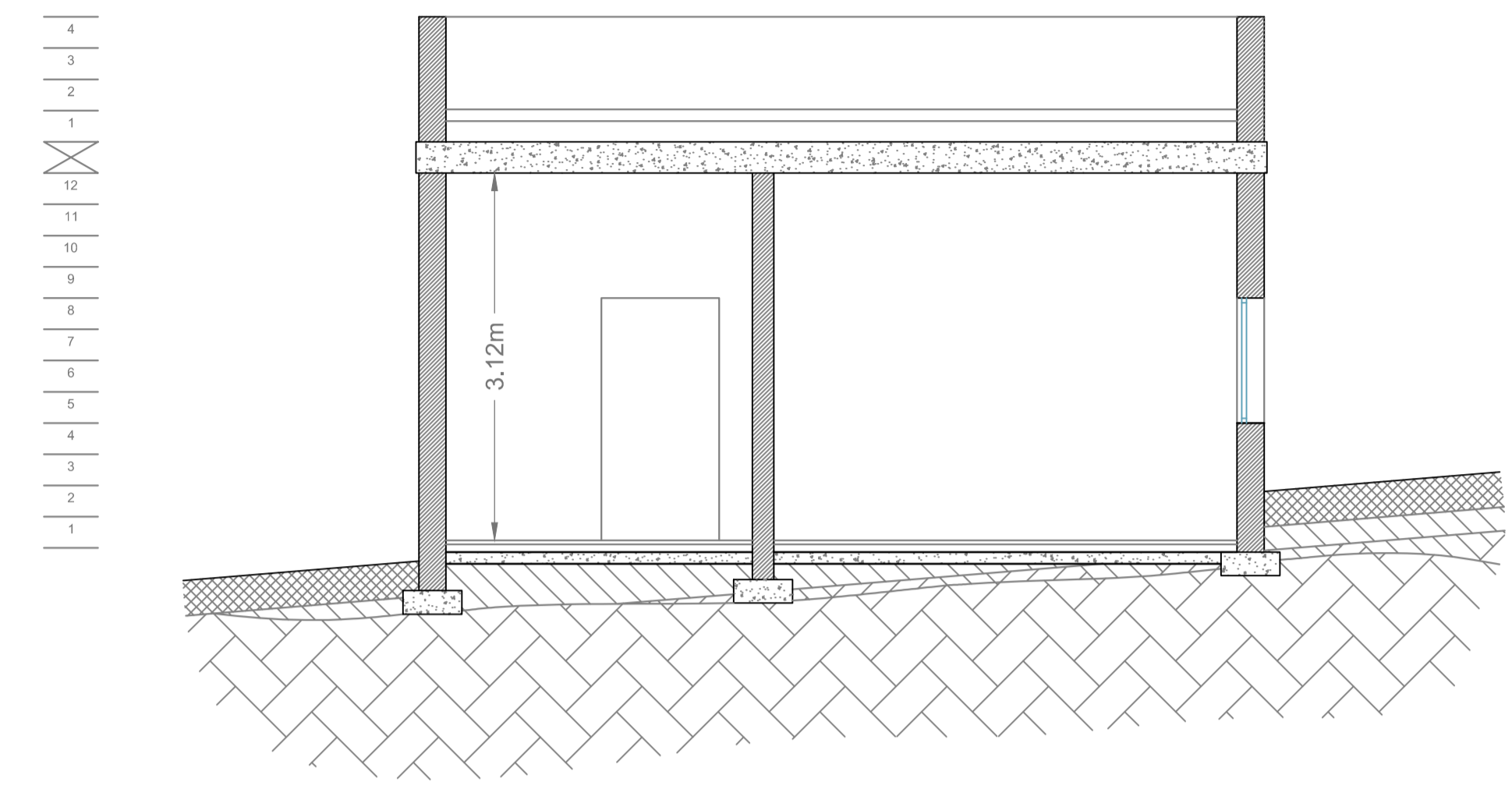
PROPOSED ELEVATION E1



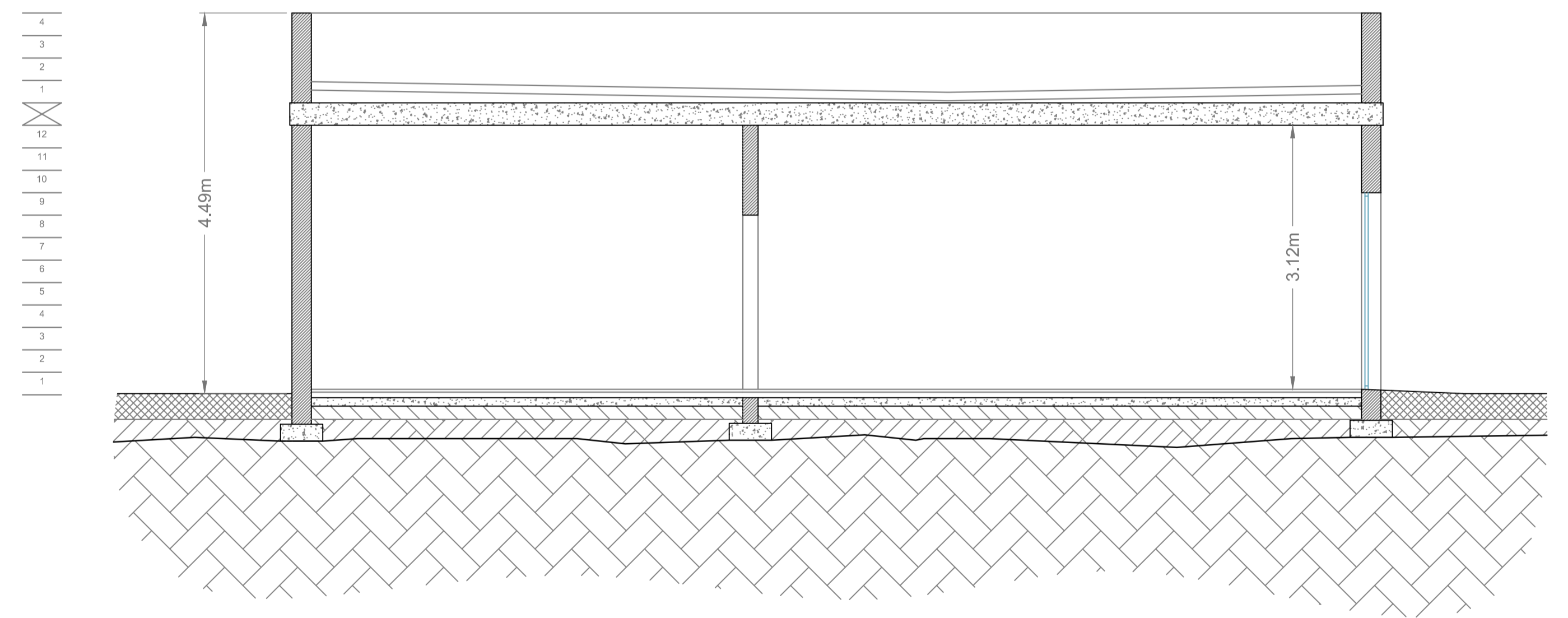
PROPOSED ELEVATION E2



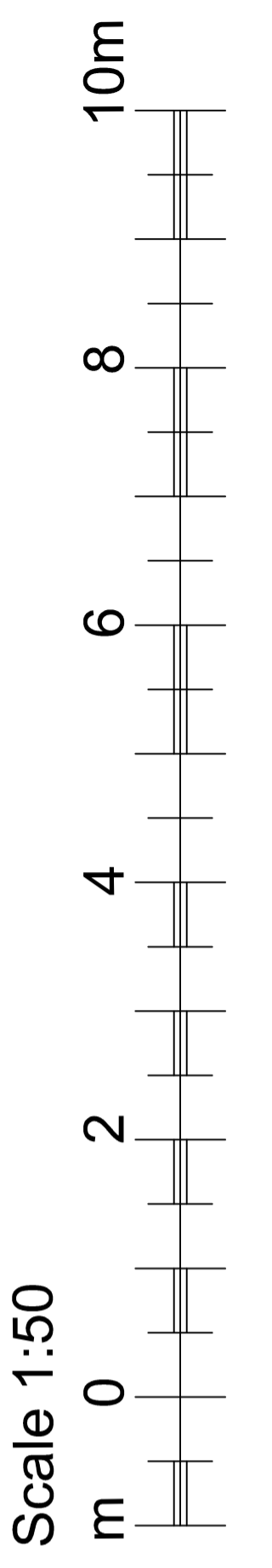
PROPOSED ELEVATION E3



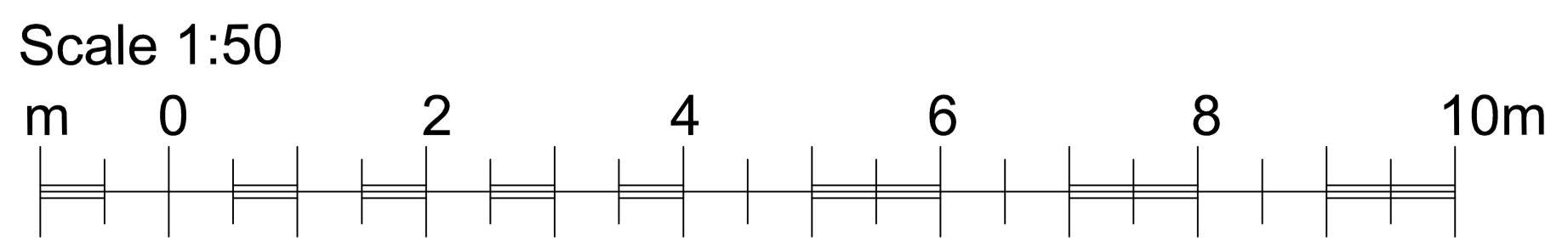
PROPOSED SECTION DD



PROPOSED SECTION EE



Scale 1:50



Legend:

- A. Aluminium Service-Shaft Door
- B. Aluminium Windows
- C. Rendered Brickwork
- D. Aluminium Main Door

Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing Name PROPOSED STAFF FACILITIES SECTIONS AND ELEVATIONS	Drawn by: LF Date: 23-04-2018 Approved by: JB Scale: 1:50 (A1) File No: J 012	<p>Joe Bugeja Associates "Majid" Leaf Handaq Road Industrial Estate, Qormi QRM 4000</p>
Dwg no: 013	Rev: -		

Attachment 3: Updated sewer discharge permit application



Triq Hal Qormi, Hal Luqa LQA 9043
Freephone: (+356) 8007 6400 Fax: (+356) 2244 3900
E-mail: customercare@wsc.com.mt Website: www.wsc.com.mt

Application for a Public Sewer Discharge Permit (based on L.N. 139 of 2002 Schedule D)

SECTION A

I DISMA ATTARD (Full Name), I.D. Card number 177575(M)
residing at SQAQ IL-FDAL TAL-HADID, LUQA, MALTA

telephone 2166 7857 fax / mobile 99493592
e-mail info@ddeattard.com
as representative of DDE ATTARD LTD

am applying for a permit to discharge effluent into the public sewer, during the one year period

from

DD	MM	YY
30	05	2017

 to

DD	MM	YY
30	05	2018

Address of premises from which effluent will be discharged:

SITE AT SQAQ IL-FDAL TAL-HADID, LUQA, MALTA.

The following is a brief outline of activities/processes envisaged to be carried out at the above premises during the above mentioned period:

SCRAPYARD, RECYCLING PLANT, ELV FACILITIES, COMPOSTING

The substances that will be used at the above premises (not necessarily discharged in the effluent) during the said period are:

Substances	Kg
<u>REFER TO ATTACHED</u>	

The proposed point of discharge is indicated in the attached site plan, scale 1:2500, which is signed by Architect and Civil Engineer

JOE BUGEJA
name in BLOCK LETTERS

Declaration by Applicant (tick appropriate box)

I declare that the effluent to be discharged from the above mentioned premises is exclusively domestic sewage i.e. effluent resulting exclusively from activities related to the habitation of humans, such as the use of toilets, wash hand basins, showers and kitchen facilities.

I declare that the effluent to be discharged from the above mentioned premises is trade effluent having the same characteristics as approved in Public Sewer Discharge Permit No _____ covering the period from

DD	MM	YY
----	----	----

 to

DD	MM	YY
----	----	----

(If one of the above options are chosen, you may proceed to SECTION E)

I declare that the effluent to be discharged from the above mentioned premises is, at least partly, trade effluent, as defined in the Environment Protection (Sewer Discharge Control) Regulations, 2002. For this reason, I am supplying the following information which, I understand, shall be treated as strictly confidential:

PA 4172/06 - In Process
 PA 1876/15 - Approved
 PA 5538/07 - Approved.
 IPPC Reference: IP 0001/13

SECTION B to be filled in for the discharge of trade effluent, please tick appropriate box/boxes

Type of industrial activity/process envisaged to take place in above premises during the year

Activity I – Manufacturing and Processing

- | | | |
|---|--|---|
| <input type="checkbox"/> Textiles & clothes | <input type="checkbox"/> Soap & detergent | <input type="checkbox"/> chemical(s) <i>specify which</i> |
| <input type="checkbox"/> Shoes | <input type="checkbox"/> Carpentry | _____ |
| <input type="checkbox"/> Food | <input type="checkbox"/> Glass & porcelain | _____ |
| <input type="checkbox"/> Beer | <input type="checkbox"/> Electronic components | _____ |
| <input type="checkbox"/> Wines & spirits | <input type="checkbox"/> Metal goods | _____ |
| <input type="checkbox"/> Soft drinks | <input type="checkbox"/> Batteries | _____ |
| <input type="checkbox"/> Mineral water | <input type="checkbox"/> Leather | _____ |
| <input type="checkbox"/> Paint & pigments | <input type="checkbox"/> Tiles | <input type="checkbox"/> Other <i>specify which</i> |
| <input type="checkbox"/> Paper & cardboard | <input type="checkbox"/> Glue | _____ |
| <input type="checkbox"/> Plastic & resin | <input type="checkbox"/> Explosives | _____ |
| <input type="checkbox"/> Tobacco | <input type="checkbox"/> Rubber | _____ |
| <input type="checkbox"/> Stone & marble | <input type="checkbox"/> Lime | _____ |
| <input type="checkbox"/> Carpentry | <input type="checkbox"/> Candles | _____ |

N/A

Activity II – Servicing

- Electroplating
- Motor vehicles
- Photographic printing
- Laundries
- Dry cleaning
- Shipbuilding
- Other *specify which* _____

N/A

Activity III – Miscellaneous

- Catering
- Agricultural
- Animal husbandry
- Hotel
- School
- Water desalination
- Aquaculture
- Waste processing
- Petroleum
- Power generation
- Hospital/clinic
- Dyeing
- Printing
- Other *specify which* _____

SECTION C

VOLUME of effluent to be discharged during the year: 810 m³
 MAXIMUM FLOW per hour: 430 L

SECTION D

I declare that the effluent characteristics will be as follows:

NAME OF SUBSTANCE	(a) *	(b) **
<u>SANITARY WASTES FROM TOILETS,</u>		
<u>SHOWERS AND WASH-HAND BASINS</u>	<u>N/A</u>	<u>N/A</u>
<u>WATER CONDENSATE - NON-HAZARDOUS</u>	<u>Limits stated</u>	<u>60,000 kg</u>
<u>EFFLUENT GENERATED FROM THE</u>	<u>in LN 139 of 2002</u>	
<u>COMPOSTING OF FOOD WASTE</u>	<u>will not be</u>	
	<u>exceeded.</u>	

NAME OF SUBSTANCE

(a) *

(b) **

* (a) Maximum concentration in effluent, expressed in mg/L

** (b) Total amount of material to be discharged in sewerage system during year, expressed in Kg

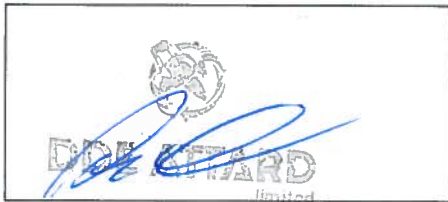
SECTION E

I declare that the information contained above is true.

Signed 

Date 30/05/2017

Name in Full DISMA ATTARD

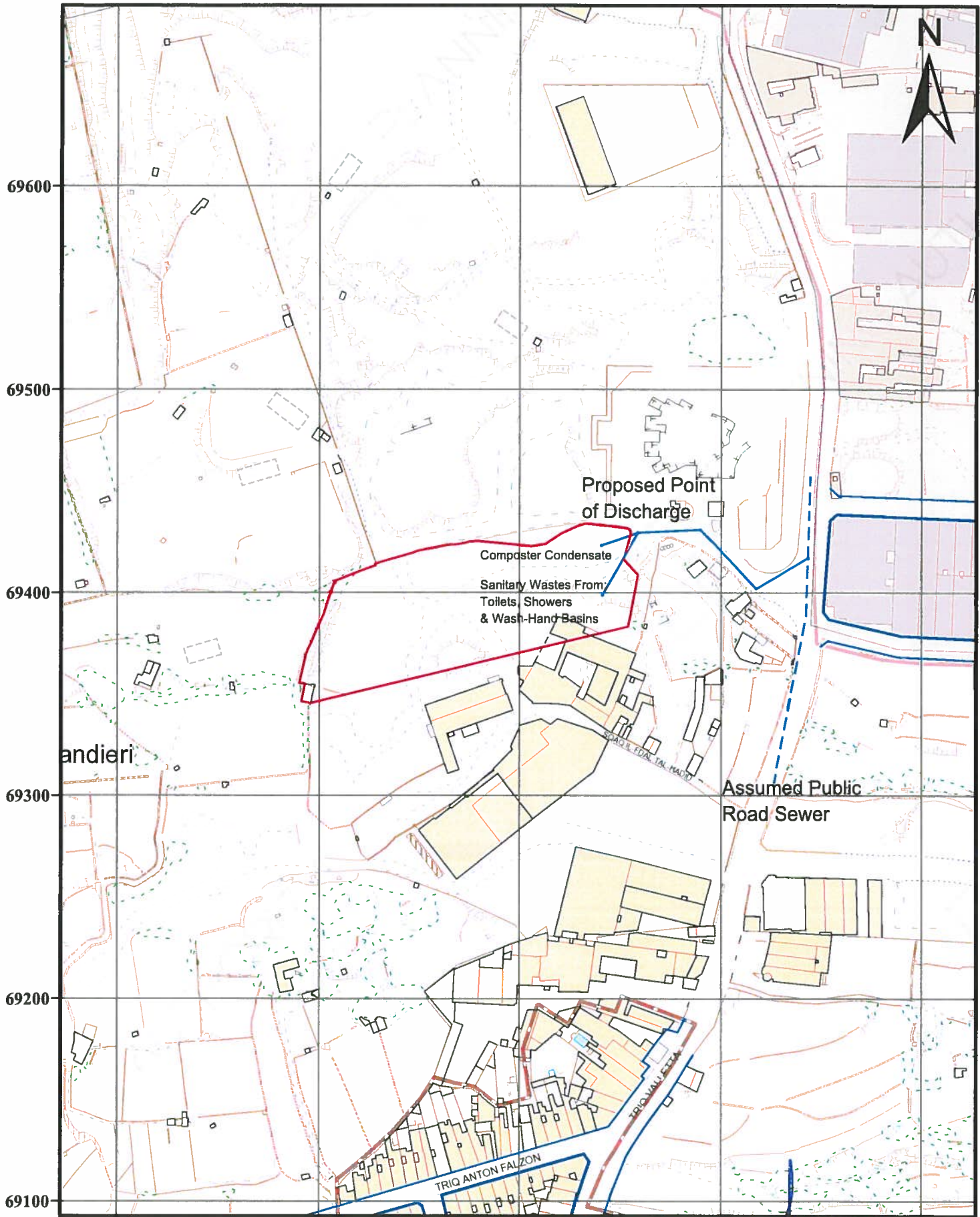


Official company/personal stamp of industrial concern

**€11.65 fee for the first application
or any subsequent application not being a renewal**

DATA PROTECTION

The information in this application form is used by the Water Services Corporation but may also be shared with Enemalta Corporation in accordance with the Water Services Corporation Act (Chapter 355) and shall be dealt with in strict confidence. You have the right to access, rectify, and where applicable, erase any data that concerns you. The Water Services Corporation guarantees fair processing of personal data. Furthermore, the Water Services Corporation will only send you information related to the Corporations' own services.



53700 53800 53900 54000 54100



Public Geoserver

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 Data Captured from: 1988, 1994, 1998, 2004 & 2008 aerial photography and updates from 2012 orthophotos.
 Truncated U.T.M. Coordinates. Levelling Datum M.S.L. (Mean sea level). Contours when shown are at 2.5m vertical interval. Not to be used for interpretation or scaling of scheme alignments
 Copyright © PA - Planning Authority. Not for resale

1:2,500

Joe Bugeja
 A & C E

Mejta Leal, Hondoq Road,
 Hondoq Industrial Estate, Qormi GR1 4000

Tel: 2144 2020 Fax: 2149 2299
 Data printed: 08/06/2017



PLANNING AUTHORITY

St. Francis Ravelin, Floriana.
 Tel: +356 2290 0000, Fax: +356 2290 2295
 www.pa.org.mt, mappingshop@pa.org.mt



Environmental Permit

Environment and Development Planning Act (CAP. 504; Act X of 2010)

Permit number
WM 0009/06/K

The Malta Environment and Planning Authority (hereinafter the Authority; the Competent Authority or MEPA) in exercise of its powers under the Environment and Development Planning Act (CAP. 504; Act X of 2010) and the Waste Regulations, 2011 (L.N. 184 of 2011 as amended), hereby authorises:

DDE Attard Ltd
Company registration number: **C 4938**

(hereinafter "the Operator" or "the Permit Holder"),
Of / Whose Registered Office (or principal place of business) is at:

DDE Attard Ltd
3, Scrap Lane
Valetta Road
Luqa, LQA 03, Malta

to carry out waste management activities related to storage and processing of specified non-hazardous waste at:

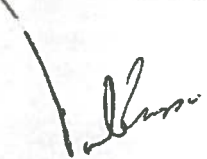
DDE Attard Ltd
3, Scrap Lane
Valetta Road
Luqa, LQA 03, Malta

to the extent authorised by and subject to the conditions of this Permit.

This permit is valid for **six (6) months** from the original issue date below. An application for renewal of this permit is to be submitted at least six weeks prior to expiry of this permit.

