


## Site Surrender Report KSR Plant Swansea

KSR Electronic Systems  
Limited

Prepared by:  
**Sol Environment**

Date:  
**June 2017**

Project Issue Number:  
**SOL1705KSR01\_Site Surrender**

VERSION CONTROL RECORD			
Contract/Proposal Number:		SOL1705KSR01_Site Surrender	
Authors Name:		Steve Butler	
Signature:			
Issue	Description of Status	Date	Reviewer Initials
1	First Issue to NRW	September 2017	SB

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## Contents

### Page

<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1	Background	1
1.2	Regulatory History	2
1.3	Details of Full Site Surrender	2
1.4	Scope of Surrender Report	2
<b>2.</b>	<b>SURRENDER SITE CONDITION REPORT</b>	<b>3</b>
2.1	Site Location & Description	3
2.2	Site Layout	4
<b>3.</b>	<b>Condition of the Land at Permit Issue</b>	<b>6</b>
3.1	Site History	6
3.2	Site Activities	7
3.3	Desk-based Research & Site Reconnaissance	10
3.4	Potential Contaminant Sources	10
3.5	Previous Site Investigations	10
3.6	Conceptual Model	11
<b>4.</b>	<b>Permitted Activities</b>	<b>14</b>
4.1	Operational Activities	14
4.2	Non-permitted activities undertaken	15
4.3	Potentially Polluting Substances	15
<b>5.</b>	<b>Changes to the Activity</b>	<b>16</b>
<b>6.</b>	<b>Operational Controls (Measures taken to protect the land)</b>	<b>17</b>
6.1	Environmental Management System, Policies & Procedures	17

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<b>7.</b>	<b>Pollution incidents that may have had an impact on land and their remediation</b>	<b>18</b>
<b>8.</b>	<b>Soil, Gas &amp; Water Quality Monitoring</b>	<b>19</b>
<b>9.</b>	<b>Decommissioning &amp; Removal of Pollution Risk</b>	<b>20</b>
9.1	Site Closure Plan	20
9.2	Decommissioning	20
9.3	Site Inspection	20
<b>10.</b>	<b>Reference Data and Remediation</b>	<b>22</b>
<b>11.</b>	<b>Statement of Site Condition</b>	<b>23</b>

Annex A: Figures

Annex B: Application Site Condition Report

Annex C: Email from NRW on Low Risk Designation

Annex D: BSI 14001 Certificate

Annex E: Site Closure Plan

Annex F: Environmental Management System Overview

Annex G: Drainage Integrity Survey (Foul & Storm)

Annex H: Effluent Tank Survey

Annex I: Weekly Check Forms

Annex J: Site Inspection Photographs

## 1. Introduction

### 1.1 Background

Sol Environmental Limited (Sol) has been commissioned by KSR Electronic Systems Limited (KSR) to prepare a Permit Surrender Report for the full surrender of the permit EPR/TP3035SG at the KSR Electronics Plant at Penllegaer, Swansea SA4, 9HL.

KSR manufacture Power Electronic Motion Systems for Automotive and Industrial applications. The site is currently permitted as a Part A1 Installation due to the following principle activity:

- *Schedule 1, Section 4.2 Part A1 (d) unless falling within another section of this schedule, any manufacturing activity, other than the application of a glaze or vitreous enamel, involving the use of any of the following elements or compound of those elements or the recovery of any compound of the following elements*  
*(vi) lead*  
*Where the activity may result in the release into the air of any of those elements or compounds or the release into water of any substance listed in paragraph 13 of Part 2 of this Schedule.*

KSR (the operator) ceased permitted activities at the installation prior to April 2015.

An additional Trade Effluent Consent relates to the installation, D100/06, issued in 2006. This Trade Effluent Consent is not being surrendered as part of this application.

Due to omission of lead used in the electronics manufacturing process, the site no longer requires regulation under the Environmental Permitting Regulations 2016 and as such is surrendering the current permit. The site will continue to operate as currently.

