

ENVIRONMENTAL RISK ASSESSMENT

Increased Product Permit Variation Application

Prepared for: Muller UK & Ireland Group LLP

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1.0 INTRODUCTION

SLR Consulting Limited (SLR) has been instructed by Muller UK & Ireland Group LLP (Muller) to prepare an application for a substantial variation of the existing Environmental Permit (EP), reference EPR/SP3200SY for the Telford Facility, Donnington Wood Business Park, Granville Road, Telford, TF2 7GJ (the site), for submission to the Environment Agency (EA).

The site is currently permitted for the operation of a Medium Combustion Plant. The installation is a Schedule 25B activity as described in the Environmental Permitting (England and Wales) (Amendment) Regulations (EPR) 2018.

Muller intends to increase production at the site by 21%. This Environmental Risk Assessment (ERA) is a simple assessment of the risks to the environment and human health that may be associated with the increase annual throughput of the Telford manufacturing facility.

1.1 Methodology

This ERA is an assessment of the risk to the environment and to human health that may be associated with the proposed variation at the site.

The assessment has been completed in accordance with the Environment Agency (EA) Technical Guidance 'Risk Assessments for your Environmental Permit' dated April 2022. The aim of the assessment is to identify any significant risks and to demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

This ERA uses the following approach for identifying and assessing the risks from the proposed variation to the existing permitted operations:

Step 1 Identify and consider risks for your site and the sources of the risks.

Step 2 Identify the receptors at risk from your site.

Step 3 Identify the possible pathways from the sources of the risks to the receptors.

Step 4 Assess risks relevant to your specific activity and check they are acceptable and can be screened out.

Step 5 State what you will do to control the risks if they are too high.

Step 6 Submit your risk assessment as part of your EP application.

The following sources of information have been used in the preparation of this ERA:

- Multi Agency Geographical Information for the Countryside¹ (MAGIC) map.
- Landmark Envirocheck Report (reference 302396227_1_1 dated 10 October 2022).
- British Geological Survey².
- Environment Agency. Flood map for planning³

Section 2.0 of this document is a screening step to identify the receptors at risk as part of this assessment.

Section 3.0 identifies people or parts of the environment that could be harmed (at potentially significant risk) by the activity.

¹ Multi-Agency Geographical Information for the Countryside Map, available at www.magic.defra.gov.uk, accessed in May 2022.

² British Geological Survey, available at <http://www.bgs.ac.uk>, accessed May 2022.

³ Flood map for planning, available at <https://flood-map-for-planning.service.gov.uk/>, accessed June 2022

The guidance⁴ requires all receptors that are near the site and could reasonably be affected by the proposed activities to be identified and considered as part of the ERA. Therefore, for the purpose of this report:

- A 2km radius from the site's EP boundary has been adopted in reviewing potentially sensitive receptors designated as RAMSAR, SAC, SPA, Marine Potential SPA and SSSIs and sensitive receptors of ecological importance along with features such as sites of cultural and natural heritage; and
- A radius of 500m from the site's EP boundary has been adopted for all other potentially sensitive local receptors (for example, residential, commercial, industrial, agricultural and surface water receptors).

Section 4.0 of this document presents the assessment and demonstrates that any risks of pollution or harm will be mitigated to manage the risk.

This ERA should be read in conjunction with the following documents submitted with this EP variation application:

- Section 1 - Non-Technical Summary (SLR Ref. 410.V62639.00001_NTS).
- Section 2 - Application Forms:
 - Part A, C2, C3, C6 and F1.
- Section 4 - Best Available Techniques and Operating Techniques (SLR Ref. 410.V62639.00001_BATOT).
- Section 5 - Air Emissions Risk Assessment (SLR Ref. 410.V62639.00001_AERA).
- Section 6 - Surface Water Risk Assessment (SLR Ref. 410.V62639.00001_SWRA).
- Section 7 - Site Condition Report (SLR Ref. 410.V62639.00001_SCR).
- Section 8 - Drawings:

The following drawings accompany the Environmental Permit variation application:

- Drawing 001 - Site Location;
- Drawing 002 - Site Layout and EP boundary;
- Drawing 003 - Site Setting Plan – Local Receptors; and
- Drawing 004 - Site Setting Plan – Cultural and Natural Heritage.