Signed

Date

 Perit Vincent Cassar F/Director Environment Protection	Permit Issued: <u>14</u> / <u>03</u> / 2016
--	---

Authorised to sign on behalf of the Competent Authority

MALTA ENVIRONMENT & PLANNING AUTHORITY
L-AWTORITA' TA' MALTA DWAR L-AMBIJENT U L-IPPJANAR

P.O. BOX 200, MARSA MRS 1000, MALTA
TEL: (+356) 2290 0000 • FAX: (+356) 2290 2295
<http://www.mepa.org.mt> • email: enquiries@mepa.org.mt

Section A:

Raw material	Annual consumption
Diesel EN 590 (0.1% sulphur)	140,000 L
Acetylene	18,400 kg
LPG	1,600 kg
Oxygen	46,000 kg
Water	500 m ³
Nutrients (Advetec 6000)	54 L
Extremophilic bacteria	4.8 kg
Wood chips	Variable
Packaging material	3 kg
Engine oil	4,800 L
Transmission oil	1,200 L

Incoming waste	Estimated annual quantity
End-of-life vehicles	4,800 t
Tyres	1,000 t
Washing machines	250 t
Cookers	7,500 t
Water meters	<10 t
Scrap metal	750 t
Cables (non-hazardous)	200 t
Wood	2,000 t
Sealed containerised waste	600 t
Food waste	162 t

Boundary as per PA5538/07: 9,041sqm
 Revised Boundary: 9,028sqm

SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED



- STORM WATER FLOW
- ⊠ STORM WATER CATCHPIT
- ⊠ SEWAGE SYSTEM MANHOLE
- - - FOUL WATER SEWER

- OPEN YARD
- SHEDS
- STAFF FACILITIES
- ROAD
- LANDSCAPED AREA

- LEGEND**
1. BALING OF TYRES
 2. E.V. (VEHICLES AWAITING DISMANTLING)
 3. E.V. (EQUIPMENT FOR DEPOLUTION OF VEHICLES AND DISMANTLING)
 4. E.V. (STORAGE OF DISASSEMBLED PARTS)
 5. STAFF FACILITIES - OFFICE, TOILETS & CANTEN
 6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
 7. WIRE STRIPPING
 8. STORAGE OF SPARE PARTS (GENERAL)
 9. STORAGE OF PROCESSED WOOD
 10. SHREDDING/CRUSHING
 11. GARAGE FOR PARKING & MAINTENANCE OF YARD EQUIPMENT
 12. STORAGE OF TYRES
 13. STORAGE OF SCRAP METAL
 14. STORAGE OF WOOD
 15. STORAGE OF ALUMINIUM
 16. STORAGE OF PLASTIC
 17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
 18. QUARANTINE
 19. PARKING AREA
 20. TEMPORARY STORAGE
 21. WEIGH BRIDGE
 22. COMPOSTER SHED
 23. TYRE WASH FACILITY
 24. WEIGHBRIDGE OFFICE
 25. GENERATOR
 26. FUEL STORAGE CONTAINER
 27. STORAGE OF COPPER



SITE AT SQAQ
 FDAL IL-HADID, LIQA
 AMENDMENT TO
 APPROVED PA05538/07
 AND PA01876/15

EXISTING
 BLOCK PLAN

12/14/2010 dat: 118237
 12/14/2010 dat: 118237
 12/14/2010 dat: 118237

Joe Bugeja
 A/B/C/D
 Joe Bugeja
 Architect
 12/14/2010 dat: 118237

Data: 9/6/17 Nru. ta' l-irċevuta
Date: Invoice no. **№ 127697**

Irċivejt minghand **DPE Attard Ltd.**
Received from

is-somma ta' **Eleven** Ewro
the sum of Euro

65 ċenteżmi cents **€ 11.65**

ghal **DMM 7400**
in respect of

Firma **G. Ghigo.** Discharge Permit Unit
Signature IWT - Water Services Corporation

L-irċevuta ma' valida jekk iċ-ċekk ma jissarrafx.
Dishonoured cheques automatically invalidate this receipt.



Triq Qormi, Luqa LQA 9043
Freephone: (+356) 8007 2222
Fax: (+356) 2244 3900
E-mail: customercare@wsc.com.mt
Website: www.wsc.com.mt
VAT No. MT12435416
VAT Permit No. 71/04

Nru. taċ-Ċekk **CASH**
Cheque No.

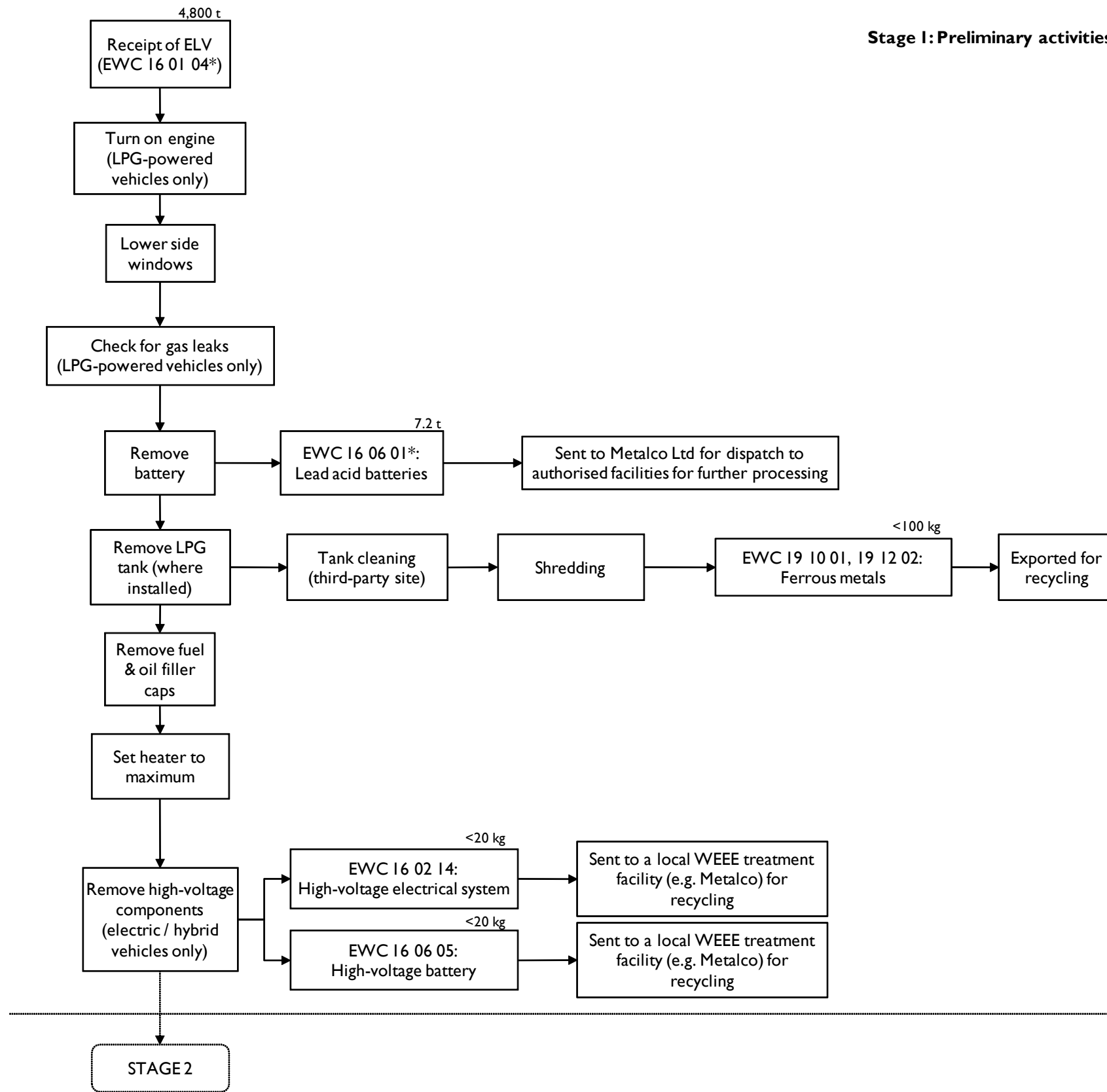


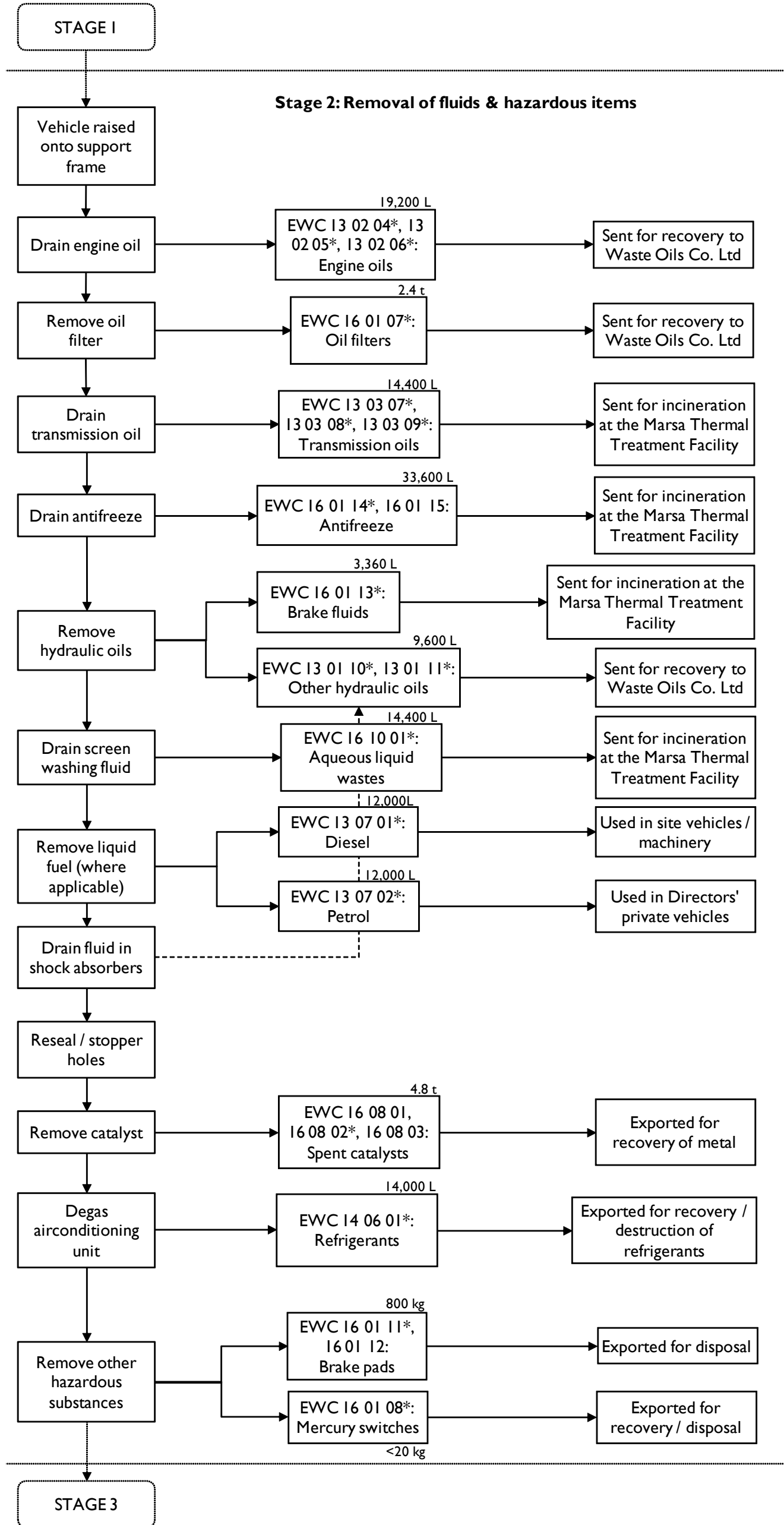
CSD/FIN 104/1 1x2 01/15

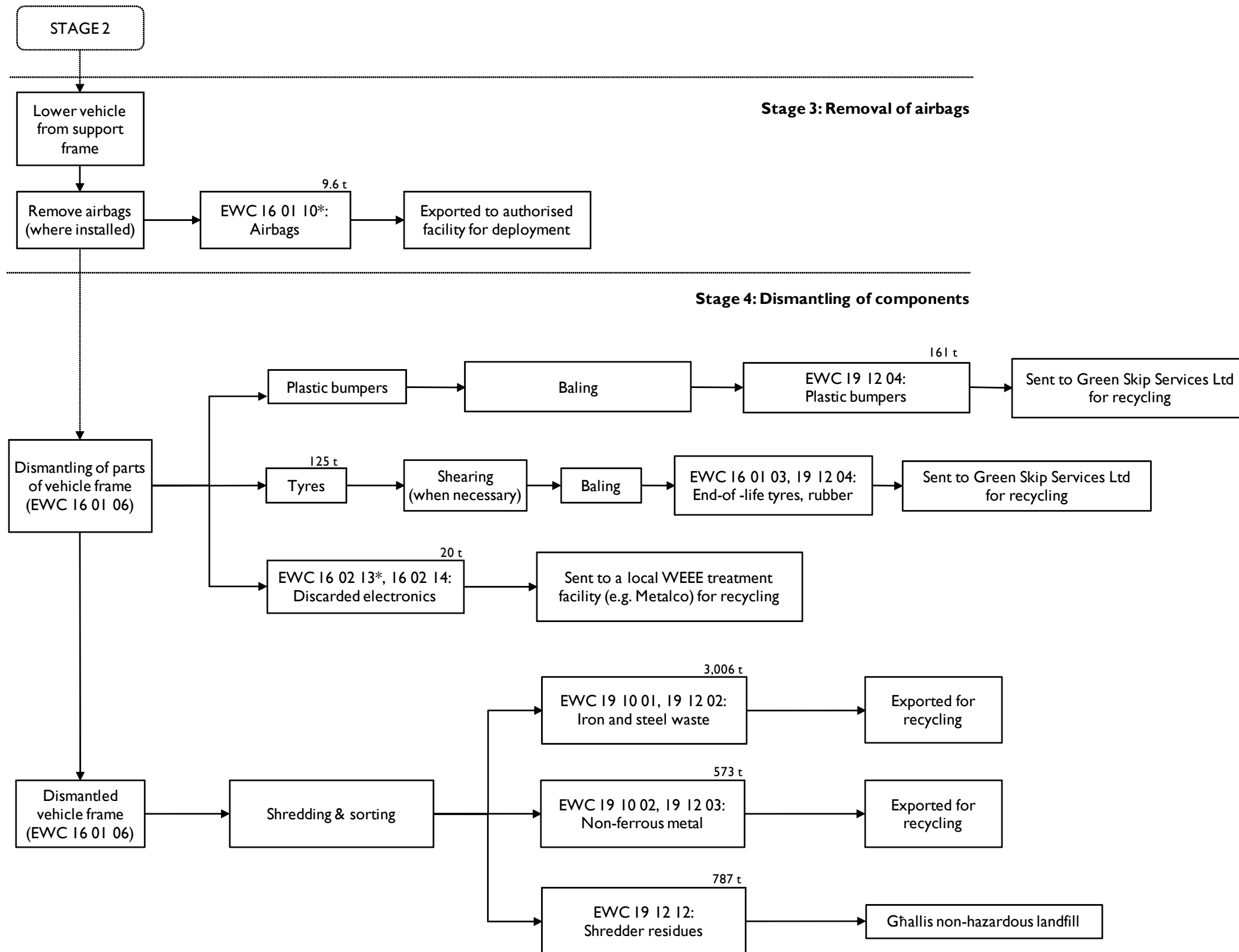
Attachment 4: Updated flow diagrams

End-of-life vehicles (Option 1 – as described in Volume 2):

Stage 1: Preliminary activities

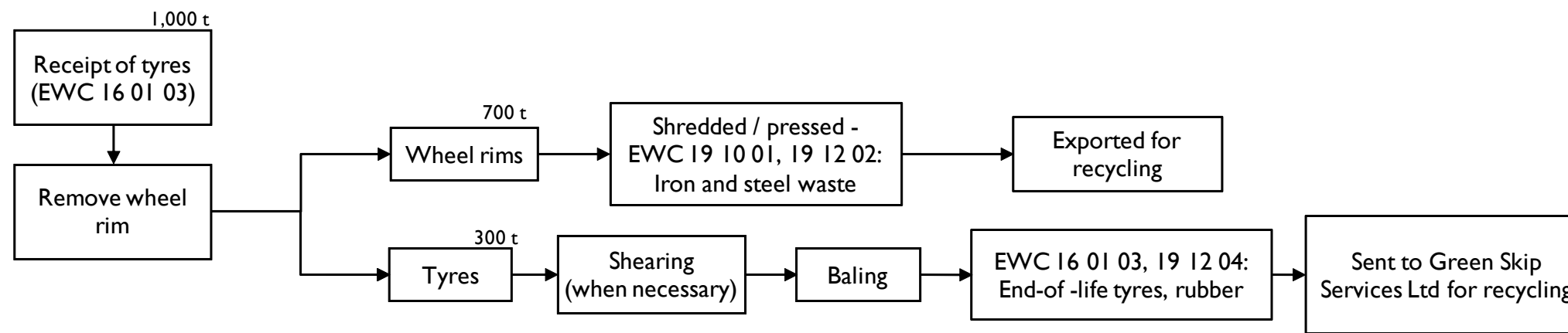




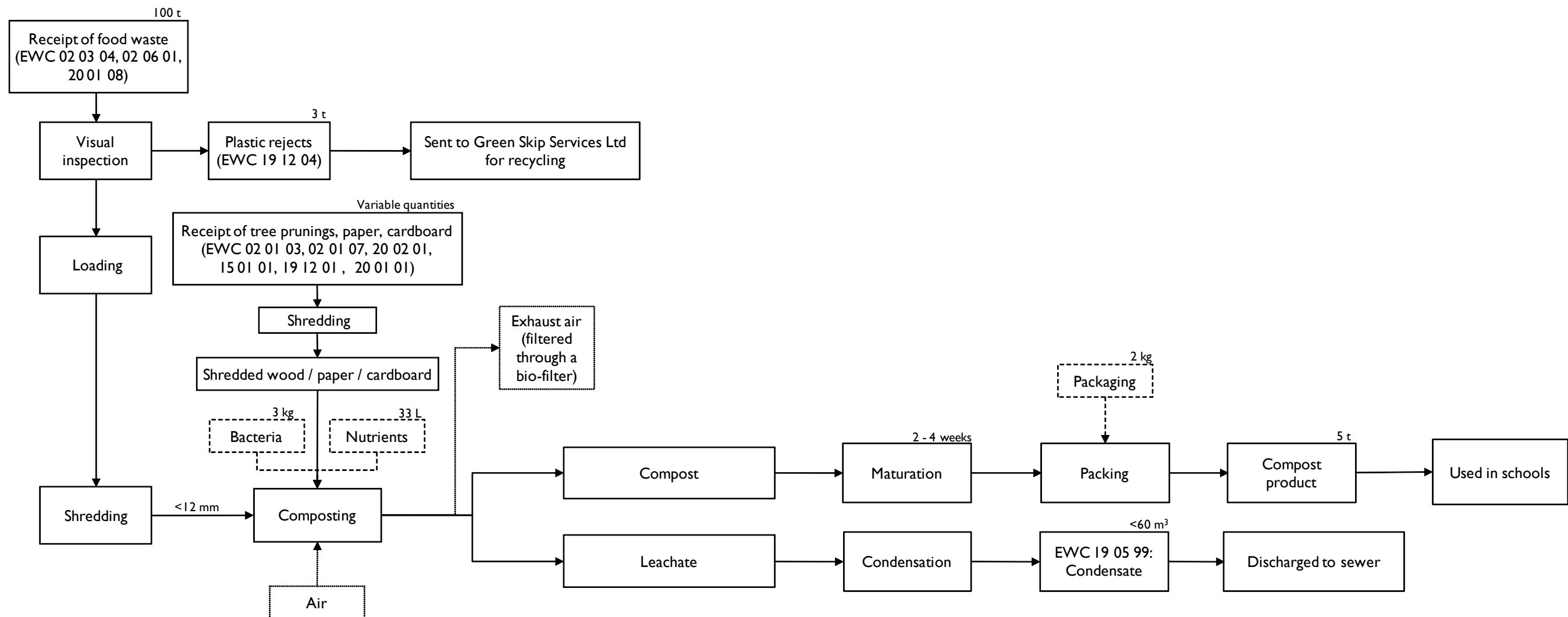


Option 2, as described in **Attachment 13**, will be implemented in order to improve recovery and reuse rates.

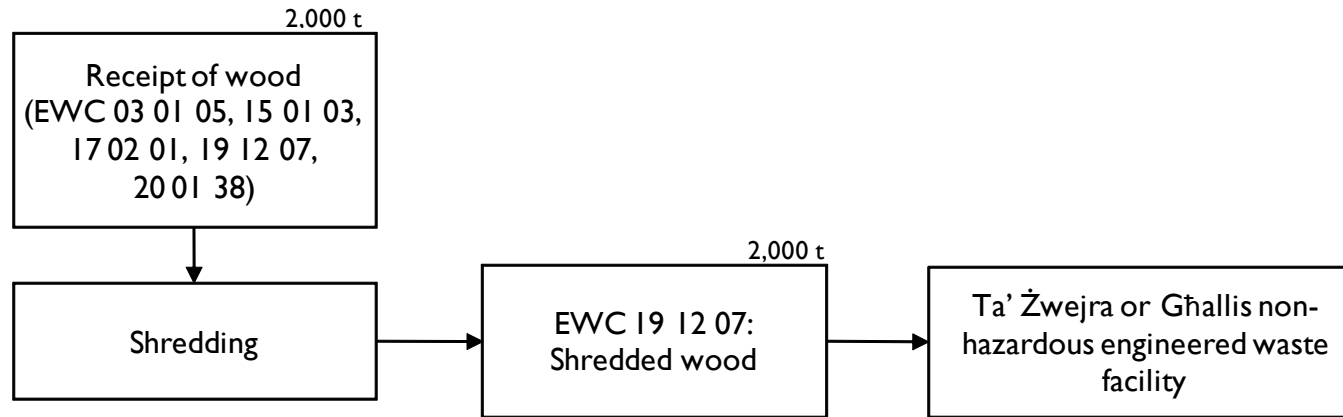
Tyres:



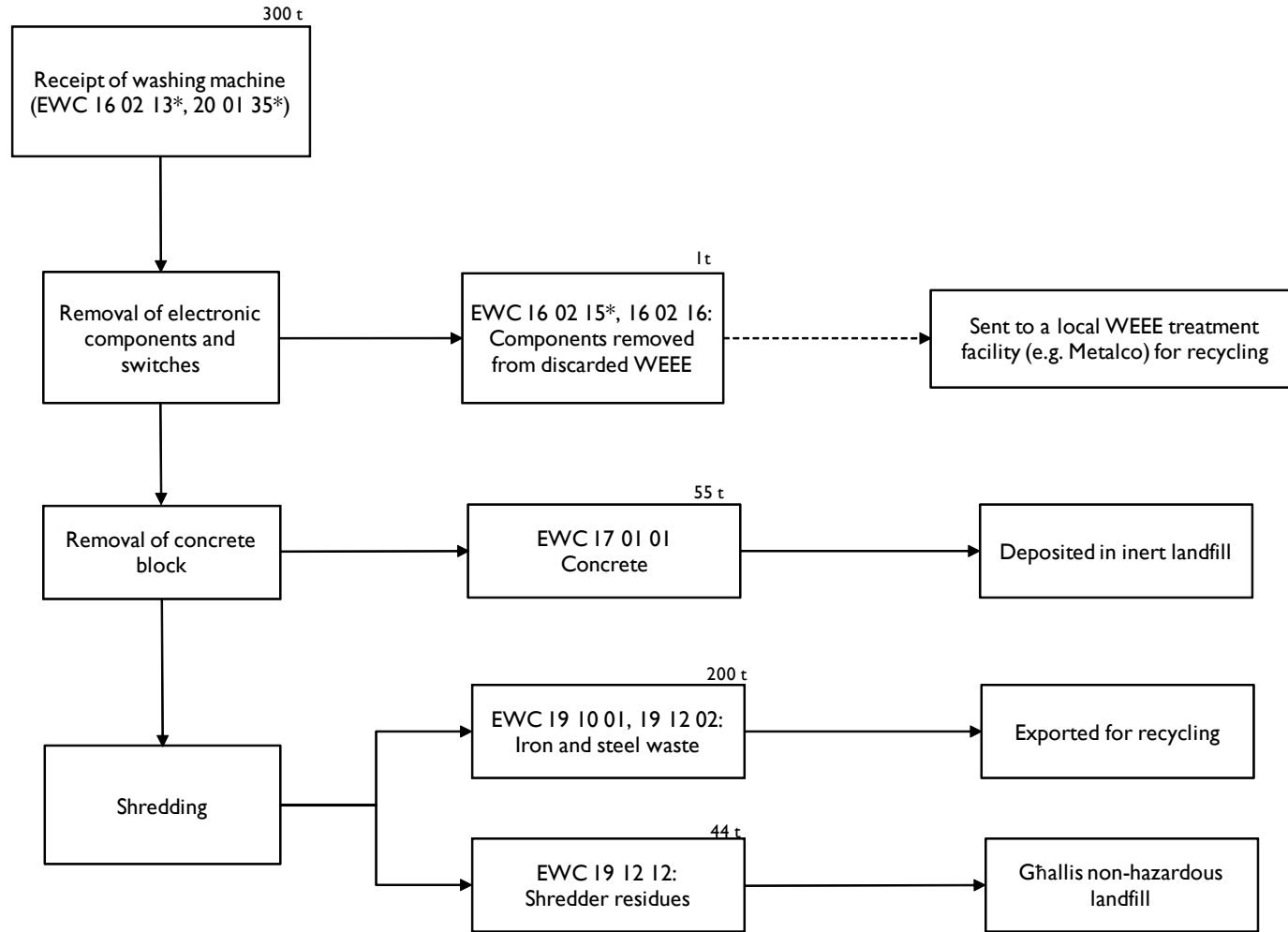
Composter:



