



# Non-Technical Summary

## Shotton Mill Permit Variation Application

### Shotton Mill Limited

Weighbridge Road  
Deeside Industrial Park  
CH5 2LW

Prepared by:

### SLR Consulting Limited

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## Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1	1 July 2025	P Wright	C Berryman	P Wright

## Basis of Report

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## Acronyms and Abbreviations

AERA	Air Emissions Risk Assessment
BATOT	Best Available Techniques and Operating Techniques
CHP	Combined Heat and Power plant
ERA	Environmental Risk Assessment
EP	Environmental Permit
FPMP	Fire Prevention Plan and Mitigation Plan
NTS	Non-Technical Summary
NRW	Natural Resources Wales
OCC	Old Corrugated Cardboard
SML	Shotton Mill Limited



## 1.0 Introduction

SLR Consulting Limited (SLR) have been instructed by Shotton Mill Limited (SML) to prepare an application for a variation to the existing Environmental Permit (EP), reference EPR/BT4885IT for the Shotton Mill site located at Weighbridge Road, Deeside Industrial Park, Flintshire, CH5 2LW, hereafter referred to as 'the site'. The EP was issued by Natural Resources Wales (NRW).

The site was acquired by Modern Karton, part of Eren Holdings, from UPM Kymmene (UK) Limited in late 2020. The existing EP was transferred to SML, a wholly owned subsidiary of Modern Karton on 4 February 2021.

This Non-Technical Summary (NTS) provides a summary of the regulated facility, an explanation of exactly what is being applied for and a summary of key technical standards and control measures that will be implemented at the site.

### 1.1 Site Location

The site is located within the Deeside Industrial Park, approximately 3km north of Shotton and approximately 10km northwest of Chester city centre. The site is centred on National Grid Reference SJ 3046 7150, the site location is shown in Drawing 001 Site Location.

### 1.2 Pre-Application discussions with Natural Resources Wales

Pre-application advice was sought from NRW and a pre-application meeting was held with Stuart Ross (Senior Regulatory Officer, Industry Regulation Team – North East Wales). A copy of the advice received from these discussions is provided in Appendix A.

## 2.0 Proposed Redevelopment

SML are proposing to redevelop the site converting from newsprint paper production to the production of containerboard and tissue paper. The redevelopment of the site requires the demolition of the following existing main infrastructure:

- Paper Machine 1 building
- Office block
- Finished goods warehouse
- Associated ancillaries

The following infrastructure will be constructed as part of the redevelopment of the site:

- Containerboard machine building
- Finished goods warehousing and despatch area
- Combined Heat and Power plant (CHP)
- Old Corrugated Cardboard (OCC) storage warehouse
- Effluent Treatment Plant (ETP)
- Raw materials storage area
- Modification to the existing Paper Machine 2 building to redevelop it into the Tissue machine building
- Associated ancillaries



It is anticipated that the redeveloped site will produce approximately 750,000tpa of containerboard and approximately 70,000tpa of tissue when fully operational. All of the feedstock for containerboard production will be recycled fibre, whilst the feedstock for tissue production will be a mix of recycled fibre and virgin fibre, depending upon the quality requirements of the finished products.

The redeveloped site will be self-reliant for energy with the installation of a new 60MWe Combined Heat and Power (CHP) plant. This will be fuelled on natural gas, but will be capable of using hydrogen should a suitable supply become available in the future.

The UK is currently a net importer of both containerboard and tissue products, whilst also being a net exporter of recycled (waste) paper. The proposed redevelopment is intended to close both these gaps by increasing production at the site, thereby allowing the use of more recycled paper, with the proposed new cardboard paper production facility using 100% recycled paper. The new production facility would allow the UK as a whole to be more self-supporting in these materials, reducing reliance on external supplies.

The redeveloped site will deliver a market leading operation with the newest innovations and technologies in this market. This would make the site a flagship exemplar project in the UK and Europe, delivering significant job creation and inward investment into the UK.