2.0 IDENTIFYING THE RISKS

Step 1 is a screening step to identify potential risks to the environment from the proposed permit variation. The following are generally considered to require assessment for an Installation:

- any discharge;
- accidents;
- odour;
- noise and vibration;

⁴ <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit> accessed May 2022

- uncontrolled or unintended emissions; and
- visible emissions.

Based on the proposed changes on site there will be no point source emissions to groundwater or land and therefore, for the purpose of this ERA these elements have not been considered.

The generation of fugitive emissions (dust, pests and litter), noise, odour and environmental accidents resulting from the proposed variation have been considered within the ERA.

A Best Available Techniques and Operating Techniques (BATOT) assessment has also been included in the EP variation application, to address best available techniques to minimise the impacts on the environment, document reference 410.V62639.00001_BATOT.

Point source emissions to air have been considered in the Air Emissions Risk Assessment (AERA), document reference 410.V62639.00001_AERA.

A Surface Water Risk Assessment has been included in the EP variation application, to consider discharging hazardous pollutants to sewer, document reference 410.V62639.00001_SWRA.

A site condition report has been included in the EP variation application to consider the baseline ground conditions in the area of the proposed EP boundary extension, document reference 410.V62639.00001_SCR.

3.0 SITE SETTING AND RECEPTORS

Step 2 identifies people or parts of the environment that could be harmed (at potentially significant risk) by the activity. This section identifies the site setting and potentially sensitive receptors in the vicinity of the site.

3.1 Site Setting

The site is centred on National Grid Reference SJ 71170 12140. The site, which is located approximately 3.75km northeast of Telford, is within an industrial area. To the north of the site lies Granville Road, beyond which lies a residential area (approximately 25m north). Commercial premises lie to the east, south and northwest of the permit boundary. An additional residential area lies approximately 35m to the west beyond Redhill Way. Parcels of woodland lie to the north, east, south and west of the site boundary. There is a 'detention basin' filled with uncontaminated rainwater located in the eastern portion of the site.

The site location is illustrated on Drawing 001. The site layout and EP boundary is shown on Drawing 002, local receptors are illustrated on Drawing 003, and Drawing 004 shows the Cultural and Natural Heritage.

A summary of the immediate surrounding land use is provided in Table 1.

Table 1
Immediate Land Uses Surrounding the Site

Direction	Land-Use
North	Granville Road, beyond which is a small residential area (approximately 25m north of the EP boundary but 70m north of the nearest onsite building) and vegetated open space. A petrol station is located 117m northwest. Residential properties approximately 250m north.
East	Commercial premises with vegetated open space beyond.
South	Commercial properties with woodland and vegetated open space beyond.

Direction	Land-Use
West	Redhill Way (A4640) with residential housing (approximately 35m west of the EP boundary but 115m west of the nearest onsite building) and woodland beyond.

3.1.1 Commercial and Industrial

Commercial and industrial premises lie to the east, south and west of the site boundary. Including the following premises in the immediate vicinity of site:

- Maiden A J & Son lies approximately 40m south;
- Tactree, Keim Mineral Paints and Wire Electric Supplies lie approximately 150m south;
- Lyreco UK lies approximately 45m east; and
- St. Georges Industrial Estate & St. Georges Court lies approximately 170m northwest.

3.1.2 Local Transport Network

Granville Road lies approximately 30m north and Redhill Way (A4640) approximately 30m west of the site boundary. Additionally, Donnington Wood Way lies approximately 75m north and Wrockwardine Wood Way lies approximately 120m northwest of the site boundary.

3.1.3 Surface Water Features

A detention basin is located onsite to collect uncontaminated rainwater which is subsequently discharged from emission point W3. A review of MAGIC map reveals that three ponds are identified within 500m of the site boundary. The ponds are located approximately 355m east; 370m east and 390m southwest respectively. A number of streams are also located in the vicinity of site, located approximately 390m east; 430m northeast and 550m southeast respectively.

3.1.4 Open Space

Areas of open space lie to the north and south of the site, the closest of which lies approximately 40m south of the site boundary. An additional area of open space lies approximately 75m north of the site boundary.

3.1.5 Woodland

Several parcels of woodland lie within 500m of the site boundary. The closest of which lies adjacent to the east of the site. Additional parcels of woodland lie approximately 40m north, 120m west and 220m south of the site boundary.

3.1.6 Residential

The closest residential properties lie approximately 25m north of the EP boundary, beyond Granville Road. It is noted that these properties are approximately 70m away from the nearest onsite building. Additional residential properties lie approximately 35m west (approximately 115m west of the nearest onsite building) and approximately 250m north beyond Donnington Wood Way.