It is considered that the permit surrender is classed as a low risk surrender as it is considered that the installation poses a low potential pollution risk to land and groundwater for the following reasons:

- The facility is relatively new and designed to meet modern containment standards;
- Few hazardous substances are stored and used;
- All hazardous substances are provided with containment measures;
- A stringent environmental management system and appropriate maintenance procedures have been in place throughout the duration of operations; and
- No environmental incidents have been recorded at the site.

Therefore, an environmental monitoring programme has not been required as a condition of the permit and intrusive ground investigation is not considered necessary.

This surrender report details the condition of the KSR Electronic Systems manufacturing facility (herein after referred to as the 'Site').

## **1.2 Regulatory History**

The electronics manufacturing facility at Penllagaer Business Park was first permitted in February 2005 under permit TP3035SG. The operator at this time was International Rectifier Automotive (Swansea) Ltd. In January 2007, this was varied to Electronic Motion Systems UK Limited under permit number EP3938MH. Most recently, in June 2016, the permit operators name was changed again to KSR Electronic Systems Limited and this is the current version which is being surrendered (TP3035SG/V002).

## **1.3 Details of Full Site Surrender**

This section describes the details of the proposed surrender of the KSR Electronics Manufacturing facility permit.

The electronics manufacturing process has been improved to omit the use of lead and antimony. This therefore negates the necessity for the operations to be regulated by a permit under the Environmental Permitting (England and Wales) Regulations 2016 as Schedule 1 Section 4.2 Part A1 (d) no longer applies. This application is to surrender the permit at the site held by KSR Electronic Systems Ltd.

Site operations will continue as they currently are post permit surrender, with no significant removal of plant, equipment or infrastructure. As such the operations detailed within the Site Closure Plan (Annex E) will not be undertaken and the plan will be kept as a live document for use in the future should site operations cease.

## **1.4 Scope of Surrender Report**

This report will cover the following:

- Condition of the land at permit issue;
- The current use of the permitted area;
- Operational history of the permitted area;
- Environmental management of the installation;
- Any reported accidents or spills; and
- Decommissioning and removal of pollution risks.

## 2. SURRENDER SITE CONDITION REPORT

<b>Name of the Applicant:</b>	KSR Electronic Systems Limited
<b>Activity Address:</b>	Penllagaer Business Park, Penllergaer, Swansea, SA4 9H
<b>National Grid Reference:</b>	OS X (Eastings) 262871 OS Y (Northings) 199112
<b>Permit Number:</b>	EPR/TP3035SG

<b>Document References:</b>	Site Surrender Report, KSR Electronic Systems Limited Sol document reference and date: SOL1705KSR01_Site Surrender
<b>Annexes:</b>	Annex A: Figures Annex B: Application Site Condition Report Annex C: Email from NRW on Low Risk Designation Annex D: BSI 14001 Certificate Annex E: Site Closure Plan Annex F: EMS Annex G: Drainage Integrity Survey (Foul & Storm) Annex H: Effluent Tank Survey Annex I: Weekly check forms Annex J: Site Inspection Photographs

### 2.1 Site Location & Description

The location of the Site is shown on Annex A, Figure 1, approximately centred at National Grid Reference X (eastings) 262871; Y (northings) 199112. The site layout and drainage is shown in Annex A, Figure 2.

The Site is located at the KSR Electronic Systems manufacturing facility at Penllergaer Business Park, Penllergaer, Swansea, SA4 9HL, which is located to the northeast of Swansea City centre, south of the M4. The Site is accessed from the A48 and is understood to have been built in 1999, covering an area of 8 hectares.

The site is bounded to the north by the A48, with the M4 motorway running parallel to the north. To the west and south is woodland (Penllergare Valley Woods Country Park) including a visitor centre, numerous footpaths and a lake, with the village of Penllergaer beyond. To the east are industrial units associated with the business park, with Cilfwnwr Farm buildings and fields beyond.

The site is located predominantly within a rural setting. The closest residential property lies approximately 450 m to the southwest on Oak Way. The land lies at approximately 73 mAOD with generally flat topography sloping gently towards the south east.

Table 1.1 below provides information regarding the surrounding site.