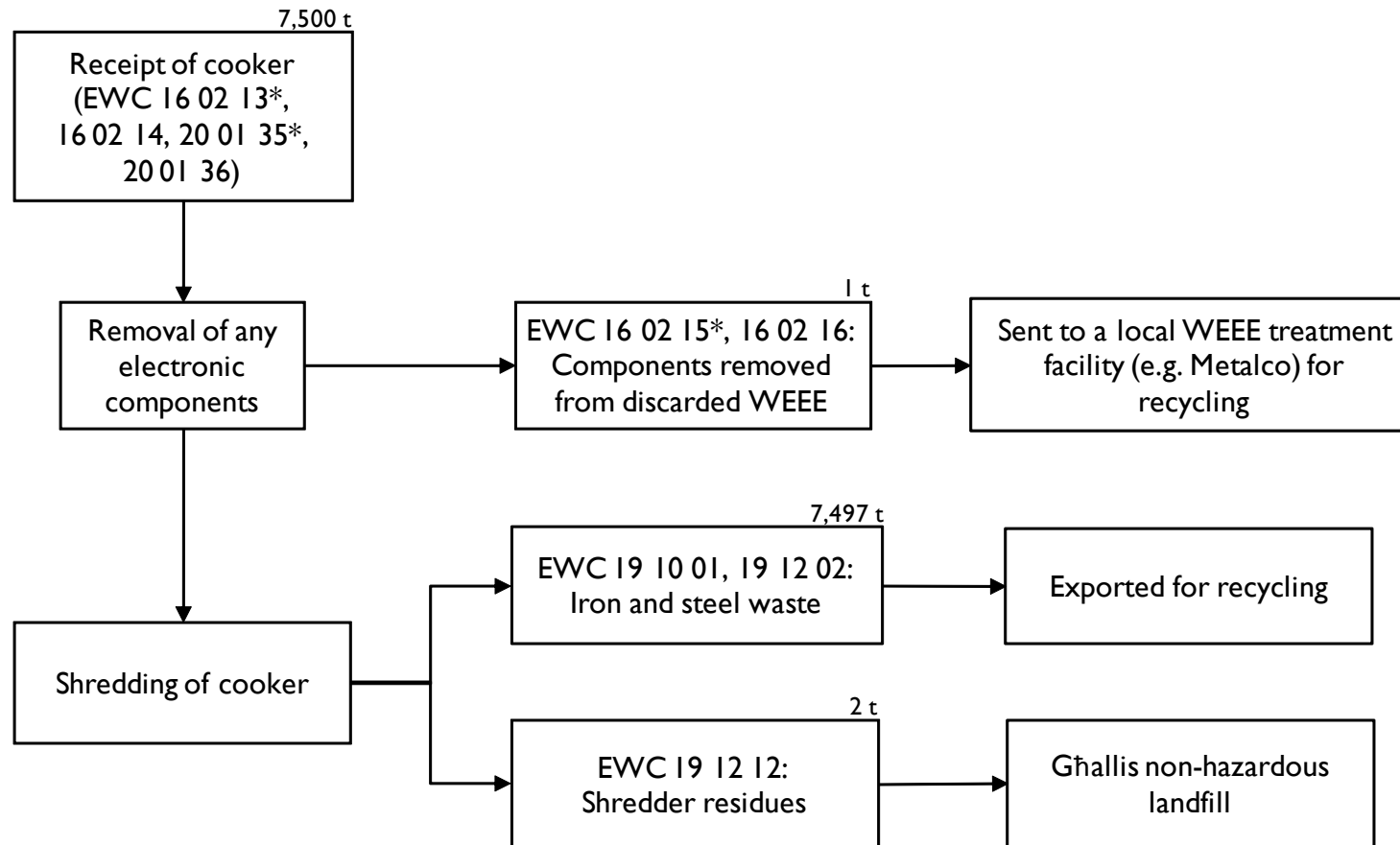
Wood processing:



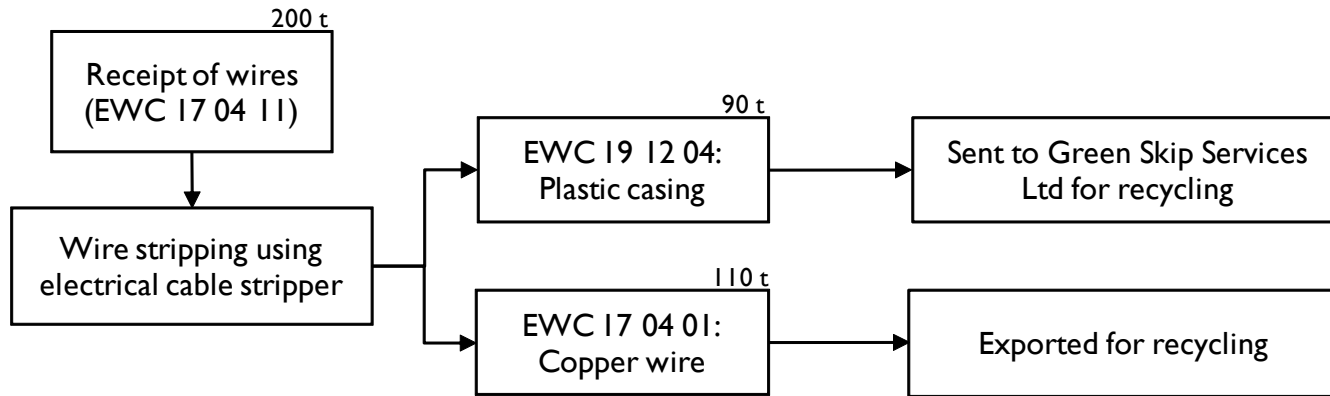
Washing machines:



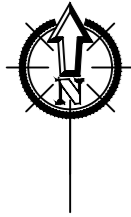
Cookers:



Wires:



Attachment 5: Excavation and fill drawing



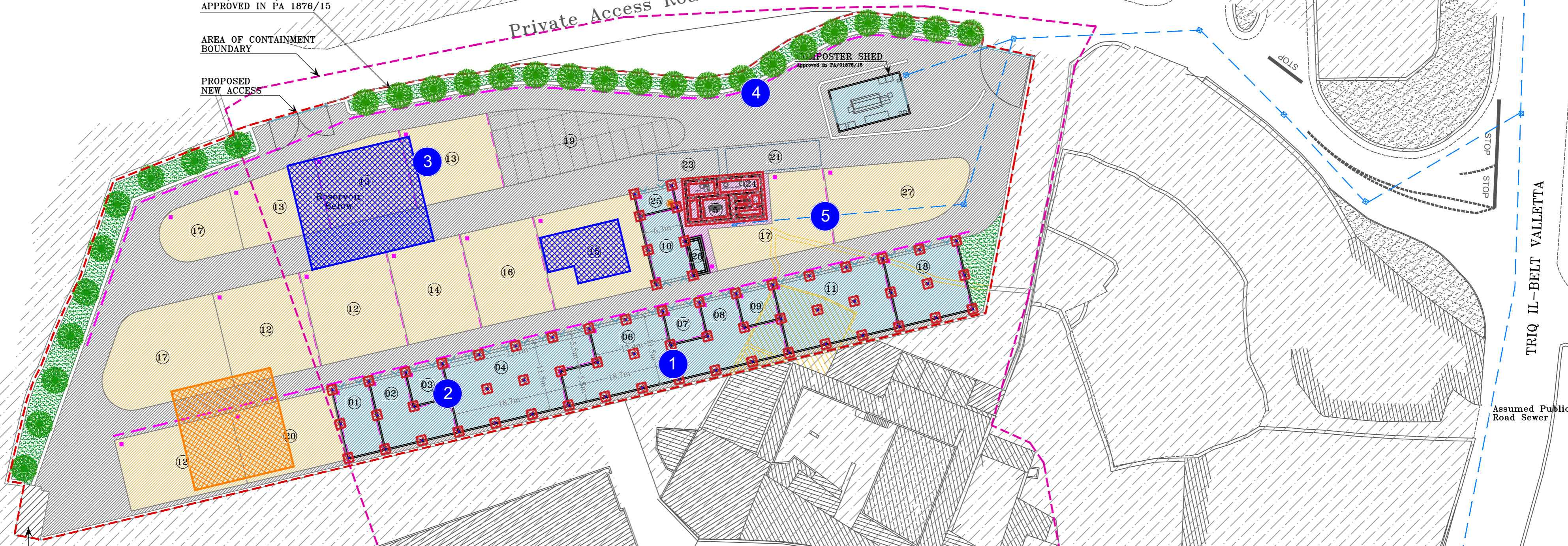
SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS





Private Access Road

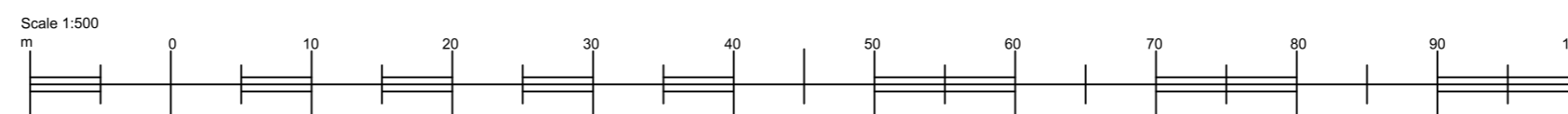
POSTER SHED
Approved in PA/01876/15




Farmhouse
Constructed Prior to 1968

LEGEND

-  Excavation of soil down to rock level for foundations; All excavated soil to be exported for disposal overseas.
-  Excavation down to required levels, not exceeding 4.2m below ground level. All material (both soil and rock) down to 1.50m to be exported for disposal overseas.
-  Temporary storage of excavated soil.
-  LAND MONITORING POINTS



Project SITE AT SQAQ FDAL IL-HADID, LUQA	Drawing Name PROPOSED EXCAVATION	Drawn: LJ Date: 05-03-2019	 Joe Bugeja Associates Main Unit Hamra Road Hamra, Luqa Gozo, QRM 4000
AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Approval: JB	Scale: 1:500 (A2)	
Drawn: LJ	Rev: F	File No: J012	
Drawn: LJ	Rev: F	File No: J012	

Attachment 6: Fuel road tanker licence



Transport Malta

L369205

NOTI (Notes):

Valida sal-ahhar ta': Valid till end of:	Jun 17
Nru tar-Registrazzjoni Registration Number	FBV203
Nru tal-irċevuta Receipt Number	

Vehicle Licence

JOSEPH ATTARD
ATTARD LOGISTICS LTD
ATTARD LOGISTICS LTD
298.00 SCRAP LANE, VALLETA ROAD
LUQA

01/07/2016

Data
(Date)

Total (EUR)

298.00

Firma tal-Ufficial TM
(TM Official Signature)
Online

EMISSION ALERT! Send SMS to 5061 1899 to report vehicles with emissions. Kindly refrain from sending whilst driving.

FBV203

LEYLAND
ROAD RUNNER

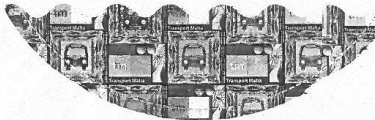
Jun 17

Next VAT must be carried out within 30 days preceding end of Jun 2017
483582

VIN XLRK732VOL050808

L.369205

Licenzja tal-Vettura
Vehicle Licence



Din għandha titwaha fuq in-naħa tax-xellug tal-windscreen
To be displayed on the left-hand side of the windscreen

Attachment 7: Engineer's report on oil-water interceptors

Our Ref.: C/44304/68102

19th June 2018

JB Associates,
Maple Leaf
Handaq Road
Handaq Industrial Estates
Qormi QRM4000

For the attention of Perit Joseph Bugeja

Dear Sir,

CERTIFICATION OF OIL AND SILT INTERCEPTOR – PROPOSED ERECTION OF E.L.V. SHED, ADDITIONAL ACCESS FROM PRIVATE ROAD AND RECONFIGURATION OF SITE INTERNAL LAYOUT, PA/04172/16, REV 1

Please find attached a revised report in relation to the certification of Oil and Silt interceptor to be installed at the proposed scrapyards in Luqa. This report supersedes our previous report issued on the 31st August 2017 and bearing reference C/44304/67151.

Should you require further assistance, please do not hesitate to contact us.

Yours faithfully,

MTS CONSULTING LTD



Ing. Liana Zerafa

Consulting Engineer

(Warrant No. 1056)



Encl. - drawings and literature



MTS QUALITY ASSURANCE SYSTEM

Project Title: Various Reports – Luqa Scrapyard
Sub-Title: As above
Project No: C/44304
File Location: -
Status: Final
Client Contact Name: Luigi Fenech / Disma Attard obo
Client Company Name: Dde Attard Ltd
Project Co-ordinator: -
Document Controller Ms Christabel Fenech
Issued By: MTS Consulting Ltd, Valley Mansions, Level 2, Triq il-Wied ta' I-Imnsida, Birkirkara, BKR 9023, Malta

Document Production / Approval Record

	Name	Signature	Date	Position
Prepared by	Ing. L. Zerafa		19.06.2018	Senior Consulting Engineer
Checked & Approved by	Ing. Jonathan Sammut		19.06.2018	Managing Director

Document Revision Record

Issue No	Date	Details of Revisions
Rev 1	19.06.2018	Revision of catchment areas

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CERTIFICATION OF OIL INTERCEPTOR AND SILT TRAP

1.0 INTRODUCTION AND SCOPE

The development consists of a scrapyards occupying a footprint of around 8,000m². The site has an internal private road with a number of sheds, designed to cater for the various stages of scrapping of cars. These include:

- E.L.V. (storage, dismantling, etc)
- Storage of tyres and scrap metal
- Storage area of white goods, wood, aluminium and plastic
- Staff facilities and parking

Access to the site is possible through two exits, both leading to a private access road which discharges onto Triq il-Belt Valletta, Luqa.

Moreover, the site is also equipped with a rain water catchment for rain water runoff. The rain water runoff falling on the road and open storage areas has the risk of being contaminated. In view of this, rain water from such areas shall be diverted through a silt trap and oil-water interceptor to remove contaminants prior to storage in the reservoir. Areas that are not prone to such contamination shall have a dedicated system for rain water collection that goes straight into the reservoir.

The scope of this report is to assess the suitability of the Oil Interceptors being proposed by the client. The relevant literature is attached to this report.

2.0 REFERENCES

EN 858-1, Separator systems for light liquids – Principles of product design, performance and testing, marking and quality control

EN 858-2, Separator systems for light liquids – Selection of nominal size, installation, operation and maintenance

3.0 OVERVIEW OF INTERCEPTORS PROPOSED

The interceptors being proposed are manufactured from Aquapoly, as per attached literature. The rainwater catchment shall be split in two and each system shall have a dedicated interceptor. In view of this, two in number interceptors are being proposed. Each interceptor has the following specifications:

- Maximum flow of 10l/s
- Maximum hydrocarbon retention of 460ltrs
- Maximum contaminated water of 2,850ltrs

In addition each interceptor shall have a by-pass to divert water in heavy rainfall that exceeds the maximum flow rate of the interceptor.

The models being proposed are all certified to EN 858-2.

4.0 ANALYSIS

In order to assess the suitability of the interceptors proposed, the following assumptions are being made:

- 4.1 The area that is prone to contamination amounts to 6,749m², as per attached drawing.
- 4.2 The interceptor is only required to treat oil contaminated rain water and to retain any small volumes of spillage of light liquid.
- 4.3 The rain flow rate that the interceptor shall be capable of handling is that of the average rainfall in Malta, i.e. not more than 10mm/hr. The interceptor shall not be suitable for heavy rainfall, in line with the recommendations of EN 858-2.

Based on a flow rate of 10mm/hr, the interceptor required for the entire site shall have the following specifications, in line with the recommendations of EN 858-2:

- Maximum flow of 19l/s
- Minimum size of sludge trap – 1,896ltrs

Based on the above requirements, it can be concluded that the interceptors proposed are suitable for this site since each one provides more than half the flow rate and storage required.

5.0 RECOMMENDATIONS AND CONCLUSION

From the above assessment, it can be certified that the oil interceptor being proposed for installation at the above mentioned scrapyard is suitable for this application. Notwithstanding, its suitability will remain valid provided that the assumptions forming part of this report are adhered to. In addition it is highly recommended that any spillages are immediately cleaned, that the rainwater catchment is equally split amongst the two systems and that the interceptor is regularly cleaned of build of oil and other contaminants.

For and on behalf of,

MTS CONSULTING LTD

A handwritten signature in black ink, appearing to read 'Liana Zerafa', is written over a light blue horizontal line.

Ing. Liana Zerafa

Consulting Engineer

(Warrant No. 1056)



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Reservoir Below





TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

Farmhouse
Constructed Prior to 1988

SQAQ IL-FDAL IL-HADID

LEGEND

1. TOTAL SITE AREA	9,028 m ²	
1.1. Large ELV Shed	1,316 m ²	
1.2. Other smaller roofed areas	309 m ²	
1.3. Soft Landscaping areas	810 m ²	
1.4. Paved circulation and storage areas	6,749 m ²	

Liana Zerafa
Ing. Liana Zerafa
B.Eng.(Hons.) Msc. (Warrant 1056)
MTS Consulting Limited

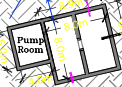
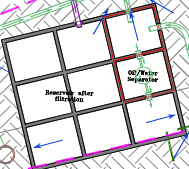


Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing No. RAINWATER CATCHMENT AREAS	Date: 15/06/2011 Approved: [Signature] Scale: 1:500/1:50 Plot No.: 1002	 Assoc. Ingegneri Maltini & Associates Professional Engineers License No. 1002
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Private Access Road

AREA OF CONTAINMENT
BOUNDARY



Tyre Wash Facility

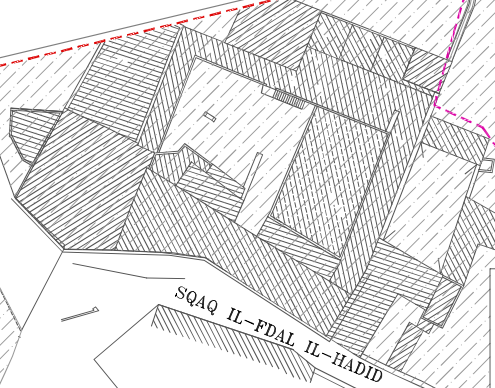
Weigh Bridge

Staff Facilities

Shed

Composter

E. L. V. Shed



SQAQ IL-FDAL IL-HADID

Liana Zerafa
Ing. Liana Zerafa
B.Eng.(Hons.) Msc. (Warrant 1056)
MTS Consulting Limited

LEGEND

- Catchpits
- Water Management above ground
- Water Management under ground
- Water Management of Runoff from Roofed Areas
- Reservoir overflow -discharge as street surface runoff
- Infill Pipe for Fire Fighting Reservoir
- Ring Main with Fire Hydrants

Site to be equipped with fire hydrants, positioned in line with the requirements of BS:9990

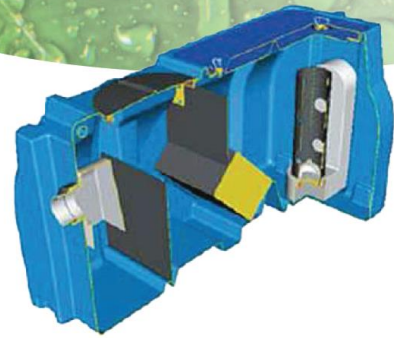
TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer



Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing No. PROPOSED RAIN WATER MANAGEMENT PLAN	Drawn: LF Date: 06/06/2011 Approved: JB Scale: 1:500 (A3) File No.: 1002	 JAC HIGGINS ASSOCIATES CONSULTING ENGINEERS 100, GLEBE ROAD GLEBE, SYDNEY NSW 1530, AUSTRALIA PH: 61 2 9550 1000 FAX: 61 2 9550 1001 WWW.JACHIGGINS.COM.AU
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Oil Interceptor



AQUAPOLY OIL INTERCEPTOR

Patented and Registered Model

- CLASS I POLYETHYLENE HYDROCARBON DECANter-SEPARATOR
- COMPLIES WITH EN 858-1 AND EN 858-2 STANDARDS
- CE CERTIFIED
- GUARANTEED ≤ 5 MG/L OUTPUT

USES

- SERVICE STATIONS
- CAR WASHES
- REPAIR SHOPS ETC



TECHNICAL FEATURES

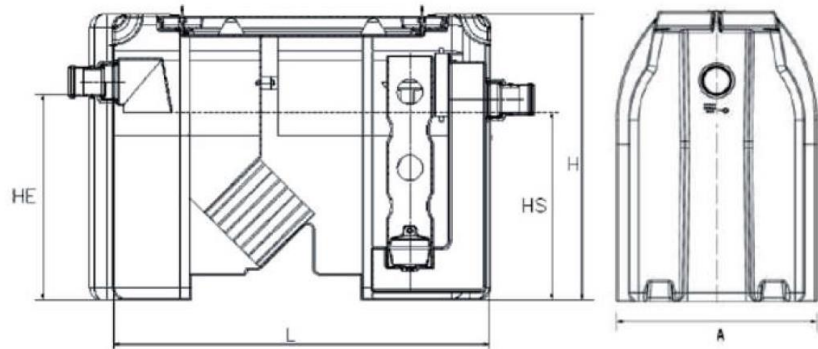
The Aquapoly Hydrocarbon Decanter-Separator is specifically designed with a lamellar coalescing effect and for a large retention capacity. All compartments are easily accessed for inspections and maintenance. Treatment takes place in two phases:

- Settling of sludge and sand in the decanter-sand trap compartment
- Separation of oil and hydrocarbons through the coalescing effect

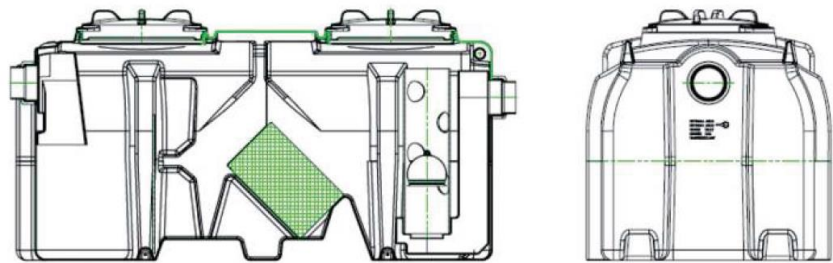
TECHNICAL FEATURES

Treatable wastewater is retained in the settling compartment located at the head of the hydrocarbon separator, where sludge and sand are retained. The stream of water - now free of sludge and sand - flows to a separation compartment, equipped with a block of polypropylene lamellar cells that provide a coalescing effect which separates the hydrocarbons. An automatic shutter system prevents accidental hydrocarbon spillage if the hydrocarbon level overflows, thus preventing hydrocarbons from entering the water system.