3.1.7 Recreational

Four recreational sites lie within 500m of the site boundary, all of which are parks. The closest of which lies approximately 215m west of the site.

3.2 Geology, Hydrogeology and Hydrology

3.2.1 Geology

A search on the British Geological Survey (BGS) Map identifies the site as having the following strata:

- Superficial Till, Devensian – Diamicton, formed up to 2 million years ago in the Quaternary Period in environments previously dominated by ice age conditions; and
- Bedrock Etruria Formation of mudstone, sandstone and conglomerate, formed approximately 308 to 319 million years ago in the Carboniferous Period in environments dominated by rivers.

3.2.2 Hydrogeology

The MAGIC map identifies the Etruria Formation bedrock at the site as a Secondary A Aquifer, which is defined as:

“Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.”

The Superficial Till, Devensian – Diamicton Deposits are defined as a Secondary (undifferentiated) aquifer.

The MAGIC map indicated that the site does not lie within any Source Protection Zones.

3.2.3 Hydrology

The Secondary Bedrock Aquifer – is classified as having High Vulnerability in the Envirocheck report. Onsite ‘detention basin’ used for the storage of uncontaminated rainwater.

3.2.4 Flood Zone

The Flood Map for Planning identifies that the site lies in flood zone 1, areas with ‘a low probability of flooding from rivers and the sea’ (Figure 1).

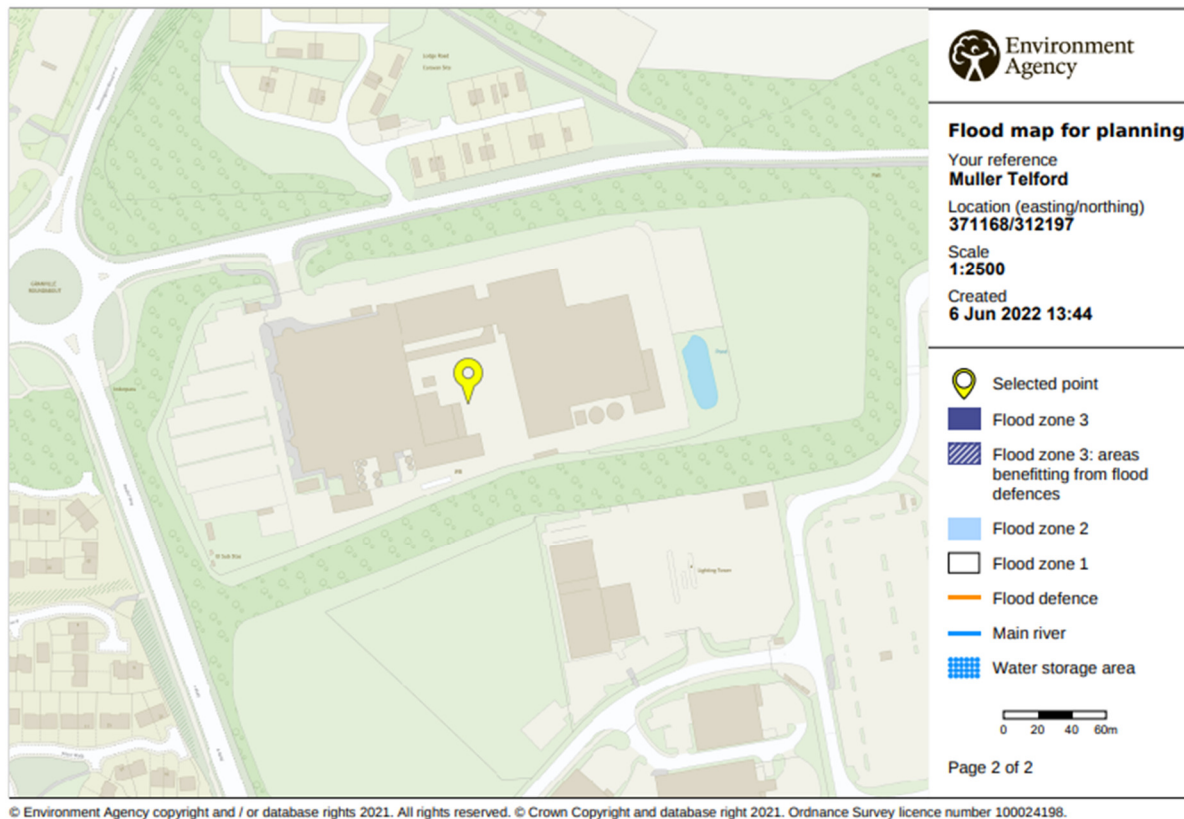


Figure 1 Flood Zones within the Site Boundary

3.3 Ecology

3.3.1 Internationally Designated Sites

Site of Special Scientific Interest (SSSI)

A review of MAGIC map identified one SSSI's within a 2km radius of the site boundary. Muxton Marsh lies approximately 940m northeast of the site boundary.