Table 1.1 Site Setting	
Direction	Description
North	Immediate Vicinity: A48 road Within 500m: M4 motorway, Scouts Camping Site, Woodland, Farmland, Railway line, Afon Llan (river) Beyond 500m: Farmland, Penllergaer Forest
North East	Immediate Vicinity: A48 road Within 500m: M4, Tir-fford Farm buildings, Farmland, Railway Line Beyond 500m: Pond, Felindre Park & Ride, Afon Llan, Green Plantation
East	Immediate Vicinity: Atlas AV & Persimmon Homes industrial / commercial units Within 500m: Penllergaer Business Park, Cilfwnwr Farm buildings and land Beyond 500m: Farm land, Griffiths Waste Management, Llangyfelach town and common, Afon Tinplate 'works'
South East	Immediate Vicinity: Car park, Woodland Within 500m: Farmland, pond. Beyond 500m: Farmland, Woodland
South	Immediate Vicinity: Car park, woodland Within 500m: Penllagaer Valley Wood Country Park, Afon Llan River Beyond 500m: Woodland, Lake, Disused mine, Port Mead (town)
South West	Immediate Vicinity: Unoccupied land Within 500m: Valley Wood Country park, Penllergaer village (residential properties) Beyond 500m: A483, farm land
West	Immediate Vicinity: Unoccupied Land Within 500m: Valley Wood Country Park, Lake, Visitor Centre, Civic Centre Beyond 500m: A483, A48, Penllergaer village (residential properties), Penllergaer Primary School
North West	Immediate Vicinity: Unoccupied land, A48 Within 500m: M4, Railway line, Afon Llan (river), Beyond 500m: M4 Swansea West Services, Penllergaer Forest, Tircoed village

The Natural Resources Wales flood zone database indicates that parts of the site lie within low to medium risk of flooding from surface water (due to drainage), meaning they have an annual chance of flooding between 1 in 1000 (0.1 %) and 1 in 30 (3.3 %).

## 2.2 Site Layout

The current site layout can be split into the following areas:

- Main Operational Building;
- Site support facilities;
- Chemical store;



- A deionised water plant;
- Extraction systems for emissions to atmosphere;
- Bulk material storage areas;
- Bulk gas storage area;
- Waste storage area;
- Effluent Treatment Plant;
- Offices; and
- Car parks and contractor's facility (external to the installation boundary).

### 3. Condition of the Land at Permit Issue

#### 3.1 Site History

The site remained an undeveloped greenfield site until the construction of Penllegaer Business Park in 1999. Due to the sites minimal development history, the likelihood for contamination is very low. Historical maps of the site have been reviewed and a summary of historical development is included below:

Table 2.1 Historical Land Use		
Date	Comments / Observations	Potential Contaminants
1876 - 1901	<p><u>Application Site</u> The site is undeveloped agricultural fields.</p> <p><u>Surrounding Area</u> The surrounding area is predominantly undeveloped agricultural fields. A road runs east-west to the north of the site. Woodland lies to the west, with a few residential properties of the village of Penllagear beyond. The farm of Cil-fwnwr is present to the southeast.</p>	None
1901 - 1936	<p><u>Application Site</u> No change</p> <p><u>Surrounding Area</u> An 'Old Quarry' is now marked on the maps to the south of the site.</p>	None
1936 - 1951	<p><u>Application Site</u> No change</p> <p><u>Surrounding Area</u> The village of Penllergaer is expanding.</p>	None
1951 -- 1969	<p><u>Application Site</u> A drain is marked in the north of the site.</p> <p><u>Surrounding Area</u> The road to the north of the site has become more substantial with embankments. (the A48)</p>	None
1971 - 1995	<p><u>Application Site</u> No change</p> <p><u>Surrounding Area</u> An additional road has been constructed to the north of the A48, including a junction to the northwest of site (the M4).</p>	None

The Application Site Condition Report (ASCR) (Ref: Environ 63-C8160 dated December 2004) submitted with the EPR permit application did not identify the presence of any potentially contaminative substances

or former activities associated with the historical land use within the installation boundary. A historical landfill was identified within the larger KSR site, but this is not covered by the permit boundary.

The ASCR is included in Annex B.

### **3.2 Site Activities**

KSR develop and manufacture application specific power modules, subsystems and a variety of customised voltage regulators, rectifiers and inverters for current alternators as well as new starter alternator designs.