The system can also be equipped with an oil / sludge level sensor to give an alarm when system needs desludging.



AquaPOLY01 and AquaPOLY03



AquaPOLY06 and AquaPOLY10

Model	Flow lt/s	Volume of oil/ hydrocarbon Retention lt.	Volume Treated lt.	L mm	A mm	H mm	He mm	HS mm	Inlet/ outlet mm
AquaPOLY01	1.50	150	620	1570	1180	1058	823	753	110
AquaPOLY03	3	210	1200	1570	1180	1200	965	895	110
AquaPOLY06	6	350	1800	2300	1180	1212	785	715	160
AquaPOLY10	10	460	2850	2300	1180	1662	1235	1165	160

**FM Environmental reserves the right to change the measurements

Contractual document.
The data and values
are given as an indication
and are subject to change



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Applus
Certificado nº 380143



Attachment 8: Shredder specifications



You may not start to operate the machine until you have read these operating instructions, observed all the instructions given and installed the machine as described!

Keep the instructions in a safe place for future use.

Contents

Extent of delivery	11
Description of the device	11
Operating times	11
Symbols on the device	12
Symbols in the operating manual	12
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Residual risks	12
Safety instructions	12
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Working with the garden shredder	15
Adjusting the fixed counter blade	16
Maintenance and cleaning	16
Operational faults	17
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Spare parts	150

Extent of delivery

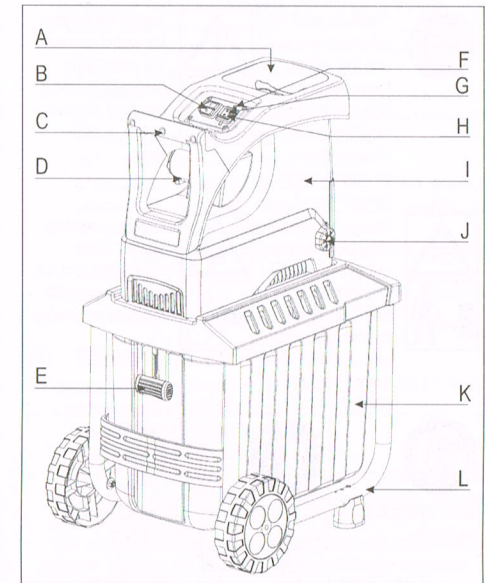
After unpacking, check the contents of the box

- That it is complete
- Check for possible transport damage

Report any damage or missing items to your dealer, supplier or the manufacturer immediately. Complaints made at a later date will not be acknowledged.

- 1 pre-assembled device unit
- 1 base frame
- 2 wheels
- 2 wheel covers
- 2 feet
- 1 screw bag
- 1 retaining basket
- 1 operating manual

Description of the device












- A. Hopper opening for material to be shredded
- B. On / Off switch
- C. Handle
- D. Power supply plug
- E. Retaining basket locking
- F. LED
- G. Reversing switch
- H. Infeed switch
- I. Upper enclosure part
- J. Adjusting knob for cutting roller
- K. Retaining basket
- L. Base frame with wheels and feet





Operating times

Please observe as well the regional regulations for noise protection.

Symbols on the device

	Carefully read the operating manual and the safety instructions before starting the machine and observe the instructions when operating.		Switch off the motor and disconnect the mains plug before performing cleaning, maintenance or repair work.
	Danger – objects may be thrown out at high speed when motor is running. Keep bystanders, pets and domestic animals out of the danger area.		Danger – rotating blades. Keep hands and feet out of openings while machine is running.
	Wear eye and ear protection.		Wear protective gloves.
	Protect against humidity.		
Material is cut		Material is not cut	
	Retaining basket locked		
	Retaining basket unlocked		
	Electrical devices do not go into the domestic rubbish. Give devices, accessories and packaging to an eco-friendly recycling.		
According to the European Directive 2002/96/EC on electrical and electronic scrap, electrical devices that are no longer serviceable must be separately collected and brought to a facility for an environmentally compatible recycling.			

Symbols in the operating manual

-  **Potential hazard or hazardous situation.** Failure to observe this instruction may lead to injuries or cause damage to property.
-  **Important information on proper handling.** Failure to observe this instruction may lead to faults.
-  **User information.** This information helps you to use all the functions optimally.
-  **Assembly, operation and servicing.** Here you are explained exactly what to do.

Proper use

The proper use includes the shredding of

- all types of branches up to a max. diameter (depending on wood species and freshness)
- wilted, moist garden refuse that has already been stored for several days, alternating with branches

Shredding of glass, metal, plastic parts, plastic bags, stones, fabric cut-offs, roots with soil, waste without solid consistency (e.g. kitchen scraps) is explicitly excluded.

The garden shredders are suitable for private use in gardens and allotments.

As garden shredders for private gardens and allotments are considered such devices that are not applied in public facilities, parks, and sports facilities as well as in agriculture and forestry on a commercial basis.

The intended usage also includes compliance with the operating, servicing and repair conditions prescribed by the manufacturer and following the safety instructions included in the instructions.

Any other use is deemed not to be used as prescribed. The manufacturer is not liable for any type of damage resulting from this: the user bears the sole risk.

Unauthorised modifications on the garden shredder exclude a liability of the manufacturer for damages of any kind resulting from it.

Only persons who are familiarised with the device and informed about possible risks are allowed to prepare, operate and service this device. Repair works may only be carried out by us or by a customer service agent nominated by us.

Residual risks

Even if used properly, residual risks can exist even if the relevant safety regulations are complied with due to the design determined by the intended purpose.

Residual risks can be minimised if the "Safety instructions" and the "Intended usage" as well as the whole of the operating instructions are observed.



Observing these instructions, and taking proper care, will reduce the risk of personal injury or damage to the equipment.


- Risk of injury to the fingers and hands, if your hand grasps through an opening and reaches the blade unit.
- Risk of injury to the fingers and hands, when carrying out assembly work and cleaning on the blade unit.
- Injury by the chopped material spinning away near the hopper.
- Risk from electricity when using improper electrical connections.
- Touching live parts of opened electrical components.
- Impairment of hearing when working on the machine for longer periods of time without ear protection.

In addition, in spite of all the precautionary measures taken, non-obvious residual risks can still exist.

Safety instructions

Before commissioning this product, read and keep to the following advice. Also observe the preventive regulations of your professional association and the safety provisions applicable in the respective country, in order to protect yourself and others from possible injury.

-  Pass the safety instructions on to all persons who work with the machine.
-  Keep these safety instructions in a safe place.

 **Repair works on the shredder must be carried out by the manufacturer or by companies appointed by the manufacturer respectively.**

- Make yourself familiar with the equipment before using it, by reading and understanding the operating instructions.
- Do not use the machine for unsuitable purposes (see "Proper use" and "Working with the garden shredder").
- Provide a safe standing position and keep at any time the balance. Do not lean forward. When placing material into the shredder, always stand on the same level as the machine. When placing material into the shredder, always stand on the same level as the machine.
- Be observant. Attend to what you do. Start working with rationality. Do not use the device when you are tired or under the influence of drugs, alcohol or medicaments. One moment of carelessness when using the device can result in serious injuries.
- Wear protective goggles, gloves and noise protection while working with the machine.
- Wear suitable work clothes:
 - do not wear loose-fitting clothes
 - slip-proof shoes
- Within his area of work the operator is responsible for third parties.
- The machine must not be operated by children or young people under 16 years of age.
- Physically, sensorially or mentally handicapped persons or persons who have no relevant experience and/or knowledge are not allowed to operate the device, unless a person responsible for their safety supervises them or instruct them on how to use the device.
- Children must be supervised to make sure that they do not play with the device.
- Keep children away from machine.
- Never operate the machine if other persons are in the immediate vicinity.
- Never leave the device unattended.
- Keep your workplace in an orderly condition! Untidiness can result in accidents.
- Choose a working position alongside the equipment or behind it.
- Never reach into the filling or ejection opening.
- Keep your face and body away from the filling opening.
- Do not overload the machine! You work better and safer in the given performance range.
- Only operate the machine with complete and correctly attached safety equipment and do not alter anything on the machine that could impair the safety.

- Do not alter the revolution speed of the motor, since this controls the safe maximum operating speed, and protects the motor and all rotating parts against damage due to excess speed.
- Do not operate without the funnel.
- Do not modify the device or parts of the device respectively.
- Do not hose down the device with water. (Origin of danger electric current).
- Take into consideration environmental influences:
 - Do not use the device in moist or wet ambience.
 - Do not leave the machine standing in the rain or use when raining.
 - Provide for good illumination.
- To prevent danger of injury to fingers during assembly or cleaning operations wear protecting gloves.
- Do not transport the device when the motor is running.
- Switch the machine off and remove the mains plug from the socket when
 - attaching or removing the retaining basket
 - performing maintenance and cleaning work
 - eliminating faults
 - checking the connection cable for damage and entanglement during operation
 - transporting
 - carrying out repair work
 - leaving unattended (even during short interruptions)
- If the machine's filling funnel or ejection slot is blocked switch off the motor and disconnect the mains plug before removing material from the filling funnel or ejection slot.
- Check the machine for possible damage:
 - Before further use of the machine the safety devices must be checked carefully for their proper and intended function.
 - Check whether movable parts function perfectly and do not stick or whether parts are damaged. All parts must be correctly installed and fulfill all conditions to ensure perfect operation of the machine.
 - Damaged safety devices and parts must be properly repaired or exchanged by a recognized, specialist workshop; insofar as nothing else is stated in the instructions for use.
 - Damaged or illegible safety labels have to be replaced.
- Store unused equipment in a dry, locked place out of the reach of children.

Electrical safety

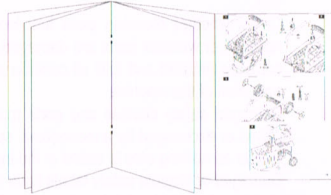
- Design of the connection cable according to IEC 60 245 (H 07 RN-F) with a core cross-section of at least
 - 1.5 mm² for cable lengths up to 25 m
 - 2.5 mm² for cable lengths over 25 m
- Long and thin connection lines result in a potential drop. The motor does not reach any longer its maximal power; the function of the device is reduced.
- Plugs and coupler outlets on connection cables must be made of rubber, plasticised PVC or other thermoplastic material of same mechanical stability or be covered with this material.
- The connector of the connection cable must be splash-proof.
- When running the connection line observe that it does not interfere, is not squeezed, bended and the plug connection does not get wet.

- Wind off completely the cable when using a cable drum.
- Do not use the cable for purposes for which it is not meant. Protect the cable against heat, oil and sharp edges. Do not use the cable to pull the plug from the socket.
- Regularly check the extension cables and replace them if they are damaged.
- Do not touch a damaged connection cable before disconnecting it from the mains. A damaged connection cable may cause contact with live parts.
- Do not use any defective connection cables.
- When working outdoors, only use extension cables especially approved and appropriately labelled for outdoor use.
- Do not set up any provisional electrical connections.
- Never bypass protective devices or deactivate them.
- Only hook up the machine by means of a fault-current circuit breaker (30 mA).

- ⚠ The electrical connection or repairs to electrical parts of the machine must be carried out by a certified electrician or one of our customer service points. Local regulations – especially regarding protective measures – must be observed.
- ⚠ Repairs to other parts of the machine must be carried out by the manufacturer or one of his customer service points.
- ⚠ Use only original spare. Accidents can arise for the user through the use of other spare parts. The manufacturer is not liable for any damage or injury resulting from such action.

Assembly

See page 156



Start-up

- Check that the machine is completely and correctly assembled.
- To avoid toppling, place the shredder on a firm horizontal surface.
- The machine should only be operated in the open. Always maintain a safe distance (at least 2 m) from walls or other fixed objects.
- Before each use, check
 - Connection cables for defects (cracks, cuts, etc.).
 - ⚠ Do not use any defective cables.
 - There are no damage at the machine (see safety instructions).
 - All screws are tight.

Mains connection

- Compare the voltage given on the machine model plate e.g. 230 V with the mains voltage and connect the machine to the relevant and properly earthed plug.
- Only use extension cables with sufficient core cross-section.

Mains fuse

2800 W	16 A time-lag
--------	---------------

Electrical mains supply impedance

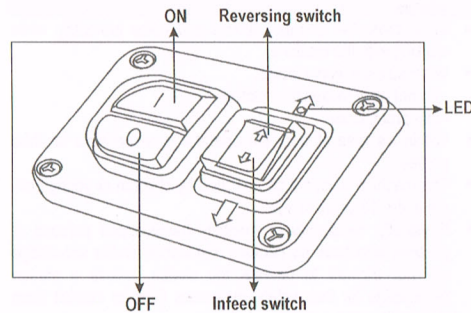
When conditions in the electrical mains supply are unfavourable, voltage reductions for short periods can occur during the process of turning on the equipment, which can adversely affect other equipment (e.g., the flickering of a lamp).

No breakdowns are to be expected if the maximum, electrical mains supply impedances given in the table are met.

Power consumption P ₁ (W)	Electrical mains supply impedance Z _{max} (Ω)
2800	0.31

On / Off switch

Do not use any device where the switch can not be switched on and off. Damaged switches must be repaired or replaced immediately by the customer service.



Switch on

Press the green button (1). The LED lights up green.

Switch off

Press the red button (0). The LED goes out.

Restart protection in case of power failure

In case of a power failure, the device switches off automatically (zero-voltage initiator). To restart, press the green button again.

Motor protection

The motor is equipped with a safety switch and switches off automatically when overloaded. After a cooling-down break (approx. 5 min), the motor may be restarted. Press the

1. reset button (motor protection)
2. green button (1) to restart.

Reversing switch

The motor is equipped with a reversing switch and in the case of overload / blocking it automatically switches to reversing to release jammed material. The motor is automatically cut off after 5 seconds.

⇒ To restart press the infeed switch ↓.

If the blocking is not eliminated after several tries, turn the adjusting knob (J) to the left.

⇒ Press the reversing switch ↑. The jammed material is released.

Then, readjust the counter knife as described under "Adjusting the counter knife".

Hints

- Large objects or pieces of wood may be removed after the shredder has been operated several times both in cutting and in release direction.
- Use a tamper or hook to remove jammed objects from the hopper or ejection slot.

⚠ Always wait until the shredder has come to a complete standstill before restarting it.

Retaining basket

The integrated retaining basket is equipped with a locking lever and a safety cut-out device.

ⓘ Power off the device before attaching or removing the retaining basket.

- ⇒ Retaining basket locked and fixed connected to the device.
- ⇒ Retaining basket unlocked and disconnected from the device. The device cannot be powered up.
- ⓘ When the retaining basket is unlocked while the device is operating the device is automatically cut out. The LED goes out.

Working with the garden shredder

- Choose a working position alongside the equipment or behind it.
- ⚠ Longer material that is protruding from the device could spring back when it is drawn in by the blades! Observe safety distance!
- Never reach into the filling or ejection opening.
- Keep your face and body away from the filling opening.
- Never place hands, other parts of the body or clothing into the filler funnel, ejection channel or in the vicinity of other moving parts.
- Check before powering the device up that:
 - no material residues are in the filling hopper,
 - the retaining basket is locked.

- Do not tip or tilt the machine when the motor is running.
- When filling, be careful that no pieces of metal, stones, bottles or other objects unintended for processing, enter the filling hopper.
- Immediately switch off the equipment and allow it to come to a stop, if foreign objects enter the filling hopper or if the equipment starts to make unusual noises or vibrates. Remove the mains plug and carry out the following checks:
 - inspect for damage,
 - replace or repair damaged parts,
 - check the equipment and tighten loose parts.

⚠ You must not repair the equipment yourself if you are unauthorized to do so.

What can I shred?

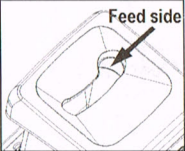
Yes:

- all types of branches up to a max. diameter, depending on wood species and freshness.
- withered garden refuse which has lain a number of days.
 - ⇒ Only shred in alternation with branches.

No:

- glass, metal, plastic, plastic bags, stones, cloth, roots with soil
- refuse which does not have a solid consistency, e. g. kitchen waste

Special tips on shredding:

- Always fill the material to be shredded into the filling hopper from the right. 
- Branches, twigs and wood should be broken down immediately after they have been cut
 - material of this kind gets very hard when it is dry, and the maximum allowed branch diameter to be processed has to be reduced.
- Remove any side shoots from branches with a large number of twigs.
- How to shred garden waste with high water content and a tendency to clog
 - to prevent the machine from clogging, alternate waste with wood containing material.
- Do not allow the shredded material to pile up too high in the area of the ejection opening. This can lead to shredded material blocking the ejection channel, and backing up to the filler opening. Empty the retaining basket on a regular basis.
- Clean out the filler opening and ejection channel thoroughly if the machine becomes blocked. Before doing this, switch the motor off and disconnect the machine from the mains power supply.
- Please do not exceed the maximum branch diameter specified (cutting fresh wood) for your appliance (see "Technical data"). Depending on the wood's nature and freshness the maximum branch diameter the machine can process may be smaller.
- The cutter automatically draws the shredding material into the machine through the slow rotation of the cutting rollers.

- Automatic switch-over in the direction of rotation:
 - If the unit suddenly clogs, the blades may start to turn in the opposite direction and push the shredded material back out.
 - Switch off unit
 - Wait until the blades come to a standstill
 - Switch unit back on and use material which is easier to process.

Adjusting the fixed counter blade

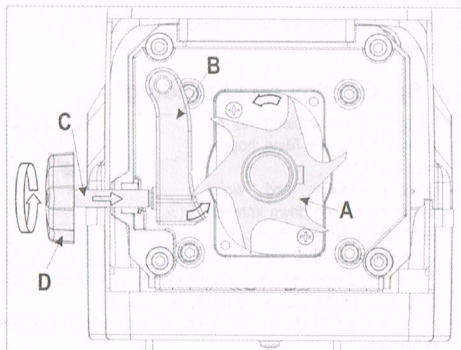
It is possible to adjust the counter blade (B) at the cutting roller (A) free of clearance. For an effective operation, an as small as possible clearance should be maintained.

Soft material or wet branches may tear instead of being cut. A counter blade that is worn after repeated use may also lead to this problem.

Setting the clearance.

Switch on the device.

There is an adjustment device on the right hand side of the plastic housing. To adjust the distance turn the adjusting knob (D) clockwise so that the screw (C) moves toward the cutting roller. Turn until fine aluminium chips are falling from the ejection slot.



Maintenance and cleaning

- Each time before starting maintenance work:
 - Switch off the motor and pull out the mains plug.
 - Wear protective gloves to prevent injury.

The cutters will not come to a standstill immediately after cut-off. Before starting any service work wait until all parts are stationary.

Be sure to have removed any tools from the machine after completion of service work.

- Generally garden shredders require little maintenance. To maintain their efficiency and a long life, observe the following:
 - Keep vent slits clean and free from obstructions.
 - Check the locking screws (tighten where necessary).
 - Clean the device after shredding.

To clean your product only use a warm moist cloth and a soft brush.

Never use cleaning agents or solvents. Otherwise the device may be damaged irreversibly. Plastic parts may be corroded by chemicals.



- Do not clean the machine with running water or high-pressure cleaners.
- After each operation treat bare metal parts with an environment-compatible biodegradable spray oil to protect them against corrosion.
- the cutting roller and shaving plate are expendable parts, though with normal use and correct adjustment they have a service life of many years.

Operational faults




Before each fault elimination:

- Switch off device.
- Wait for standstill of the device.
- Pull out mains plug.

Fault	Possible cause	Remedy
Motor does not start	No power supply	Check fuses
	Mains cable defective	have these checked (electrician)
	Machine overloaded/blocked and automatically cuts out after 5 seconds reversing.	To restart press the infeed switch ↓
Motor hums but does not start	Retaining basket unlocked (safety cut-out device of the retaining basket has tripped)	Lock the retaining basket Ⓢ
	Blade shaft blocked even after several reversing tries.	1. Loosen the adjusting knob (J). 2. Press the reversing switch ↑.
Shredding material is not drawn into the shredder	Capacitor faulty	Bring machine to manufacturer or authorised workshop for repair
	The cutting roller is running in reverse. Wrong switch position	Switch off device and switch over direction of rotation selector switch.
	Shredding material caught in funnel	Press the infeed switch ↓.
	Shredding material too soft or wet	Push down with a branch and shred
Shredding material not cut cleanly.	Cutting roller worn	Adjust fixed counter blade as described under „adjusting the fixed counter blade“. In case of severe wear, replace cutting roller.
	Fixed counter blade not adequately adjusted.	Adjust fixed counter blade.
Device starts but blocks under as slight load and switches off via protective motor switch.	Extension cable too long or cross-section too small. Socket too far from mains supply and cross-section of mains cable too small.	Extension cable at least 1.5 mm ² , maximum 25 m long. If a longer cable is used, minimum cross-section 2.5 mm ² .

Technical data

Model	ALF 2800
Year of construction	see last page
Motor	AC-Motor 230 V~, 50 Hz, 2800 rpm
Motor rating P ₁ S6 - 40 %	2800 W
Motor rating P ₁ S1	2300 W
Rotational speed cutting roller	40 min ⁻¹
ON/OFF-switch with	overload protection; cutting and reverse function, zero-voltage initiator
Weight	31 kg
Sound pressure level at work L _{PA} (measured to 2000/14/EC)	71,9 dB (A) K = 3 dB (A)
Measured sound power level L _{WA} (measured to 2000/14/EC)	89,1 dB (A)
Guaranteed sound power level L _{WA} (measured to 2000/14/EC)	92 dB (A)
Max. branch diameter (only for freshly cut wood)	∅ max. 45 mm
Safety class	I
Protection class	IP 24
Mains fuse	16 A time-lag 

EC Declaration of Conformity

No. (S-No.): 12682

according to EC directive: 2006/42/EC

We,

ATIKA GmbH
Schinkelstraße 97, 59227 Ahlen - Germany

herewith declare under our sole responsibility that the product
Gartenhäcksler (Garden Shredder) model ALF 2800

Serial number: 001000 – 015000

is conform with the above mentioned EC directives as well as with the provisions of the guidelines below:
2004/108/EC, 2000/14/EC and 2011/65/EC.

Following harmonized standards have been applied:

EN 60335-1/A14:2010; EN 13683/A2:2011; EN 62233:2008; EN 55014-1/A2:2011; EN 55014-2/A2:2008; EN 61000-3-2/A2:2009;
EN 61000-3-11:2000

Conformity assessment procedure: 2000/14/EC - Appendix V.

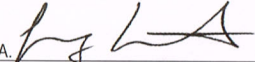
Measured level of the acoustic output L_{WA} 89,1 dB (A)

Guaranteed level of the acoustic output L_{WA} 92 dB (A)

Keeping of technical documents at:

ATIKA GmbH – Technical department – Schinkelstr. 97 – 59227 Ahlen – Germany

Ahlen, 22.10.2013

i.A. 
i.A. G. Koppstein, Engineering design management

Guarantee

Please observe the enclosed terms of guarantee.

