

Environment Agency Permitting Decisions

Surrender

We have decided to accept the surrender of the permit for **Wilton Nylon Works** operated by **Invista Textiles (UK) Limited**

The permit number is **EPR/BM2063IR**

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.

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

Annex 1 the decision checklist and Key Issues.

Annex 1: decision checklist

Aspect considered	Justification / Detail	Criteria met
		Yes
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
The site		
Pollution risk	<i>We are satisfied that the necessary measures have been taken to avoid a pollution risk resulting from the operation of the regulated facility. This is after an internal review of surrender application site condition report combined with area inspector progress report visit March 2011 and associated report with photographic evidence combined with final photographs from operator dated 12 th May 2011 detailing complete removal of remaining KA tanks with residual hazardous solid material.</i> The operator has utilised a combination of intrusive sampling and installation and incident management as detailed below to demonstrate minimal environmental impact from operations and the return of the site to a satisfactory state equivalent to baseline permit determination stage (2004). The installation operations fully ceased in 2009. In brief the site has been well managed to minimise environmental impact, incidents occurring have had no significant impact on ground water and contaminated land plus in the main intrusive sampling did not discover raised contaminants levels except in three areas (Boreholes 304, 1101 and 1104). Of these only Borehole 304 can be linked to permitted activities and remedial work has been carried out as discussed below with the aim to return contaminated soil to a satisfactory condition. Measures included in original application and applied throughout life of permit include: • Well managed drainage system including lined drainage for systems likely to contain corrosive chemicals and minimisation of underground flow of effluent to collection sumps. Most process effluent flowed to above ground Waste and Liquor Equalisation Tank and then sent via surface pipeline to Northumbrian Water Bran Sands Waste Water Treatment Plant • Surfacing - suitable corrosive resistant surface utilised (e.g. for nitric acid). Kerbs utilised to direct any spillages to process foul sewer drains and away from surface water drains • Storage Tanks and Vessels – containing liquid raw materials, intermediates and products had inspection regimes in place. Inspections and visibility of any spillages were made easier by most of tanks designed to be raised on plinths.	✓

Aspect considered	Justification / Detail	Criteria met
	Primary and Secondary Containment Measures – controls in place since initial permit determination in 2004 include tank level indication, high level alarms, sump discharge analysis and alarms plus bunding. The level of bunding was unclear and an additional response dated 25/05/11 confirmed that all bulk storage tanks and vessels containing liquid raw materials, intermediates and products and their associated transfer facilities were assessed for their potential to cause pollution and this is covered in the Site Condition Report paragraph 5.4. With regards to the bunding of tanks specified in tables 7a) to f) in the surrender site condition report, all the tanks listed were located in either a dedicated bund or a kerbed area which terminated at a sump. Most of these sumps were then fed to the bio-treatment system hold tanks and eventually sent to Northumbrian Water for treatment under consent. The remaining sumps were used to retain any spillage before being pumped out by a road tanker for either off-site disposal or material returned to the storage tank. Additionally local area procedures existed that detailed the process to be followed and actions to be taken in the event of a minor spill. The only minor exception to this was the TiO₂ systems in the Polymer Area (see table 7e) which was not classified as environmentally harmful but following a minor spill that resulted in a white film on the river Tees an interceptor system rather than a direct sump was installed and periodically pumped out by tanker. This was communicated with the Environment Agency at the time. Chemical Transfer Area – Chemical transfers eg. raw material unloading and product loading activities were carried out in contained zones with drains leading to containment sumps. Storage of Materials – IBC's and drums were stored in designated areas which were either contained or place on containment pallets. Water treatment chemicals were stored in double skinned containers. Transformers – all transformers were located in bunded compounds. Site Incidents During the actual operation of the installation facility (2004-2009) there were a total of 12 incidents recorded in section 6.1 of the Site Condition Report. None of the incidents were considered by the operator to have had the potential for negative environmental impact on groundwater or soil based on the containment measures in place and the level of the incidents. One incident in 2009 led to the release of HMD (Hexamethylenediamine) from the Refinery Stack. Fire brigade attended and washed down structure and surfaces without any breach of Emission Limit Value to sewer. Decommissioning A full decommissioning exercise has been carried out as detailed in Surrender site condition report section 8.2. This decommissioning was carried out during 2009 and completed in February 2010. The work covered a thorough decommissioning and decontamination of each facility step by step. Process Hazards Analysis teams made up of a cross-section of the operating teams fixed the relevant material removal and cleaning steps for each facility. In a minority of cases where the material could be shown to be non-hazardous, not a pollution risk and /or where it would be difficult to remove eg inert polymeric material coated on the walls of specific KA tanks , the material was left in place. It was this material left on site when the initial surrender application was submitted which was one of the key reasons why the initial application was returned. However this situation has now been resolved as discussed below.	Yes

