

Waste Oils Company Ltd.

**Application for Variation of IPPC Permit
IP 02/08/C**

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Scope of the application

1. Waste Oils Company Ltd. consists of a waste management facility permitted for the '*Collection, storage and separation of waste oils from commercial, domestic and shipping operations prior to export; On-site treatment of waste water generated from treatment of waste oils.*'
2. The operations of the plant were first permitted by IP 02/08/C on the 23rd March 2010, as per the requirements of the IPPC Directive. The latest renewal of permit was issued on the 25th June 2012, and an application for renewal of the permit is currently pending evaluation from the Environment and Resources Authority.
3. This application is an application for variation of permit for the operations of the facility to include the storage of used cooking oil (EWC 20 01 25 edible oil and fat) collected from households and commercial premises, within a bunded area within the Waste Oils Co. Ltd. premises at Marsa. The maximum volume of storage of such waste is of 4500 litres. No treatment of edible oil is being proposed.
4. No variation of existing operations is being proposed. However, additional information is being provided as Appendices 9 and 10: the current inventory of the site as being discussed with the OHSA as lead competent authority on the Control of Major Accident Hazards (COMAH) Regulations (L.N. 37 of 2003), and the additional EWC codes that have been added to inventory of wastes that have accepted on site, having been recognised by ERA as being compatible with approved operations.
5. This application has been reviewed by ERA and statutory consultees mandated via Subsidiary Legislation 549.77 Industrial Emissions (Integrated Pollution Prevention and Control) Regulations, where the review processes for both renewal and variation have been amalgamated by ERA. The results of this review and the relevant answers are provided in Appendix 7. It should be noted that some of the feedback received regarding COMAH is being communicated directly to OHSA as lead competent authority, through the appropriate channels.
6. The application for variation includes the following documentation (as appendices), to facilitate review of implementation of permit requirements and operations:
 - Appendix 1 - application forms A & C as required for variation of permit
 - Appendix 2 - Non-Technical Description
 - Appendix 3 - Technical Details
 - Appendix 4 – Process Flow & Risk Assessment
 - Appendix 5 – Sewage Discharge Permit
 - Appendix 6 – Plan 1
 - Appendix 7 – ERA review and feedback
 - Appendix 8 – Waste Acceptance Criteria
 - Appendix 9 – Site Inventory
 - Appendix 10 – EWC codes approved by ERA
 - Appendix 11 – bund wall certification

APPENDIX 1: IPPC Form A & Form C

APPENDIX 2: Non-Technical Description

Waste Oils Company Ltd. consists of a waste management facility permitted for the '*Collection, storage and separation of waste oils from commercial, domestic and shipping operations prior to export; On-site treatment of waste water generated from treatment of waste oils.*'

The operations of the plant were first permitted by IP 02/08/C on the 27th January 2011, as per the requirements of the IPPC Directive. The latest renewal of permit was issued on the 25th June 2012, and was last extended in July 2019.

This application is an application for variation of permit for the operations of the facility to include the storage of used cooking oil (EWC 20 01 25 edible oil and fat) collected from households and commercial premises (from trusted commercial premises involved in the preparation of food and Civic Amenity Sites). The maximum volume of storage of such waste is of 4500 litres, within a bunded area within the Waste Oils Co. Ltd. premises at Marsa.

No treatment will be carried out, as oils mixed with considerable quantities of water will be rejected.

This application is also for the renewal of permit of permitted operations.

