

Environment Agency permitting decisions

Surrender

We have decided to accept the surrender of the permit for Stowford Mill operated by ArjoWiggins Ivybridge Limited.

The permit number is [EPR/BJ9223ID](#)

The facility is located at Stowford Mill, Ivybridge, Devon, PL21 0AA

The surrender number is [EPR/BJ9223ID/S006](#)

The application was duly made on 24/12/13 and the decision was effective from 05/03/14.

We are satisfied that the necessary measures have been taken to avoid any pollution risk and to return the site to a satisfactory state.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements.

Summary of the decision

We have decided to accept the surrender of the permit.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements.

A non-technical description of the installation is included in the introductory note to the permit, however key points considered relevant to the decision to accept the surrender of the permit are outlined below.

A permit was issued under the Pollution Prevention and Control (PPC) Regulations to ArjoWiggins Fine Papers Limited on 08/01/2002, the operator name was subsequently changed in the WP3437SJ variation issued 27/08/2005. The current permit allows the operator to carry out the following activities, listed in Part 1 of Schedule 1 to the PPC (now EPR) Regulations:

- Section 6.1 A1 (b) Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.
- S5.3 A1 (c)(i) Biological treatment of effluent from the paper-making activity.

The permit also authorised the operation of the following directly associated activities (DAA):

- Combustion plant – producing steam by burning gas and oil
- Treatment of water – for the treatment of abstracted water
- Surface water disposal via a oil interceptor to controlled water

The main features of the installation when operational were as follows (reproduced from the non technical description in the permit):-

The installation has two listed activities;

- the production of paper on two machines (No2 and No3) from principally imported virgin fibre, (although some recycled pulp from an Forest Stewardship Council source is used), in excess of 20 tonnes per day
- and an Effluent Treatment Plant (ETP) with a capacity of greater than 50 tonnes per day dealing with process waste.

In addition, the following associated activities are carried out to enable the principle activity; handling and storage of raw materials, steam production in a dual gas / gas oil 9MWth input boiler, fibre preparation, effluent treatment and waste handling.

The Operator has applied to surrender the permit owing to site closure. The manufacture of paper at Stowford Mill ceased on 21st November 2013. Soil sampling has been undertaken to measure the condition of the site at surrender. Some equipment within the site will be transferred to other mills within the group, with the remainder being sold to a contractor, to be removed from site by 31st March 2014.

Purpose of this document

This decision document:

- explains how the operator's application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account

Structure of this document

- Key issues
- Annex 1 the decision checklist

Key issues of the decision

The test for the surrender of a permit is given in paragraph 14 of Schedule 5 to the EP Regulations 2010, where it states that:

The regulator must accept an application to surrender an environmental permit in whole or in part under regulation 25(2) if it is satisfied that the necessary measures have been taken –

(a) to avoid a pollution risk resulting from the operation of the regulated facility; and

(b) to return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation.

The factors that we have taken into account in determining whether to accept the application for surrender of the permit are described below.

Pollution Risk

The principle permitted activities carried out at the installation consist of the storage of raw materials, manufacture of paper, storage of final product, treatment of effluent and waste storage. Table 1 below lists the potential contaminants associated with the activity.

The site comprises the following areas:

- The main site entrance alongside the original mill building
- Chemicals storage and paper pulp preparation processes and chimney
- Operational plant area, comprising paper machine houses, boiler house for paper manufacture
- Storage and warehouse for finished products
- An area of green open space
- Effluent treatment plant

Table 1: Primary contaminants and hazards		
Operation	Potential contaminant sources	Hazard
Paper manufacture	Raw, finished and recovered paper	Failure of pipeline leading to loss of product to land. Spillage or failure of containment of raw materials
Raw material storage	Paper fiber, starch, dye, chemical	Failure of pipeline, containments or delivery failure leading to loss of product to land.
Fuel tanks	Diesel for fork lift trucks (FLT)	Spillage from FLT or failure of containment leading to spillage on land.
Drainage network	Liquid effluent discharges from all processes.	Failure of drainage containment leading to loss of waste waters to land.