## **3.0 What is being applied for**

### **3.1 Regulated Activities**

The primary purpose of the redevelopment will be the production of paper as per the existing EP. The listed activities under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) on site will remain:

- Section 6.1, Part A(1)(b) – producing in an industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.
- Section 1.1, Part A(1)(a) – burning any fuel in an appliance with a rated thermal input of 50MW or more.
- Section 5.1, Part A(1)(b) – the incineration of non-hazardous waste in an incineration or co-incineration plant in a facility with a capacity exceeding 3 tonnes per hour.
- Section 5.4, Part A(1)(a)(i) – disposal of non-hazardous waste in a facility exceeding 50 tonnes per day by biological treatment.

### **3.2 Directly Associated Activities**

The following directly associated activities will continue to operate at the site:

- Discharge of site drainage from the installation.
- Materials recovery facility.
- Wood recycling facility.

Due to the new plant described in Section 2, the operation of the site will change.

## **4.0 Application Contents**

To support this application, the following documentation is submitted in addition to this NTS:

- Section 1: Application Forms;
- Section 2: NTS;



- Section 3: Drawings;
- Section 4: Best Available Techniques and Operating Techniques (BATOT);
- Section 5: Air Emissions Risk Assessment (AERA);
- Section 6: Environmental Risk Assessment (ERA);
- Section 7: Fire Prevention and Mitigation Plan (FPMP);
- Section 8: Noise baseline survey and Impact Assessment;
- Section 9: Site Condition Report (SCR) addendum; and
- Section 10: CIRIA Risk Assessment.

## **4.1 Application Forms**

Parts A, C2, C3, F1 and relevant appendices and supporting documentation, of NRW's application forms have been completed in support of this application and are enclosed in Section 1 of the application.

## **4.2 Drawings**

The following drawings have been prepared in support of this application:

- Drawing 001            Site Location Plan
- Drawing 002            Site Layout and Environmental Permit Boundary
- Drawing 003            Environmental site setting & receptors
- Drawing 004            Cultural and Natural Heritage receptors

They are enclosed in Section 3 of this application.

## **4.3 Best Available Techniques and Operating Techniques**

The Best Available Techniques and Operating Techniques (BATOT) document describes how the proposed developments on site have been designed and will be operated in accordance with Best Available Techniques (BAT) as described in NRW guidance and the relevant BRef notes. The document includes an overview of the technical, operational and management measures that will be implemented at the site.

The BATOT is enclosed in Section 4 of this application.

## **4.4 Risk Assessments**

### **4.4.1 Air Emissions Risk Assessment**

An Air Emissions Risk Assessment (AERA) which includes a detailed dispersion model has been carried out on the emissions from the following sources only:

- Paper Machine 3 driers;
- Tissue Machine 1 driers;
- CHP and back-up boilers; and
- ETP gas engines and boilers.

The AERA was in accordance with NRW guidance and is provided in Section 5 of this application.



The conclusions of the detailed atmospheric dispersion modelling assessment of emissions on sensitive human and ecological receptor locations arising from the proposed developments on site are as follows:

- a) The Process Contributions do not lead to any exceedances of the standards (long-term or short-term) for the protection of human health at any relevant location outside of the Site;
- b) The Process Contributions will result in 'no adverse effect' on the annual mean and 24-hour mean NO<sub>x</sub> Critical Levels at the Dee Estuary / Aber Dyfrdwy SAC and the Dee Estuary SPA;
- c) The Process Contributions will result in 'no likely significant effect' on the annual mean and 24-hour mean NO<sub>x</sub> Critical Levels at the River Dee and Bala Lake SAC, Dees and Buckley Newts SAC, Halkyn Mountain SAC, Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC, and the Mersey Estuary SPA;
- d) The Process Contributions will cause 'no likely damage' on the annual mean and 24-hour mean NO<sub>x</sub> Critical Levels at Inner Marsh Farm SSSI, and Shotton Lagoons and Reedbeds SSSI;
- e) The Process Contributions will cause 'no adverse effect' on the annual mean SO<sub>2</sub> Critical Level at the Dee Estuary / Aber Dyfrdwy SAC, The Dee Estuary SPA, River Dee and Bala Lake SAC, Inner Marsh Farm SSSI and the Shotton Lagoons and Reedbeds SSSI;
- f) The Process Contributions will cause 'no likely significant effect' on the annual mean SO<sub>2</sub> Critical Level at the Dees and Buckley Newts SAC, and the Halkyn Mountain SAC;
- g) The Process Contributions will cause 'no likely significant effect' on the nutrient nitrogen Critical Load at Dee Estuary / Aber Dyfrdwy SAC, The Dee Estuary SPA, River Dee and Bala Lake SAC, Dees and Buckley Newts SAC, Halkyn Mountain SAC, Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC, and Mersey Estuary SPA; and cause 'no likely damage' at Inner Marsh Farm SSSI and Shotton Lagoons and Reedbeds SSSI; and
- h) The Process Contributions will cause 'no likely significant effect' on the acid Critical Load at The Dee Estuary SPA, Dees and Buckley Newts SAC, Halkyn Mountain SAC, Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC, and Mersey Estuary SPA; and cause 'no likely damage' at Shotton Lagoons and Reedbeds SSSI.