APPENDIX 3: Technical Details

Section	Relevant Information
C1.3 <ul style="list-style-type: none"> a description of the change in operation requiring the variation; an indication of the variations to the conditions of the permit that you wish to apply for. 	<p>The proposed changes in operation are described in the process flows as per appendix 4.</p> <p>Variation to permit is to allow acceptance of EWC code 20 01 25 (edible oil and fat) on site.</p>
C2.1 Environmental Management System Provide details of any changes to environmental management techniques resulting from your proposals.	<p>The EMS procedures already cater for storage of materials that are of greater risk from the environment and safety perspectives.</p>
C2.2 Proposed activities C2.2.1 Describe any proposed changes to the installation activities.	<p>No changes in activity are being considered beyond the inclusion of storage of waste edible oils.</p>
C2.2.2 Describe the proposed techniques and measures to prevent and reduce waste and emissions of substances and heat (including during periods of start-up or shut-down, momentary stoppage, leak or malfunction) as a result of your proposals.	<p>The proposal consists of a waste storage operation; no wastes are expected to be generated as part of this process. No emissions of heat or substances, barring minimal fugitive emissions, are expected.</p> <p>Spill kits and fire response systems are available on site (as part of existing operations) to cater for the handling of such wastes in case of leak or fire.</p>
C2.2.4 Include a comparison of the proposed changes to the activities with relevant BAT conclusions published by the European Commission, where these have been published.	<p>The relevant BAT conclusions are those resulting from emissions from storage BREF (July 2006), which has been formally adopted by the European Commission under the IPPC Directive (2008/1/EC).</p> <p>It should be noted that this BREF (section 3.1.13) recognises IBCs as appropriate storage containers for limited volumes, given that the stored contents are chemically compatible with the material of the container, and the latter is adequately sealed.</p> <p>Other considerations that may be applicable are the choice of location of the storage area, and the results of any risk assessment (as per Appendix 4).</p>
C2.2.5 Include an outline of the main alternatives considered to the proposed changes to the technology, techniques and measures.	<p>Proposed storage methodology and infrastructure (see Plan 1 and associated details) are standard storage methods widely applied throughout industry. No further consideration of alternatives is considered necessary given the limited scope of the proposal.</p>

Section	Relevant Information
C2.5 Maintenance Describe any changes to the maintenance programme for the installation.	Existing maintenance practices already cater for such storage. Regular bund certification and examination of state of IBCs will be performed.
C3.1 Waste C3.1.1: Characterise (using the European Waste Catalogue code, in accordance with LN 184 of 2011 as amended) and quantify any changes to each waste stream from the installation.	No changes to existing approved waste streams are being proposed, except for the inclusion of EWC code 20 01 25 (edible oil and fat) on site. Waste Acceptance Criteria are provided as Appendix 8.
C3.1.2: Describe any changes to the proposed measures for waste management, storage and handling. If any are identified, also indicate the storage location of wastes on a site layout plan and give details on: <ul style="list-style-type: none"> • Maximum storage capacity; • Containment measures (including bunding capacity, where applicable); • Protective measures (including security). 	<p>No changes are being proposed to existing operations.</p> <p>Maximum capacity of edible oil is of 4500 litres.</p> <p>Storage of this waste is within a bunded area, as per Plan 1.</p> <p>Existing security arrangements are sufficient to cater for this very limited addition in storage volume. Kindly also refer to Appendix 4 – risk assessment.</p>
C3.1.3: Describe how each waste stream identified in C3.1.1 is prepared for re use, recycled, recovered or disposed of. If you propose any disposal, explain why recovery is technically and economically impossible and describe the measures planned to avoid or reduce any impact on the environment. For these wastes, give details on authorised disposal/recovery facilities proposed to be used for each waste. If any on-site recovery of waste is proposed, provide details. For each of these wastes, give details on off-site transportation, including registered waste carriers/brokers to be used.	No treatment is proposed for EWC code 20 01 25 (edible oil and fat) This material will be will be transported onto and off site using registered waste carriers, and stored on site until export for use in the production of biodiesel (details to be provided in the Transfrontier Shipment application).
C3.2 Emissions to Groundwater Could there be changes to groundwater discharges from the installation?	The addition of storage of this waste to that of the existing operations constitutes a minor increment in operations; existing spill control provisions can cater for this risk.

