



Novidon Limited

H1 Amenity Risk Assessment

**Application for Environmental Permit for Modified Starch
Manufacturing Facility and Medium Combustion Plant**

**Coed Aben Road, Wrexham Industrial Estate,
Wrexham, Clwyd, LL13 9UH**

Report Ref: CE-WH-1801-RP02-H1-Rev A - Final



CRESTWOOD ENVIRONMENTAL LTD

ENVIRONMENT	LANDSCAPE	NOISE	LIGHTING
ECOLOGY	HERITAGE	WATER	TREES
MINERALS / WASTE	AIR QUALITY	LAND QUALITY	VISUALISATION

Produced by Crestwood Environmental Ltd.

06 January 2023

Version & Status	Date Produced	Written / Updated by:	Checked & Authorised by:
Draft	22/01/2021	Stephen Barnes BSc (Hons), MCIWM, CEnv	Andrew Abbott BSc (Hons), MSc
Final	06/01/2023	Louise Parsons BSc (Hons), MSc, MCIWEM	Andrew Abbott BSc (Hons), MSc

This report has been prepared in good faith, with all reasonable skill, care and diligence, based on information provided or known available at the time of its preparation and within the scope of work agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

The report is provided for the sole use of the named client and is confidential to them and their professional advisors unless otherwise stated in an accompanied 'letter of reliance' with an official Crestwood Environmental Limited letterhead. No responsibility is accepted to others.

Crestwood Environmental Ltd.
Science, Technology and Prototyping Centre
University Of Wolverhampton Science Park,
Glaisher Drive, Wolverhampton,
West Midlands, WV10 9RU

Email: info@crestwoodenvironmental.co.uk
Web: www.crestwoodenvironmental.co.uk

CONTENTS

1	Site Details.....	1
2	Risk Assessment	1

DRAWINGS

Drawing No CE-WH-1801-DW01, Fig 1	Environmental Permit Boundary Plan	1:1000 @ A3
Drawing No CE-WH-1801-DW01, Fig 2	Factory Site Plan	1:500 @ A3
Drawing No 001	Site Plan – Drainage Layout	NTS

1 SITE DETAILS

- 1.1.1 This H1 Amenity Risk Assessment supports an application for an Environmental Permit for a modified starch production facility and a proposed combined heat and power (CHP) plant at Coed Aben Road, Wrexham Industrial Estate, Wrexham, Clwyd, LL13 9UH (the Site). The Site is operated by Novidon Limited (the Applicant and Operator).
- 1.1.2 The Site comprises a dedicated, enclosed building within which all modified starch production processes take place. The building incorporates a concrete floor throughout, with sealed drainage (i.e. there are no internal drainage outlets) so that in the event of any accidental spillage or leakage there would be no discharge to surface water or foul sewer. The condition and integrity of both the building and concrete floor are good.
- 1.1.3 There is an external concreted yard area that drains to surface water sewer, via two penstock valves that are kept closed as a matter of routine, so that in the event of an inadvertent spillage or leakage there would be no discharge to the surface water sewer. The surface water sewer falls to the Redwither Brook. All production processes and raw materials storage are located inside the building, minimising the risk of any potential contaminants draining off Site.
- 1.1.4 Drawing No CE-WH-1801-DW01, Fig 1 shows the Site location and Environmental Permit boundary. The Site layout is shown on Drawing No CE-WH-1801-DW01, Fig 2.
- 1.1.5 During Site walkover surveys by Crestwood Environmental on the 3 September 2020 and 23 November 2020 it was observed that there were no visible dust emissions from the Site and that there were no noticeable noise emissions outside of the building, other than the occasional vehicle delivery. The predominant source of noise external to the Site was local road traffic using the public highway on the Wrexham Industrial Estate, especially Coed Aben Road, which is located to the south of the Site.
- 1.1.6 Odour was not detected during the Site Walkover Survey, either from within or external to the building. The manufacturing process does not generate any significant odour.

2 RISK ASSESSMENT

- 2.1.1 A qualitative H1 Amenity Risk Assessment is shown below.

