

**EPR Permit Ref: BS3905IP. Tata Steel Strip Products UK, Llanwern Works  
Re: PPC Permit Condition 4.1.5 – “fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Environment Agency (Natural Resources Wales) detailing such releases and the measures taken to reduce them”**

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## **Introduction**

This report serves to identify & assess the fugitive release potential associated with the Llanwern Steelworks operations, in line with the ‘Fugitive Emissions’ section of the Environment Agency Guidance document: ‘H1 Annex A – Amenity & Accident Risk From Installations and Waste Activities’. Where applicable an Aspect score is given, which is an indication of overall risk, as evaluated by the Llanwern site ISO14001 Aspects & Impacts evaluation process

26<sup>th</sup> January 2018

| Hazard                                   | Receptor                                                | Pathway                                 | Risk Management                                                                                                                                                                              | Probability of Exposure                                                                                                             | Consequence                                                                                                                                          | What is the Overall Risk                                                        |
|------------------------------------------|---------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| What is the potential to cause harm?     | What is at risk? What do I wish to protect?             | How can the hazard get to the receptor? | What measures will you take to reduce the risk. If it occurs – who is responsible for what?                                                                                                  | How likely is this contact?                                                                                                         | What is the harm that can be caused?                                                                                                                 | What is the risk that still remains? The balance of probability and consequence |
| <b>[1] To Air</b>                        |                                                         |                                         |                                                                                                                                                                                              |                                                                                                                                     |                                                                                                                                                      |                                                                                 |
| Dust from roads                          | Local roads, community, adjacent on/off site business's | Wind blown dust                         | Provision of Road weepers and / or Water Suppression on unmade roads.<br>Tarmac of commonly sed roads<br><br>The LL complaints & investigation procedure would apply in event of an incident | LOW<br><br>It is possible that dust may be mobilised by vehicles using unmade roads                                                 | LOW<br><br>Nuisance, and potential harm from respirable dusts, however remoteness & quantities involved, mean this impact is considered minimal      | LOW                                                                             |
| Particulates from Slab Yards operation   | Local roads, community, adjacent on/off site business's | Wind blown dust                         | Listed as Env Aspect within EMS and control procedure in place<br><br>However, Aspect has been suspended due to mothballing                                                                  | LOW<br><br>At this stage, as the hot mill has been mothballed, the slab yard is not in use therefore no exposure                    | MED<br><br>There is potential for appreciable dust release if not controlled.                                                                        | LOW                                                                             |
| Oil Mist from the Cold Rolling operation | The surrounding area, including:, land & water          | Atmospheric dispersion                  | An oil separator has been in use since 2006.<br><br>The operation & associated controls are owned by the 'Continuous Mill & Further Process' dept                                            | LOW<br><br>The Cold Mill oil separator has a very basic principle of operation, and so it is very unlikely that a failure can occur | MED<br><br>A release of oil to atmosphere could likely cause a noticeable level of contamination to immediate surroundings, including land and water | LOW<br><br>Aspect Score 1.78 (Significant due to scoring criteria)              |

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| Acid (storage) vapour release                         | Persons & plant [in close proximity]                                  | Vapour cloud arising from spillage, or tank filling (minimal release) | Sealed Tanks Scheduled [SAP] Maintenance<br><br>Works area responsible: 'Pickle Lines'                                                                                                           | LOW<br><br>Exposure of any appreciable quantity would only occur in the event of a serious spillage type scenario i.e. not a likely occurrence. Also it would likely affect the local area only | LOW<br><br>The consequence to persons is High, but in the context of Environmental Risk, this is considered to be Low             | LOW                                                                               |
| Acid (pickling) vapour release                        | Local community, adjacent on / off site business's, and nearby SSSI's | Atmospheric dispersion                                                | Acid fume is collected via extraction system, and scrubbed prior to point source discharge<br>Monitoring for HCl is conducted on a quarterly basis<br><br>Works area responsible: 'Pickle Lines' | HIGH<br><br>This item relates to a release from point source(s) outside of routine parameters. This has been an issue historically, but has been improved in recent years                       | MED<br><br>Dispersion modelling has not identified a significant impact, however potential consequences are noted in the rating   | HIGH<br><br>Aspect Score 2.00 (Significant due to score & Risk Factors criteria)  |
| Metallurgical fumes from Scalebreaking at Pickle Line | Nearby community, and general air quality                             | Atmospheric dispersion                                                | Atmospheric dispersion Bag Filter plant installed in 2009, and the emissions monitored as per EPR requirements<br><br>Works area responsible: 'Pickle Lines'                                     | LOW<br><br>No plant failure, or other compliance issues to date                                                                                                                                 | LOW<br><br>Prior to fitment of abatement plant, the dust impact was limited to immediate area only, and not of great significance | LOW<br><br>Aspect Score 0.44 (non-significant)                                    |
| Metallurgical fumes from Strip Welding – Cold Mill    | Nearby community, and general air quality                             | Atmospheric dispersion                                                | Bag Filter plant in operation, and the emissions monitored as per EPR requirements<br><br>Works area responsible: 'Cold Mill'                                                                    | MED<br><br>No recent plant failure, or other compliance issues                                                                                                                                  | LOW<br><br>Similar to above, impact limited to immediate area only                                                                | LOW<br><br>Aspect Score 1.33 (Significant due to being a Permitted release point) |