Aspect considered	Justification / Detail	Criteria met
	In general once cleaning work was completed, each piece of equipment was inspected, photographed and a decontamination certificate was completed and approved by area management. Photographic evidence plus marked up process flow drawing showing the final condition of vessels and pipe work was collected together into as decontamination pack (an example of which is provided in Appendix I of the surrender site condition report). In addition to the original application Site Condition report (submitted in October 2010 with original application), additional information has been supplied with this latest application site condition report covering following areas linked to issues preventing progression of original surrender application : • Removal of residual material on tank internals Clarification on some previous ambiguities in bore hole sampling techniques for BH1101 and remedial work linked to BH304 In particular the previous surrender application was rejected based on chemical solid residual material remaining in tanks linked to the KA Plant. Specifically five of the vessels in the KA plant contained solid process residues which were tested and identified as hazardous waste. The tanks were identified for demolition and summary of actions carried out since last application are as below: - o Organic Recovery Column - removed in December 2010 , residues disposed of and cleanliness photograph issued to Environment Agency local area team - o SDC Mother Liquor Tank – removed in March 2011, Environment Agency visit allowing observation of tank removal. The procedure was accepted as professional, effective and minimising environmental impact. The residues were disposed of and cleanliness photographs were sent to the local EA representative 3 Oil Wash Water Settlers – schedule in surrender application site condition report confirmed removal by April 2011. A further application update confirmed the full removal of hazardous waste by duly made date of May 12th 2011. The Environment Agency requested additional information to confirm all chemical residues as listed in Appendix M of the surrender site condition report have been removed form site (beyond the hazardous waste confirmed as removed as of May 12th 2011). . The operator response was as follows. June 29th 2011 final response detailed removal of all possible chemical non-hazardous residue without complete building demolition. The operator has confirmed that general materials with potential trace chemical residues will be removed as part of final demolition eg. packing materials, insulation materials and filter materials (July 5th 2011 response). Intrusive sampling results The repeat intrusive sampling was a comparison with the work carried out in 2002 for initial permit determination. The repeated monitoring included: 1) July 2009 groundwater monitoring and site reconnaissance survey 2) November 2009 intrusive soil investigation and further groundwater monitoring 3) Follow up ground water monitoring of specific boreholes in June 2010 to prove removal of specific contaminants The site reconnaissance survey of July 2009 included well inspections. Wells were generally found to be in good condition with little silting. A number of the well covers required remedial works to maintain their integrity ie. the borehole cover at BH304 was observed to be damaged and the monitoring well potentially exposed to the inflow of surface water run off from the surrounding area, The monitoring well was subsequently improved with fitting of a protective standpipe to prevent surface water running into the well	Yes

