

EMS- CLIMATE CHANGE ADAPTATION

Kings Court Beacon Road, Poulton Industrial Estate, Poulton-le-Fylde, FY6 8JE

Ashvin Metals Ltd

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1 Background

1.1 Note

1.1.1 This document includes a summary of Climate Change Adaptation measures which have been integrated into the site EMS, informed by risk assessment.

1.1.2 The Met Office UK Climate Projections (UKCIP) has developed scenarios of climate change, which are summarised as:

- Warmer, wetter winters
- Hotter, drier summers
- Increased frequency and intensity of extreme weather (storms, droughts, intense downpours)

1.1.3 Reflecting these, the UK Climate Change Risk Assessment (CCRA) identifies a number of priority risk and opportunities.

1.1.4 The following sections outline specific mitigation in relation to managing risks and adapting to climate change at the installation, with reference to the risk assessment guidance on the government website in relation to the chemicals sector.

1.1.5 Impacts from climate change were considered in detail as part of the permit application process for the installation. This information has been integrated into this EMS document in the relevant sections, reviewed and updated as applicable.

2 Summer Daily Maximum Temperatures

2.1 Impacts of Rising Summer Temperatures

2.1.1 The summer daily maximum temperatures may be around 70C higher compared to average summer temperatures now, with the potential to reach extreme temperatures as high as over 400C with increasing frequency based on today's values.

a) Impact 1: Potential increase in temperature may result in expansion and stress of plant, pipework and fittings. The site utilises the following mitigation:

- Regular preventative maintenance and inspections for all plant and machinery to ensure in good condition and good working order.
- The plant at the site operates at temperatures in excess of 100 degrees Celsius, hence any rise in ambient temperature due to climate change is likely to have a negligible effect on the amount of additional energy which it is necessary to input to the cooling system in order to maintain its effective operation.
- Based on the design of the plant the outer skin of the engines of the plant is approximately 50 degrees Celsius or less.
- Based on the design of the buildings given the buildings are open fronted it is anticipated that there will be no requirement for cooling during the summer months either at present or as a result of any average or extreme rises in temperatures as a result of climate change.

b) Impact 2: There could be an increase in dust emissions from the site. The site utilises the following mitigation:

- The waste types that are accepted at the site are not associated with dust emissions.
- The site has access to mains water and hoses located on the site which can be used to dampen down any stockpiles.
- Good housekeeping is maintained on site at all times.

c) Impact 3: There could be an increase in odour from the site. The site utilises the following mitigation:

- Due to the waste types accepted at the site the likelihood of odour becoming an issue is highly unlikely.

3 Winter Daily Maximum Temperatures

3.1 Impacts of extreme winter temperatures

3.1.1 The temperatures could be 40C more than the current average with the potential for more extreme temperatures, both warmer and colder than present.

a) Impact 1: There could be an increased risk of pipework ruptures. The site utilises the following mitigation:

- The site will mitigate this through regular inspection and preventative maintenance of the site, plant and equipment, including pipework. Pipework will be suitably insulated where there is a risk of freezing.

b) Impact 2: Frozen onsite roadways may restrict access for staff and emergency vehicles. The site utilises the following mitigation:

- Site management will mitigate this through regular inspection of site surfaces. Grit is always available onsite to ensure that the site remains safely accessible for staff and emergency vehicles.

c) Impact 3: There could be damage to site infrastructure from snow-loading over extended periods. The site utilises the following mitigation:

- The majority of site infrastructure is contained within the building which provides mitigation from snow-loading.