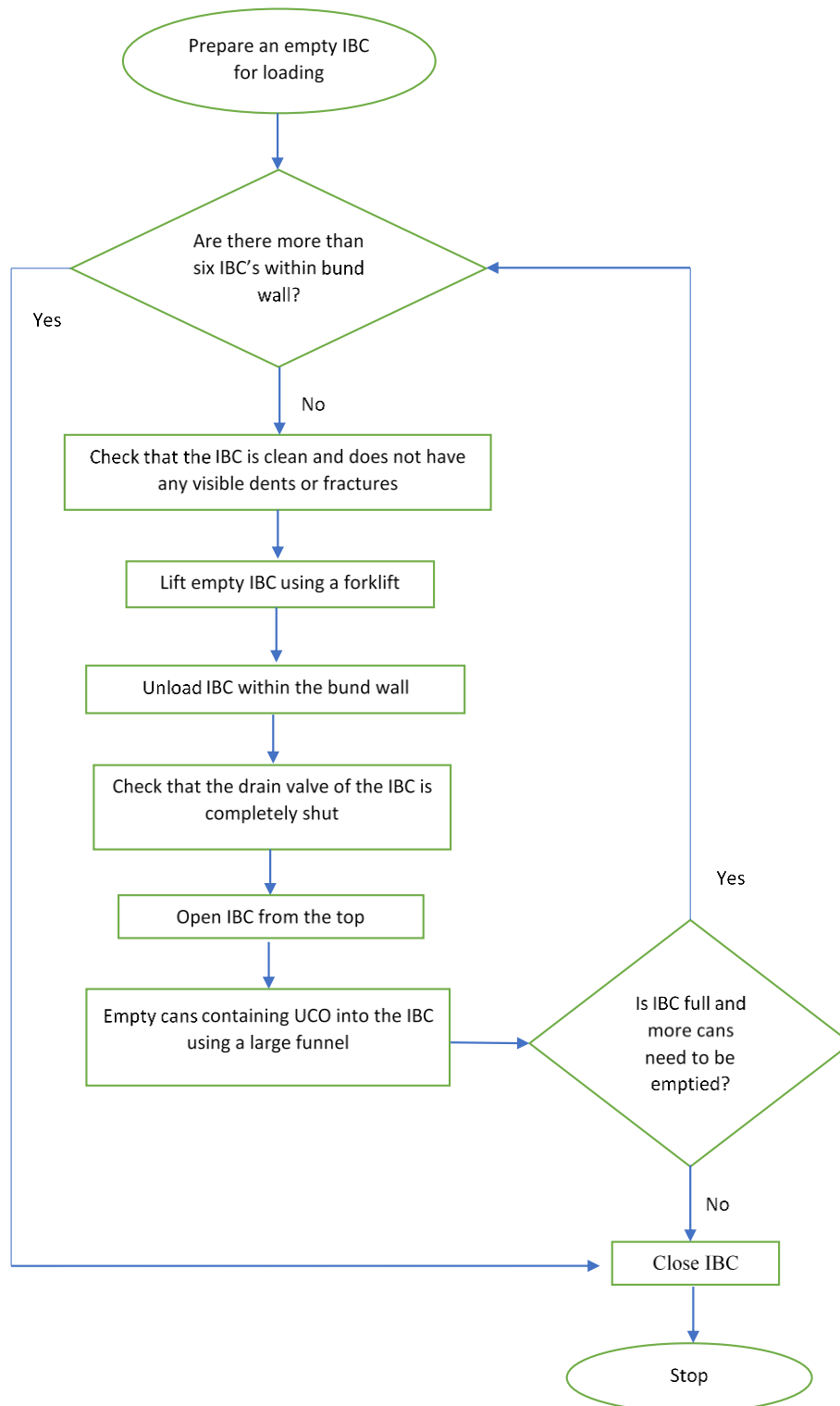
Section	Relevant Information
C3.5 Rainwater Describe any changes to how rainwater is handled on site. If any changes are proposed, attach a site drainage map indicating rainwater capture and harvesting/discharge.	Management of rainwater is unchanged; storage IBCs and bund with be covered by an impermeable tarpaulin, to prevent the bund being filled with rainwater.
C3.6 Emissions to Air Identify if there may be any changes in emissions of substances to air.	<p>No changes are predicted. However, in view of the recent introduction of the Limitation of Emissions of Certain Pollutants into the air from Medium Combustion Plants Regulations (S.L.549.122), the following details have been requested by ERA:</p> <p>Boiler 2 is out of operation and boiler one is used for less than 500 hours annually.</p> <p>Waste gas flow rates:</p> <ul style="list-style-type: none"> i. CO₂: 44,364kg/yr ii. Nitrogen oxides: 456kg/yr iii. Sulphur oxides: 540kg/yr iv. PMI: 22kg/yr <p>The only other combustion plant on site is a 2.5KVA standby generator.</p>
C3.7 Odour Emissions Identify if there may be changes in emissions of odour. If any are identified, submit details of the main sources of odour, and the proposed techniques and measures for control of odours.	Nuisance odours may result from rancid oils; all oils will be kept in sealed containers to prevent prolonged exposure.
C3.9 Noise Describe: C3.9.1: The main sources of noise and vibration (including infrequent sources) of the new proposal; C3.9.2: The proposed techniques and measures for control of noise; C3.9.3: The nearest noise sensitive locations and distance away from the site (a site map may be submitted for this purpose); and C3.9.4: Relevant environmental noise measurement surveys which have been undertaken (monitoring shall be according to the latest revisions of ISO1996 and the rating of industrial noise affecting residential areas shall be according to BS 4142; monitoring shall be carried out exclusively using type 1 sound level meter).	<p>No significant noise generation is expected as a result of this proposal.</p> <p>Previous noise assessments and existing monitoring provisions do not require updating as a result of this proposal.</p>