Aspect considered	Justification / Detail	Criteria met																												
	Groundwater samples were submitted for testing, to a UKAS accredited laboratory, for the same analytical suites used in the baseline survey in 2002: • Volatile Organic Compounds (VOC) all groundwater samples; • Semi Volatile Organic Compounds (SVOC) all groundwater samples; • TPH (Total Petroleum Hydrocarbons) separated into Petrol Range Organics (PRO) and Diesel Range Organics (DRO), including benzene, toluene, ethyl benzene and xylene (BTEX), selected samples; • Metals – arsenic, boron, cadmium, chromium, copper, mercury, nickel, lead, selenium, vanadium and zinc, selected samples; • Ammonia, all groundwater samples; • Acids, pH and acids identified in the VOC and SVOC TIC, selected samples; • Methanol, selected samples; • PCBs selected samples; • Cyclohexane, all groundwater samples; and • Total Organic Compounds (TOC), all groundwater samples. All boreholes sampled during the baseline survey were re-sampled with the exception of boreholes BH207, BH1107 and BH1108 which could not be located and BH1105 which had insufficient water to sample Results of Groundwater Monitoring A detailed report of the July 2009 groundwater monitoring is presented as Appendix O of the surrender site condition report and a summary of the results is presented below. Analytical results for the majority of samples collected in 2009 were of similar magnitude to the 2002 baseline monitoring with the following exceptions: BH1101; BH1104 and BH304. A comparison of analytical results, showing key increases in concentrations, is presented below: <table><tr><th>Borehole</th><th>Analysis</th><th>2002 (µg/l)</th><th>2009 (µg/l)</th></tr><tr><td rowspan="3">304</td><td>TOC</td><td>10,000</td><td>580,000</td></tr><tr><td>SVOC</td><td>< MDL</td><td>311</td></tr><tr><td>NH4(N)</td><td>1,200</td><td>260,000</td></tr><tr><td rowspan="3">1101</td><td>SVOC(TIC)</td><td>595 (1)</td><td>101,920</td></tr><tr><td>TPH-GRO</td><td>< MDL</td><td>931 (2)</td></tr><tr><td>NH4(N)</td><td>1,000</td><td>4,000</td></tr><tr><td>1104</td><td>Boron</td><td>590</td><td>15,000</td></tr></table> MDL – Method Detection Level Notes SVOC-TICs (1) C6 to C9 acids (2) Carboxylic acid group and dicarboxylic acid. <u>BH304 review</u> Concentrations of total organic carbon (TOC), ammonium and Semi Volatile Organic Compounds (SVOC's) were recorded above the baseline investigation. It is considered likely that the source of the elevated concentrations may be a result of the damaged borehole cover and potentially contaminated surface water run-off that has entered the monitoring well As such unlike some of the conclusions for other boreholes below this is a specific potential environmental linked to the installation permitted activities <u>BH1101 review</u> Concentrations of SVOC's, TPH (Total Petroleum Hydrocarbons) and ammonium were recorded above the baseline levels. The operator asserts that the reason for the increase for TPH is more linked to different sampling techniques as opposed to increase contamination for TPH. The 2009 sampling technique was based on low flow sampling and Invista original 2002 sampling have been collected using a bailer. Low flow sampling is considered by the Environment Agency as a more accurate sampling technique reducing the possibility of Volatile Organic Carbon "loss" from the sample leading to 2009 levels being considerably higher without necessary additional contamination than 2002 data.	Borehole	Analysis	2002 (µg/l)	2009 (µg/l)	304	TOC	10,000	580,000	SVOC	< MDL	311	NH4(N)	1,200	260,000	1101	SVOC(TIC)	595 (1)	101,920	TPH-GRO	< MDL	931 (2)	NH4(N)	1,000	4,000	1104	Boron	590	15,000	Yes
Borehole	Analysis	2002 (µg/l)	2009 (µg/l)																											
304	TOC	10,000	580,000																											
	SVOC	< MDL	311																											
	NH4(N)	1,200	260,000																											
1101	SVOC(TIC)	595 (1)	101,920																											
	TPH-GRO	< MDL	931 (2)																											
	NH4(N)	1,000	4,000																											
1104	Boron	590	15,000																											

Aspect considered	Justification / Detail	Criteria met
	There is no such sample technique reasoning for SVOC and NH4 (N). After a further review of all the incidents (list as section 6.1 of site condition report) utilising our local compliance knowledge of the site to substantiate the operator conclusions no incidents with impact to ground occurred linked to these chemical parameters. However with particular reference to SVOC's there is real potential for a specific incident prior to permit issue. This is further supported by elevated levels of SVOC-TIC C6 to C9 acids in the soil sample from BH1101 in 2002 at concentrations of 14.94 mg/kg. Borehole BH1101 is located in an area that historically used organic acids similar to those tentatively identified in the monitoring. These activities ceased in this area prior to 1990 and have been subsequently decommissioned and demolished. An area 95 metres to the east of BH1101 did use a mixture of organic acids during the lifetime of the permit. However as discussed above there have been no recorded releases over the lifetime of the permit <i>There are two conclusions:</i> <i>It is considered that the operator has operated the plant during the life of the permit without contamination of land/groundwater in the vicinity of BH1101 and as such no further actions are required of the operator under EPR.</i> <i>However there does appear to be potential contamination in the vicinity of BH1101 of the groundwater/land prior to permit issue in 2004 in particular relative to SVOC's. Hence there are still potential legal requirements for remedial work as summarised in key issues section below beyond the EPR regulations</i> <u>BH1104 review</u> Results for this borehole had considerably higher concentrations of boron that the baseline data. The 2002 baseline investigation recorded elevated concentrations of boron (50 to 1010 µg/l) across the site and the 1993 investigation also recorded elevated boron levels across the site (notably even higher max 56,150 µg/l). In terms of environmental impact from the installation during the permitted activities operation no recorded releases/incidents of boron occurred. <i>In light of above elevated concentrations of specified parameters the operator decided to undertake additional characterisation of the soil and groundwater around BH304, BH1101 and BH1104.</i> <u>Additional characterisation (November 2009 and June 2010).</u> The additional characterisation included the drilling of four boreholes around BH304 (positions detailed in Figure 9 of Site Condition Report), three boreholes around BH1101 (Figure 10 gives details) and three boreholes around BH1104 (Figure 11 gives details). The additional boreholes were drilled to comparable depths as the target boreholes with comparable monitoring well design. Soil and groundwater samples were collected and submitted to an accredited laboratory. <i>Groundwater was sampled on 4th and 18th November 2009 for all three set of boreholes plus additional monitoring for BH1104 in June 2010. Samples were scheduled for the same suite of analysis as previously listed above and results listed in Appendix O of surrender site condition report.</i>	Yes