Attachment 9: Fire safety report

Our Ref.: C/44304/68101

19th June 2018

JB Associates,
Maple Leaf
Handaq Road
Handaq Industrial Estates
Qormi QRM4000

For the attention of Arch. Joseph Bugeja

Dear Sir,

VARIOUS REPORTS – PROPOSED ERECTION OF E.L.V. SHED, ADDITIONAL ACCESS FROM PRIVATE ROAD AND RECONFIGURATION OF SITE INTERNAL LAYOUT, PA/04172/16, REV 2

Please find attached rev 2 of the following reports:

1. Fire Safety, ventilation and noise mitigation report
2. Lighting report

The reports supersede the previous reports issued by the undersigned on the 3rd July 2017 bearing reference C/44304/66986.

Should you require further assistance, please do not hesitate to contact us.

Yours faithfully,

MTS CONSULTING LTD



Ing. Liana Zerafa

Consulting Engineer

(Warrant No. 1056)



Encl. - dwgs



MTS QUALITY ASSURANCE SYSTEM

Project Title: Various Reports – Luqa Scrapyard
Sub-Title: As above
Project No: C/44304
File Location: -
Status: Final
Client Contact Name: Disma Attard
Client Company Name: Dde Attard Ltd
Project Co-ordinator: -
Document Controller Ms Christabel Fenech
Issued By: MTS Consulting Ltd, Valley Mansions, Level 2, Triq il-Wied tal-Msida,
Birkirkara, BKR 9023, Malta

Document Production / Approval Record

	Name	Signature	Date	Position
Prepared by	Ing. Liana Zerafa		19.06.2018	Senior Consulting Engineer
Checked & Approved by	Ing. Jonathan Sammut		22.06.2018	Managing Director

Document Revision Record

Issue No	Date	Details of Revisions
Rev 2	19.06.2018	Updates following CPD recommendations

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SECTION I:

FIRE SAFETY, VENTILATION AND NOISE MITIGATION

1.0 INTRODUCTION AND SCOPE

The development consists of a scrapyards occupying a footprint of around 8,000m². The site has an internal private road with a number of sheds, designed to cater for the various stages of scrapping of cars. These include:

- E.L.V. (storage, dismantling, etc)
- Storage of tyres and scrap metal
- Storage area of white goods, wood, aluminium and plastic
- Staff facilities and parking

The site is also equipped with two reservoirs, one envisaged for fire fighting use and the other one for second class water use. The second class water reservoir shall be mainly filled with rain water catchment from the whole site. In view of the presence of oils, the catchment passes through a silt trap and oil-water interceptor to remove contaminants prior to storage in the reservoir.

Access to the site is possible through two exits, both leading to a private access road which discharges onto Triq il-Belt Valletta, Luqa.

This report gives a description of the provisions catered for the purposes of fire safety measures, means of ventilation and mitigation measures against nuisance to neighbours for the development described above.

2.0 REFERENCES

- Design guidelines on fire safety for buildings in Malta – Vol. D / Draft Building regulations, issued in March 2004 by the BCID
- L.N. 227 of 2016 Development Planning Act (Cap. 552) - Development Planning (Health and Sanitary) Regulations
- BS 9990:2015 – Non-automatic fire fighting systems in buildings, Code of Practice

3.0 FIRE SAFETY REPORT

(i) **General**

The layout of the building as well as its use and the nature of its occupancy have been reviewed in conjunction with the *Design guidelines on fire safety for buildings in Malta – Vol. D / Draft Building regulations, issued in March 2004 by the BCID.*

The nature of the site involves storage of scrap material, which at times can be highly hazardous. Such materials could pose a risk if they catch fire. Hazardous material includes the following:

1. Tyres
2. Wood
3. Plastic
4. White goods

Therefore, the fire safety assessment will focus on containing the volumes of stored material, in order to limit the spread of fire. Other means of suppression, such as automatic extinguishing systems are not possible since most of the above materials are stored externally.

Metals are excluded from the above list as it is assumed that such materials will be cleaned from grease prior to storage.

(ii) Travel distance to Escape Routes

As explained in the preceding sections, the site consists of open air storage areas, with some covered sites, all interconnected to an internal private road. Although the road cannot be considered as an escape route, it is assumed that it shall still offer sufficient protection from any fire. Moreover, the zones shall be sub-divided using fire rated partitions such that the spread of fire is delayed.

In view of this, and the fact that no zone shall be wider or deeper than 15m, the escape from any zone to the road and to the eventual assembly point is found to be adequate.

(iii) Compartmentation

Compartmentation is the division of a building into 'fire-tight' compartments by fire resisting elements of building construction in order to contain fire within the compartment of origin. This can be achieved by completely separating different zones by fire resisting walls and ceilings.

All walls marked with dotted lines on the drawing are required to be 60 minutes fire rated (unless otherwise stated on the drawings).

Doors located on fire rated walls are to have the same fire resistance as the wall they will be installed on. Any other doors required to be fire rated are marked with the symbol FD60, where the numerical figure signifies the minimum amount of minutes of fire resistance integrity.

(iv) Detection

An automatic fire detection system would provide 24 hours surveillance for any signs of combustion throughout the premises. The system shall be properly designed to give a very early alarm. This would enable an early emergency response, thus minimizing the cost of fire damage. There are many kinds of detectors and each is appropriate for specific types of occupancy / category of room.

In view of the fact that the development consists mostly of open air storage, a fire detection system cannot be installed. Notwithstanding, all areas covered by means of a canopy are to have a fire detector, suitable for external installation.

The system should comprise an addressable series of detectors all linked to a fire alarm panel (FAP) forming various recognizable fire zones.

(v) *Manual Suppression System*

The development shall be protected by portable fire extinguishers. These shall consist of 9ltr Water and 9ltr foam extinguishers. Both extinguishers are to be installed in each zone, near the exit of the zone, as noted on the drawings.

(vi) *Emergency Illumination*

The entire site shall be adequately illuminated and in case of emergency there will be battery maintained lights for safe exit from premises. These are to be installed in the internal road leading to the outside.

(vii) *Access and Facilities for Fire Service*

Access for fire services is adequate since there are two roads leading to the site. Moreover, the CPD can make use of the private road for access to the various storage areas.

One of the reservoirs shall be solely dedicated for firefighting use, and this is to be made available to the fire brigade at all times. It shall have a minimum volume of 175m³. Moreover, it shall be equipped with a fire pump operated by two different and independent power supplies with a capability of supplying 3000 litres per minute at a pressure of 8 bar to a ring main around the plant having strategically located double headed fire hydrant outlets conforming to CPD connections.

4.0 VENTILATION

The activities taking place in the scrapyard are solely related to the storage of goods. In view of this, it is assumed that there shall be no generation of fumes or other emissions that require ventilation systems to capture such fumes / emissions. Moreover, most of the storage areas are either located externally or covered by means of a canopy but not enclosed. Therefore, for all storage areas in the scrapyard, no ventilation provisions are required.

The only areas that might require ventilation provisions are the staff facilities and guard room. Ventilation systems are only required if these areas are not provided with external, openable windows. If such apertures are not provided, then the following forced ventilation systems are to be provided:

- Occupied areas: 10l/s per person
- Kitchen / stores: 3 air changes per hour
- Toilet: 6 air changes per hour

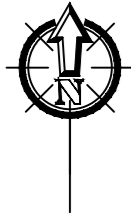
5.0 NOISE MITIGATION

The main sources of noise for the proposed development shall result mainly from handling of material and vehicle's movement. No particular noise generating equipment is expected to be installed onsite, except for maybe the outdoor units of air conditioning equipment.

The neighbourhood consists mainly of other industrial buildings. In view of this, the proposed development is not expected to generate noise in excess of the current background noise. Moreover, residential units are quite far away and therefore it can be ensured that that noise levels within occupied areas as a result of the proposed development will not exceed 45dBA.

6.0 CONCLUSION

The recommendations made in this report were obtained from said regulations. The implementation of these systems and measures will bring the entire project to the required safety level expected. It is furthermore recommended that an Engineer with experience in building services inspects the building upon completion so as to ensure that the provisions in this report have been adhered to.



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Reservoir Below

Farmhouse
Constructed Prior to 1998

TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

SQAQ IL-FDAL IL-HADID

Liana Zerafa
Ing. Liana Zerafa
B.Eng.(Hons.) Msc. (Warrant 1056)
MTS Consulting Limited

FIRE SAFETY:

- 9L FOAM PORTABLE FIRE EXTINGUISHER & 9L WATER PORTABLE FIRE EXTINGUISHER
- WALL HAVING 60 MINUTES FIRE RATING
- RING MAIN WITH FIRE HYDRANTS

Site to be equipped with fire hydrants, positioned in line with the requirements of BS:9990

- OPEN YARD
- SHEDS
- STAFF FACILITIES
- ROAD
- LANDSCAPED AREA

- STORM WATER FLOW
- ⊗ STORM WATER CATCHPIT
- ⊗ SEWAGE SYSTEM MANHOLE
- FOUL WATER SEWER
- GENERATOR EXHAUST FLUE - 11.5M HIGH

LEGEND

1. BALING OF TYRES
2. E.L.V. (VEHICLES AWAITING DISMANTLING)
3. E.L.V. (EQUIPMENT FOR DEPOLLOUTION OF VEHICLES AND DISMANTLING)
4. E.L.V. (STORAGE OF DISASSEMBLED PARTS)
5. STAFF FACILITIES - OFFICE, TOILETS & CANTEEN
6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
7. WIRE STRIPPING
8. STORAGE OF SPARE PARTS (GENERAL)
9. STORAGE OF PROCESSED WOOD
10. SHREDDING/CRUSHING
11. GARAGE FOR PARKING & MAINTENANCE OF YARD EQUIPMENT
12. STORAGE OF TYRES
13. STORAGE OF SCRAP METAL
14. STORAGE OF WOOD
15. STORAGE OF ALUMINIUM
16. STORAGE OF PLASTIC
17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
18. QUARANTINE
19. PARKING AREA
20. TEMPORARY STORAGE
21. WEIGH BRIDGE
22. COMPOSTER SHED
23. TYRE WASH FACILITY
24. WEIGHBRIDGE OFFICE
25. GENERATOR
26. 9m³ FUEL STORAGE CONTAINER WITHIN 14m³ BUND
27. STORAGE OF COPPER



Project SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name PROPOSED BLOCK PLAN	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates Mechanical Heating, Ventilation Air Conditioning Electrical
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SECTION II - LIGHTING

1.0 INTRODUCTION AND SCOPE

The development consists of a scrapyards occupying a footprint of around 8,000m². The site has an internal private road with a number of sheds, designed to cater for the various stages of scrapping of cars. These include:

- E.L.V. (storage, dismantling, etc)
- Storage of tyres and scrap metal
- Storage area of white goods, wood, aluminium and plastic
- Staff facilities and parking

Moreover, the site is also equipped with a rain water catchment for rain water runoff. In view of the presence of oils, the catchment passes through a silt trap and oil-water interceptor to remove contaminants prior to storage in the reservoir.

Access to the site is possible through two exits, both leading to a private access road which discharges onto Triq il-Belt Valletta, Luqa.

This report gives a description of the lighting concepts that will be adopted and their effect on the surrounding.

2.0 REFERENCES AND STANDARDS

- CIBSE – The SSL Lighting Handbook
- CIBSE – SSL Lighting Guide 4
- IET Wiring Regulations
- ITF Guide to Lighting Tennis Courts

3.0 BACKGROUND INFORMATION - LIGHT POLLUTION

Exterior lighting is the major source of light pollution. Complaints about light pollution from exterior lighting can be divided into three categories, namely light trespass (or light spill), skyglow and glare.

3.1 *Light trespass*

This is the light spill over from one property to the adjacent or opposite property beyond acceptable levels, whereby this light affects the full enjoyment of the third party property. Worst cases are normally bedrooms, however this is to be limited neither by location nor by subjective interpretation of the measurements.

3.2 *Skyglow*

The effect of skyglow is more spread and can affect people over much larger distances. This is caused by the scattering and accumulation of light from multiple sources. Skyglow reduces the contrast of the stars in the night sky hence reducing their visibility.

3.3 *Glare*

There are many forms of glare however in general it is described as the presence of luminance which happens to be much above the average for the field of view. This causes discomfort and normally persons need to look away or shield their eyes from the source of light.



Light pollution in Malta – Photo NASA ©

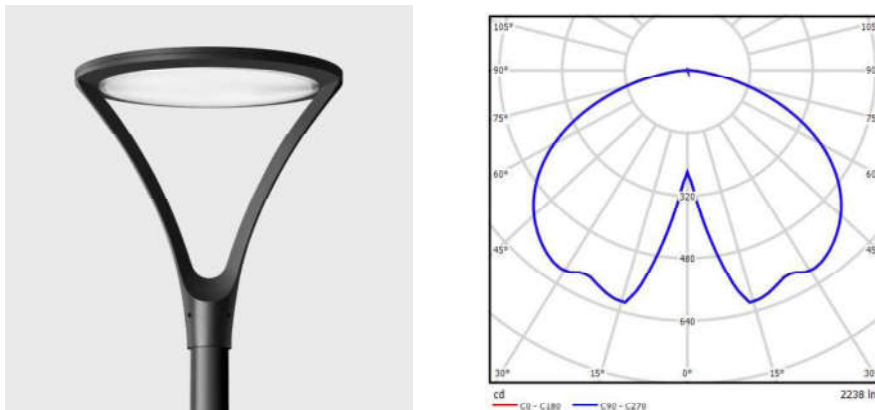
4.0 PARTICULAR REQUIREMENTS

The project in caption is a scrapyard with a distinct internal circulation road for vehicles to un/load the scrap material. This part of the development will be illuminated by means of high poles. These are shown in the attached drawing. The periphery of the zone will be lit by low poles, as shown in the drawing, highlighted in purple.

The lighting system shall be fitted with timers in order that part of the installation may be switched off during the hours in which it is determined not to be utilised. This will minimise light pollution at night as much as possible. Notwithstanding, part of the lighting will however be kept on throughout the night for security reasons.

4.1 Lighting from the high poles

Typical light fittings used for high poles consist of LEDs, an example of which is shown in the following photo.



Typical light fitting on top of a 5m pole and Luminous Emittance

The light emittance diagram of this light fitting shows the polar reach of the light. This is also shown in the attached drawing which shows the reach of the beam through a section of the zone. As can be seen in the drawing, the light beam does not trespass beyond the site perimeter. This also ensures that the glare beyond the site is minimal and will therefore not be of nuisance, especially in view of the fact that there are no residential buildings in close proximity.

4.2 Lighting from the low poles

Low poles typically also make use of LEDs. The light emittance diagram of such a light fitting is shown in the attached drawing which shows the reach of the beam through a section of the zone, highlighted in purple. As can be seen in the drawing, the light beam does not trespass beyond the site perimeter. This also ensures that the glare beyond the site is minimal and will therefore not be of nuisance, especially in view of the fact that there are no residential buildings in close proximity.

5.0 CONCLUSION

From the analysis carried above, it can be confirmed that the lighting resulting from the development beyond the site is minimal and shall not be of nuisance to surrounding neighbours.

For and on behalf of,

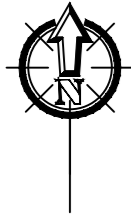
MTS CONSULTING LTD

A handwritten signature in black ink, appearing to read 'Liana Zerafa', is written over a light blue horizontal line.

Ing. Liana Zerafa

Senior Consulting Engineer

(Warrant No. 1056)



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED

Approved PA 01876/15



Reservoir Below

Assumed Public Road Sewer

Farmhouse
Constructed Prior to 1998

TRIQ IL-BELT VALLETTA

LIGHTING LEGEND

-  LIGHT - TYPE A (LOW POLES)
-  LIGHT - TYPE B (HIGH POLES)

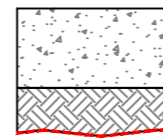
Liana Zerafa
Ing. Liana Zerafa
B.Eng.(Hons.) Msc. (Warrant 1056)
MTS Consulting Limited

PAVING LEGEND

PAVEMENT DETAIL



250mm DEEP IMPERMEABLE CONCRETE WITH A503 STEEL REINFORCING MESH

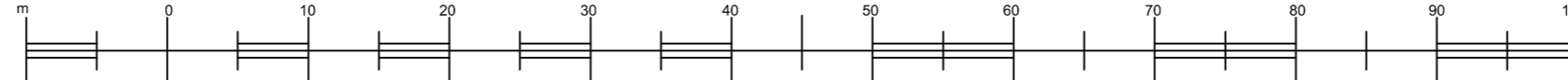



CEMENT STABILISED SITE MATERIAL - VARIABLE DEPTH IMPERMEABLE GEOTEXTILE LINER

LEGEND

1. BALING OF TYRES
2. E.L.V. (VEHICLES AWAITING DISMANTLING)
3. E.L.V. (EQUIPMENT FOR DEPOLLUION OF VEHICLES AND DISMANTLING)
4. E.L.V. (STORAGE OF DISASSEMBLED PARTS)
5. STAFF FACILITIES - OFFICE, TOILETS & CANTEEN
6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
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9. STORAGE OF PROCESSED WOOD
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12. STORAGE OF TYRES
13. STORAGE OF SCRAP METAL
14. STORAGE OF WOOD
15. STORAGE OF ALUMINIUM
16. STORAGE OF PLASTIC
17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
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24. WEIGHBRIDGE OFFICE
25. GENERATOR
26. 9m³ FUEL STORAGE CONTAINER WITHIN 14m³ BUND
27. STORAGE OF COPPER

Scale 1:500



Project SITE AT SQAQ FDAL IL-HADID, LUQA Amendment to APPROVED PA.05538/07 AND PA.01876/15	Drawing Name PROPOSED LIGHTING AND PAVING PLAN	Drawn: LF Date: 06-06-2018 Approved: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates Maria Louisa Hensley Road Hensley Industrial Estate, Qormi QRM 4000
Drawn no: 003 Rev: G	File No: J012	Date: 06-06-2018	Scale: 1:500 (A2)

Attachment 10: Updated expenditure plan

I. MEPA’s ToR in respect of expenditure are:

Please provide a plan of the estimated expenditure for each phase of the following specified activities.

The plan should include the likely costs of:

- *monitoring (emission/discharge and ambient monitoring);*
- *clearing the installation (including drainage systems) of all wastes;*
- *remedial action in the event of the failure of pollution control systems.*

We recognise that this plan may need to be revised before the issue of the final permit.

2. **Table I** provides an expenditure plan for various planned activities. Site remediation has not been costed since it would only be required if the site is found to have been contaminated at the decommissioning phase. That cost is also heavily dependent on the extent of remediation required and the technology chosen.

Table I: Expenditure plan

Activity	Estimated costs
Site reorganisation and upgrading	Confidential
Land monitoring	€12,000
Air monitoring	€5,000 (dependent on Terms of Reference, including number of samples)
Noise study	€1,500
Compost testing	€2,000
Clearing the installation of all wastes	€5,000
Cleaning the oil-water interceptor	€1,000
Collecting and disposing of an oily spill (around 2 m ²)	€1,000
Spill kits	€200

Attachment I I: Site earthworks method statement

SITE EARTHWORKS METHOD STATEMENT

DDE ATTARD LTD. – PA 4172/16

Site at: *Don Kotra, Sqaq Fdal il-Hadid, Hal Luqa*

JOE BUGEJA ASSOCIATES

MARCH 2019

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Earthworks Scheme	3
Excavation and Disposal Method Statement.....	6
Project Time Line	7
Appendices.....	7

Introduction

The site in question is a scrapyard located at Sqaq Fdal il-Hadid, Luqa. A land monitoring study carried out at the site in 2015 showed that due to the past and present waste handling activities on site, the soil / land on the site contain some chemical contaminants, including various metals and hydrocarbons.

This document refers to the civil works proposed on site as per PA/04172/16 and outlines the proposed method statement for the earthworks involving contaminated soil / land.

Land Monitoring Results

The 2015 land monitoring study showed that the most heavily contaminated samples were the samples taken from the surface and 1 m depths. The classification of these samples under waste legislation is shown in Table 1.

Land Monitoring Point Location (as per D013 – Proposed Excavation)	Depth	Waste Classification
1	Surface	Hazardous
	1 m	Not hazardous
	2 m	Not hazardous
2	Surface	Hazardous
	1 m	Hazardous
	2 m	Not hazardous
3	Surface	Hazardous
	1 m	Hazardous
	2 m	Not hazardous
4	Surface	Hazardous
	1 m	Hazardous
	2 m	Not hazardous
5	Surface	Hazardous
	1 m	Hazardous
	2 m	Hazardous

Earthworks Scheme

The site is gently sloping downwards to the North. The present slopes of the site will be retained – this means that no excavation shall be carried out for the paving of the site.

The other construction works being proposed on site shall necessitate excavation as follows:

- Storm-water reservoir: Excavation down to 4.2m

- Fire Fighting Reservoir: Excavation down to 3.5m
- Sheds Foundations: Excavation down to rock level (assumed at 1.0m below ground level)
- Staff Facilities Foundations: Excavation down to rock level (assumed at 1.0m below ground level)

Based on the waste classification in Table 1:

- Soil / land excavated for the construction of the proposed reservoirs is to be considered hazardous up to a depth of 1.5 m; this is based on a review of the land monitoring data closest to these reservoirs (notably point 3), whereas the surface sample has been taken to be representative of the first 0.5 m and the 1 m sample has been taken to be representative of the 0.5 to 1.5 m depth;
- Below a depth of 1.5 m, rock excavated for the construction of these proposed reservoirs is to be considered as non-hazardous, since in these areas none of the 2 m samples were found to be hazardous;
- Excavated soil from other areas (i.e. sheds foundations and staff facilities) is to be considered hazardous.

Accordingly excavated material down to 1.5 m in the reservoirs areas (both soil and rock) together with all excavated soil from the excavations for foundations shall be considered as hazardous. On the other hand excavated rock in the reservoirs areas from deeper than 1.5m shall be considered as non-hazardous waste.

The total estimated volume of hazardous soil and rock to be excavated amounts to 704.7m³ as summarised in Table 2 below.

Table 2 - Volumes of Hazardous Ground Materials to be Excavated					
Location	Number	Length m	Width m	Depth m	Volume m ³
Storm-water Reservoir	1.0	16.0	16.0	1.5	384.0
Fire Fighting Reservoir	1.0	11.8	8.9	1.5	157.5
Sheds Columns Foundations	62.0	0.6	0.6	1.0	22.3
Staff Facilities Wall Foundations	1.0	76.8	1.0	1.0	76.8

In-Situ Excavation Volume	640.7
Bulking Factor	10%
Total Volume of Excavated Hazardous Material	704.7

All the excavated contaminated ground material will be stockpiled in a sealed temporary containment area (as described below), before being transferred into UN-approved big bags and loaded onto shipping containers. Hazardous excavated waste will be transported overseas for disposal; a waste broker is being engaged for this purpose. The selected waste disposal facility will be licensed to handle and dispose of such waste, and disposal shall be compliant to the relevant regulations; the export of waste will also be covered by the required permits.

Prior to disposal, samples of waste will be tested in accordance with Decision 2003/33/EC to determine acceptability for disposal in hazardous landfill. Samples will be taken as follows:

- Two samples from the centre of the storm water reservoir (0.5 m and 1 m depths);
- Two samples from the centre of the fire fighting reservoir (0.5 m and 1 m depths);
- Two samples from the sheds columns foundations (one on the western side, one on the eastern side, both at 0.5 m depth); and
- One sample from the staff facilities wall foundations (0.5 m depth).

Table 3 presents the volumes of non-hazardous rock to be excavated from depths greater than 1.5m.