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| Air Conditioning –<br>inadvertent release of<br>gas                                                                      | Established as ODS,<br>and GHG         | Atmospheric<br>dispersion     | Limited inventory of F'<br>Gas systems<br>Frequency leak checks<br>& maintenance carried<br>out by trained<br>personnel as per<br>documented<br>requirements<br><br>Site-wide units looked<br>after by: 'Energy &<br>Utilities'                                                                                                                                                      | HIGH<br><br>Units are topped-up<br>on occasion, indicating<br>small losses can occur                                                    | LOW<br><br>Overall impact is<br>considered to be Low<br>based on capacities of<br>units in use                                                              | MED<br><br>Aspect Score 1.33<br>(Significant due to<br>Hazardous nature)                                   |
| <b>[2] To Water</b>                                                                                                      |                                        |                               |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                         |                                                                                                                                                             |                                                                                                            |
| Pollutants released to<br>effluent system<br>Numerous storage<br>facilities of PPL<br>(Potentially Polluting<br>Liquids) | Severn Estuary via W1<br>consent point | Effluent & Drainage<br>System | <ul style="list-style-type: none"> <li>Environmental<br/>Contingency Plan<br/>in effect</li> <li>Storage facilities<br/>identified in<br/>ISO14001<br/>system, including<br/>controls</li> </ul> Owned by respective<br>works area                                                                                                                                                   | LOW<br><br>Incidents of serious<br>tank<br>and / or bund failures,<br>are not a frequent<br>occurrence, but not<br>unknown historically | HIGH<br><br>Some chemicals<br>(notably acids and<br>oils) have the potential<br>to cause appreciable<br>harm to the<br>environment                          | MED<br><br>[PPL] Aspect Score<br>2.67<br>(Significant due to<br>overall score, and<br>impact<br>potential) |
| Pollutants (pH, oil &<br>solids) released to<br>effluent system<br><br>From Process                                      | Severn Estuary via W1<br>consent point | Effluent & Drainage<br>System | <ul style="list-style-type: none"> <li>Process effluents<br/>have local<br/>abatement<br/>systems</li> <li>Monitoring takes<br/>place on both<br/>continuous &amp;<br/>daily basis</li> <li>Environmental<br/>Contingency Plan<br/>in effect</li> </ul> Classed as a 'General'<br>site aspect, although<br>the respective areas<br>are responsible for<br>local abatement<br>systems | HIGH<br><br>There have been a<br>number of instances<br>whereby out-of<br>specification effluent<br>samples have had to<br>be notified  | MED<br><br>Impact considered to<br>be limited due to<br>nature of receiving<br>waters, although oil<br>(for example) could<br>have a more serious<br>impact | HIGH<br><br>Aspect Score 4.00<br>(Significant due to<br>overall score, and<br>impact potential)            |

| [3] To Land                                                                       |                                                  |                                                                    |                                                                                                                                                                                                                 |                                                                                                                                                                        |                                                                                                                                                                |                                                                                                                          |
|-----------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Unauthorised Waste Deposition to Land                                             | Land & Groundwater /Surface-Water contamination  | N/A                                                                | <ul style="list-style-type: none"> <li>Control of wastes in accordance with Waste Management guidelines &amp; procedures</li> <li>Works Protection function</li> </ul> <p>Classed as a 'General site aspect</p> | <p>MED</p> <p>Instances of Fly-Tipping have been known, in &amp; around Tata land – and have been investigated and / or reported to Local Authority as appropriate</p> | <p>MED</p> <p>Impact considered to be limited due to nature of receiving waters, although oil (for example) could have a more serious impact</p>               | <p>MED</p> <p>Aspect Score 4.00 (Significant due to overall score, legislative considerations, and impact potential)</p> |
| Theft / vandalism related releases e.g. draining of transformers to remove copper | Land & Groundwater / Surface-Water contamination | Direct discharge to ground, and associated ground / surface waters | Security arrangements are in effect for the site, with specific focus on reducing such occurrences                                                                                                              | <p>MED</p> <p>A number of incidents would suggest that another event could occur in the future</p>                                                                     | <p>LOW</p> <p>Some transformer units are quite large, and can contain appreciable quantities of oil, however site waters have in built protection measures</p> | <p>LOW/MED</p>                                                                                                           |