Other Receptors

A review of MAGIC map confirms that none of the following are situated within 2km of the site boundary:

- Special Areas of Conservation;
- Special Protection Areas;
- RAMSAR; or
- Marine Special Protection Areas.

3.3.2 Nationally/Locally Designated Sites

Local Nature Reserves

A review of MAGIC map identified the Granville Country Park Local Nature Reserve lies approximately 280m south.

Other Receptors

A review of MAGIC map confirms that none of the following are situated within a 2km radius of the site boundary:

- RSPB Reserves;
- Areas of Outstanding Natural Beauty (AONB);
- National Nature Reserves (NNR);
- Ancient Woodland;
- Biosphere Reserves; and
- National Parks.

3.4 Cultural Heritage

Listed Buildings

A review of MAGIC map confirms that 19 Listed Buildings lie within 2km of the site boundary all of which are Grade II listed. The closest Listed Building, Southern Wash House lies approximately 520m north of the site boundary.

Scheduled Monuments

A review of MAGIC map confirmed that 5 Scheduled Monuments lie within 2km of the site boundary:

- Headgear at Grange colliery lies approximately 1km southeast;
- Site of pumping engine at Muxton Bridge colliery lies approximately 1.34km northeast;
- Roman camp and signal station lies approximately 1.46km southeast;
- Small Roman town, Roman road called Watling Street and a mansion lies approximately 1.75km southeast; and
- St Leonard’s Priory immediately adjacent to the Church of St Mary and St Leonard, Wombridge lies approximately 1.92km west.

Other Receptors

A review of MAGIC map confirmed that none of the following are situated within 2km of the site boundary:

- registered parks and gardens;
- registered battlefields; or
- World Heritage sites.

3.5 Identified Receptors

Table 2 and Drawings 003 and 004 identified receptors which are considered to be potentially sensitive and could reasonably be affected by activities at the site.

**Table 2
Identified Receptors**

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from EP and Site Boundary at closest point (in metres)
Local receptors located within 500m of the EP boundary as shown on Drawing 003			
Woodland	Woodland	East	Adjacent
Redhill Way (A4640)	Local Transport Network	West	Adjacent
Granville Road	Local Transport Network	North	Adjacent
Woodland	Woodland	North	25

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from EP and Site Boundary at closest point (in metres)
Residential	Residential	North	25
Maiden A J & Son	Commercial	South	25
Open Space	Open Space	South	Adjacent
Lyreco UK	Commercial	East	45
Residential	Residential	West	35
Donnington Wood Way	Local Transport Network	North	75
Open Space	Open Space	North	75
Wrockwardine Wood Way	Local Transport Network	West	120
Woodland	Woodland	West	120
Tactree	Commercial	South	150
Keim Mineral Paints	Commercial	South	150
Wire Electrical Supplies	Commercial	South	150
St. Georges Industrial Estate & St. Georges Court lies	Commercial	Northwest	170
Recreational	Park	West	215
Woodland	Woodland	South	220
Residential	Residential	North	250
Industrial and commercial area	Commercial/Industrial	West	270
Pond	Surface Water Feature	East	355
Pond	Surface Water Feature	East	370
Pond	Surface Water Feature	Southwest	390
Stream	Surface Water Feature	Northeast	430
Stream	Surface Water Feature	East	390
Stream	Surface Water Feature	Southeast	550
Internationally Designated, Nationally/Locally Designated Ecological Receptors located within 2km of the EP boundary as shown on Drawing 004			
Granville Country Park	Local Nature Reserves	South	280
Southern Wash House approximately 3 metres west of number 3 and 5	Listed Building (Grade II)	North	520
Muxton Marsh	Site of Special Scientific Interest	Northeast	940
Headgear at Grange colliery, 240m northwest of Watling Street Grange	Scheduled Monuments	Southeast	1000
Site of pumping engine at Muxton Bridge colliery	Scheduled Monuments	Northeast	1340
Parts of a Roman camp and signal station 410m ESE of Watling Street Grange	Scheduled Monuments	Southeast	1460
Part of a small Roman town, the Roman road called Watling Street and a mansion 255m northwest of Upper Woodhouse Farm	Scheduled Monuments	Southeast	1750
St Leonard's Priory immediately adjacent to the Church of St Mary and St Leonard, Wombridge	Scheduled Monuments	West	1920