Effluent plant chemicals	Chemicals, untreated effluent	Spillage from vehicle, failure of containment or failure of pipeline leading to loss of effluent/chemical to land.
Boiler treatment	Proprietary boiler treatment chemicals.	Spillage from vehicle, failure of containment or failure of pipeline leading to loss of chemical(s) to land.
Oil storage (conveyor lubricant & engineering use)	Various grades of proprietary engineering oils.	Spillage from vehicle, failure of containment or failure of pipeline leading to loss of oil(s) to land.
Chemical compounds	Acids & alkalis for a number of the above operations.	Spillage from vehicle, failure of containment or failure of pipeline leading to loss of chemical(s) to land.

The operator confirmed in the site closure report dated December 2013:

- Stowford Mill ceased manufacturing on 21st November 2013
- Paper machine 2 stopped manufacturing on 21st November 2013
- Paper machine 3 stopped manufacturing on 31st May 2013
- Full manning was retained until the process decommissioning was completed.
- The equipment on site has been relocated on other mills within the group or sold to Sandbach Commercial Dismantlers Ltd.

Site condition

The operator has submitted a Site Closure Report, Site Closure Plan and Site Investigation Report, which included details of the condition of the site at closure. The main elements of the report are summarised below:

Environmental setting

The original PPC Application Site Report included a satisfactory description of the environmental setting of the installation.

Changes to activities

There have been no significant changes to the site or site processes since the original permit issue in 2002. The permit was consolidated and updated to modern conditions in October 2011 (EPR/BJ9223ID/V005).

Measures taken to protect land

During the lifetime of the permit the following operating techniques have been incorporated to protect the site where possible:

- Maintenance of ISO14001 certification at the site since May 2002, including identification of potential environmental aspects and impacts and associated protection measures as identified at permit application

- Regular site and bund inspections undertaken during the lifetime of the permit
- Maintenance of spill equipment and stock levels
- Adequate waste storage, contactors and disposal routes in place to minimise waste pollution to the environment
- The use of an environmental incident and near miss reporting system, with investigation and preventative actions.

Pollution incidents

The historic pollution events reported to the environment agency all relate to breaches to final discharge emission limit values. As such no spillage events whereby ground contamination could have occurred have been logged.

Decommissioning and removal of pollution risk

In summary the process of decommissioning undertaken included the following activities:

- Isolation procedures completed to ensure safe access to all equipment
- Fuel oils removed from three boiler fuel storage tanks and forklift truck diesel tank, with tanks and lines drained, flushed and cleaned.
- All boilers and process vessels were drained and cleaned
- All surplus chemicals were disposed of through a registered waste disposal route
- As the production process was emptied and cleaned the internal drainage channels were also cleaned together with the final effluent sumps.
- The effluent plant was decommissioned, drained and cleaned.
- Water supplies to the process have been isolated
- All bulk storage tanks were emptied and cleaned, any remaining liquids were sent off-site for disposal
- All process tanks were emptied and cleaned all effluent was treated by the onsite ETP.
- Surplus biomass has been pressed and disposed of to landfill using the existing waste disposal route.

Items to be decommissioned	Action	Record
Air conditioning units	Isolate, de-gas	Maintenance and service records
Asbestos	Transfer register to new owners of the site	Asbestos register
Boiler	Remove from the site	Site inspection / photo evidence
Bunds	Cleaned, drained and where applicable knocked through to allow the escape of surface water	Photo evidence / site inspection