Aspect considered	Justification / Detail	Criteria met																																																																																						
	BH304 Results of analysis of groundwater samples taken from BH304 and the four newly installed monitoring wells are presented below: <table><tr><th>Borehole</th><th>Analysis</th><th>2002</th><th>July 2009</th><th>04/11/09</th><th>18/11/09</th></tr><tr><td rowspan="3">304</td><td>TOC</td><td>10,000</td><td>580,000</td><td>160,000</td><td>N/S</td></tr><tr><td>TPH-DRO</td><td>2,062</td><td>643</td><td>1,100</td><td>N/S</td></tr><tr><td>NH4(N)</td><td>1,200</td><td>260,000</td><td>390,000</td><td>N/S</td></tr><tr><td rowspan="3">304-1 (*1.2m)</td><td>TOC</td><td>-</td><td>-</td><td>N/S</td><td><MDL</td></tr><tr><td>TPH-DRO</td><td>-</td><td>-</td><td>N/S</td><td><MDL</td></tr><tr><td>NH4(N)</td><td>-</td><td>-</td><td>N/S</td><td><MDL</td></tr><tr><td rowspan="3">304-2 (*6.0 m)</td><td>TOC</td><td>-</td><td>-</td><td>6,000</td><td>4,000</td></tr><tr><td>TPH-DRO</td><td></td><td></td><td>< MDL</td><td><MDL</td></tr><tr><td>NH4(N)</td><td>-</td><td>-</td><td>< MDL</td><td><MDL</td></tr><tr><td rowspan="3">304-3 (*6.5m)</td><td>TOC</td><td>-</td><td>-</td><td>N/S</td><td>8,000</td></tr><tr><td>TPH-DRO</td><td></td><td></td><td>N/S</td><td><MDL</td></tr><tr><td>NH4(N)</td><td>-</td><td>-</td><td>N/S</td><td><MDL</td></tr><tr><td rowspan="3">304-4 (* 7.0m)</td><td>TOC</td><td>-</td><td>-</td><td>10,000</td><td>6,000</td></tr><tr><td>TPH-DRO</td><td></td><td></td><td>< MDL</td><td><MDL</td></tr><tr><td>NH4(N)</td><td>-</td><td>-</td><td><MDL</td><td>< MDL</td></tr></table> Notes/abbreviations – N/S: Not sampled, < MDL: Below method detection levels, * Distance from BH304. Conclusions The elevated concentrations of ammonium detected in borehole BH304 in July 2009 were not recorded in any of additional characterisation boreholes. However 04/11/09 BH304 results showed elevated readings especially for NH4 and Total Organic Compound (TOC). As such BH304 is considered a potential localised contamination spot caused by surface water run off ingress into the unprotected borehole (prior to corrective work as detailed above). Remedial work Whilst an isolated hotspot, this contamination is potentially due to specific installation activities. The operator has actioned the following remedial steps in 2010: • Small excavation in immediate area actioned (approximately 2 metre by 2 metres), soil removed was logged and sampled. Approximately 16 tonnes of material was excavated and was disposed of via road transfer to landfill. The excavation was backfilled with some of the concrete removed from the surface. Based on the elevated ammonium levels previously the soil and groundwater samples were submitted for ammonium analysis. Ammonium was not detected in any of the samples from the excavation • BH304 well decommissioned It is the view of the operator accepted after careful review by the Environment Agency that the extent of the remedial work based on final sampling analysis is sufficient to ensure soil and groundwater is no longer impacted by permitted activities. The clarification plan in this surrender application site condition report (Figure 9) with distances between BH304 and the characterisation boreholes has substantiated the acceptance that the remedial work has covered sufficient area. BH1101 Three new installed monitoring wells BH1101-1, BH1101-2 and BH1101-3 were drilled and sampled plus existing borehole BH501 located between BH1101 and the former Nitric Acid Plant was sampled. The elevated levels of SVOC's relative to baseline data in 2002 for BH1101 were found in BH1101 and BH 1101-1 only in additional characterisation groundwater samples and not in BH 1101-2, BH1101-3 and BH 501. Elevated levels of NH4 (N) were found for BH 1101-1 only and not in any of other characterisation samples from November 2009. The conclusions as per original section on BH1101 apply without further comment.	Borehole	Analysis	2002	July 2009	04/11/09	18/11/09	304	TOC	10,000	580,000	160,000	N/S	TPH-DRO	2,062	643	1,100	N/S	NH4(N)	1,200	260,000	390,000	N/S	304-1 (*1.2m)	TOC	-	-	N/S	<MDL	TPH-DRO	-	-	N/S	<MDL	NH4(N)	-	-	N/S	<MDL	304-2 (*6.0 m)	TOC	-	-	6,000	4,000	TPH-DRO			< MDL	<MDL	NH4(N)	-	-	< MDL	<MDL	304-3 (*6.5m)	TOC	-	-	N/S	8,000	TPH-DRO			N/S	<MDL	NH4(N)	-	-	N/S	<MDL	304-4 (* 7.0m)	TOC	-	-	10,000	6,000	TPH-DRO			< MDL	<MDL	NH4(N)	-	-	<MDL	< MDL	Yes
Borehole	Analysis	2002	July 2009	04/11/09	18/11/09																																																																																			
304	TOC	10,000	580,000	160,000	N/S																																																																																			
	TPH-DRO	2,062	643	1,100	N/S																																																																																			
	NH4(N)	1,200	260,000	390,000	N/S																																																																																			
304-1 (*1.2m)	TOC	-	-	N/S	<MDL																																																																																			
	TPH-DRO	-	-	N/S	<MDL																																																																																			
	NH4(N)	-	-	N/S	<MDL																																																																																			
304-2 (*6.0 m)	TOC	-	-	6,000	4,000																																																																																			
	TPH-DRO			< MDL	<MDL																																																																																			
	NH4(N)	-	-	< MDL	<MDL																																																																																			
304-3 (*6.5m)	TOC	-	-	N/S	8,000																																																																																			
	TPH-DRO			N/S	<MDL																																																																																			
	NH4(N)	-	-	N/S	<MDL																																																																																			
304-4 (* 7.0m)	TOC	-	-	10,000	6,000																																																																																			
	TPH-DRO			< MDL	<MDL																																																																																			
	NH4(N)	-	-	<MDL	< MDL																																																																																			