3.6 Windrose

Figure 2 shows the wind patterns between 2016-2020 as identified by Shawbury’s Meteorological Station in Shropshire. The most prominent wind directions are from the northwest and southwest. Winds from the north, north-east and east are relatively infrequent by comparison.

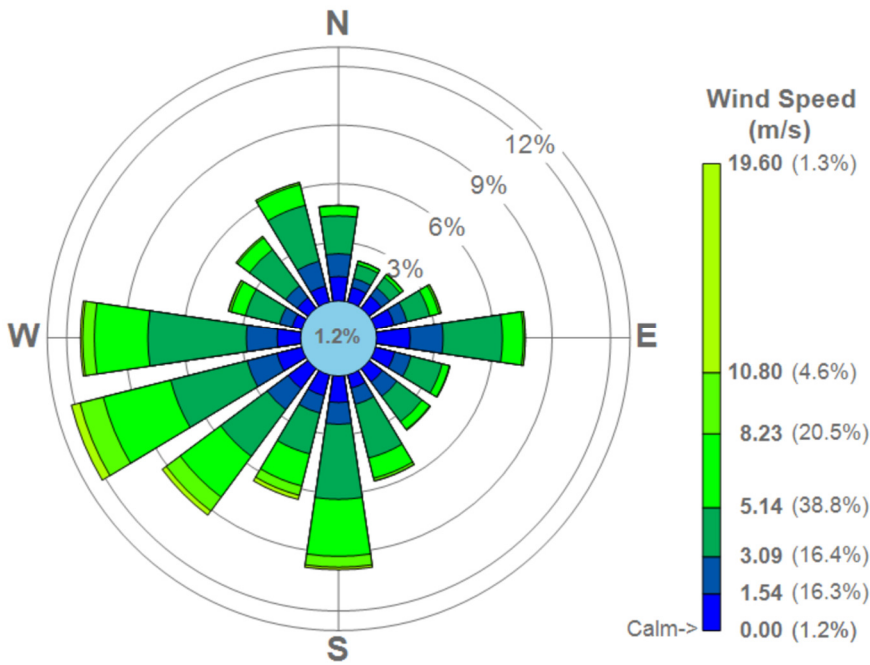


Figure 2
Shawbury Meteorological Station Windrose (2016-2020)

4.0 ENVIRONMENTAL RISK ASSESSMENT

The following table sets out the potential hazards posed by the proposed permit increase throughput and effluent treatment system, receptors and pathways, along with management and assessment of the identified risks. This section comprises Steps 3, 4, 5 and 6 as defined in Section 1.1 above. As defined in Section 2, this assessment only considers risks to amenity (uncontrolled or unintended emissions (fugitive), odour, noise and accidents) and as a consequence of accidents.

The probability of exposure is the likelihood of the receptors being exposed to the hazard, and is defined as low, medium or high. These terms are qualified as follows:

- Low: exposure is unlikely, barriers in place to mitigate against exposure.
- Medium: exposure is fairly probable, barriers to exposure less controllable.
- High: exposure is probable, direct exposure likely with few barriers.

The methodology outlined in Section 1.1 of this report is the basis on which it is determined whether the proposed operations will lead to significant impacts on the surrounding environment. Where a conclusion of 'not significant' has been reached, it is proposed that the mitigation and management measures that will be in place at the site will be sufficient to ensure that there will be no impact at the surrounding environment.