These can generally be split into three basic categories:

- Engine cooling systems
- Alternator Regulators
- Refrigeration Compressors.

All of these products consist of copper or ceramic substrate or printed circuit board as an electronic platform. Solder paste is then screen printed to the substrate and electronic devices are then placed using sophisticated automatic placement machines onto the solder. The product is then heated in an oven which is sufficiently hot for the solder to become molten and then quickly cooled thus allowing the components to be mechanically and electrically fixed securely.

Substrates are then cleaned via an in-line wash system consisting of a solvent based solution and a de-ionised water rinse.

The product is then matched with a shell or housing (generally high temperature withstanding plastic). Electrical connections to the housings are then made using either soldered connection or bonded aluminium wire.

Various visual inspections and electrical tests are then carried out prior to packaging and shipping of the products.

Point source emissions to air take place via three exhaust stacks, one for process exhaust air and two for boiler emissions. The site has two sets of natural gas fired 1450 KW boilers to periodically provide Low Temperature Hot Water, only one of which is operational at a time.

Process waters are treated at the onsite Effluent Treatment Plant (owned by an outside contractor) prior to discharge to sewer under consent from Welsh Water.

Uncontaminated surface water run-off from the external hardstanding areas is discharged via interceptor to the Afon Llan.

A simplified process schematic is shown in Figure 3.1 below.

