



Novidon Limited

Raw Materials

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-RP06-RAW-Rev A-Draft



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

Crestwood Report Reference: CE-WH-1801-RP06-RAW - Final:

Version & Status	Date Produced	Written / Updated by:	Checked & Authorised by:
Draft	17/06/2021	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
1.1	Background.....	1
2	RAW MATERIALS MANAGEMENT	1
3	RAW MATERIALS INVENTORY	1
4	RAW MATERIAL USE MINIMISATION	2
5	WATER USE	2
6	WATER EFFICIENCY MEASURES	2
7	RECORDS.....	3

1 SITE DETAILS

1.1 BACKGROUND

- 1.1.1 This Raw Materials Report supports an application for an Environmental Permit for a modified starch manufacturing facility and the possible installation of a 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***) and currently manufactures circa 15,000 tonnes per annum of modified starches.

2 RAW MATERIALS MANAGEMENT

- 2.1.1 The selection of raw materials at the Site will take into account the environmental impact associated with their manufacture, use and recovery. Materials from sustainable and renewable sources will be used where technically and financially feasible. Consideration will be given to the recycling and recovery of spent materials after their use and to sourcing products as locally as possible to minimise the environmental impact and costs associated with haulage.
- 2.1.2 Efficient use of raw materials will be maintained at all times, so that only the required quantity of products is used to ensure optimum performance and subsequent waste arisings are minimised.

3 RAW MATERIALS INVENTORY

- 3.1.1 A raw materials inventory for the Site is shown in Table 1. It is based on raw material use in 2019. In total 6.6. tonnes of raw materials were used in 2019.

Table 1 Raw Materials Inventory

Raw Material	Storage Type	Maximum Storage Capacity	Annual Usage	Notes
Caustic Soda 32%	Self bunded Tanks x 2	108 tonnes	2,827 tonnes	
Monochloroacetic acid 80%	Self bunded Tank	46 tonnes	1,290 tonnes	
Indox RD18	Delivered in IBC's	5 tonnes	16 tonnes	Starch crosslinker
Mergal 204	Delivered in IBC's	24 tonnes	87 tonnes	Preservative for wallpaper
Potato Starch	Delivered in FIBC's	1000 tonnes	6000 tonnes	
Mergal MC14	Delivered in IBC's	1 tonne	2 tonnes	Preservative for Drilling starch
Mergal 303	Delivered in IBC's	205 Litre drums	300 Litres	Cleaning of starch system
Calcium Carbonate	Delivered in FIBC's	24 tonnes	500 tonnes	Addition to drilling starch
Salt	Delivered in 25Kg sacks	1 tonnes	2 tonnes	For boiler feed water softener
Bardac	Delivered in IBC's	3 tonnes	2 tonnes	Preservative

4 RAW MATERIAL USE MINIMISATION

- 4.1.1 Raw materials use minimisation will include preventative maintenance in accordance with manufacturers' recommendations to ensure plant operates efficiently and any inadvertent leaks or spillages are quickly identified and remediated.
- 4.1.2 Fluid levels in tanks and reactor vessels etc are carefully controlled and checked to prevent over filling and wastage. Spent raw materials will be recovered or recycled where feasible, to minimise the requirement for waste disposal.
- 4.1.3 A raw materials efficiency audit will be undertaken at intervals not exceeding 4 years.

5 WATER USE

- 5.1.1 Mains water use at the Site is currently circa 22,420 m³ per annum.

6 WATER EFFICIENCY MEASURES

- 6.1.1 The Operator measures mains water as part of the Company's Environmental Management System.
- 6.1.2 Opportunities to collect water for reuse are relatively limited due to the need to maintain a high quality product in the production process.

- 6.1.3 A water efficiency audit will be undertaken at the end of the first year and thereafter at intervals not exceeding 4 years.

7 RECORDS

- 7.1.1 Records of raw materials use are stored electronically and are available for inspection by authorised officers of Natural Resources Wales.
- 7.1.2 An inventory is maintained of the raw materials produced on Site, which includes details of the type, and quantity of product used (see Table 1 above). The inventory is used to generate precise figures about the amount and type of raw materials used on Site and to identify opportunities that may arise, to minimise raw material use or source more environmentally benign alternatives that may become available.