Table 3 Fugitive Emissions Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
To Air:						
Dust from vehicle movement	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. See Drawing 003 & 004.	Air	The following measures are used to prevent mobilisation of dust generally at the site: <ul style="list-style-type: none"> • Good housekeeping of roads and surfaces. • Speed limits are implemented. • All vehicle movements are on hard standing. • Powdered raw materials are handled indoors. • Visual inspections are carried out daily. 	Low – with the mitigation measures implemented on site.	Nuisance and health risk to human receptors.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Dust from machinery and equipment (e.g., powder silos).	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2.	Air	Material imported or exported from the site are transported in enclosed vehicles. Powdered raw materials are handled indoors. These raw materials arrive in one tonne or 25kg bags are managed with local exhaust ventilation. Visual inspections are carried out daily and good house-keeping measures are undertaken.	Low – with the operational procedures and mitigation measures implemented on site.	Nuisance and health risk to human receptors.	Not significant
Product supply / Equipment failure.	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2.	Air	The site implements production supply procedures to operate the equipment in accordance with best practice and the manufacturers recommendations. All personnel working within these areas are provided with adequate training. Tanks are monitored with high and lowlevel alarms. Mass throughput rates will be adjusted to ensure optimum	Low – with the preventative measures implement on site.	Contaminated land, air pollution and harm to human health.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			conditions are maintained for the manufacture of product. A planned preventative maintenance programme is implemented on site.			
To Water:						
Runoff from site surfaces	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. Drawing 003 & 004	Land, surface and ground water	Raw and waste materials associated with the site is stored in suitable containers and where required provided with adequate secondary containment. Uncontaminated rainwater from non-operational areas of the site is captured in the surface water drainage system and passed through an interceptor prior to discharge to local surface water Crow Brook via discharge point W2 and an offsite Severn Trent foul drain via discharge point W3.	Low – with the design of the site and the mitigation measures in place.	Nuisance, pollution of controlled water and soil.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
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			<p>Uncontaminated rainwater from the east of site is collected in a detention pond onsite until it is discharged through W3.</p> <p>Surface water collected in bunded areas is pumped out then discharged to drains that lead to the effluent treatment plant. Here it is treated prior to discharge to sewer.</p> <p>In the unlikely event of a fire, the volume of fire water required is minimised by the use of targeted firefighting devices (e.g., sprinklers, mist, inert gases and foams). Two 500,000lt sprinkler water tanks are located to the south of the highbay warehouse.</p> <p>SLR have undertaken an assessment of containment at the site (refer SLR Muller Telford Containment Assessment Report 410.V62639.00001_BATOT). The findings</p>			

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			<p>of the containment review and additional key issues are still being considered by Muller. However, the following containment solutions are due to be implemented on site in the next 12-18 months:</p> <ul style="list-style-type: none"> • Key issue 7: Undertake design and construction works to mobilise 340m3 of tertiary storage capacity in the attenuation tank below the carpark on the northwest corner of the site. • Key issue 8: Consider closing of the Penstock valve associated with the slot drain running diagonally through the stocking yard and inclusion of a sleeping policeman to close off the roadway at kerb height to the east of the turn into the stocking 			

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			<p>yard so that any spills associated with the storage of the fruit concentrate would be captured by the tertiary containment system described above in Key Issue 7 and not drain to the surface water systems to the east of the site.</p> <p>As part of the response to key issues 7 and 8, Muller are currently in the process of designing and implementing the following:</p> <ul style="list-style-type: none"> • upgraded surface water drain covers the spill catchment area identified in the containment report; • effluent manhole cover to be replaced with open grid cover to partially treat potential spills; 			

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			new automated 600mm Dia. Penstock in main surface water outlet discharge W2 (triggered by turbidity, pH or manual activation); <ul style="list-style-type: none"> • automation of the current slot drain penstock (Closed) with kerb level activation (to open) in spill catchment area identified in the containment report; • spill catchment area (as defined in the containment report) pump set with bowser connections to feed to tanker or ETP; and • sleeping policeman by middle yard to direct spills towards the ETP. 			

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Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Percolation of contaminated liquid into groundwater	Ground water	Ground water	<p>A detention pond is located on site, this collects uncontaminated rainwater only. All treated effluent is discharged to sewer.</p> <p>The operational areas, including material storage locations on site are surfaced with impermeable surfacing to prevent percolation of contaminated materials into the underlying soil and groundwater.</p> <p>Raw material storage and finished goods storage areas surfacing and drainage systems are subjected to routine inspection to ensure their integrity.</p> <p>SLR have undertaken an assessment of containment at the Telford site. Refer 'Runoff from Site Surfaces' above for detail on planned upgrades to onsite containment.</p> <p>Materials suitable for absorbing and containing minor spillages are maintained</p>	Low – with the measures implemented on site.	Contamination, nuisance, pollution of soil and controlled water.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>on site. Minor spillages are cleaned up immediately, using sand or proprietary absorbent to clean up liquids and placed in alternative containers for disposal off-site to a suitably licensed facility.</p> <p>Tank integrity testing occurs regularly to ensure the capability of the tank to hold liquid.</p> <p>In the event of a major spillage immediate action is taken to contain the spillage and prevent liquid from entering surface water drains and the unmade ground. Any spillage is cleared immediately and placed in containers for off-site disposal and the EA will be notified.</p> <p>Any weaknesses in surfacing are repaired immediately using temporary solutions, with permanent measures implemented as soon as practicable.</p>			