4 Daily extreme rainfall and average winter rainfall

4.1 Impacts of extreme rainfall events

4.1.1 Daily rainfall intensity could increase by up to 20% on today's values. Average winter rainfall may increase by over 40% on today's averages.

a) Impact 1: Flooding could lead to increased site surface water and flash flooding. The site utilises the following mitigation:

- The site is served by dedicated drainage system, which has been designed to manage a 1 in 100-year flood event (inclusive of appropriate climate change allowance) and therefore is designed to manage the potential increase in rainfall associated with climate change.
- The surface drainage system is regularly inspected for integrity.
- In particular SITE B (southern site) has 3m in height concrete panel walls which would prevent any flooding from the watercourse located to the south.
- The site can be accessed from the A586 and Beacon Road from the north. The A586 comprises a major arterial route from which the M55 can be accessed. The site is therefore accessible from multiple directions via major arterial routes, priority to which is likely to be allocated by Highways England when constructing resilience measures to mitigate the effects of climate change.

b) Impact 2: The site may experience reduced access or egress due to site flooding. The site utilises the following mitigation:

- In the event of reduced access/egress due to flooding, site management will make a decision on whether to reduce operations at the site, having consideration to health and safety requirements.

5 Sea Level Rise

5.1 Impacts of sea level rise.

5.1.1 Sea level rise could be as much as 0.6m higher compared to today's level.

a) Impact 1: If located near the coast a site could experience increased risk of flooding and associated impacts and corrosion due to increase in saltwater spray. The site utilises the following mitigation:

- In the event that the site is inundated with water or considered to be under threat of being Inundated with water, barge boards and sandbags will be placed as necessary to prevent insofar as possible water ingress into the building.
- As the floor level of the building of approximately 6-7m AOD will be above the projected mean sea level taking into account the most extreme projections for the lifetime of the site, it is likely any water inundating the site during a sea flooding event will return to the sea rather than migrate inland, therefore the risk posed to surface water quality as a result of the inundation of the site is negligible.
- Sensitive materials will be moved or protected as necessary so as to prevent their coming into contact with flood water.
- Plant that is present on the site including mobile and fixed is painted and galvanised therefore unlikely to be a significant impact on the rate of corrosion due to salt spray at present or in the future due to any minor encroachment of the mean high-water mark between its current position and the adjacent sea defences.
- No potentially contaminative materials with a high leaching potential will be stored at the site. No stockpiling or storage of powdered, cohesive or granular materials is undertaken within areas external to the main building or external weatherproof structure that is used for storage of product.
- In the event of the failure of flood defences, the site is likely to inundate from the east. The operator will receive flood alerts and warnings from the Environment Agency. In the event of a flood alert or warning, a watching brief will be maintained for any breach in the flood defences to the south of the site.

- In the event that a breach in the flood defences to the south of the site is observed, the plant will be shut down and made safe insofar as possible, the building will be sealed, and the site will be evacuated via Beacon Road and the A586 away from the direction of inundation from which the wider highways network can be accessed.

6 Drier Summers

6.1 Impacts of drier summers

6.1.1 Summers could see potentially up to 40% less rain than now.

a) Impact 1: Potential increased use or reliance on mains water for dust suppression and cleaning. The site utilises the following mitigation:

- No water is required for the site's operations and therefore water use on site is negligible, used within the office and welfare facilities and for dust suppression if needed.
- Dust suppression is not routinely required given the waste types accepted on the site.
- In order to optimise water efficiency at the site, the operator reviews water use every four years.
- Opportunities to save water or exploit alternative sources are under constant review.

7 River Flow and storms

7.1 Impacts of increased river flow and storm events

a) Impact 1: Reduced dilution available in receiving watercourse for discharge of effluent, resulting in increased pollution.

- Clean surface water discharges are in accordance with the site Environmental Permit. Discharges to meet limits within receiving treatment facility which serves the wider industrial estate.

7.1.2 Storms could see a change in frequency and intensity. The unique combination of increased wind speeds, increased rainfall, and lightning during these events provides the potential for more extreme storm impacts.

7.1.3 Storms and high winds could damage building structures with increased potential for fugitive emissions.

- The building at the site was constructed to meet latest standards.
- Integrity of structures will be subject to periodic assessment/review. If deemed necessary, reinforcements will be included.