#### **4.4.2 Environmental Risk Assessment**

The Environmental Risk Assessment (ERA) has considered the risks posed by the proposed developments on site to the environment. It includes assessments of fugitive emissions, odour, noise and vibration and potential for accidents and incidents. The assessment concludes that with the implementation of the risk management measures described, potential hazards from the proposed developments are not likely to be significant.

The ERA is enclosed as Section 6 of this application.

#### **4.4.3 Noise Baseline and Impact Assessment**

An updated noise baseline survey has been undertaken in accordance with BS4142:2014 whereby the existing (background) sound levels have been established. The baseline is enclosed in Section 8 of this application.

A noise impact assessment has been undertaken in accordance with BS4142:2014, whereby the sound sources under investigation have been compared to the background





sound levels determined by the baseline survey. The noise impact assessment is enclosed in Section 8 of this application.

The assessment concludes that noise from the operation of the proposed developments on site will not have a significant impact upon local sensitive receptors.

## 4.5 Fire Prevention and Mitigation Plan

A Fire Prevention and Mitigation Plan (FPMP) has been prepared in accordance with NRW guidance<sup>1</sup>. The FPMP details the required mitigation and management methods to prevent a fire of combustible waste materials stored on site.

The information contained in the FPMP aims to meet the 4 main objectives of the NRW FPMP guidance:

- minimise the likelihood of a fire;
- minimise the impact of emissions during or after a fire on the local community, critical infrastructure and the environment;
- minimise the resources required by NRW and the other emergency responders during an incident; and
- minimise the post incident clean-up costs and remediation costs.

The FPMP is enclosed in Section 7 of this application. ***[Please note; the FPMP will be submitted after the main application due to operational issues. It is acknowledged that this will impact the duly making of the application.]***

## 4.6 Site Condition Report Addendum

An addendum to the existing Site Condition Report (SCR) has been prepared in accordance with the pre-application advice received from NRW. The SCR addendum details the conditions of the baseline soil and groundwater conditions within the permit boundary.

The SCR addendum report is enclosed in Section 9 of this application.

## 4.7 CIRIA Risk Assessment

The development of the Effluent Treatment Plant has required improvements to the associated containment systems. A Risk Assessment has been prepared to demonstrate how these improvements are either in accordance with, or provide equivalent provisions to CIRIA C736 guidance.

The CIRIA risk assessment is enclosed in Section 10 of this application. ***[Please note; the CIRIA RA will be submitted after the main application due to operational issues. It is acknowledged that this will impact the duly making of the application.]***

# 5.0 Key Technical Standards and Control Measures

## 5.1 Technical Standards

The key technical standards that will be followed for the site are:

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<sup>1</sup> [Guidance No. 16 Fire prevention and mitigation plan - waste management \(naturalresources.wales\)](https://naturalresources.wales/Guidance%20No.%2016%20Fire%20prevention%20and%20mitigation%20plan%20-%20waste%20management)



- Best Available Techniques Reference Document and BAT conclusions for Waste Treatment (2018);
- Best Available Techniques Reference Document and BAT conclusions for Waste Incineration (2019);
- Best Available Techniques Reference Document and BAT conclusions for the Production of Pulp, Paper and Board (2014);
- Best Available Techniques Reference Document and BAT conclusions for Large Combustion Plants (2021);
- NRW - How to comply with your environmental permit guidance;
- NRW – Fire prevention and mitigation plan: waste management guidance;

The pollution control measures relevant to the proposed developments on site are described in the BATOT and ERA documents submitted with this application.