Section	Relevant Information
<p>C3.10 Monitoring Describe the proposed measures for monitoring emissions arising from the proposal, including any environmental monitoring. The following must be specified:</p> <p>C3.10.1: The location of each proposed monitoring point (plotted on a suitably-labelled block plan of the site);</p> <p>C3.10.2: The substances (in each environmental medium) which are proposed to be monitored;</p> <p>C3.10.3: The frequency with which monitoring is proposed to take place;</p> <p>C3.10.4: The proposed measurement methodology, which should be a standard methodology, such as EN or ISO standard, or equivalent;</p> <p>C3.10.5: The proposed procedure for evaluation of the results.</p>	<p>No significant emissions are expected as a result of this proposal.</p> <p>Previous emissions assessments and existing monitoring provisions do not require updating as a result of this proposal.</p>
<p>C3.11 Emissions & waste summary By means of a mass flow diagram, summarise the emissions and waste described in sections C3.1, C3.2, C3.3, C3.4, C3.6, and C3.8 of this application.</p>	<p>Mass flow is limited to the storage of 4500L of edible oil on site; no wastes are expected to be generated, and emissions are expected to be very limited fugitive emissions.</p>
<p>C4.1 Environmental effects Provide an assessment of the potential significant environmental effects (including transboundary effects) of the foreseeable emissions from the proposal.</p>	<p>C3.11 refers – no significant effects are expected.</p>
<p>C4.2 Effects on other sites Provide an assessment of whether the proposal is likely to have a significant effect on another site in Malta and, if it is, provide an assessment of the implications of the installation for that site.</p>	<p>C3.11 refers – no significant effects are expected.</p>
<p>C6.3 Port Authority Could the installation involve the release of any substance into a harbour managed by a port authority?</p>	<p>As point of clarification requested by ERA: the discharge is not currently being used, but this function is not being surrendered as part of this application.</p>
<p>C9.1 Expenditure plan Please provide a plan of the estimated expenditure for each phase of the following specified activities arising from your proposal.</p> <p>The plan should include the likely costs of:</p> <ul style="list-style-type: none"> ▪ monitoring (emission/discharge and ambient monitoring); 	<p>Expenditure for this proposal is subsumed within the budget for the existing operations.</p>

<ul style="list-style-type: none"> ▪ clearing the installation (including drainage systems) of all wastes; ▪ remedial action in the event of the failure of pollution control systems. <p><i>We recognise that this plan may need to be revised before the issue of the final permit.</i></p>	
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APPENDIX 4: Process Flow & Risk Assessment