Aspect considered	Justification / Detail	Criteria met																																			
	BH1104 Results of groundwater samples taken in and around H1104 are summarised below Results in µg/l for <i>Boron</i> <table><tr><th>Borehole</th><th>2002</th><th>July 2009</th><th>04/11/09</th><th>16/11/09</th><th>10/06/10</th><th>23/06/10</th></tr><tr><td>1104</td><td>590</td><td>15,000</td><td>1,100</td><td>N/S</td><td>16,400</td><td>14,300</td></tr><tr><td>1104-1</td><td>-</td><td>-</td><td>1,200</td><td>1,100</td><td>676</td><td>1,030</td></tr><tr><td>1104-2</td><td>-</td><td>-</td><td>1,500</td><td>1,000</td><td>1,010</td><td>1,310</td></tr><tr><td>1104-3</td><td>-</td><td>-</td><td>1,800</td><td>1,500</td><td>1,230</td><td>998</td></tr></table> The results of additional sampling show that BH1104 boron results are shown to be consistently elevated from baseline especially results in June 2010. The characterisation borehole results are higher than baseline but significantly lower than BH1104 results. Boron has not been utilised in the KA process since the permit determination in 2004. Borehole BH1104 is located immediately adjacent to a building which historically manufactured Ammoniated Boron Phosphate catalyst (ABP). This plant closed in 1992 and the building has been used as a warehouse since 2002. Borehole BH1104 is also located in close proximity (< 5 m) to a sump interceptor which would have contained any effluent generated in the ABP plant. It is likely that the elevated boron levels especially for BH1104 are from the historical ABP catalyst plant. The installation never operated utilising boron as detailed above and as such this is outside the EPR permit scope.	Borehole	2002	July 2009	04/11/09	16/11/09	10/06/10	23/06/10	1104	590	15,000	1,100	N/S	16,400	14,300	1104-1	-	-	1,200	1,100	676	1,030	1104-2	-	-	1,500	1,000	1,010	1,310	1104-3	-	-	1,800	1,500	1,230	998	Yes
Borehole	2002	July 2009	04/11/09	16/11/09	10/06/10	23/06/10																															
1104	590	15,000	1,100	N/S	16,400	14,300																															
1104-1	-	-	1,200	1,100	676	1,030																															
1104-2	-	-	1,500	1,000	1,010	1,310																															
1104-3	-	-	1,800	1,500	1,230	998																															
Satisfactory state	We are satisfied that the necessary measures have been taken to return the site of the regulated facility to a satisfactory state. In coming to this decision we have had regard to the state of the site before the facility was put into operation.	✓																																			