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			The Site Manager is responsible for implementing risk management measures in conjunction with the Best Available Techniques and Operating Techniques (Ref: 410.V62639.00001_BATOT).			
Litter						
Litter	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2.	Air	<p>The Site Manager and operatives inspect the site and surrounding area on a regular basis to collect any litter and return it to the main storage areas.</p> <p>Waste accumulation within production areas is controlled and limited with external waste collection containers.</p> <p>Waste streams are clearly labelled and segregated.</p> <p>Waste is removed from site regularly by licensed and approved contractors.</p>	Low – with the measure implemented on site.	Nuisance human and environmental receptors.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>Incoming raw material is transported in enclosed vehicles to ensure no escape of materials (e.g., packaging) during transit. The material is store within the warehouse on site.</p> <p>Finished products are despatched from the site in enclosed vehicles.</p> <p>The Site Manager is responsible for implementing risk management measures in accordance with operational and management procedures.</p>			

Table 4 Accidents Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Spillage or leakage from site equipment.	Local land quality, surface water and groundwater (aquifer).	Runoff and percolation through ground.	<p>Spills from site in operational areas will enter the sealed drainage system and travel to the effluent treatment plant for treatment and discharge to sewer.</p> <p>SLR have undertaken an assessment of containment at the site. Refer 'Runoff from Site Surfaces' in Table 3 above for detail on planned upgrades to onsite containment.</p> <p>Storage tanks are constructed to the appropriate British Standard.</p> <p>Integrity testing is undertaken on tanks every six months.</p>	Low – with the measures implemented on site.	Contamination of land, groundwater and surface water. Nuisance.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>Tanks are inspected visually on a regular basis by site staff to ensure continued integrity and identifying the requirement for any remedial action. Any remedial action will be recorded.</p> <p>Site staff undertake regular monitoring for evidence of spillage and leakage. Alongside regular visual inspections, the tanks are fitted with level indicators to prevent overfilling.</p> <p>Materials suitable for absorbing and containing minor spillages are maintained on site. Minor spillages will be cleaned up immediately, using sand or proprietary absorbent</p>			

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>to clean up liquids and placed in alternative containers.</p> <p>In the event of a major spillage immediate action will be taken to contain the spillage and prevent liquid from entering surface water drains and the unmade ground (as detailed above) and the EA will be notified.</p> <p>The Site Manager is responsible for implementing risk management measures in conjunction with the Best Available Techniques and Operating Techniques (Ref: 410.V62639.00001_BATOT).</p>			

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Fire	Potentially sensitive receptors including commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. See Drawing 003 & 004.	Air Land, surface water and groundwater.	The site has the following in place which seeks to reduce the impacts as the result of a fire: <ul style="list-style-type: none"> • fire and site evacuation procedures; • a fire alarm system connected to audible and visual (stroboscopic) signal; • local firefighting equipment (including fire extinguishers) is provided at designated locations; and • targeted firefighting devices (e.g., sprinklers, mist, inert gases and foams). Incompatible materials are stored separately.	Low - due to the fire preventative measures, inspections and maintenance processes implemented at the site.	Harm to human health and ecology. Nuisance. Contamination of land, groundwater and surface water	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>The plant inspection schedule includes checks of electrical equipment within the site to ensure any faults are identified and repaired.</p> <p>Smoking is not permitted in the operational areas of the site.</p> <p>Operators working practices ensure assessment of fire hazards and training of employees in fire prevention, e.g., use of fire extinguishers and emergency procedures.</p> <p>The EA are advised of all incidents of fire as soon as practicable.</p>			

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Security and Vandalism	Potentially sensitive receptors including commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. Drawing 003 & 004	Land, surface water, groundwater, air.	In order to prevent unauthorised access, a number of security measures are in place at the site including: <ul style="list-style-type: none"> • 24-hour CCTV surveillance which covers the site boundary and are digitally recorded; • security fencing and a security gate which is manned 24 hours a day; and All visitors and contractors report to security and go through a screening system before permission is granted to access the site.	Low – with the security measures implemented at the site.	Theft, plant failure, harm to human health, environmental harm.	Low