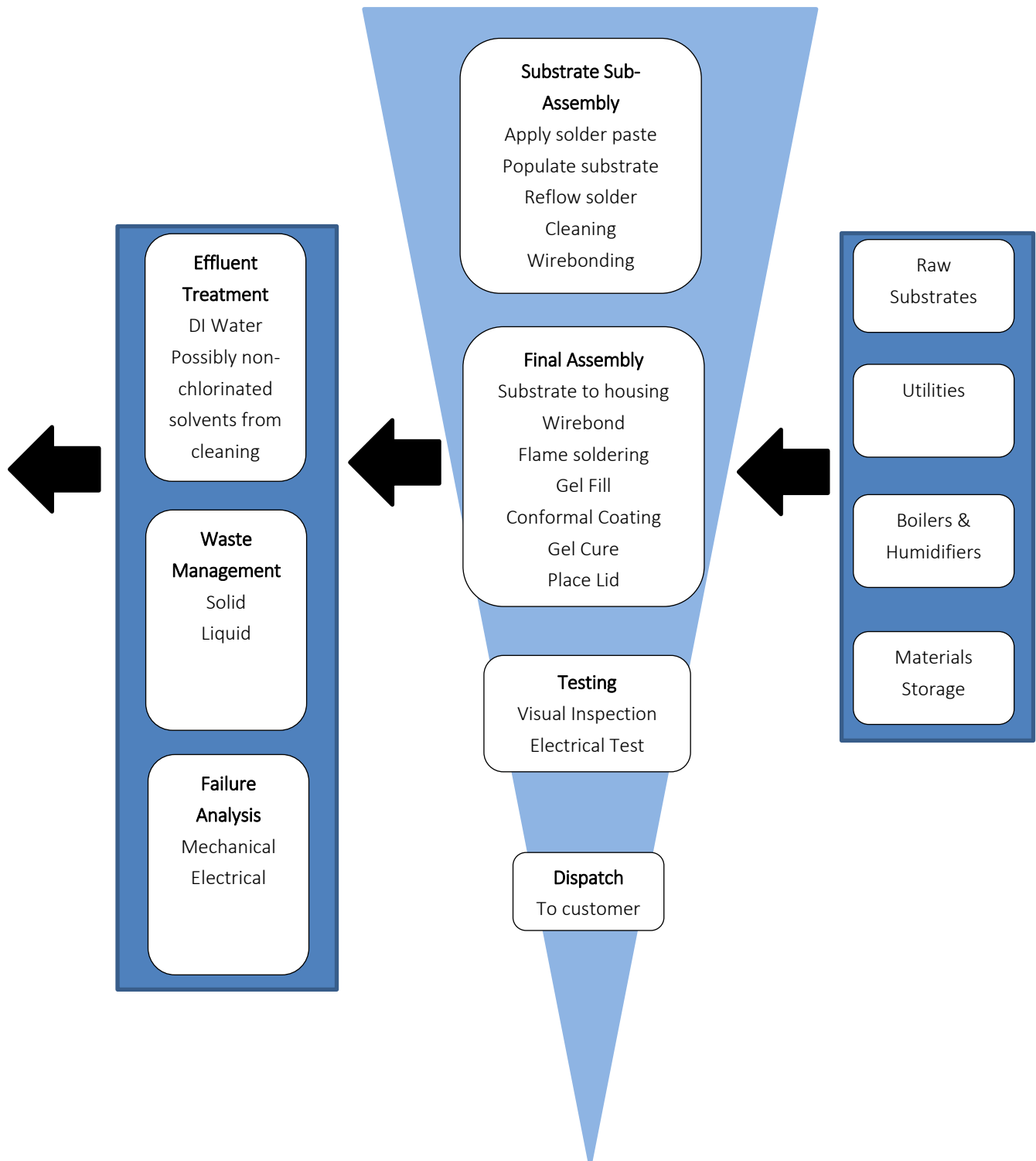


Figure 3.1: Production Process Schematic

### 3.3 Desk-based Research & Site Reconnaissance

Site reconnaissance and desk based research was undertaken by Environ in 2004 and is summarised in the ASCR provided in Annex B.

### 3.4 Potential Contaminant Sources

A number of small volumes of hazardous chemicals are kept onsite for use within the production process. A short summary of the potential contaminant sources on site is provided in Table 3.1 below. Further detail can be found in the ASCR in Annex B.

Table 3.1 Potential Contaminant Sources		
Contaminant	Storage	Fate
Fuel – Diesel	100 litre tank within brick bunded building and hardstanding floor	Supplies the firewater generator and back up generator
Chemicals (various generally low volumes)	IBCs stored on plastic trays or dedicated steel storage cabinets with internal drip trays within the indoor chemical store with secondary containment. Floor of indoor chemical store is coated with epoxy resin to prevent corrosion due to spillages	Used in production process
Effluent	HDPE Holding tanks in effluent treatment area with secondary containment in sealed concrete pit	Discharged via ETP to sewer
Hydrochloric Acid & Sodium Hydroxide	Bulk storage tank	Used in ETP as reagents and discharged to sewer
Waste	Waste storage areas – special waste area with cambered concrete floor (acting as a bund) and roof. Clearly labelled sealed containers (drums) are stored in the compound on bunded stillages and small volumes of chemicals within a storage cabinet with internal drip trays. Three lidded waste skips and four lidded bins located on hardstanding with raised curb.	Onward disposal or recycling

### 3.5 Previous Site Investigations

The following site investigation was undertaken to assess ground conditions prior to the development of the site in 1991:

- Penllergaer Feasibility Study Geotechnical Factual Report, WS Atkins, November 1991 (Ref: W5059/MJE/KW/SW – CW/RT-01).

The investigation consisted of a Phase I Desk Top Study followed by the excavation of 27 trail pits, 8 shell and auger boreholes and 5 rotary boreholes across a 42 acre area. At the time of the investigation the land on which the site is situated was utilised for agricultural purposes, though a recently closed private landfill was noted approximately 40m north east of the site. This was investigated and identified materials including domestic and construction waste.

The site was noted to be underlain by topsoil (likely removed during construction of the facility), glacial deposits consisting of sand, gravel and boulder clay, which was noted to be up to 2.5 m thick. Underlying these deposits were the Upper Coal Measures consisting of mudstone and sandstone up to a maximum proven depth of 35 mbgl.

Groundwater was identified within the glacial sand deposits and bedrock at depths of between 13.3 – 21.1 mbgl.

No visual or olfactory evidence of contamination was identified within the soil and groundwater. Soil samples were analysed for pH and sulphate with pH levels ranging between 4.2 – 7.4 and sulphate ranging from 100 – 1000 mg/kg. Groundwater from one borehole was analysed and found to have a pH of 6.5 and a sulphate concentration of 0.04 g/l.

For further details please see the ASCR provided in Annex B.

### 3.6 Conceptual Model

Based on the geological and environmental information collected on site, a conceptual model has been developed.