Chemicals	<p>Run down stock levels where possible disposal via:</p> <ul style="list-style-type: none"> • return to supplier • transfer to Stoneywood Mill • disposal of waste through a certified waste carrier 	<p>All removed by return to supplier or transfer to Stoneywood Mill. Records held Site inspection records</p>
Effluent treatment plant	<ul style="list-style-type: none"> • Empty tanks and rinse • Remove sludge • Isolate systems and electronic equipment • Drain points left open to allow continual drainage 	<p>Site inspection Photographic records</p>
Electrical systems	<ul style="list-style-type: none"> • Isolate all systems • Three of the four transformers to be removed from the site • Small electrical items relocated within the group, sold or disposed as WEEE. 	<p>Site inspection / photographs Waste transfers for WEEE</p>
Engineering stores	<p>All chemicals, fuels and oils and electrical waste will be removed Remaining stores will be transferred within the group</p>	<p>All stores empty, removed or relocated. Photographic evidence and site audit</p>
Finished goods stock	<p>Finished goods will be despatched, all stock will be run down, transferred or disposed of</p>	<p>Stocks removed – shown in pictures and site audit</p>
Fire protection systems	<p>Sprinkler systems and fire extinguishers will be left at the site as a part of the sale agreement Systems isolated and gas bottles made safe and removed.</p>	<p>Waste records Site inspection</p>
Fuel / Oils	<p>Stocks run down on fuel oil and lubrication oils and greases Remaining fuel oils and lubrications disposed Tanks cleaned and isolated FLT diesel fuel tank to be drained and cleaned before vacation of the site 31st March 2014. Unused fuels will be disposed via Viridor. All bunds have been cleaned and knocked out (except FLT oil bund)</p>	<p>Waste transfer notes Site inspection Confirmation email dated 03/03/14</p>
Gas bottles	<p>Run down Unopened and opened bottles returned to supplier</p>	<p>Site inspection</p>
Paper making and stock preparation machinery	<p>Sold and removed from site tank, pipes and pumps will be flushed with fresh water,</p>	<p>Site inspection Log of completed activities</p>

	drained and given additional cleaning	
Radioactive sources	PM2 decommissioned and disposed via appropriate waste route PM3 removed and disposed via appropriate waste route	Waste transfer documents – provided by the operator 20/2/14
Steam and condensate systems	Drained and isolated	Site inspection / photographs
Waste disposal	All wastes removed from site	Waste transfer notes
Water systems	Towns water is left live for new site occupant Process water will be isolated Fresh water / process storage tanks will be drained and left free draining	Site inspection
Underground storage tank (waste starch and storage tank)	Drained, cleaned. Sealed up to prevent ingress of surface water	photographs

Reference data

At the time of permit application the site environmental condition was summarised in the following document: *Crofty Consultancy, October 2001. Contamination report on ArjoWiggins.*

Intrusive investigation was concentrated in three key areas of the site comprising:

- The tank area – the effluent treatment plant and an underground storage tank used to store waste liquids from the mill and referred as waste dye and starch tank.
- The former coal yard – located near to the main sure operations and above ground storage tanks (ASTs – oils and waste oils).
- The pits area – an area which comprises an open concrete culvert conveying waste liquids from the mill.

A total of 7 soil samples were analysed for metals, pH, polycyclic aromatic hydrocarbons (PAH) and total petroleum hydrocarbons (TPH). No groundwater was encountered during the 2001 baseline study. No ongoing analyses were carried out between the reference data collection and the final data collection carried out prior to surrender.

Condition of site at site closure

The operator has confirmed that all incidents were logged, and no incidents are recorded that could have impacted on the soil/groundwater at the installation.

Some of the equipment will be transferred to other mills within the ArjoWiggins Group, the remainder will be sold to be removed from the site by 31/03/14.

Soil Data Assessment

Groundwater and soil samples were completed at the site in October 2013 to establish soil quality at the time of surrender to determine whether there has been any deterioration from the baseline investigation taken in 2001. No visual and olfactory evidence of fuels or oils was noted at any of the sample points.

The average concentration of all parameters have been compared with the seven baseline soil samples taken in 2001 (locations 1, 2, 3, 4, 5, 7 and 8) compared with the surrender data set collected in 2013 (locations S1, S2, S3, S7, S8, S9A and S10A). Following a site visit we agreed with the operator that additional samples should be taken where there was no baseline data due to the potentially polluting substances present in these areas. Five additional samples were collected down gradient of the ETP, transformers, machine halls and coal yard (S4, S5, S6, S11 and S12).