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>Security is managed by an external contractor, who have the appropriate training on risk prevention (malicious intent or acts of terrorism).</p> <p>A documented security manual between Muller and the contract company is subject to annual review.</p> <p>The Site Manager is responsible for implementing risk management measures in conjunction with the Operating Techniques (Ref: 410.V62639.00001_BATOT).</p>			
Flooding	Surface water, soils and groundwater.	Flood waters over land	The site lies in Flood Zone 1, areas with 'a low probability of flooding form rivers and the sea'.	Low – due to the location of the site.	Contaminated flood waters impacting, controlled water, land, aquifers,	Not Significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
	Receptors as identified in Table 2.		Surface water run-off is directed away from buildings.		ecological, residential and industrial/commercial areas.	
Vehicle collisions	Harm to human receptors.		<p>Only authorised vehicles are granted access to the site.</p> <p>The site implements strict vehicle movement protocols to prevent collisions.</p> <p>Site maps define routes for personnel, movement of material intake, storage, production and return to storage and the movement of finished product.</p>	Low	Harm to human health	Low

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Plant Failure	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. Drawing 003 & 004.	Air, surface water, ground water	All equipment is subject to pre-planned preventative maintenance checks and maintained in accordance with manufacturer's recommendations. Should any problems, malfunctions or breakdowns occur, which affects the ability to safely function, the manufacturing will stop until the problems are rectified. Monitoring systems are in place to ensure that all relevant parameters are recorded and that any operating faults can be detected. When detected, action is taken, and this	Low – with the preventative systems in place on site.	Nuisance, harm to human health and environmental harm.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			<p>may involve the use of standby equipment.</p> <p>The Site Manager will be responsible for implementing risk management measures in conjunction with the Best Available Techniques and Operating Techniques (Ref: 410.V62639.00001_BATOT).</p>			
Explosion	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2.	Air	<p>All electrical equipment is subject to inspections and marked appropriately to conform with applicable regulations and legislation.</p> <p>Incompatible materials are stored separately.</p>	Low – with the preventative measures implemented.	Contaminated land, air pollution and harm to human health.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
	Drawing 003 & 004.		<p>Training is provided to all operative on site to understand the risks.</p> <p>'No Smoking' signs are in place, as appropriate.</p> <p>The site operates a permit to work system and any 'hot works' will only be permitted if the atmosphere is free from explosive gases.</p> <p>The site implements fire precaution measures and a fire management plan.</p>			

Table 5 Odour Risk Assessment and Mitigation Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Odour from the manufacturing of products and storing of raw material.	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. Drawing 003 & 004.	Air	The site has not received any odour complaints from neighbours in recent years and the manufacturing process does not generate odour. Site operatives conduct daily checks and record any instances of unacceptable odour. If any odour is identified the cause is investigated and odorous material is isolated in a sealed container before removal offsite to a suitably licenced treatment facility. The Site Manager responsible for implementing Risk Management measures in accordance with operational and management procedures.	Low – with the measures implemented on site.	Odour Nuisance and loss of amenity.	Not significant

Table 6 Noise Risk Assessment and Mitigation Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
Noise from the operation of plant and equipment.	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 2. Drawing 003 & 004.	Air	The site has not received any noise complaints from neighbours in recent years. The production areas are located inside the buildings on site. All new equipment will be designed in accordance with European noise standards; the equipment will be subject to regular preventative maintenance in accordance with the manufacturer’s requirements. All site personnel are trained in the need to minimise site noise and are responsible for monitoring and	Low – with the measures implemented on site.	Nuisance and health risk to human receptors.	Not significant

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
<i>What has the potential to cause harm?</i>	<i>What is at risk what do I wish to protect?</i>	<i>How can the hazard get to the receptor?</i>	<i>What measures will you take to reduce the risk? – Who is responsible for what?</i>	<i>How likely is this contact?</i>	<i>What is the harm that can be caused?</i>	<i>What is the risk that still remains? The balance of probability and consequence</i>
			reporting excessive noise when carrying out their everyday roles.			

5.0 Conclusion

To conclude, it is considered that the operations on site will not pose a significant risk of harm to sensitive receptors in the vicinity of the site once the SLR containment report has been fully reviewed. This will guide the site to implement site specific management, if required.

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