Table 3 - Volumes of Non-Hazardous Rock to be Excavated					
Location	Number	Length m	Width m	Depth m	Volume m³
Storm-water Reservoir	1.0	16.0	16.0	2.7	691.2
Fire Fighting Reservoir	1.0	11.8	8.9	2.0	210.0
In-Situ Excavation Volume					901.2
Bulking Factor					10%
Total Volume of Excavated Non-Hazardous Rock					991.4

Excavated rock at deeper levels from beneath the reservoirs (i.e. beyond 1.5 m depth), being classified as non-hazardous, will be carted away to a licensed waste management site. Prior to disposal, it will be tested in accordance with Decision 2003/33/EC to determine acceptability for disposal in landfills of different types. Samples will be taken from around 2 m depth; two samples from beneath the larger reservoir and one beneath the smaller reservoir will be taken and tested for the parameters in Decision 2003/33/EC.

Excavation and Disposal Method Statement

The paving works will be carried out in 5 phases, each phase having an area ranging from c.1140m² to c.2360m². Consequently the following method will be repeated for all phases of the paving programme.

Testing in accordance with Decision 2003/33/EC will be carried out prior to the below activities, as described previously.

1. The area to be paved shall be cleared from the scrap materials being stored.
2. A sealed temporary containment shall be set up on site for the temporary storage of excavated soil. Its construction shall be as follows: 1m precast concrete blocks shall be used to form retaining containment walls; joints between blocks shall be plastered to prevent loss of material. Stockpiled excavated soil will be covered using plastic sheets to prevent it being blown by the wind.
3. All the soil (down to rock level) in the areas to be excavated shall be excavated using a mechanical shovel and stockpiled temporarily in the sealed temporary containment area. It will then be placed in UN-approved double-lined big bags, which will be loaded onto shipping containers.
4. Rock in the areas designated for the construction of underground reservoirs shall be excavated down to the required levels. Excavated rock up to 1.5 m depth in these areas will be placed in the temporary containment area prior to being loaded onto shipping containers (as per 2 above); rock at deeper levels shall be carted away and disposed of in an approved waste management site.
5. Shipping containers (filled with excavated hazardous material as per 2 and 3 above) shall be sealed and transported overseas to an approved waste management site.
6. The reservoir shall be constructed within the excavated void.
7. The ground shall be compacted by rollers.
8. A geotextile membrane shall be laid on the compacted ground.
9. A reinforced concrete layer (forming the final structural paving) shall be placed on the geotextile membrane.

It is important to note that none of the site equipment that is used for the operation of the scrapyards will be used for the earthworks. All equipment to be used for the civil works and earthworks shall be dedicated equipment brought on site solely for this purpose.

Project Time Line

The phasing of the civil works shall be subdivided as per the following time line:

Weeks 1-12 Paving Phase 1 – works subdivided as follows:

- | | |
|-------------|---|
| Week 1 | Clearance of area to be paved from stored scrap materials. |
| Week 2 | Plant and equipment mobilisation to site. |
| Weeks 3- 4 | Excavation (excavated materials will be handled and disposed of as described above). |
| Weeks 5- 8 | Construction of reservoir. |
| Weeks 9-10 | Compaction of existing sub-grade material by rollers, with subsequent placing of geotextile membrane. |
| Weeks 11-12 | Laying of the structural paving. |

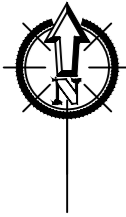
Weeks 13-24 Paving Phase 2 – works to be subdivided as for Paving Phase 1

Weeks 25-36 Paving Phase 3 – works to be subdivided as for Paving Phase 1

Weeks 37-48 Paving Phase 4 – works to be subdivided as for Paving Phase 1

Appendices

- A. Drawing 002: Proposed Paving Programme
- B. Drawing 003: Proposed Lighting and Paving Plan
- C. Drawing 013: Proposed Excavation



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

Phase 3
Area: c. 1480 sq. m

Phase 2
Area: c. 1930 sq. m

Phase 4
Area: c. 1140 sq. m

Paving Phase 1
Area: c. 2190 sq. m
Area to Include Storm-water Reservoir and areas 1 to 4

Area already paved

Farmhouse
Constructed Prior to 1998

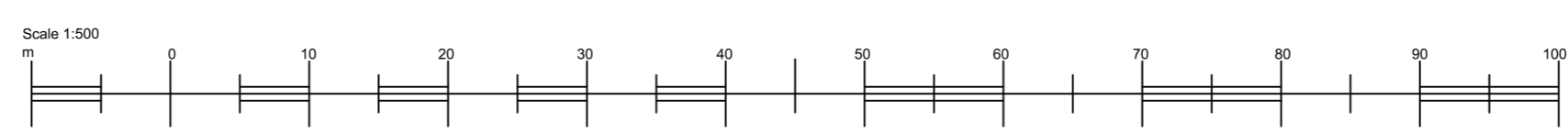
TRIQ IL-BELT VALLETTA

Assumed Public Road Sewer

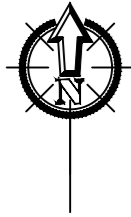
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CONSTRUCTION PHASING - HARDSTANDING

	Phase 1: Reservoir & Areas 1 to 4	2190 sq. m
	Phase 2	1930 sq. m
	Phase 3	1480 sq. m
	Phase 4	1140 sq. m
	Area already paved	2360 sq. m



Project: SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA.05538/07 AND PA.01876/15	Drawing Name: PROPOSED PAVING PROGRAMME	Drawn: JF	
		Date: 20-03-2019	
Author: JF	Scale: 1:500 (A2)	Approved: JB	Model Ref: Hardw Road Hardw Substn Hardw Drain Hardw Sewer
		Date: 20-03-2019	
Drawing No: 002	Rev: 1	File No: J102	Scale: 1:500 (A2)



SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED
Approved PA/01876/15



Reservoir Below

Farmhouse
Constructed Prior to 1998

TRIQ IL-BELT VALLETTA

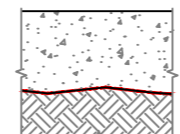
Assumed Public Road Sewer

LIGHTING LEGEND

-  LIGHT - TYPE A (LOW POLES)
-  LIGHT - TYPE B (HIGH POLES)

PAVING LEGEND

PAVEMENT DETAIL

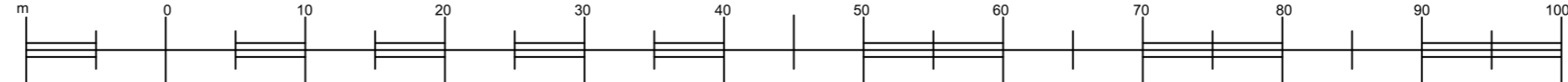



250mm DEEP IMPERMEABLE CONCRETE WITH A503 STEEL REINFORCING MESH
IMPERMEABLE GEOTEXTILE LINER
EXISTING SITE MATERIAL - COMPACTED BY ROLLERS

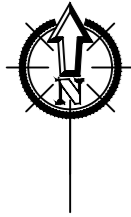
LEGEND

1. BALING OF TYRES
2. E.L.V. (VEHICLES AWAITING DISMANTLING)
3. E.L.V. (EQUIPMENT FOR DEPOLLOUTION OF VEHICLES AND DISMANTLING)
4. E.L.V. (STORAGE OF DISASSEMBLED PARTS)
5. STAFF FACILITIES - OFFICE, TOILETS & CANTEEN
6. DISMANTLING OF WHITE GOODS (COOKERS AND WASHING MACHINES)
7. WIRE STRIPPING
8. STORAGE OF SPARE PARTS (GENERAL)
9. STORAGE OF PROCESSED WOOD
10. SHREDDING/CRUSHING
11. GARAGE FOR PARKING & MAINTENANCE OF YARD EQUIPMENT
12. STORAGE OF TYRES
13. STORAGE OF SCRAP METAL
14. STORAGE OF WOOD
15. STORAGE OF ALUMINIUM
16. STORAGE OF PLASTIC
17. STORAGE (TEMPORARY) OF SEALED CONTAINERS FOR ONWARD SHIPPING
18. QUARANTINE
19. PARKING AREA
20. TEMPORARY STORAGE
21. WEIGH BRIDGE
22. COMPOSTER SHED
23. TYRE WASH FACILITY
24. WEIGHBRIDGE OFFICE
25. GENERATOR
26. 9m³ FUEL STORAGE CONTAINER WITHIN 14m³ BUND
27. STORAGE OF COPPER

Scale 1:500



Project SITE AT SQAQ FDAL IL-HADID, LUQA Amendment to APPROVED PA/05538/07 AND PA/01876/15	Drawing Name PROPOSED LIGHTING AND PAVING PLAN	Drawn: LF Date: 21-11-2018 Approved: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates 100, Gatt Havelock Road Havelock Industrial Estate, Qormi QRM 4000
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SOFT LANDSCAPING - SOIL & OLIVE/CYPRESS/PINE TREES AS APPROVED IN PA 1876/15

AREA OF CONTAINMENT BOUNDARY

PROPOSED NEW ACCESS

Private Access Road

POSTER SHED
Approved in PA/01876/15

4

3

5

1





2

Farmhouse
Constructed Prior to 1998

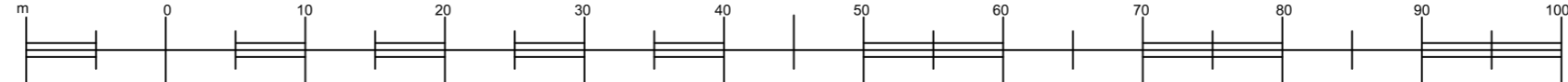
TRIQ IL-BELT VALLETTA


Assumed Public Road Sewer

LEGEND

-  Excavation of soil down to rock level for foundations; All excavated soil to be exported for disposal overseas.
-  Excavation down to required levels, not exceeding 4.2m below ground level. All material (both soil and rock) down to 1.50m to be exported for disposal overseas.
-  Temporary storage of excavated soil.
-  LAND MONITORING POINTS

Scale 1:500



Project: SITE AT SQAQ FDAL IL-HADID, LUQA AMENDMENT TO APPROVED PA/05538/07 AND PA/01876/15	Drawing Name: PROPOSED EXCAVATION Drawing No: 013 Rev: F	Drawn: LF Date: 05-03-2019 Approval: JB Scale: 1:500 (A2) File No: J012	 Joe Bugeja Associates 100, Gattafiora Road Hamra, Luqa Malta, QRM 4000
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Attachment 12: Hazardous property assessment

Client Reference: DDE 004
15 Samples of Soil Ex Scrap Yard

HAZARDOUS PROPERTY ASSESSMENT
Waste (England and Wales) Regulations 2011

Date of Assessment 12th May 2017

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
Arsenic	ICP/OES	Highest 1-15	0.009	diasenic trioxide	0.0120	H350	HP7	0.1	Not Hazardous
						H300	HP6	0.25	Not Hazardous
						H314	HP8	1	Not Hazardous
						H400	HP14	0,1	Not Hazardous
						H410	HP14	0.1	Not Hazardous
Cadmium	ICP/OES	Highest 1-15	0.003	cadmium carbonate	0.0045	H332	HP6	22.5	Not Hazardous
						H312	HP6	0.25	Not Hazardous
						H302	HP6	0.25	Not Hazardous
						H400	HP14	0.1	Not Hazardous
						H410	HP14	0.1	Not Hazardous
Chromium	ICP/OES	Highest 1-15	0.06	none listed	0.1890				Not Hazardous
Chromates	ICP/OES	All samples	<0.0001		<0.001	H350	HP11	0.1	Not Hazardous
						H317	HP13	10	Not Hazardous
Mercury	ICP/OES	Highest 1-15	0.001	mercury sulphide	0.0010	H331	HP6	22.5	Not Hazardous
						H373	HP5	0.1	Not Hazardous
						H410	HP14	0.1	Not Hazardous

Client Reference: DDE 004
15 Samples of Soil Ex Scrap Yard

HAZARDOUS PROPERTY ASSESSMENT
Waste (England and Wales) Regulations 2011

Date of Assessment 12th May 2017

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
Lead	ICP/OES	#001	0.05	lead ion	0.05				
		#004	1.8	lead ion	1.80				
		#005	0.1	lead ion	0.10				
		#007	0.1	lead ion	0.10				
		#008	0.6	lead ion	0.60				
		#010	0.6	lead ion	0.60				
		#011	0.7	lead ion	0.70				
		#013	0.2	lead ion	0.20				
		#015	0.2	lead ion	0.20				
								H360	HP10
						H332	HP6	22.5	Not Hazardous
						H302	HP6	25	Not Hazardous
						H373	HP5	10	Not Hazardous
						H400	HP14	0.1	Hazardous
						H410	HP14	0.1	Hazardous
Selenium	ICP/OES	Highest 1-15	0.001		0.0010	H331	HP6	3.5	Not Hazardous
						H301	HP6	5	Not Hazardous
						H373	HP6	5	Not Hazardous
						H410	HP14	0.1	Not Hazardous

Client Reference: DDE 004
15 Samples of Soil Ex Scrap Yard

HAZARDOUS PROPERTY ASSESSMENT
Waste (England and Wales) Regulations 2011

Date of Assessment 12th May 2017

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
Copper	ICP/OES	#004	0.1	copper oxide	0.1250				
		#010	0.2	copper oxide	0.2500				
		#011	0.11	copper oxide	0.1375				
						H302	HP6	25	Not Hazardous
						H400	HP14	0.1	Not Hazardous
Nickel	ICP/OES	Highest 1-15	0.04	nickel carbonate	0.0800	H410	HP14	0.1	Not Hazardous
						H350	HP7	0.1	Not Hazardous
						H341	HP11	1	Not Hazardous
						H360	HP10	0.3	Not Hazardous
						H372	HP5	1	Not Hazardous
						H332	HP6	22.5	Not Hazardous
						H302	HP6	25	Not Hazardous
						H315	HP4	20	Not Hazardous
						H334	HP13	10	Not Hazardous
						H317	HP13	10	Not Hazardous
						H319	HP4	20	Not Hazardous
						H400	HP14	0.1	Not Hazardous
						H410	HP14	0.1	Not Hazardous
Zinc	ICP/OES	#001	0.3	zinc oxide	0.3720				
		#004	0.5	zinc oxide	0.6200				
		#007	0.12	zinc oxide	0.1488				
		#008	0.64	zinc oxide	0.7936				
		#010	0.6	zinc oxide	0.7440				
		#011	0.7	zinc oxide	0.8680				
		#013	0.3	zinc oxide	0.3720				
		#014	0.2	zinc oxide	0.2480				
								H400	HP14
						H410	HP14	0.1	Hazardous

Client Reference: DDE 004
15 Samples of Soil Ex Scrap Yard

HAZARDOUS PROPERTY ASSESSMENT
Waste (England and Wales) Regulations 2011

Date of Assessment 12th May 2017

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
pH			8.1		2<pH<11.5		HP4/HP8		Not Hazardous
Contact with acids		All		no reaction					Not Hazardous
Explosivity		All		no reaction					Not Hazardous
Asbestos	plm	All	<0.001				H350	0.1	Not Hazardous
Organic Compounds									
Total Petroleum Hydrocarbons	GC FID	#004	0.5000				HP5	10	Not Hazardous
		#013	0.30000				HP5	10	Not Hazardous
Polyaromatic Hydrocarbons	GC MS	#004	0.07		0.0002		HP7 HP11 HP10 HP14 HP16	0.1 0.1 3 2.5 50mg/kg	Not Hazardous Not Hazardous Not Hazardous Not Hazardous Not Hazardous
Polychlorinated Biphenyls	GC MS	Highest 1-15	18 mg/kg						
Dioxins and Furans		Highest 1-15	0.92ng/kg I-TEQ				HP16	50mg/kg	Not Hazardous

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
SUMMARY		Sample No					EWG Code		
		#001					HP7, HP14	17-05-03*MH	Hazardous
		#002					HP7, HP14	17-05-04 MN	Not Hazardous
		#003					HP7, HP14	17-05-04 MN	Not Hazardous
		#004					HP7, HP14	17-05-03*MH	Hazardous
		#005					HP7, HP14	17-05-03*MH	Hazardous
		#006					HP7, HP14	17-05-04 MN	Not Hazardous
		#007					HP7, HP14	17-05-03*MH	Hazardous
		#008					HP7, HP14	17-05-03*MH	Hazardous
		#009					HP7, HP14	17-05-04 MN	Not Hazardous
		#010					HP7, HP14	17-05-03*MH	Hazardous
		#011					HP7, HP14	17-05-03*MH	Hazardous
		#012					HP7, HP14	17-05-04 MN	Not Hazardous
		#013					HP7, HP14	17-05-03*MH	Hazardous
		#014					HP7, HP14	17-05-03*MH	Hazardous
		#015					HP7, HP14	17-05-03*MH	Hazardous

SAL Report #470069 informs this assessment and should be read in conjunction.

Risk Phrases used in this assessment are based on EU 1277 2008

The conclusions in this assessment are based on guidance taken from WM3 1st edition 2015.

The terms "Hazardous" and "Not Hazardous" are used in the context of these Regulations. Further testing may be required if classification under the Waste Acceptance Criteria (Landfill Regulations 2000/EU Directive 99/3/EC as amended) is intended.

The term "Not Hazardous" does not imply that significant possibility of significant harm to human health or the environment is not present.

All reasonable skill and care has been exercised in production of this assessment.

Assessment Prepared by W A Cohen

William A Cohen B.Sc
Consultant Environmental Chemist

Client Reference: DDE 004
15 Samples of Soil Ex Scrap Yard

HAZARDOUS PROPERTY ASSESSMENT
Waste (England and Wales) Regulations 2011

Date of Assessment 12th May 2017

Hazardous Property/Determinand	Test/Assessment Method	Sample No	Result %	Worst Case Compound	Result as Worst Case Compound	Hazard Statement	Hazardous Property	Threshold %	Conclusion
Assessment Prepared by W A Cohen									

		MW	Metal	no	
arsenic trioxide	as2o3	197	74	2	1.3
antimony trichloride	sbcl3	228	122	1	1.9
cobalt sulphate	coso4	155	59	1	2.6
manganese sulphate	mnso4	151	55	1	2.7
thallium sulphate	tl2so4	504	204	2	1.2
aluminium					
barium					
cadmium carbonate		172	112	1	1.5

Attachment I3: Achievement of reuse and recovery targets for end-of-life vehicles

Part A: Achievement of ELV reuse and recycling targets (based on Option 1 as described in **Volume 2**)

This part of the assessment is based on the estimates of outgoing waste generated from end-of-life vehicles, as shown in the end-of-life vehicle flow diagram marked as Option 1 in **Attachment 4**, and using the method described in **Volume 2**.

Fate of waste	Waste type	Estimated annual quantity (tonnes)	Notes
Recycling	Lead acid batteries	7.2	
	Metal from LPG tanks	0.1	When a quantity is given as a maximum in the flow diagram, the maximum is assumed.
	Iron and steel waste	3,006	
	Non-ferrous metal	573	
	Tyres	125	
	High-voltage electrical system	0.02	
	High-voltage battery	0.02	
	Catalyst units	4.8	
	Plastic bumpers	161	
	Discarded electronics	20	
	Mercury switches	0.01	Recycling (estimated 50%) / disposal (50%)
	Total recycling	3,897	
Recovery	Engine oils	19.2	
	Oil filters	2.4	
	Other hydraulic oils	9.6	
		Total recovery	31
Reuse	Diesel	12	In this Table, a density of 1 kg/L has been assumed for all liquids (this does not affect the overall outcome)
	Petrol	12	
	Refrigerants	10.5	Recovery for reuse (estimated at 75%) / destruction (25%)
		Total reuse	35
Disposal	Transmission oils	14.4	
	Antifreeze	33.6	
	Brake fluids	3.36	
	Screen washing fluid	14.4	
	Refrigerants	3.5	
	Brake pads	0.8	
	Airbags	9.6	
	Shredder residues	787	
	Total disposal	867	
Total waste from ELV process		4,830	

The recycling and reuse rates achieved based on the originally planned waste management routes for end-of-life vehicles (Option I) are shown in the following Table, and compared to the targets set by Waste Management (End of Life Vehicles) Regulations, SL 549.36.

Fate	Rate achieved by Scheme	Targets set by SL 549.36	
		Reuse & recovery	Reuse & recycling
Recovery (excl. recycling)	0.6%	95%	-
Recycling	80.7%		85%
Reuse	0.7%		
Disposal	17.9%	-	-

With the above planned waste management routes (Option I) there is a shortfall of:

- 3.6% in order to meet the reuse and recycling target; and
- 12.9% in order to meet the reuse and recovery target.

The Applicant is therefore planning to implement further measures to help improve reuse / recycling / recovery rates and meet these targets, as described in Part B.

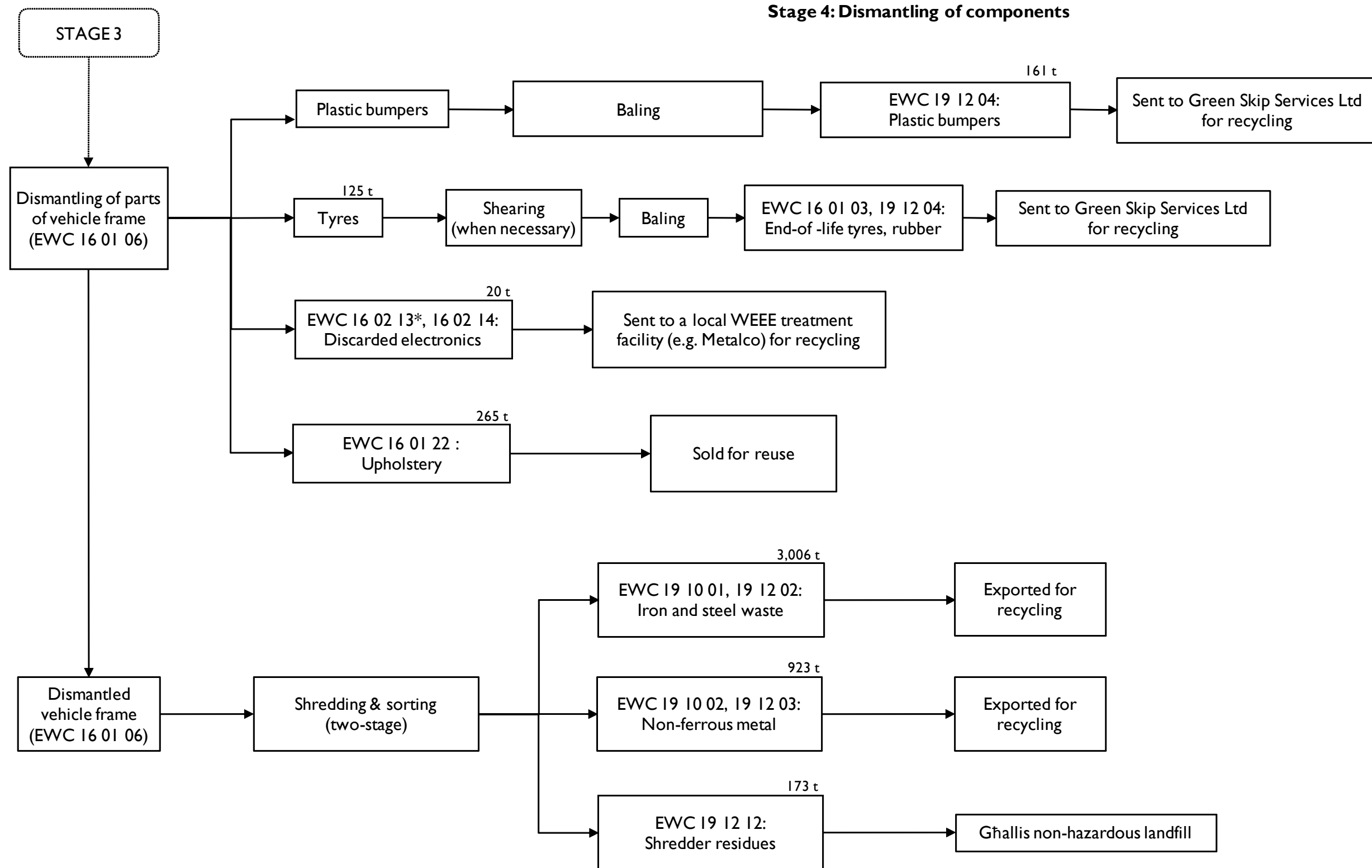
Part B: Achievement of ELV reuse and recycling targets (Option 2)

Option 2 is proposed, which includes the following measures that are planned to improve reuse / recycling / recovery rates:

- Installation of a second shredder and sorter based on Eddy current technology after the first shredder, which will help recover more of the non-ferrous metal component. A datasheet for this shredder is included at the end of this Attachment; and
- Manually removing upholstery (estimated at 265 tonnes annually) before the vehicle chassis is shredded, and selling the upholstery for reuse.