<p><b>Geology:</b></p>	<p>The entire site is constructed on concrete hardstanding with a landscaped embankment surrounding the site.</p> <p>According to the BGS Geology of Britain Viewer, the site is underlain superficial deposits comprising Glacial Till deposits formed in the Devensian. Bedrock Geology at the site comprises two units, predominantly the Swansea Member sandstone in the south, with a band of Swansea Member mudstones and siltstones in the centre and the younger Grovesend Formation mudstones, siltstones and sandstones in the north. Both sedimentary units were formed in the Carboniferous period.</p> <p>The BGS Lexicon of Named Rock Units describes each unit as: Swansea Member; <i>'green-grey, lithic arenites ("Pennant Sandstones") with thin mudstone / siltstone and seatearth interbeds, and mainly thin coals.'</i></p>
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	Grovesend Formation; <i>'Predominantly argillaceous, comprising mudstones and siltstones, with well-developed coals; minor lithic ("Pennant") sandstones; locally developed red mudstones in the type area.'</i>
Hydrogeology:	<p>The BGS Hydrogeological Map of South Wales 1:125,000, identified both the Swansea Member and the Grovesend Member as part of the South Wales Upper Coal Measures Formation which is hydrogeologically classified as a moderately productive aquifer – 'a regional, cyclic multi-layered aquifer with moderate yields from sandstones and many springs. Mine water quality poor but elsewhere reasonable.'</p> <p>The Glacial Till present on site is predominantly cohesive and therefore is not considered a water bearing unit, rather an aquiclude to the underlying formations.</p> <p>The site is not located in a Groundwater Source Protection Zones (SPZs).</p> <p>There are no groundwater abstractions within 1 km of the site.</p> <p>The site is considered to be situated in an area of moderate sensitivity with respect to groundwater resources due to the underlying aquifer. This sensitivity is mitigated somewhat by the presence of the Glacial Till which will potentially prevent downward migration of contaminants &amp; the absence of any groundwater abstraction (sensitive or otherwise) within 1km of the site. In addition, the site not located within a Groundwater Source Protection Zone.</p>
Hydrology:	<p>The nearest surface water bodies include a drainage network running around the north, west and south of the site. Approximately 400m to the north, the river Afon Llan flows east-west before turning to run north – south approximately 450 m to the northwest. Approximately 300 m to the west is a fish pond / lake associated with the Valley Wood Country Park with a waterfall at its southern end and the river Afon Llan flowing to the south. In addition, a smaller pond / lake associated with Cil-fwnwr farm is located approximately 300 m to the south east.</p> <p>There is one surface water abstraction within 1km of the Site. The abstraction is operated by 'Bellway Homes' for 'the abstraction of water from a pond and is located approximately 960m to the south of the site.</p> <p>The nearest river network is the Afon Llan flowing to the north and west of site and coming within 300m at its closest point. Natural Resources Wales have classified the river quality and its catchment as 'good'.</p> <p>The site is not within a Nitrate Vulnerable Zone (NVZ).</p>



	Natural Resources Wales flood zone database indicates that parts of the site lie within low to medium risk of flooding from surface water (due to drainage), meaning they have an annual chance of flooding between 1 in 1000 (0.1 %) and 1 in 30 (3.3 %).
<b>Potential Receptors / Pathways:</b>	Due to the entire site being mainly constructed on concrete hardstanding and the sealed drainage systems, there are is no potential for the migration of contaminants in soils or impacting groundwater.

The conceptual model is visually demonstrated in the Figure provided in the ASCR.

## 4. Permitted Activities

### 4.1 Operational Activities

The site is currently permitted under permit EPR/TP3035SG/V02 which allows KSR to use lead during their electronics manufacturing process under Schedule 1 Section 4.2 Part A1 (d):

- *Schedule 1, Section 4.2 Part A(1) (d) Unless falling within any other section, any manufacturing activity (other than the application of glaze or vitreous enamel) involving the use of, or the recovery of, any compound of any of the following elements-  
(vi) lead  
where the activity may result in the release into air of any of these elements or compounds or the release into water of any substance*

Lead is a component of the following raw materials used in the process for manufacturing alternator regulators and refrigeration compressors.