Key Issues of the decision

The installation scheduled activities include:

- Section 4.1 A(1)(a)(ii) - "Producing organic chemicals such as organic compounds containing oxygen, such as alcohols, aldehydes, ketones, carboxylic acids, esters, ethers, peroxides, phenols, epoxy resins"
- Section 4.1 A(1)(a)(iv) - "Producing organic chemicals such as organic compounds containing nitrogen, such as amines, amides, nitrous-, nitro- or azo-compounds, nitrates, nitriles, nitrogen heterocyclics, cyanates, isocyanates, di-isocyanates and di-isocyanate prepolymers"
- Section 4.1 A(1)(a)(viii) - "Producing organic chemicals such as plastic materials, such as polymers, synthetic fibres and cellulose-fibres"
- Section 4.2 A(1)(a)(ii) - "Producing inorganic chemicals such as acids, such as chromic acid, hydrofluoric acid, hydrochloric acid, hydrobromic acid, hydroiodic acid, phosphoric acid, nitric acid, sulphuric acid, oleum and chlorosulphonic acid"

The installation permitted activities commenced in 2004 and ceased in 2009. INVISTA sold the Wilton site to ONE NORTH EAST in 2010, and the new owner leased the land back to the operator on 25th November, 2010 in order for plant demolition and environmental permit surrender to be completed.

This application is the second for complete surrender of this facility. The initial application received 20th September 2010 was returned at the duly making phase.

Utilising Environmental Permitting Guidance Updated March 2010

<http://www.defra.gov.uk/environment/policy/permits/documents/ep2010guidance.pdf>

The installation was not at a fully satisfactory state with this first application without the removal of chemical residues from KA plant vessels to allow it be returned to condition prior to permit determination (point 7.21 in Defra guidance above).

In addition this residue as above is classified as waste and therefore Defra guidance above point 7.33 was not fulfilled. This combined with concerns over some of the implications of higher ground water monitoring results relative to baseline data for BH304, BH1101 and BH1104 and associated boreholes led to the original application being returned

Conclusion for this second surrender application

The legal test for surrender is – '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.'

In conclusion based on this surrender application and our review of the data the above issues have been satisfactorily covered without the need for further actions from the operator.

However whilst not a permitting issue, we would recommend that further risk assessment is undertaken in relation to the historic contamination linked to areas round BH1101 and BH1104 as discussed above. The owner/developer should address risks to controlled waters from contamination at the site. The Environment Agency recommends the following actions:

- 1) Owner/Developer to follow the risk management framework provided in CLR11, Model Procedures for the Management of Land Contamination, when dealing with land affected by contamination.
- 2) Reference to the Environment Agency Guiding Principles for Land Contamination for the type of information required in order to assess risks to controlled waters from the site. The Local Authority can advise on risk to other receptors, e.g. human health.

The local authority is the lead body relating to historic contamination with the legal framework being P2A of the Environmental Protection Act 1990.