Copper

One elevated concentration was found when compared to the baseline from a made ground sample in the tank area, the sample suggests potential fragments of metallic copper are present, the presence of copper is from historical contamination and not due to the permitted activity. At all other locations change in copper concentrations were not significantly elevated when compared to the baseline conditions and slight elevations are considered to be a result of sample variability or natural fluctuations in the soil.

TPH

The 'coal yard' and 'the pits' were the locations at which the largest elevation of concentrations of TPH were recorded in comparison to the baseline analytical assessment. Elevated TPH-C16-C35 aromatic hydrocarbon fraction analysis (as compared to 2001) from location S7, S8 and S10a (the 'coal yard' and 'the pits') has indicated the origin of the TPH found is likely to be coal tar derived material commonly associated with tarmac. On this basis we agree with the conclusions reached by the operator that the likely source of contamination is from fragments of tarmac within the sample rather than resulting from the permitted activities. The maximum recorded TPH concentrations remain less than the soil general assessment criteria (GAC) (the TPH figures from the GAC are in line with Environment Agency publication on assessing petroleum hydrocarbons) and therefore considered unlikely to represent a significant risk to human health.

VOCs

VOCs including benzene, toluene and naphthalene were recorded above the lower analytical detection limit, however, these concentrations are below the lower analytical detection limit for the method used during the 2001 baseline investigation and therefore a detailed comparison could not be made.

Summary

The majority of substances were detected at levels in soils at concentrations within the range recorded during the baseline investigations within all areas sampled. Several substances were recorded at concentrations marginally greater than those within the baseline investigation. We consider that marginal increases may represent sample variability or natural fluctuations in the soil and therefore are unlikely to demonstrate significant deterioration.

Condition of the Site at Closure

The Operator has confirmed in the Site Condition Report that:-

- all permitted activities have ceased;
- the pollution risk has been removed; and
- there has been no significant deterioration of the condition of the land during the lifetime of the permit.

We have visited the site and are satisfied that the decommissioning activities were conducted in such a way that the risk of pollution was minimised and that no significant impact on the underlying land occurred as a consequence of these activities (see section: Decommissioning and Removal of Pollution Risk, above). We therefore agree that the pollution risk has been removed.

We have previously stated that:

- We consider that the preventative measures implemented during the lifetime of the permit, including those incorporated into the management systems and those covered by the requirements of improvement conditions, were satisfactory and demonstrate that significant pollution of the land at the installation has been prevented (see section: Measures Taken to Protect Land, above).
- None of the Schedule 1 notifications completed during the lifetime of the permit relate to an incident which is likely to have caused deterioration to the ground.
- We are satisfied that there have been no significant changes to the installation boundary or activities since permit issue, other than the shutdown of the activities for site closure, and that no additional dangerous or potentially polluting substances were introduced to the site during the life of the permit (see section: Changes to Activities, above).
- We are satisfied that the decommissioning activities were conducted in such a way that the risk of pollution was minimised and that no impact on the underlying land occurred as a consequence of these activities (see section: Decommissioning and Removal of Pollution Risk, above).

Conclusion

The Environment Agency is satisfied that the 'test' for the surrender of permits under paragraph 14 of Schedule 5 to the EP Regulations has been met.

Based on our analysis and consideration of the application to surrender the permit, we have concluded that:

- the necessary measures to avoid a pollution risk during the operation of the regulated facility were undertaken, which has protected the site from deterioration
- all potential polluting activities associated with the paper manufacture and effluent treatment have been removed
- the site is in a satisfactory state for surrender.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met
		Yes
The site		
Extent of the surrender application	The operator has provided a plan showing the extent of the site of the facility that is to be surrendered. We consider this plan to be satisfactory.	✓
Pollution risk	We are satisfied that the necessary measures have been taken to avoid a pollution risk resulting from the operation of the regulated facility.	✓
Satisfactory state	We are satisfied that the necessary measures have been taken to return the site of the installation to a satisfactory state. In coming to this decision we have taken into account the state of the site before the facility was put into operation.	✓