- Solder wire;
- Solder pellets (37 % Pb);
- Solder bar (37 % Pb); and
- Solder paste (35 % Pb).

Waste solder is recycled by the supplier.

The site is additionally permitted for associated activities as per the table below:

Table 4.1 Activities		
Activity listed in Schedule 1 of the PPC Regulations / Associated activity	Description of specified activity	Limits of specified activity
<b><i>Electronics Manufacturing</i></b> – Section 4.2 Part A(1)(d) Unless falling within another Section of this Schedule, any manufacturing activity, other than the application of a glaze or vitreous enamel, involving the use of any of the following elements or compound of those elements or the recovery of any compound of the following elements – lead, where the activity may result in the release into the air of any of	Use of lead in manufacture of electronic devices	From the receipt of raw materials to despatch of products and waste

those elements or compounds or the release into water of any substances listed in paragraph 13 of Part 2 of this schedule		
<i>Section 7 Part B (now defunct) Surface cleaning using halogenated VOCs which are assigned or need to carry the risk phase R40 where solvent consumption is greater than 1 tonne per year</i>	<i>Degreasing of components using dichloromethane (Risk Phrase R40) prior to between assembly operations</i>	<i>Receipt and storage of raw materials to dispatch of products to surface treatment activities</i>
<b><i>Directly Associated Activity</i></b>	Effluent handling and discharge	From collection of process effluent until discharge to sewer
<b><i>Directly Associated Activity</i></b>	Surface water handling, treatment and discharge	From collection in drainage systems to discharge via interceptors

## 4.2 Non-permitted activities undertaken

Without the use of lead within the manufacturing process, the operations at the site do meet any of the criteria which require a permit under EPR 2016.

## 4.3 Potentially Polluting Substances

Potentially polluting substances on site comprise the following:

- Fuel oils;
- Chemicals including reagents;
- Effluent; and
- Waste.

Further details are provided in Table 3.1, with specific chemical brands and tank inventory identified within Appendix D of the ASCR provided in Annex B.

These will remain on site subsequent to permit surrender. The site will maintain its ISO 14001 accredited Environmental Management System.

## 5. Changes to the Activity

There have been no changes to the activity, other than efficiency improvements, during the lifetime of the permit. The only significant change is the removal of lead from the manufacturing process which is driving this application for permit surrender.

## 6. Operational Controls (Measures taken to protect the land)

The majority of the site is constructed on concrete hardstanding, thereby limiting the potential pathways for contaminants to land and groundwater. Where soft landscaping is present on the site, this is present as a raised bund, around the car park and admin areas where no processes or operations are undertaken.

The site protection measures in place at the site during the duration of the permit included:

- Concrete hardstanding on all process and operational areas;
- Separate sealed drainage systems for foul and surface water including interceptors;
- Indoor processing areas and chemical storage areas have epoxy resin coated floors (to prevent corrosion in the unlikely event of spillage);
- Drainage channels within process building are constructed of acid resistant material;
- Secondary containments around external tanks (fuel and effluent);
- Recirculation of rainwater held within bunds through the effluent treatment plant;
- Waste storage compound is bunded and partially enclosed;
- All drums and waste skips are lidded, even when empty;
- All raw materials and wastes are segregated;
- Chemical storage is within dedicated steel storage cabinets with internal drip trays within the process building;
- Spill kits are located strategically around the site;
- Maintenance inspections – the following plant and infrastructure were subjected to routine inspections to ensure integrity:
  - Drainage systems and pipework
  - Bunds and hardstanding
  - Transformers
  - Generators
  - Tanks (fuel & effluent)

### 6.1 Environmental Management System, Policies & Procedures

The facility is operated under KSR's comprehensive Integrated Management System (IMS) which manages all environmental, health and safety aspects of the company and prescribes the risks, controls and minimum competence requirement for a majority of the activities carried out by the company. This system is OHAS 18001 and ISO14001 certified. The ISO 14001 certificate is provided in Annex D. An overview of the organisation of the Environmental Management System is provided in Annex F.

The site will continue to be operated under this externally accredited EMS following surrender of the permit.

## 7. Pollution incidents that may have had an impact on land and their remediation

There have been no leaks or spills recorded on site over the lifetime of the permit.