Process Flow



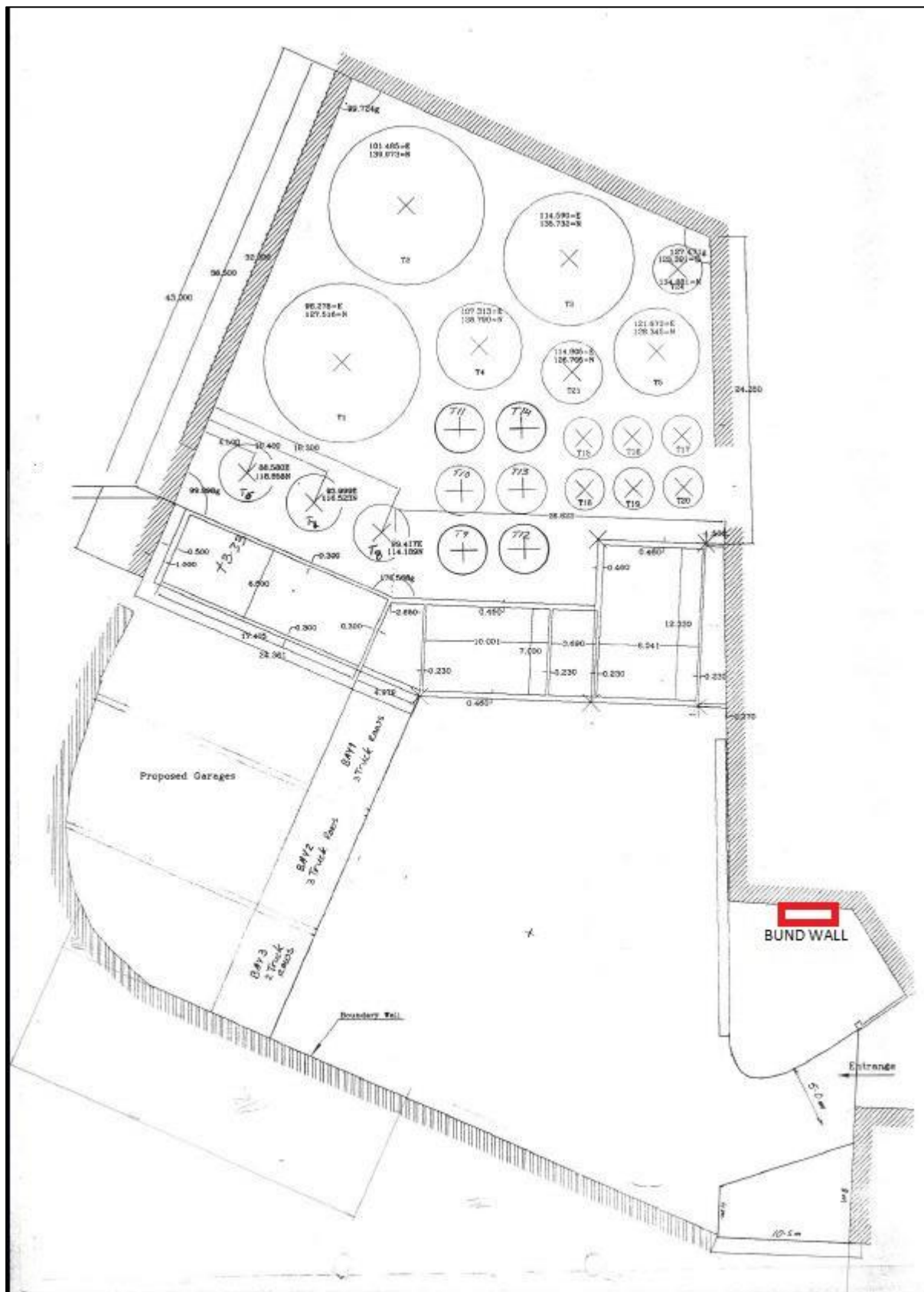
Risk Assessment and Maintenance

What are the hazards?	Environmental/OHS Risk	What are you already doing?	What further action is necessary?	Action by whom?
Workplace transport Movement of forklift trucks in the yard and the loading bays	Staff and visitors may suffer grievous injuries if they are struck by a vehicle while in operation IBCs may be hit by a forklift	<ul style="list-style-type: none"> • Walkways are clearly marked; • Good lighting in place; • All driver and staff are trained to follow a safe system while working; • Forklift trucks are regularly maintained to minimize risk of failure whilst in operation; • Spill kits available 	<ul style="list-style-type: none"> • Drivers to be instructed not to leave keys inside a forklift truck to prevent unauthorized use; • Drivers to have a banksman while operating the forklift truck to guide driver accordingly during placements of IBC's inside bund wall; • Mirrors to be installed as a reversing aid • Bollards to be installed around wall to prevent accidental striking of IBCs by trucks exiting or entering the premises 	<ul style="list-style-type: none"> • Plant manager
Slips and trips & spills	Spills outside the bund walls Staff and others might be injured if they slip on spillages of used cooking oil out of the bund wall	<ul style="list-style-type: none"> • Generally good housekeeping – plastic jerry cans containing UCO should be unloaded immediately within the bund wall; • Floor kept in good condition and any damage is usually repaired very quickly; • Staff handling jerry cans wearing safety shoes with a good grip 	<ul style="list-style-type: none"> • Plant manager to draw up a planned arrangement to clean up the site after a stipulated time and check condition of floor 	<ul style="list-style-type: none"> • Plant manager

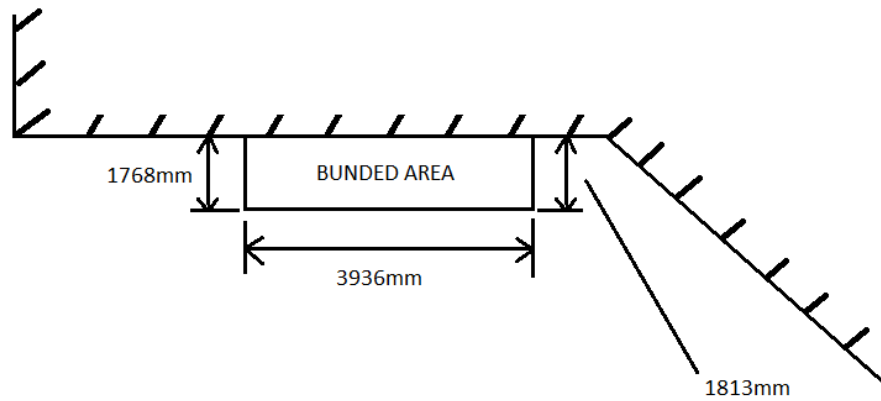
What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by whom?
Manual handling	Staff experiencing injuries as they are unloading jerry cans from truck and emptying them into IBCs	<ul style="list-style-type: none"> • Staff trained safe manual handling techniques to prevent injuries • Relevant tools such as ladder platforms and funnels used to make emptying of cans into IBCs easier and safer 	<ul style="list-style-type: none"> • Staff to be instructed not to fill IBCs placed on top of other IBCs – filling operations should be done only when IBCs are placed directly on the floor; • Post signs to remind staff not to climb on IBCs 	<ul style="list-style-type: none"> • Plant manager