These measures affect Stage 4 of the ELV treatment process; an updated flow diagram for this stage is included overleaf.

Flow diagram for end-of-life vehicles (Option 2, updating Stage 4 of process):



The output of Option 2 will be as described below:

Fate of waste	Waste type	Estimated annual quantity (tonnes)
Recycling	Lead acid batteries	7.2
	Metal from LPG tanks	0.1
	Iron and steel waste	3,006
	Non-ferrous metal	923
	Tyres	125
	High-voltage electrical system	0.02
	High-voltage battery	0.02
	Catalyst units	4.8
	Plastic bumpers	161
	Discarded electronics	20
	Mercury switches	0.01
	Total recycling	4,247
Recovery (excluding recycling)	Engine oils	19.2
	Oil filters	2.4
	Other hydraulic oils	9.6
	Total recovery	31
Reuse	Diesel	12
	Petrol	12
	Refrigerants	10.5
	Upholstery	265
	Total reuse	299.5
Disposal	Transmission oils	14.4
	Antifreeze	33.6
	Brake fluids	3.36
	Screen washing fluid	14.4
	Refrigerants	3.5
	Brake pads	0.8
	Airbags	9.6
	Shredder residues	173
	Mercury switches	0.01
Total disposal	253	
Total waste from ELV process		4,830

The recycling and reuse rates achieved based on Option 2 are shown in the following Table, and compared to the targets set by Waste Management (End of Life Vehicles) Regulations, SL 549.36.

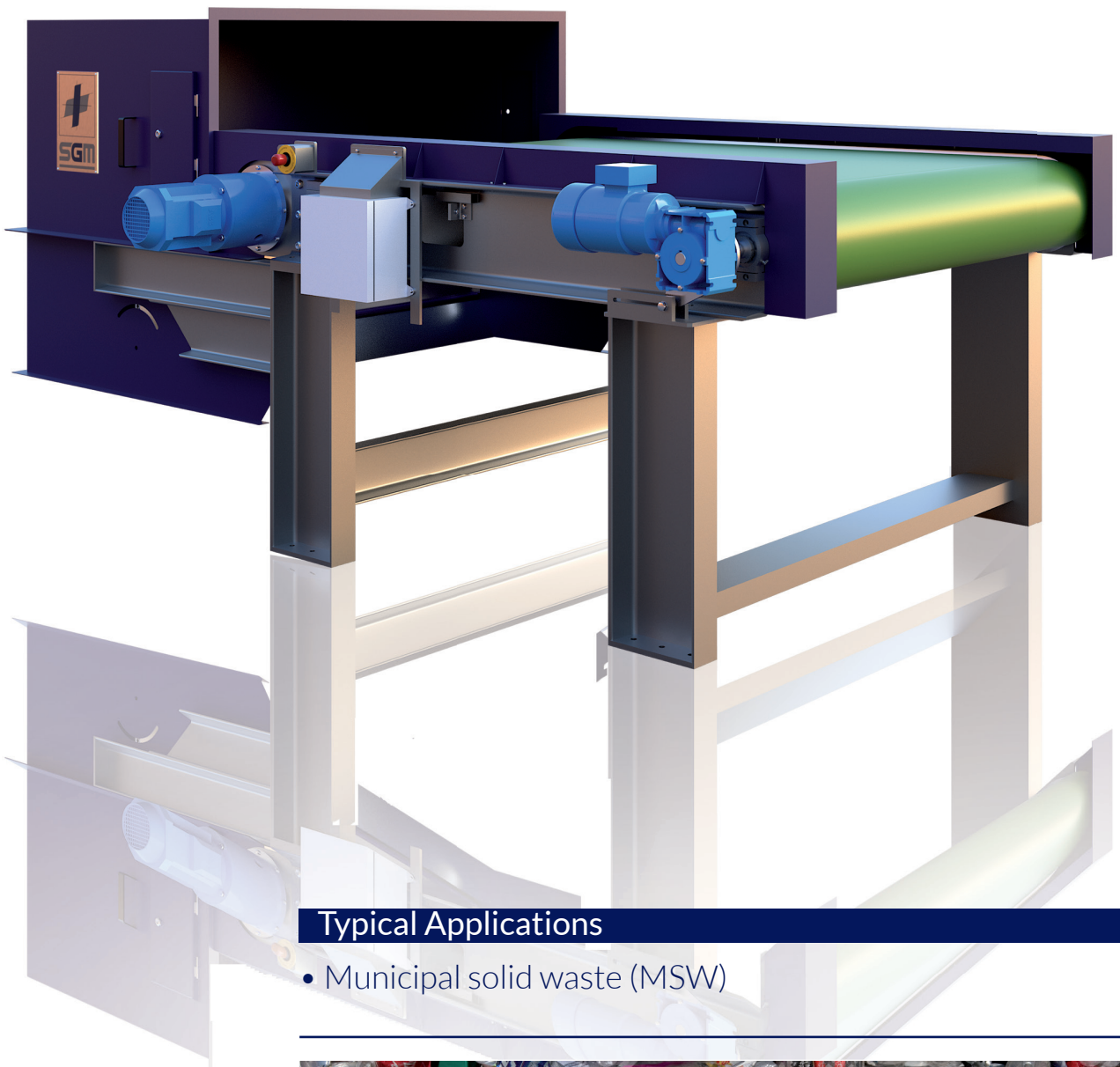
Fate	Rate achieved by Scheme	Targets set by SL 549.36	
		Reuse & recovery	Reuse & recycling
Recovery (excl. recycling)	0.6%	95%	-
Recycling	87.9%		85%
Reuse	6.2%		
Disposal	5.2%	-	-

The total reuse and recovery (including recycling) rate achieved by Option 2 is 94.7%, i.e. compliant with the 95% target. The total reuse and recycling rate achieved by Option 2 is 94.1%, i.e. compliant with the 85% target.

Eddy Current Separator

Model EIS

Easy to operate, easy to maintain, extremely reliable and very cost effective!



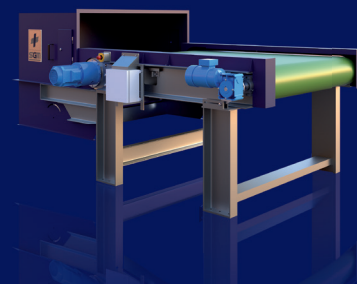
Typical Applications

- Municipal solid waste (MSW)



Eddy Current Separator

Model EIS



Technical Specifications

Designed with a concentric rotor for maximum exposure of material to magnetic field.

Product Highlights

- Latest generation of performing neodymium permanent magnets
- Designed for easy access to the inside of the ECS and for easy maintenance

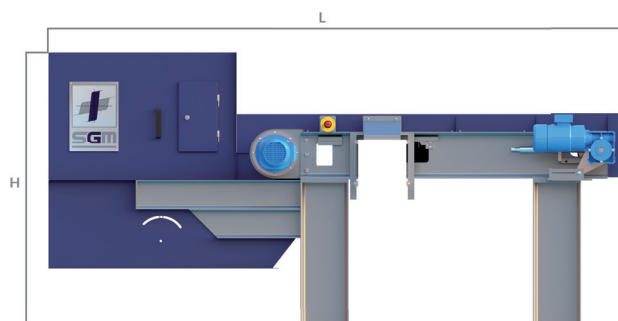
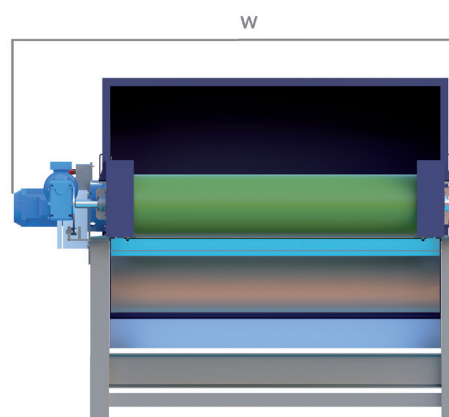
MODEL	RPM	NUMBER OF POLES	ADJUSTABLE BELT SPEED	CAPACITY (*)
EIS 100/150	1500	24	0,6-2,1 m/sec	8 t/h
EIS 100/200	1500	24	0,6-2,1 m/sec	8 t/h
EIS 130/150	1500	24	0,6-2,1 m/sec	13 t/h
EIS 130/200	1500	24	0,6-2,1 m/sec	13 t/h
EIS 150/200	1500	24	0,6-2,1 m/sec	18 t/h
EIS 150/250	1500	24	0,6-2,1 m/sec	18 t/h

* Depending on application, material specific weight and metal content material

MODEL	LENGTH	WIDTH	HEIGHT	WEIGHT
EIS 100/150	3160 mm	1825 mm	1390 mm	1,500 kg
EIS 100/200	3660 mm	1825 mm	1390 mm	1,650 Kg
EIS 130/150	3160 mm	2215 mm	1100 mm	1,600 Kg
EIS 130/200	3660 mm	2215 mm	1100 mm	1,750 Kg
EIS 150/200	3190 mm	2410 mm	1390 mm	2,050 Kg
EIS 150/250	3683 mm	2413 mm	1397 mm	2,100 Kg

Optional Features

- Electronic emergency fast breaking system (no clamping)
- Brush cleaning system for belt
- Vibrating feeder




SGM Magnetics SpA
Separation and Recycling

Via Leno 2/D Manerbio, BS Italy, 0039 0309938400
info@sgmmagnetics.com www.sgmmagnetics.com



Attachment 14: Compost end of waste application

<p>5. Percentage of foreign material/pollutants present in the recovered substance if applicable (1):</p> <p>Pollutant:</p> <p>Quantity (mg/kg):</p> <p>Please refer to the report <i>Certifying the Compliance of the Compost to International Standard Quality. Version 1.0</i> by Dr George Peplow (dated 8th March 2019).</p>
<p>6. Does the substance require further treatment prior to use:</p> <p>No <input checked="" type="checkbox"/> Yes (please specify) <input type="checkbox"/></p> <p>_____</p> <p>_____</p>
<p>7. a) Market use (demand):</p> <p>Compost for local school use.</p> <p>b) Customs code(s) (HS): Not applicable (the product is used locally).</p>
<p>8. Relevant contractual agreements, legislation and standards applicable to the substance (4): (Where relevant, main technical provisions of a customer specification such as composition, size, type and properties)</p> <p>Please refer to the report <i>Certifying the Compliance of the Compost to International Standard Quality. Version 1.0</i> by Dr George Peplow (dated 8th March 2019).</p>
<p>9. Generator's/Producer's declaration</p> <p>I certify that the information is complete and correct to my best knowledge.</p> <p>Generator's/producer's name: Daniel Attard Signature: </p> <p>Date: 13/3/2019</p> <p style="text-align: center;">FOR USE BY THE COMPETENT AUTHORITY</p>
<p>10. Approval from the Environment and Resources Authority</p> <p>Documentation received on:</p> <p>Certification approved:</p> <p>_____</p>

¹ The competent authority reserves the right to refuse an end-of-waste certification should the percentage of foreign material/pollutant lead to possible adverse environmental effects of the substance or object.

⁴ Attach relevant documentation and/or certification, clearly showing that the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable or a declaration that no such standards apply to the product that has achieved end-of-waste status.

No

Yes

Stamp and/or signature:

Dr. George Peplow B.Sc.(Hons.)(Lond.), M.Sc.(Salford), Ph.D.(Salford), EurChem, C.Chem., F.R.S.C.

Crystal Blue
Block B No 5
Mac Iver Street
Sliema SLM 3130
Malta.

Tel/Fax: +356 21 311665,

Mobile: 9947 0204,

E-mail: peplowg@gmail.com

Report Presented to: Mr Disma Attard, Director
DDE Attard Ltd,
Scrap Lane,
Valletta Road,
Luqa LQA 1764.

Tel 21667857 Fax 21805161 Mob 99493592 Email: info@ddeattard.com

Report Date 8 March 2019

Project Name: PA/04172/16- Sampling and Analysis of End of Waste Compost.

Location Details: DDE Attard Plant, Luqa.

Process: **Certifying the Compliance of the Compost to International Standard Quality. Version 1.0**

1.0 Compost Quality Objectives.

1.1 According to the publication Compost Quality Standards and Guidelines, An International View Final Report, prepared by Dr William F. Brinton, Ph.D., December 2000, prepared for the New York State Association of Recyclers, quotes the various limits of heavy metals in compost. The Table below is reproduced below.

Table 8: Heavy metals limits (mg/kg) for European countries which do have compost rules

Ele-ment	Countries ^a (for code see key)												
	A	A ^b Class 2 ^c	B Agr	B Park	CH	DK	F	D	I	NL	NL	SP	C A,AA
Arsenic	-	-	-	-	-	25	-	-	10	25	15	-	13
Boron	100	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	4	1	5	5	3	1.2	8	1.5	1.5	2	1	40	3
Chromium	150	70	150	200	150	-	-	100	100	200	70	750	210
Cobalt	-	-	10	20	25	-	-	-	-	-	-	-	34
Copper	400	100	100	500	150	-	-	100	300	300	90	1750	100
Lead	500	150	600	1000	150	120	800	150	140	200	120	1200	150
Mercury	4	1	5	5	3	1.2	8	1.0	1.5	2	0.7	25	0.8
Nickel	100	60	50	100	50	45	200	50	50	50	20	400	62
Selenium	-	-	-	-	-	-	-	-	-	-	-	-	2
Zinc	1000	400	1000	1500	500	-	-	400	500	900	280	4000	500

a. Country Codes: A Austria; B Belgium; C Canada DK Denmark; F France; D Germany; I Italy; NL Netherlands; SP Spain; CH Switzerland

b. Calculated on 30% Organic Matter basis

c. NOTES: Class-2 as Versus Class 1 or Class A vs. AA; Agr -Agricultural use; Park= Horticultural use.

- 1.2 The European Commission has also published a report on the parameters for desired soil quality as can be shown in the Table below.

Permissible concentrations in soil [mg/kg d.w.]

Prepared based on Minister for Environment Decree "in matter of soil quality standards and earth quality standards" published on September, 9, 2002 – see Official Journal –2002 no 165 item 1359

Lp.	Contaminant	Group A	Group B				Group C				
			Depth [m bgl]								
			0-0.3		0.3-15.0		>15		0-2	2-15	
			Saturated hydraulic conductivity [m/s]								
		up to	below	up to	below			up to	below		
		1·10 ⁻⁷		1·10 ⁻⁷				1·10 ⁻⁷			
1	2	3	4	5	6	7	8	9	10	11	
I. METALS											
1	Arsenic	20	20	20	25	25	55	60	25	100	
2	Barium	200	200	250	320	300	650	1000	300	3000	
3	Chromium	50	150	150	190	150	380	500	150	800	
4	Fin	20	20	30	50	40	300	350	40	300	
5	Zinc	100	300	350	300	300	720	1000	300	3000	
6	Cadmium	1	4	5	6	4	10	15	6	20	
7	Cobalt	20	20	30	60	50	120	200	50	300	
8	Copper	30	150	100	100	100	200	600	200	1000	
9	Molybdenum	10	10	10	40	30	210	250	30	200	
10	Nickel	35	100	50	100	70	210	300	70	500	
11	Lead	50	100	100	200	100	200	600	200	1000	
12	Mercury	0.5	2	3	5	4	10	30	4	50	
II. INORGANIC											
1	Free cyanides	1	1	5	6	5	12	40	5	100	
2	Cyanides - Complex compounds	5	5	5	6	5	12	40	5	500	
III. HYDROCARBONS											
III/A	Light petrol - sum (-hydrocarbons C6-12)	1	1	5	375	50	750	500	50	750	1
III/B	Mineral oil (hydrocarbons C12-C35)	30	50	200	1000	1000	3000	3000	1000	3000	2
III/C. Aromatic hydrocarbons											
1	Benzene	0.05d	0.1	0.2	25	3	50	100	3	150	
2	Ethylbenzene	0.05d	0.1	1	75	10	150	200	10	250	
3	Toluene	0.05d	0.1	1	75	5	150	200	5	230	
4	Xsylene	0.05d	0.1	1	35	5	75	100	5	150	
5	Styrene	0.1	0.1	1	5	2	100	60	2	100	
6	Sum of aromatic hydrocarbons	0.1	0.1	1	75	10	150	200	10	250	3
III/D. Polycyclic aromatic hydrocarbons											
1	Naphthalene	0.1	0.1	5	20	10	40	50	10	40	
2	Phenanthrene	0.1	0.1	5	20	10	40	50	10	40	
3	Anthracene	0.1	0.1	5	20	10	40	50	10	40	
4	Fluoranthene	0.1	0.1	5	20	10	40	50	10	40	
5	Chrysene	0.1	0.1	5	20	10	40	50	10	40	
6	Benzo(a)anthracene	0.1	0.1	5	20	10	40	50	10	40	
7	Benzo(a)pyrene	0.02	0.03	5	10	5	40	50	5	40	
8	Benzo(a)fluoranthene	0.1	0.1	5	10	5	40	50	5	40	
9	Benzo(ghi)perylene	0.1	0.1	10	10	5	40	50	5	100	

10	Sum of PAHs	1	1	20	40	20	200	250	20	200	4
IV. CHLORINATED HYDROCARBONS											
1	Aliphatic chlorinated (volatile) - individual	0.01	0.01	0.1	5	1	10	5	1	20	5
2	Aliphatic chlorinated - sum	0.01	0.01	0.15	7	3	40	60	2	40	6
3	Chlorobenzenes - individual	0.01	0.01	0.1	1	0.5	10	15	0.5	10	7
4	Chlorobenzenes - sum	0.01	0.01	0.1	2	0.8	20	25	0.8	20	8
5	Chlorophenols - individual	0.001	0.001	0.01	0.5	0.2	1	1	0.2	5	9
6	Chlorophenols - sum	0.001	0.001	0.001	1	0.5	10	10	0.5	10	10
7	PCB	0.02	0.02	0.1	1	0.5	5	2	0.5	5	11
V. PESTICIDES											
V/A	Chlorinated pesticides										
1	DDT/DDE/DDD	0.0025	0.025	0.025	4	0.025	4	0.25	0.025	4	12
3	aldrin	0.0025	0.025	0.025	4	0.025	4	0.25	0.025	4	
4	dieldrin	0.0005	0.005	0.005	4	0.005	4	0.5	0.005	4	
5	endrin	0.001	0.01	0.01	4	0.01	4	0.1	0.01	4	
6	α -HCH	0.0025	0.025	0.025	2	0.025	2	0.25	0.025	2	13
7	β -HCH	0.001	0.01	0.01	2	0.01	2	0.1	0.01	2	13
8	γ -HCH	0.000005	0.0005	0.0005	0.5	0.0005	0.5	0.005	0.0005	0.5	13
V/B	Pesticides - not chlorinated compounds										
1	carbaryl	0.01	0.2	0.1	5	0.1		0.2	0.1	5	
2	carbofuran	0.01	0.2	0.1	2	0.1	2	0.2	0.1	2	
3	maneb	0.01	0.2	0.1	35	0.1	35	0.2	0.1	35	
4	atrazin	0.00005	0.05	0.005	6	0.005	6	0.05	0.005	6	
VI. OTHER CONTAMINANTS											
1	Tetrahydrofuran	0.1	0.1	1	4	2	40	50	2	40	
2	Pyridine	0.1	0.1	0.5	2	1	20	30	1	20	
3	Tetrahydrothiophene	0.1	0.1	1	5	2	50	60	2	50	
4	Cyclohexane	0.1	0.1	1	6	5	60	80	5	80	
5	Phenol	0.05	0.1	0.5	20	3	40	50	3	100	
6	Cresols (sum)	0.05	0.1	0.5	20	3	40	50	3	100	14
7	Phthalates (sum)	0.1	0.1	5	60	5	60	60	10	60	15

Notes:

d - detection limit

depth [m bgl] – value of depth below ground level, in meters

$1 \cdot 10^{-7}$ m/s – value of saturated hydraulic conductivity

1.it means sum of aliphatic, naphten and aromatic hydrocarbons that contains in molecule from 6 - 12 carbons, including monoaromates BTEX (benzene, toluene, ethylbenzene and xylene).

2.it means sum of aliphatic, naphten and aromatic hydrocarbons that contains in molecule from 6 - 12 carbons including PAH (10. PAH as: naphthalene, phenanthrene, anthracene, fluoranthene, chrysene, benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, benzo(ghi)perylene)

3.it means concentrations' sum of- benzene, toluene, ethylbenzene, xylene and styrene.

4.it means concentrations' sum of: 10.PAH- i.e.: naphthalene, phenanthrene, anthracene, fluoranthene, chrysene, benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, benzo(ghi)perylene).

5. it means individual compounds as: 1,2-chloroethane, chloromethane, tetrachloromethane, tetrachloroethane, trichloromethane, trichloroethane, vinyl chloride.

6. it means sum of concentration level of: 1,2-chloroethane, chloromethane, tetrachloromethane, tetrachloroethane, trichloromethane, trichloroethane, vinyl chloride.

7.it means: monochlorobenzenes, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene and heksachlorobenzene.

8.it means: level of concentration of such compounds as: monochlorobenzenes, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene i heksachlorobenzene.

9. it means: monochlorophenols (sum), dichlorophenols (sum), trichlorophenols (sum), tetrachlorophenols (sum), pentachlorophenols , and chloronaphthalenes.
10. it means sum of concentration levels of compounds: monochlorophenols (sum), dichlorophenols (sum), trichlorophenols (sum), tetrachlorophenols (sum), pentachlorophenols , and chloronaphthalenes.
11. PCB as defined in art.3 point 17 Act from 27 April 2001 – Environmental Protection Law (Dz.U. No62, poz.627 and Dz.U. No115, poz.1229).
12. it means DDT and its derivatives i.e. DDT - 1,1,1-trichloro-2,2-bis (4- chlorophenyl)ethane], DDD[1,1-dichloro-2,2-bis(chlorophenyl) ethylene] i DDE[1,1-dichloro-2,2-bis(p-chlorophenyl) ethane].
13. HCH alfa, beta, gamma, as - 1,2,3,4,5,6-heksachlorocycloheksan (heksachlorocycloheksane).
14. it means sum of cresols.
15. it means sum of all phthalates.

Group A – land located in areas under protection pursuant to the Water Act 2001 and the nature protection laws. The regulations provide that unless the contamination constitutes a threat to human health or to the environment, no special action is required. Such land will however also fall under Group B or C and will be subject to the provisions thereof;

Group B – agricultural land with the exception of land under water in ponds and ditches, forest land and which is tree-covered and shrub-covered, wasteland and developed and urbanised land, save for industrial land, mining land and land used for transportation;

Group C – industrial, mining and transportation land.

The identification of chemical soil status is conducted in three stages:

- stage 1 - the establishment of substances that are suspected in soil due to the economic activity conducted on land surface or in the neighbourhood;
- stage 2 – preliminary investigation – verification of the hypothesis about contamination;
- stage 3 – detail investigation – detail determination of substances concentrations and determination of the scope and methods of soil reclamation.