The proposals have been assessed against and meet the technical standards described above.





# Appendix A    NRW Pre-Application advice

## Non-Technical Summary

**Shotton Mill redevelopmentShotton Mill Permit Variation Application**

**Shotton MillShotton Mill Limited**

SLR Project No.: 410.065169.00001410.065169.00001

01 July 20255

Hi Paul,

Thanks for your email, I have discussed your queries with our permitting team and our response can be found below (green text).

Kind regards,

Stuart

From:

Paul Wright

Sent: 29 January 2024 13:40

To: Ross, Stuart

Cc: Vicky Morris-Jones, SML

Subject: NRW pre-app meeting

Hi Stuart,

Good to see you on Friday morning and thanks for the open nature of the discussions.

We'd appreciate your thoughts and guidance on the following issues we discussed:

- Site Condition Report – we will submit a SCR if the permit variation is to include the additional expansion land. However, our question at this time is, do we need to update the SCR for the existing main site due to the extensive groundworks which have been undertaken recently as part of the demolition and construction phase?  
You did suggest that this may be addressed by way of an Improvement Condition in any issued permit?

We would expect to see an SCR submission with the variation application, however this can be an addendum to the current report if there is no change to the installation boundary. It is recommended that an addendum includes but is not limited to an overview of the work that has been completed as part of this redevelopment with a commitment to fully update the SCR within a suitable time period.

- Applicable BRefs – I suggest we would include an assessment against the following BRefs as part of the application:
  - Production of Pulp, Paper and Board
  - Waste Incineration
  - Waste Treatment
  - Large Combustion Plant – you queried if IED Chapter III is applicable:
    - This Chapter shall apply to combustion plants, the total rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used.
    - Where the waste gases of two or more separate combustion plants are discharged through a common stack, the combination formed by such plants



shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input.

- installed in such a way that, taking technical and economic factors into account, their waste gases could in the judgement of the competent authority, be discharged through a common stack, the combination formed by such plants shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input.

So my interpretation is that Chapter III would apply?

Yes, as the net rated thermal input of the combustion plant >50MWth (as indicated in the attached email) then Chapter III of the IED will apply to those units. Where units with a net rated thermal input of <50Wth exist the capacity aggregation and stack rules as detailed above should be applied.

- FPMP – we propose to submit a single consolidated site wide FPMP as part of the variation application.

We have no objection to this approach – refer NRW Guidance Note OGN16.

Guidance No. 16 Fire prevention and mitigation plan - waste management  
[naturalresources.wales](http://naturalresources.wales))

- Global Warming Potential assessment – is one required for the CHP?

The application will require a GWP assessment for the CHP – refer to the link to this assessment on the gov.uk website.

Assess the impact of air emissions on global warming - GOV.UK ([www.gov.uk](http://www.gov.uk))

- Noise & vibration plan – review baseline measurement requirements.

Refer Noise and Vibration Management Plan Guidance

Noise and vibration management: environmental permits - GOV.UK ([www.gov.uk](http://www.gov.uk))

As discussed, it is important that background sound level data are representative, older data may not be accepted if this cannot be demonstrated. The guidance provides information on deriving background sound levels.

Again as discussed, please note the following point (as copied from the guidance) –

*‘When you apply for a variation, do not include noise from the existing site (before changes) as part of the background or the residual sound levels. Your noise impact assessment must consider all the noise resulting from the proposed variation – the existing site and the variation together. Show both components clearly and then add them together to give a new total for site noise at the receptors. The impact assessment will be based on this new value, known as the ‘specific level’ in BS 4142.*

Regards,

Paul





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