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
Odour						
Odour from raw material delivery, off-loading, storage and processing.	<p>The Site is accessed off Coed Aben Road to the south.</p> <p>The nearest residential receptor is Little Friars Farm, which is circa 340m west of the Site. There are no other residential receptors within 500m of the Site. There is a residential property on Redwither Lane, circa 560 west south west of the Site. HMP Berwyn is circa 540m south east of the Site.</p> <p>The nearest businesses to the Site are located circa 15m to the west at the closest point to the permit boundary, circa 85m to the</p>	Air	<p>The manufacturing process takes place within the confines of an enclosed building. Chemicals delivered to the Site for use in the production process are stored inside the building. Odour was not detected during the Site Walkover Survey and there is no history of odour complaints at the Site.</p> <p>In the unlikely event that significant odour is detected or odour complaints are received at the Site, these will be investigated and logged in accordance with the Environmental Management System (EMS). Mitigation measures will be implemented, as appropriate, to ensure a high level of control.</p>	Unlikely as modified starch production process is not inherently odorous	Odour annoyance to anyone living or working close to the Site.	Not significant

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
	south on the other side of Coed Aben Road. Ardagh Group is circa 110m to the south east. The Wrexham Industrial Estate is a long established, large industrial area					
Odour from products, prior to off-Site dispatch.	See above. Residential and industrial properties in the vicinity.	Air	See above.	Unlikely as production process and manufactured products are not inherently odorous	Odour annoyance to anyone living or working close to the Site.	Not significant
Noise and Vibration						
Engine noise from vehicles entering and exiting the Site, including reversing beepers.	See above. Residential, industrial and commercial properties in neighbouring areas. The nearest residential receptor is circa 340m from the Site and is shielding by neighbouring	Noise via the atmosphere and vibration through the ground.	<p>To minimise noise emissions, all vehicles, plant and machinery operated at the Site will be maintained in accordance with the manufacturer's specification.</p> <p>Plant and vehicles will be switched off when not in use and no activity will be carried out beyond the permitted hours of working as specified under the planning consent.</p> <p>Routine maintenance of plant and equipment will be carried out to minimise noise emissions.</p> <p>The predominant noise source in the vicinity of the Site is traffic using the local road network, particularly the Coed Aben Road,</p>	Unlikely due to the mitigation measures in place.	Noise annoyance to anyone living or working close to the Site (excluding operators or employees).	Not significant

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
	industrial buildings etc		<p>which is located to the south of the Site and is a busy through route serving the industrial estate.</p> <p>In the unlikely event of any noise complaints from local businesses or residents, they will be investigated and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control.</p>			
Noise from the manufacturing process.	See above. Residential, and industrial properties in neighbouring areas.	Noise via the atmosphere and vibration through the ground.	The manufacturing process is carried out within an enclosed building, which minimises the potential for noise breakout from the Site. The production process is not inherently noisy.	Unlikely due to the use of an enclosed building to carry out the manufacturing process and the mitigation measures in place.	Noise annoyance to anyone living or working close to the Site (excluding operators or employees).	Not significant
Waste Storage						
			<p>No wastes are imported to the Site. However, the Site does generate wastes in the form of potato peels from starch processing and office consumables such as paper, card and plastic etc.</p> <p>The integrity of the storage areas and concrete are good.</p> <p>Office wastes such as paper, card, plastic etc are collected and stored within the building for subsequent collection by a contractor for delivery to off-site recycling facilities.</p>	Unlikely provided mitigation measures applied.	Spent scrubber solution and washdown water are discharged to foul sewer, via a Discharge Consent issued by Dwr Cymru Cyfyngedig (Welsh Water)	Unlikely

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
Fugitive Emissions – Air						
Dust from vehicle movements, processing.	See above. Residential and industrial properties.	Air transport then inhalation and/or deposition.	<p>The modified starch production is not inherently dusty and is carried out entirely within an enclosed building.</p> <p>Vehicle movements have the potential to emit particulates particularly during prolonged dry periods, e.g. summer months. Procedures to prevent dust emissions include the following: the Site entrance, access road and external yard area comprise engineered surfaces (vehicles do not drive over any unmade ground at the Site). Site vehicles will be limited to speeds of ≤10 mph. The external yard area is engineered concrete and tarmac surfaces and was observed to be in a high standard of maintenance and cleanliness during Site Walkover Surveys in September and November 2020. No visible dust emissions were observed.</p> <p>In the unlikely event of any complaints from local businesses or residents about dust emissions from the Site, an investigation will be made and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control. There is no history of dust complaints at the Site.</p>	Unlikely due to the mitigation measures in place.	Dust annoyance to anyone living or working close to the Site (excluding operators or employees).	Not significant
Fugitive Emissions - Water						
Flood water and contaminated surface water runoff.	Local surface waters and groundwater.	Direct run-off from Site to adjacent, uncontained areas and percolation into soil and groundwater.	<p>The Site is not located in a flood plain. The Site is situated in Flood Zone 1 which means that the chance of flooding each year is 0.1% (1 in 1000) or less.</p> <p>The production process takes place in an enclosed, roofed building with impermeable concrete floor. There are no drainage outlets within the building and therefore no risk of any accidental spillage or leakage entering surface water drains. The external yard area of the Site drains to surface water sewer, which in turn falls to the Redwither Brook. There are two drainage outlets on Site to the</p>	Unlikely due to the use of penstock valves on the external surface water drainage system if the event of an accidental spillage.	Increased suspended solids, potential contaminants from any accidental spillage on the external yard	Not significant