The land surface on which the soil and/or earth standards are exceeded is recorded in Register of Land for Reclamation.

The reference methods of soil and earth quality investigation as well as reference methods for modelling of contamination migration should be determined in separate decree of Ministry for Environment.

1.3 Based on the limits adopted by European authorities in the Table shown above, as well as the email submitted by Mr Bjorn Borg of ERA, dated Mr Bjorn Borg of ERA dated 22 June 2018, the limits that the Composter at the DDE Attard plant shall adopt are being proposed in the following Table.

	Class 1 Good Quality mg/kg	Class 2 Medium Quality mg/kg	Limit Reference, mg/kg DW	Analytical Method Brief
Lead	100	150	0.5	Refer to details below
Cadmium	0.7	1.5	0.1	
Copper	100	150	0.5	
Zinc	200	400	0.5	
Arsenic	0.5	1.0	0.5	
Chromium	100	150	0.5	
Nickel	50	75	0.5	
Manganese	100	150	0.5	
Physical Contaminants: Total glass, metal, plastic and any other man-made fragments > 2mm	0.5%	0.5%		Microscopic analysis following sieving
Stones > 5 mm	5%	5%		
PAH16	0.1	0.1	Italian Directive D. Lgs 152/2006 Table IV	US EPA 8270, CSN EN 15527, ISO 18287
Pathogens: E. Coli	0 counts	0 counts	CSN ISO 16649-2. Enumeration of beta-glucuronidase-positive Escherichia coli by cultivation.B-EC1 CZ_SOP_Do6_04_309 (manual Solus)..	
Pathogens: Salmonella spp	0 counts	0 counts	Detection of Salmonella by ELISA method - commercial set Solus Salmonella. Dosing of the sample for the detection of bacteria was done according to legislation requirements, unless stated otherwise in report comment	
Stability: Volatile Fatty Acids				ISO/TC34/SC11
Residual Biogas Potential	250 litres/kg	250 litres/kg	Waste and Resources Action Programme, January 2010. Walker, M, Banks, C, Heaven, S., Frederickson, J.	The use of liquid displacement gasometers allows daily monitoring of the gas production from the RBP tests. Internal Method.
Other parameters: - microbial respiration rate -germinating weed seeds or propagule regrowth	To be advised			

NOTE. The solid sample preparation shall be carried out according to the following methods:

S-DRY-GRCI CZ_SOP_Do6_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_Do6_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.

S-PPHOM.07 CZ_SOP_Do6_07_P01 Preparation of solid samples for analysis (crushing, milling and pulverizing).

S-PPHOM0.3 CZ_SOP_Do6_07_P01 Preparation of solid samples for analysis (crushing, milling and pulverizing).

S-PPHOM10 CSN EN 12457-4 Sieving and crushing of sample on the grain size < 10 mm.

For arsenic and mercury:

EN 13657 Digestion for subsequent determination of aqua regia soluble portion of elements (partial digestion of the solid waste prior to elementary analysis, leaving the silicate matrix intact)

For other metals:

EN 13656 Microwave-assisted digestion with hydrofluoric (HF), nitric (HNO₃) and hydrochloric (HCl) acid mixture for subsequent determination of elements (total digestion of the solid waste prior to elementary analysis)

Analytical methods.

EN 12506 Analysis of eluates — Determination of As, Cd, Cl, Co, Cr, CrVI, Cu, Mo, Ni, NO₂, Pb, total S, SO₄, V and Zn (analysis of inorganic constituents of solid waste and/or its eluate; major, minor and trace elements) ENV 13370 Analysis of eluates — Determination of ammonium, AOX, conductivity, Hg, phenol index, TOC, easily liberatable CN, F (analysis of inorganic constituents of solid waste and/or its eluate (anions)) prEN 14039 Determination of hydrocarbon content in the range of C₁₀ to C₄₀ by gas chromatography

1.4 The sampling regime for the initial stages of the operation, shall be structured as follows:

Sampling and Analysis Dates and Frequency	Quantity of input vegetable wastes	Number of Representative Samples for Analysis	Release of Compost following approval by ERA
First week of operation	50kg daily = 250 kg	2	Within 1 week
Second week of operation	100kg daily = 500 kg	2	Within 1 week
Following weeks	150kg daily = 750 kg	1 sample every 2 weeks	Weekly

- 1.4.1 Each sample shall be representative of the composted waste according to the production, and shall consist of a sample intended for the market. The analysis shall be carried out at an accredited laboratory.
- 1.5 Controls on the Incoming Wastes.
- 1.5 Controls of Incoming Wastes: The incoming wastes shall have to undergo screening to mitigate against non-produce wastes. For this purpose, the following controls shall be in operation:
- 1.5.1 Schools: Since the major source of the wastes shall be the local schools, students shall be encouraged to:
- 1.5.1.1 set up an appropriate committee together with a teaching representative. This shall motivate students' awareness and knowledge about the importance of waste management,
- 1.5.1.2 The schools shall be provided with appropriate bins for produce waste collection; the deliveries and collections shall be organised by DDE Attard Ltd. Collections shall be carried out on a daily basis.
- 1.5.2 Upon arrival at the Compost Plant, the bins shall be physically and visually inspected for unwanted wastes. The produce wastes shall be conveyed to the composted. Unwanted wastes shall be separated and disposed according to their EWC classification.
- 1.6 Air Emissions Tests.
- 1.6.1 The composter is likely to emit gases to the atmosphere as part of the fermentation process. For this purpose, the following gases shall be sampled and measured according to the sampling and analysis programme:

Parameter	Location and Mode of Sampling	Frequency of Sampling and analysis
Ammonia	Composter emission vent, using diffusion tubes. US OSHA ID-188 and ID-141	monthly
Hydrogen sulphide		
Faecal coliforms	Area around composter, air filtration method. Method EPA 1604.	
E coli		
Aspergillus		

- 1.7 End use of approved compost: the final use of the compost shall be for local school use where the school waste management committee shall oversee the recycling project.

This is an original unsigned digital version

Dr George Peplow

8 March 2019.

**Attachment 15: Achievement of recovery / reuse targets for waste
electrical and electronic equipment**

The Scheme will accept three types of WEEE, namely washing machines, cookers, and water meters. The Waste Management (Electrical and Electronic Equipment) Regulations, S.L.549.89 set the following targets for WEEE:

Category	Recovery target	Preparation for re-use and recycling target
4: Including washing machines and cookers	85%	80%
5: Including water meters	75%	55%

Assessment against Category 4 targets

Fate of waste	Waste type	Estimated annual quantity (tonnes)
Recycling	Iron and steel waste	7,697
	Electronic parts	2
Recovery (excluding recycling)	Concrete	55
Disposal	Shredder residues	46
Total waste from WEEE treatment		7,800

With the above planned waste management routes, the following recovery / reuse / recycling rates will be achieved, thus meeting the requirements of S.L.549.89.

- Recovery (including recycling): 99.4%; and
- Preparation for re-use and recycling: 98.7%.

Assessment against Category 5 targets

Being made almost entirely of metal, it is envisaged that over 95% of water meters (the only Category 5 WEEE to be accepted at the facility) will be recycled, thus exceeding the requirements of S.L.549.89.

Attachment 16: Engineer's report on generator

7, Old Railway Road,
B'Kara BKR1619
Tel: (+356) 2149 5532
Mob: (+356) 9946 7273

10th November 2017

Arch. Joe Bugeja

Dear Sir,

GENERATOR AND FUEL STORAGE REPORT – PROPOSED AMENDMENTS TO SCRAPYARD AT LUQA

Site: Don Kotra, Sqaq Fdal il-Hadid, Luqa
PA Number: PA/04172/16

Scope

This report describes the estimated sizing of the generator together with a description of the provisions required for the diesel storage in order to be in line with REWS standards.

References

- Development Control Design Policy Guidance and Standards, Malta Environment and Planning Authority, 2015
- Petroleum for the Inland (Retail) Fuel Market Regulations – S.L. 545.22

Description of Development

The development consists of a scrapyard occupying a footprint of around 8,000m². The site has an internal private road with a number of sheds, designed to cater for the various stages of scrapping of cars. These include:

- E.L.V. (storage, dismantling, etc)
- Storage of tyres and scrap metal
- Storage area of white goods, wood, aluminium and plastic
- Staff facilities and parking

Access to the site is possible through two exits, both leading to a private access road which discharges onto Triq il-Belt Valletta, Luqa.

Generator Requirements

The client's requirements for the essential power supply are minimal. A standby generator shall only be required to provide emergency lighting and small power for the offices, staff facilities, lighting within the shed and to operate light equipment, such as power tools. Consequently, it is envisaged that the required generator shall not exceed 100kVA. This shall be of the self contained type, housed in an acoustic weather proof enclosure.

Diesel Storage

The fuel day tank shall be housed in the skid supporting the generator set. The maximum fuel capacity of the day tank for such a generator set should not exceed 220ltrs. In view of the fact that this is lower than 300ltrs, no written notification or authorization is required from the Regulator for Energy and Water Services. Notwithstanding, the fuel tank shall have an adequate bund system designed to hold fuel located within the tank in case of leakage. The size of such a bund system shall be capable of retaining at least 242ltrs.

Exhaust flue

As this generator shall be located outdoors, an extended exhaust flue shall be required such that it is terminated at 3m above the level of any roof within a radius of 25m.

Conclusion

From the above assessment, it can be confirmed that if the above provisions are implemented, then the generator flue and diesel storage shall be compliant to local regulations.

Kind Regards,



Mr. Stephen Sultana
1776 Electrician Authorisation B



Ing. Liana Zerafa
Warrant No. 1056

Attachment 17: COMAH Assessment

Introduction

The Control of Major Accident Hazards (COMAH) Regulations, S.L.424.19, apply to establishments where dangerous substances (including raw materials and wastes) are present in quantities equal to or in excess of the thresholds defined in Schedule I of these Regulations.

This assessment is being carried out in order to identify whether the COMAH Regulations apply to the Scheme.

Only potentially hazardous materials / waste, and named COMAH substances have been considered in this assessment; non-hazardous materials / waste are automatically excluded.

Unless otherwise stated, the Safety Data Sheets (SDSs) referred to below are those included in **Annex 6** of the IPPC application.

Part I: Assessment by Hazard Categories

Only the hazard categories listed in Part I of Schedule I of the COMAH Regulations are considered in the following assessment. In accordance with the COMAH Regulations, where a dangerous substance is listed as a named substance, this is only considered in the following subsection (Part 2: Named Dangerous Substances).

Category	Type	Estimated maximum quantity stored	Storage area	Hazard categories	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
Raw material	Engine oil	1,000 L	11	None identified in SDS	-	-	Not a COMAH substance
	Transmission oil	400 L	11	None identified in SDS	-	-	Not a COMAH substance
Incoming waste	End-of-life vehicles	20 tonnes	2	None of the COMAH Part I hazard categories apply	-	-	Not a COMAH substance
	Washing machines	100 tonnes	6	None of the COMAH Part I hazard categories apply	-	-	Not a COMAH substance

Category	Type	Estimated maximum quantity stored	Storage area	Hazard categories	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
	Cookers	100 tonnes	17 (+20 when needed)	None of the COMAH Part I hazard categories apply	-	-	Not a COMAH substance
	Containerised waste (sealed)	Typically not more than two 40-foot shipping containers (55 tonnes); although up to four containers (110 tonnes) may need to be stored at times		These are dependent on the type of waste and therefore cannot be identified at this stage			Since the waste can be of various types, this waste will be assessed on a case by case basis before prior acceptance of waste to ensure that COMAH thresholds are not exceeded.
Outgoing waste from ELV depollution and dismantling	Lead acid batteries	8 tonnes	4	E1: Hazardous to the Aquatic Environment, Acute I & Chronic I ³	100	200	Not a COMAH substance
				PI(a): Explosive, Division 1.3	10	50	Not a COMAH substance
	Engine oils	2,000 L (total vehicle fluids)		None identified in raw materials SDS	-	-	Not a COMAH substance
	Oil filters	1,000 L		Since none of the oils considered in this Table are classified as COMAH substances then oil filters are not COMAH substances either	-	-	Not a COMAH substance

³ This information is based on the following SDS: <https://www.batteriesplus.com/image/sds-lead-wet-acid.pdf> and http://www.superiorbattery.com/images/PDF/SDS_2015.pdf.

Category	Type	Estimated maximum quantity stored	Storage area	Hazard categories	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
	Transmission oils	2,000 L (total vehicle fluids)		None identified in raw materials SDS	-	-	Not a COMAH substance
	Antifreeze	2,000 L (total vehicle fluids)		H3: Specific Target Organ Toxicity - Single Exposure, Category I ⁴	50	200	Individual substance below COMAH thresholds
	Brake fluids	2,000 L (total vehicle fluids)		None identified in SDSs ⁵	-	-	Not a COMAH substance
	Other hydraulic oils	2,000 L (total vehicle fluids)		None identified in SDSs ⁶	-	-	Not a COMAH substance
	Screen washing fluid	2,000 L (total vehicle fluids)		None identified in SDSs ⁷	-	-	Not a COMAH substance
	Catalyst units	10 tonnes		None of the COMAH Part I hazard categories are likely to apply	-	-	Not a COMAH substance

⁴ Assessment based on the following SDSs: <https://www.safety-kleen.com/File%20Library/msds/82967rev-1-16.pdf>; it is acknowledged that other antifreezes may not be COMAH substances (e.g. <https://images.homedepot-static.com/catalog/pdfimages/a1/a1e4bb1a-8d1c-49aa-ba8e-5b5c826e2082.pdf>).

⁵ Assessment based on the following SDSs: <http://s7d9.scene7.com/is/content/GenuinePartsCompany/715874.pdf> and http://www.online.petro-canada.ca/datasheets/en_CA/w449.pdf.

⁶ Assessment based on the following SDSs: <https://caltex.co.nz/assets/MSDS/Clarity-Hydraulic-Oil-AW-46-SDS-37063-21-Nov-2014.pdf> and <https://www.marathonpetroleum.com/brand/content/documents/mpc/sds/0298MAR019.pdf>.

⁷ Assessment based on the following SDSs: <https://www.espocatalogue.org/eSupply/COSHH/16894P.pdf> and <http://bluecol.co.uk/wp-content/uploads/2013/01/sds-04417897.pdf>.

Category	Type	Estimated maximum quantity stored	Storage area	Hazard categories	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
	Refrigerants	48 kg		P1 (a): Explosive, Division 1.2 ⁸	10	50	Individual substance below COMAH thresholds
	Brake pads containing asbestos	800 kg		None of the COMAH Part I hazard categories apply to asbestos (as indicated in the CLP Regulation, 1272/2008/EC)	-	-	Not a COMAH substance
	Mercury switches	<20 kg		H2: Acute toxic, Category 2 (classification applies to mercury, as per the CLP Regulation, 1272/2008/EC)	50	200	Individual substance below COMAH thresholds
				E1: Hazardous to the aquatic environment in Category Acute I and Chronic I (classification applies to mercury, as per the CLP Regulation, 1272/2008/EC)	100	200	Individual substance below COMAH thresholds
	Airbags	300 kg		P1 (b): Explosives, Division 1.4	50	200	Individual substance below COMAH thresholds

⁸ Assessment based on the following SDSs for refrigerants that are / were typically used in vehicles: https://www.boconline.co.uk/internet.lg.lg.gbr/en/images/sg_150_1112_tetrafluoroethane_r134a410_39646.pdf?v=5.0 (R134a; contains gas under pressure; may explode if heated) and <http://www.refrigerants.com/pdf/SDS%20R12.pdf> (R12).

Category	Type	Estimated maximum quantity stored	Storage area	Hazard categories	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
	Discarded electronics	20 tonnes		None of the COMAH Part I hazard categories are likely to apply to the substance as a whole	-	-	Not a COMAH substance
Outgoing waste from WEEE treatment	Electronic parts	20 tonnes	6	None of the COMAH Part I hazard categories are likely to apply to the substance as a whole	-	-	Not a COMAH substance
Waste from maintenance of on-site machinery	Absorbent pads	100 kg	11	Since none of the oils considered in this Table are classified as COMAH substances then absorbent pads containing oils are not COMAH substances either	-	-	Not a COMAH substance
Waste from separator	Sludge from oil-water separators	Total separator capacity for hydrocarbons: 920 L (460 L per separator)	In separator	Oils in use on site are not COMAH substances (as explained above)	-	-	Not a COMAH substance

As noted in the above Table, each of the individual substances exhibiting one of the COMAH hazard categories will be stored below COMAH thresholds.

With regard to sealed containerised waste, since the waste can be of various types, as mentioned this waste will be assessed on a case by case basis before prior acceptance of waste to ensure that COMAH thresholds are not exceeded. The assessment will be carried out by a competent person, and the method will be the same as in the current assessment, namely:

- Identifying any potentially hazardous waste and named COMAH substances in the container, and respective quantities;

- Consulting SDSs to identify the relevant hazard categories;
- Checking the waste inventory and planned waste deliveries and carrying out a summation of the hazards.

If the above assessment shows that COMAH thresholds would be exceeded, one of various options would be implemented:

- Waste would be retained at the originating facility and exported directly from there;
- Waste acceptance would be staggered so that COMAH thresholds would not be exceeded at any time;
- If it is the summation of the waste with the existing waste on site that would cause an exceedance of the COMAH threshold, the acceptance of the waste would be timed to ensure the threshold is not exceeded; or
- The waste would be declined.

Part 2: Named Dangerous Substances

Category	Type	Maximum quantity stored	Storage area	Hazard categories ⁹	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
Raw material	Diesel EN 590	8 m ³	11	E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000	Individual substance below COMAH thresholds

⁹ Only the categories listed in Part 1 of Schedule 1 of the COMAH Regulations are included.

Category	Type	Maximum quantity stored	Storage area	Hazard categories ⁹	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
	Acetylene	80 kg	11	P2: Flammable gases, Category 1 or 2 (as indicated in the CLP Regulation, 1272/2008/EC)	5	50	Individual substance below COMAH thresholds
	LPG	60 kg	11	P2: Flammable gases, Category 1 or 2 (as also indicated in the CLP Regulation, 1272/2008/EC)	50	200	Individual substance below COMAH thresholds
	Oxygen	720 kg	11	P4: Oxidising gases, Category 1 (as indicated in the CLP Regulation, 1272/2008/EC)	200	2,000	Individual substance below COMAH thresholds
Outgoing waste from ELV depollution and dismantling	Diesel	270 L	4	E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000	Individual substance below COMAH thresholds
	Petrol	270 L		P5(a): Flammable liquid, Category 1 ¹⁰ E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000	Individual substance below COMAH thresholds

¹⁰ Assessment based on the following SDS:

<https://www.exxonmobil.com/Xomfl/Core/Handlers/PDFHandler.ashx?component=SDS&downloadUrl=http://www.epw2.exxonmobil.com/IntApps/PSIMS/Download.aspx?ID=745551&docFormat=PDF> and <https://www.exxonmobil.com/Xomfl/Core/Handlers/PDFHandler.ashx?component=SDS&downloadUrl=http://www.epw2.exxonmobil.com/IntApps/PSIMS/Download.aspx?ID=745561&docFormat=PDF>.

Category	Type	Maximum quantity stored	Storage area	Hazard categories ⁹	COMAH threshold (tonnes)		COMAH classification
					Lower-tier	Upper-tier	
Waste from separator	Diesel / petrol contained in oil-water separators (oils are not COMAH substances)	Total separator capacity for hydrocarbons: 920 L (460 L per separator)	In separator	Diesel & petrol: E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000	Individual substance below COMAH thresholds
				Petrol: P5(a): Flammable liquid, Category I			

As described in the above Table, each of the individual named dangerous substances will be stored below COMAH thresholds.

Part 3: Summation

Since none of the individual substances considered in Part 1 and Part 2 meet or exceed the COMAH thresholds individually, it is necessary to apply the summation rule as per note 4 to Schedule I of the COMAH Regulations, to assess whether the combination of different substances could lead to an exceedance of COMAH threshold.

An establishment falls under the COMAH Regulations if the result of either of the following equations is ≥ 1 :

$$\text{Upper-tier establishments: } q_1 / Q_{U1} + q_2 / Q_{U2} + q_3 / Q_{U3} + q_4 / Q_{U4} + q_5 / Q_{U5} + \dots$$

$$\text{Lower-tier establishments: } q_1 / Q_{L1} + q_2 / Q_{L2} + q_3 / Q_{L3} + q_4 / Q_{L4} + q_5 / Q_{L5} + \dots$$

where:

q_x = the quantity of dangerous substance x (or category of dangerous substances) falling within Part 1 or Part 2 of Schedule I of the COMAH Regulations;

Q_{UX} = the relevant upper-tier COMAH threshold for that dangerous substance or category x; and

Q_{Lx} = the relevant lower-tier COMAH threshold for that dangerous substance or category x.

The summation rule is applied three times: to assess the health hazards, physical hazards and environmental hazards. If none of the results are greater than or equal to 1, then the Scheme is not considered to be a COMAH site. The results of this assessment are shown below.

Hazard type	Type of substance	Estimated max. quantity (tonnes)	Hazard categories	COMAH threshold (tonnes)		Summation result	
				Lower-tier	Upper-tier	Lower-tier	Upper-tier
Health hazards	Antifreeze	2	H3: Specific Target Organ Toxicity - Single Exposure, Category 1	50	200	0.04	0.01
	Mercury switches	0.02	H2: Acute toxic, Category 2	50	200		
Physical hazards	Lead acid batteries	8	P1(a): Explosive, Division 1.3	10	50	0.83	0.16
	Refrigerants	0.048	P1(a): Explosive, Division 1.2	10	50		
	Airbags	0.3	P1(b): Explosives, Division 1.4	50	200		
	Acetylene	0.08	P2: Flammable gases, Category 1 or 2	5	50		
	LPG	0.06	P2: Flammable gases, Category 1 or 2	50	200		
	Oxygen	0.72	P4: Oxidising gases, Category 1	200	2,000		
	Petrol	0.27	P5(a): Flammable liquid, Category 1	2,500	25,000		
	Diesel / petrol in oil-water separators	0.92	Petrol: P5(a): Flammable liquid, Category 1	2,500	25,000		
Environmental hazards	Lead acid batteries	25	E1: Hazardous to the Aquatic Environment, Acute 1 & Chronic 1	100	200	0.25	0.13
	Mercury switches	0.02	E1: Hazardous to the aquatic environment in Category Acute 1 and Chronic 1	100	200		
	Diesel EN 590	8	E2: Hazardous to the aquatic	2,500	25,000		

Hazard type	Type of substance	Estimated max. quantity (tonnes)	Hazard categories	COMAH threshold (tonnes)		Summation result	
				Lower-tier	Upper-tier	Lower-tier	Upper-tier
			environment in Category Chronic 2				
	Diesel	0.27	E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000		
	Petrol	0.27	E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000		
	Diesel / petrol in oil-water separators	0.92	Diesel & petrol: E2: Hazardous to the aquatic environment in Category Chronic 2	2,500	25,000		

As noted in the above Table, the summation result is below I in all cases, therefore the Scheme is not a COMAH site.

Conclusion

Provided that the maximum quantities stored at the Scheme do not exceed COMAH thresholds, as described above, the COMAH Regulations do not apply to the Scheme.

As mentioned, the acceptance of sealed containerised waste will be subject to a COMAH assessment by a competent person prior to acceptance. When relevant, this assessment will also take into account the waste that is already on site at the Scheme, to enable summation of hazards. Such waste will only be accepted on site if COMAH thresholds are not exceeded.