



TOUCAN ENVIRONMENT LIMITED

Appendix I: Environmental Risk Assessment

Environmental Permit Application for a Bespoke Installation at

Avonmouth Gas Generation Plant

Land off Severn Road

Hallen

South Gloucestershire

BS10 7RZ



Prepared for

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Version Control

Version	Date	Comments
1	30/07/2023	Draft issued for client review.



Appendix I Environmental Risk Assessment

I.1. Environmental Risk Assessment

Hazard	Receptor	Pathways	Control Measures	Probability	Consequence	Overall Risk
Noise emissions from operations	Local residents or businesses*	Air	Engines are housed within individual prefabricated concrete cells to mitigate noise emissions. A noise impact assessment is included within Appendix G and concludes the Installation is unlikely to result in an adverse impact on the nearest residential receptors, or the neighbouring industrial estate. In the event of a complaint, the Operator will undertake appropriate monitoring and further action as necessary.	Low	High - Complaints made to Operator or local authority	Low – due to control measures and probability
Odour emissions (of VOCs) from operations	Local residents or businesses*	Air	All raw materials stored on site will be in appropriate containers. None of the raw materials stored on site are considered to be particularly odorous.	Very low	High - Complaints made to Operator or local authority	Very Low – due to probability
Vibration from operations	Local residents of businesses*	Land	The Installation is not expected to create significant vibration levels. In the event of a complaint, the Operator will undertake appropriate monitoring and further action as necessary.	Very low	High - Complaints made to Operator or local authority	Very Low – due to probability
Dust	Local residents of businesses*	Air	The Installation is not expected to create significant amounts of dust. In the event of a complaint, the Operator will undertake appropriate monitoring and further action as necessary.	Very Low	High - Complaints made to Operator or local authority	Very Low – due to probability
Visible plumes from stacks	Local residents of businesses*	Visual	The Installation is fuelled from natural gas so emissions from the stack should have no visual plumes.	Very Low	High - Complaints made to Operator or local authority	Very Low – due to probability
Spills and/or leaks of lubricating oil	Land	Direct contact	Lubricating oil will be stored within a double skinned tank sited within a concrete bund which will hold 110% of the capacity of the tank, constructed in accordance with CIRIA 736 guidance.	Low	High - Localised pollution of land	Low – due to probability



	Site drainage system, local watercourses (surface water and/or groundwater)	Surface water drainage systems	Transfer of the oil from the tanks for use in the Installation will be carried out by trained operatives over hardstanding to minimise any potential environmental risk from spills in accordance with the procedure detailed in the Environmental Management System (EMS). Spill kits will be on site to provide a rapid response to any spillage via a procedure detailed in the EMS.	Low	High - Localised pollution of local watercourses (surface water and/or groundwater)	Low – due to probability
Pests	Local residents of businesses*	Land/Air	Unlikely that the Installation will attract any pests as all plant is mechanical and waste will be managed appropriately.	Very Low	Very Low	Very Low
Litter	Local residents of businesses*	Air (via Wind)	The Operator will ensure all staff working at the Installation will be trained in where to put their waste so that it doesn't become airborne and leave the Installation boundary. All waste will be managed in accordance with the waste hierarchy and only sent to appropriately licensed facilities.	Very Low	Low	Very Low

*Closest business receptors are industrial and closest local residents are 650m away.



I.2. Amenity and Accident Risk Assessment

Hazard	Receptor	Pathways	Control Measures	Probability	Consequence	Overall Risk
Fire	Local residents and businesses* Site staff Plant infrastructure	Air – gases released from combustion	Fire detection kit will cover all areas of the Installation allowing for an early detection of fire to minimise the risk of it spreading. Portable extinguishers will be placed around the Installation. Staff will be trained in fire procedures.	Low	Medium – Complaints of smoke or visual impact from local receptors.	Low
	Local watercourses, groundwater	Surface water drainage system	There will be an appropriately designed firewater containment system in place within the surface water drainage system, with dedicated firewater storage tanks.	Low	Medium – localised pollution of watercourses with firewater.	Low
Vandalism	Site staff Plant infrastructure	Air/water/land (depending on type of vandalism)	The Installation will be bounded by a 3m high paladin fence with secured access gates to provide a physical barrier to intruders. CCTV will be in place to enable a 24/7 feed to the Operator for monitoring.	Low	Low to High depending on nature of vandalism	Low
Flood waters releasing contaminants from the site.	Plant infrastructure Local watercourses	Surface water drainage system	The site is within Flood zone 3 so has a high probability of flooding. A flood risk assessment has been prepared for the site and is presented within Appendix F. All equipment is appropriately banded to contain any raw materials from entering flood water in the event of a flood.	High	Medium – localised pollution of land watercourses with contaminants.	Low
Operator Error	Site staff Plant infrastructure	Air/water/land (depending on)	The Installation will be automatically controlled via the control room off site which minimises error for personnel on site.	Low	Low	Low



type of Alarms and warning lights will be installed in the control room to alert staff to potential operational issues.
All staff will be suitably qualified and trained for the role they are carrying out within the Installation boundary.

*Closest business receptors are industrial and closest local residents are 650m away.