Odours	Generation of unpleasant odours from rancid oils		<ul style="list-style-type: none"> • All volumes of oil to be kept sealed in their containers, and transfer timeframes to be minimised 	<ul style="list-style-type: none"> • Plant manager

APPENDIX 5: Sewage Discharge Permit

APPENDIX 6: Plan 1 - map of site showing location of storage



Detailed dimensions of bunded area (bund height in 0.3m)



APPENDIX 7: Review by ERA and Statutory Consultees

Waste Acceptance Criteria and Procedures

A. Criteria for the acceptance of collection of WVO

Some criteria are needed to determine that the waste being collected is indeed used cooking oil which would in the end prove to be useful as feedstock to produce biofuels. This would make it viable to be exported from our side and accepted by other industries abroad whilst at the same time safeguarding the environment by making sure that no other waste is being disposed off by being blended with the used cooking oil prior to collection.

Given that used cooking oils are collected from the catering industry, the main risk of contamination is from chemical products stored in kitchens, or dilution with water. Consequently, the following are the criteria on which waste collection is accepted or refused:

- a. Colour of the oil. A careful look at the colour of used cooking oil should range from light yellow to a reddish/brownish colour. A black or dark brown colour indicates that the oil might be potentially mixed with hydrocarbons and it should immediately be refused.
- b. The cans in which the used oil is supplied. The WVO is usually placed back within cans in which the same raw virgin oil is purchased, these cans are easily identifiable from their standard sizes and colour, having a capacity of 10 or 25 litre and are usually yellow in colour. In some other cases, the used oil is supplied inside buckets which have advertisement stickers identifying the oil as raw oil. This is the standard procedure which is utilized by most restaurants/hotel operators and food shops when disposing of their used cooking oils. It makes sense for the people working inside kitchens to use the same cans to store the WVO inside the same cans in which the oil is bought. Cans which have a different sizes or colours would cast some doubt as to what the oil inside might really be.