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
			<p>surface water sewer, a penstock valve has been fitted to each one so that in the event of an accidental spillage on the external yard area (e.g. during a vehicle delivery), there would be no discharge off Site (the penstock valves are kept closed as a matter of routine).</p> <p>There is a scrubber on Site which treats emissions from the reaction of sodium hydroxide with monochloroacetic acid to produce sodium monochloroacetic acid (SMCA). Spent scrubber solution and washdown water are discharged to the foul sewer in accordance with the Discharge Consent issued by Dwr Cymru Cyfyngedig (Welsh Water).</p>		area external yard area.	
Fugitive Emissions - Mud and Debris						
Mud and debris being liberated beyond the Site boundary.	Neighbouring roads on the industrial estate, primarily Coed Aben Road.	Transportation of mud and debris from the Site on the under carriage and wheels of vehicles exiting the Site.	The Site entrance and access road comprise engineered tarmac surfaces and the external yard area is concrete and tarmac. Dusty loads or materials are not received at or dispatched from the Site and vehicles are not required to drive over any unpaved surfaces. However, in the unlikely event of mud and debris deposits from the Site on the public highway or Site entrance, surfaces will be swept to prevent any mud and dust accumulation, as required. All Site vehicles will be limited to speeds of ≤10 mph.	Very Unlikely	Potential risk of vehicle accidents if mud accumulation occurs and is not treated.	Not significant
Pests and vermin						
Pest and/or vermin infestation.	Nearby industrial, industrial and residential receptors.	Airborne (flies and other insects, scavenging birds). Land	<p>Modified starch production process and materials used on Site are not inherently attractive to pests and vermin and are not likely to provide a source of food.</p> <p>In the unlikely event of any pest infestation or complaints from local businesses or residents etc about pests or vermin from the Site, an</p>	Very unlikely	Potential nuisance to anyone living or working close to the Site.	Not significant

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
		(rodents and other vermin).	investigation will be made and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control. There is no history of pests and vermin complaints associated with the Site.			
Litter						
Litter deposits on Site.	Nearby industrial premises. Users of Coed Aben Road.	Airborne	<p>The modified starch production process is carried out entirely within an enclosed building. There is no storage of light materials, susceptible to windblown dispersal, in an uncontained manner in the external yard area.</p> <p>In the unlikely event that litter escapes the Site it will be collected and appropriately disposed of as a matter of urgency. External yard areas of the Site will be kept clean and litter picked should this become necessary.</p> <p>In the unlikely event of any litter complaints from local businesses or residents, the matter will be investigated and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control.</p>	Unlikely	Potential nuisance to anyone living or working close to the Site. Unsightly impact on adjacent areas.	Not significant
Fires						
Fires on Site from plant and equipment. (Including arson and/or vandalism causing the release of polluting	Staff, visitors, other personnel on Site, local human population, plant and equipment. Surface water courses, soils and groundwater.	Air transport of smoke. Spillages and uncontained firewater, e.g. by direct run-off from Site	<p>On Site plant and equipment is maintained on a regular basis to ensure it is working effectively to minimise the risk of fire. The complex is secured outside operational hours.</p> <p>Fire extinguishers are located on Site and suitable staff are trained in the event of a fire to use the fire-fighting equipment available. If deemed necessary the fire brigade will be contacted and Natural Resources Wales informed.</p>	Unlikely	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists /	Not significant

H1 Amenity Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
materials to air (smoke or fumes), water or land.			The Site is securely fenced to prevent unauthorised access.		vandals. Pollution of waters and soils.	
Oil/Diesel/Chemical Leak						
Leak from oil / diesel / chemical storage areas on Site (including overfilling, vandalism etc.)	Surface water courses, soils and groundwater.	Percolation through the ground.	<p>The sodium hydroxide tanks are located within a bund, inside the building, to contain any inadvertent leakage. In the event of any leakage or spillage from the tank, the surrounding bund would be pumped out and any waste collected in an IBC or drum for authorized disposal off-site.</p> <p>All on Site vehicles are routinely inspected to identify any leaks, which will be dealt with accordingly.</p> <p>Absorbent material, such as sand, will be kept on Site and used to treat any spillages of potentially polluting liquids. Designated Site staff are trained in the relevant spillage procedures on Site.</p>	Unlikely	Potential Contamination of local water courses and underlying groundwater.	Not significant