The following information on pollution incidents within 500 m of the site has been obtained from the ASCR provided in Annex B.

Table 6.1. Recorded Pollution Incidents within 500m of the Site

Incident Identification	Incident Date	Distance and Direction	Pollutant	Details
-	August 1991	425m W	Chlorinated water onto a road at a motorway service station	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

The identified pollution incident is not considered to have a potential to have impacted the site.

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## 8. Soil, Gas & Water Quality Monitoring

There have been no requirements to monitor soil, gas or groundwater throughout the lifetime of the permit. All site activities have been carried out upon concrete hardstanding, with the majority within the internal process area and presents a very low risk to the environment.

In addition, continuous monitoring of the pH and quarterly testing for copper, zinc, chromium, nickel, lead, COD, sulphate and total suspended solids of the effluent discharged to sewer is undertaken and no breaches of the Welsh Water Discharge Consent have been identified.

## 9. Decommissioning & Removal of Pollution Risk

### 9.1 Site Closure Plan

The Site Closure Plan for the site which was submitted with the original application has been provided in Annex E. As the operations on site will continue following permit surrender the Site Closure Plan has not been implemented at this time and will be kept as a live document pending cessation of operations and decommissioning at the site.

The principal objectives of the site closure plan remain the same and these are:

- Removal of all potentially polluting materials from the site;
- Remediation of any soil & groundwater contamination that has been caused by the activities associated with the installation (not applicable at this time);
- Removal of all waste materials and redundant plant and equipment;
- Validation testing of soil and groundwater (not applicable at this time); and
- Handover of a cleared building and site to the site owner / new occupier.

On surrender of the permit the site General Manager shall retain all environmental information pertaining to the business.

The site has been and will continue to be operated and managed in such a way that no escape of potentially polluting materials has or will occur. In addition, should such incidents occur, any resulting groundwater or soil contamination would be dealt with as part of the incident response.

For further details on plant decommissioning and site closure please see the Site Closure Plan in Annex E.

### 9.2 Decommissioning

Of the plant, equipment and infrastructure present on site, only production line SL1 requires decommissioning, as the site operations will continue. This was undertaken in 2015 in accordance with the decommissioning procedure outlined within the Site Closure Plan provided in Annex E.

In addition, a CCTV drainage survey has been undertaken on both the foul and storm drains in March 2016 and a report on the condition of the effluent tank was undertaken in 2015 to assess their integrity during the lifetime of the permit. Both are provided in Appendices G & H respectively.

### 9.3 Site Inspection

A site walk over inspection was carried out by Sol Environment in May 2017 to inspect all areas of the site and identify potential pollution sources and pathways to determine whether there was any evidence of failure of any pollution prevention measures on the site.



All plant and equipment is kept in impeccable condition and no visual evidence of spills or leaks were identified throughout the site. Where required bunds were evident and in good condition. The impermeable concrete hardstanding across site was observed to be in good general condition.

An Effluent Tank is located in the south west corner of the site, during the walkover the tank and its bund were noted to be in generally fair condition. A more detailed Effluent Tank Condition Report was undertaken by FSG in 2015 and this is provided in Annex H.

Selected site photographs are provided in Annex J.

## 10. Reference Data and Remediation

Given the recent site history, low pollution risk of the site and the previous development history no site pollution is considered present and therefore no physical remediation is required.

## 11. Statement of Site Condition

Based on the finding of the site closure inspection and investigation process there is no evidence to suggest any contamination has occurred during the permitted lifetime of the installation.

All areas of the site with the potential for pollution to have arisen have been thoroughly inspected.

No pollutant linkages associated with the permitted activities have been identified.

All permitted pollutant risks associated with the site have now been removed.

On this basis the site meets the requirements of '*Satisfactory State*' and '*Removal of Pollution Risks*' as defined by the EA ERP Guidance Note H5.

## Annex A: Figures

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## Annex B: Application Site Condition Report

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## Annex G: Drainage Integrity Survey (Foul & Storm)

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## Annex H: Effluent Tank Survey

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## Annex I: Weekly Check Forms

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## Annex J: Site Inspection Photographs