- c. The collected cans are emptied into IBCs at the facility. Opened cans are checked for any strange odours and for any presence of soap at the top. The latter would indicate that the oil has been mixed with caustic soda which indicates that the oil was mixed with detergents used in the cleaning of cutlery and kitchenware. This would be an immediate indication that the oil is not suitable for collection as it would have a greater water content than the maximum allowable as per our own set criteria and specifications.
- d. Any visible separation layer between the water and the oil would be an indication of considerable quantities of water (greater than the 5% maximum threshold of water content as per our established parameters) and the raw material is refused.

B. Sampling

Although the criteria stipulated above give a general overview of how it is ensured that the waste collected is indeed WVO without being blended with other oils or liquids, the company needs to ensure that the oil suppliers are indeed trustworthy and reliable, especially during the early phases of collection where a list of reliable suppliers would not have been established yet. The decision to take samples from several suppliers would ensure that should there be any foul play with the disposal of the oil, the supplier would be immediately identified, and the oil would not be then exported but disposed off as waste as stipulated by law. A set of procedures to sample the oil has therefore been established as follows:

- a. Our collectors attend at the restaurant/shop after being informed by the restaurant/shop operator that there is waste cooking oil to be collected.
- b. The oil is checked briefly according to the criteria set above.
- c. A small sample bottle (500ml capacity max.) is filled with oil from the cans and retained by the collector. The details of the WVO supplier are then written on this bottle.
- d. This procedure is repeated several times according to how many cans are collected during a period of one week;
- e. After a stipulated time period which varies from two days to a maximum of one week according to the variations in the demand for the oil collection, all the oil which was collected is poured into IBCs according to our own procedures.
- f. A sample from each IBC is then taken and poured inside a sample bottle.
- g. The sample bottle is finally given to an independent laboratory to check the properties of the oil.

- h. If any foul play is identified after the lab analysis, for example presence of hydrocarbons in the oil, each sample is analysed at a laboratory and until the sample with the fouled oil is found and the supplier behind it identified and taken off the list of reliable suppliers. The oil inside the IBC is then discarded as waste unsuitable for export as used cooking oil.

APPENDIX 9: Site Inventory

TANK No.	PRODUCT	MAXIMUM SAFE CAPACITY/m3
T.01	Gas Oil 0.1%	1,387
T.02	EN590	1,387
T.03	EN590	959
T.04	Waste Oil	345
T.05	Fuel Oil	345
T.06	Gas Oil 0.1%	143
T.07	EN590	143
T.08	Gas Oil 0.1%	143
T.09	Waste Oil	104
T.10	Waste Oil	104
T.11	Waste Oil	104
T.12	Waste Oil	104
T.13	Waste Oil	104
T.14	Waste Oil	104
T.15	LCO	36
T.16	Waste Oil	36
T.17	LCO	36
T.18	LCO	36
T.21	Fuel Oil	240
T.24	Waste Water	154
T.25	Bio Fuel B100	345
T.27	Bio Fuel B100	26
T.28	Bio Fuel B100	27

Appendix 10: EWC codes approved for acceptance by ERA

EWC

13 01 05*	non-chlorinated emulsions
13 02 04*	mineral based chlorinated engine, gear and lubricating oils
13 02 08*	other engine, gear and lubricating oils
13 03 08*	synthetic insulating and heat transmission oils
13 04 03*	bilge oils from other navigation
13 05 02*	sludges from water / oil separators
13 05 06*	oil from oil/water separators
13 07 01*	waste fuel oil and diesel
16 07 08*	waste containing oil
16 10 01*	aqueous liquid wastes containing dangerous substances

Appendix 11: Bund wall certification