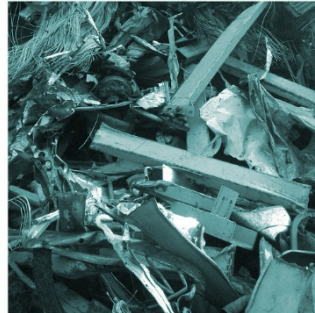
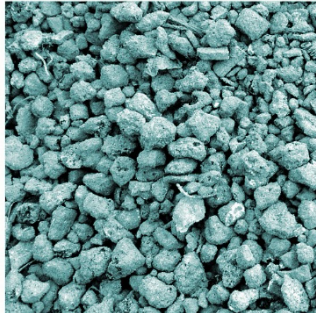
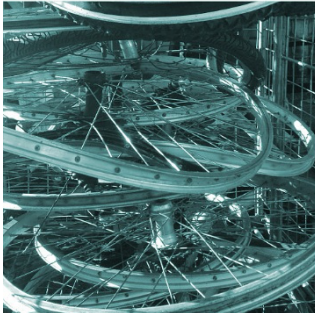
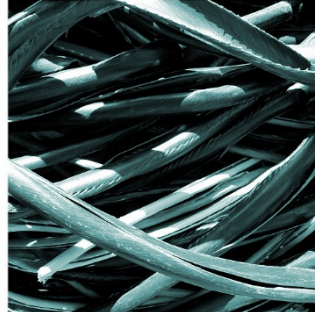


BIO DYNAMIC UK LIMITED

PERMIT VARIATION APPLICATION

Raw Materials List

July 2022





REPORT SCHEDULE

Operator: Bio Dynamic UK Limited

Client: Bio Dynamic UK

Project Title: Bio Dynamic UK Limited Permit Variation Application

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1. RAW MATERIALS LIST

Product	Maximum Quantities Stored at One Time	Estimated Annual Usage	Fate of Raw Materials in the Facility (where will it be used)	Potential Environmental Impact	Storage Arrangements
Diesel	8,000 Litres	20,000 Litres	Operation of backup boiler as second fuel (primary fuel is biogas) and use in site vehicles.	Toxic to animals and humans. Can have long term, persistent impacts if areas of land or water become contaminated following uncontrolled release. Also, direct physical impact on aquatic environment if lost to sewer, via exclusion of oxygen, and physical impacts by coating plants and animals.	Bunded tank
Virkon S Disinfectant	10 KGs	60 KGs	Foot dips and disinfection for cleaning of ABP handling areas.	Irritant to staff if inhaled/on skin. Accidental release to water may have an impact on aquatic environment.	COSHH cabinet
Micronutrients	100 Litres	300 Litres	Dosing for maintenance of health of biology in digesters.	May have short term localised impacts if uncontrolled release, depending on nature of bespoke mix.	COSHH cabinet
Fresh Oil	2,000 Litres	2,000 Litres	For use in CHP engines and other items of equipment at the site.	Toxic to animals and humans. Can have long term, persistent impacts if areas of land or water become contaminated following uncontrolled release. Also, direct physical impact on aquatic environment if lost to sewer, via exclusion of oxygen, and physical	Bunded tank

Product	Maximum Quantities Stored at One Time	Estimated Annual Usage	Fate of Raw Materials in the Facility (where will it be used)	Potential Environmental Impact	Storage Arrangements
				impacts by coating plants and animals.	
Waste Oil	1,500 Litres	1,500 litres	Generated as a result of servicing of CHP engines and equipment at the site.	Toxic to animals and humans. Can have long term, persistent impacts if areas of land or water become contaminated following uncontrolled release. Also, direct physical impact on aquatic environment if lost to sewer, via exclusion of oxygen, and physical impacts by coating plants and animals.	Bunded tank
Activated Carbon	55 Tonnes	300 Tonnes	Maintenance of Carbon filters in gas conditioning unit and odour abatement systems.	Replaced/removed by outside contractor responsible for maintaining equipment. Unlikely to have direct impact but has potential to be flammable in certain circumstances which will require safe systems of work to manage.	Carbon vessels. Replaced/removed by outside contractor responsible for maintaining equipment
Ferric Hydroxide	2 tonnes	15 tonnes	Dosing in digesters (via tiger unit) to manage hydrogen sulphide in biogas.	Material is powdered and has potential to be dispersed as dust. Irritant if inhaled. Potentially corrosive once in solution.	Palletised in reception hall, with sealed drainage.
Grease/Lubricants /Hydraulic oil	50 Kgs	200 Kgs	Maintenance of machinery and equipment.	Potential short-term impact of uncontrolled releases of synthetic chemicals to the receiving	Engineering store

Product	Maximum Quantities Stored at One Time	Estimated Annual Usage	Fate of Raw Materials in the Facility (where will it be used)	Potential Environmental Impact	Storage Arrangements
				environment. Will vary depending on the product type and use.	
Glycol	100l	100l	Use in engines to protect from freezing during colder seasons.	High BOD liquid – will have impact on water quality if released to ground water or surface water.	Bunded drum.
Water (borehole and harvested surface water)	50 m3	2,340 m3	Mixed with wastes to produce pumpable slurry for processing in digesters.	Unlikely to have significant impacts.	Above ground tank in tank storage area.
Pesticides - Rodenticide -	Small amounts in bait stations laid by contractor.	Use in designated bait stations for management of pests on site.	Anticoagulant may impact on other wildlife if not controlled in suitable bait stations.	Stored off site and provided by pest control contractor as needed.	No stores kept on site. Only material present in bait boxes.
Cleaning Products	200 litres of floor and wall/surface cleaner a year of varied strengths and applications.	Cleaning of domestic facilities.	Cleaning of domestic facilities at the site.	Potential short-term impact of uncontrolled releases of synthetic chemicals to the receiving environment. Will vary depending on the product type and use.	Cleaning Products Store
Lab Chemicals	1-2 retail boxes of test cuvettes as required.	Number of boxes of cuvettes will depend on test and conditions	Carrying out onsite lab analysis for process monitoring purposes.	Will vary depending on chemicals. Accidental release may impact on aquatic environment. COSHH assessment and data sheets kept in labs.	Small volumes stored in packaging provided by lab supply provider in trays inside the lab container.

Product	Maximum Quantities Stored at One Time	Estimated Annual Usage	Fate of Raw Materials in the Facility (where will it be used)	Potential Environmental Impact	Storage Arrangements
		on site.			
Vegetable Oil	200 litres	Will depend on occurrence of foaming.	Used to dose digesters in the event of foaming of substrate.	Impact on aquatic ecosystems by physical contact with plants/animals. Potential hazardous materials arising from longer term degradation.	Stored in 200l container inside pump room which in turn is in main site process bund.
Polymer/Flocculent	1 IBC stored at any one time.	1 IBC every 6 weeks.	Flocculent used in sludge removal step of digestate MBR process.	Will depend on final product selection. Material likely to be irritant if comes into contact with eyes/skin. Environmental hazards to be identified once MSDS for selected product available.	Stored in IBC inside process container. May be in solid or liquid form – dependent on final product selection.



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