Agilent Environmental Permit Application – Copy for the Public Register

Environmental Risk Assessment

Agilent Technologies LDA UK Limited

Essex Road, Church Stretton, Shropshire, SY6 6AX

Prepared by:

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Basis of Report

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1.0 Introduction

SLR Consulting Limited (SLR) has been instructed by Agilent Technologies LDA UK Limited (Agilent) to prepare an application for an Environmental Permit (EP) for their organic polymer manufacturing site located at Essex Road, Church Stretton, Shropshire, SY6 6AX (the site). The EP application will be submitted to the Environment Agency (EA) for determination.

The site manufactures silica and organic polymers for use in laboratory consumables and industrial applications at a rate of less than 5 tonnes per year. This is considered to be a listed activity under the Environmental Permitting (England and Wales) Regulations (EPR) 2016 (as amended):

- *Section 4.1 Part A(1)(a)(viii) producing organic chemicals such as plastic materials (for example polymers, synthetic fibres and cellulose based fibres).*

This Environmental Risk Assessment (ERA) provides a qualitative assessment of the risks to the environment and human health from accidents, odour, noise, and fugitive emissions that may be associated with the operations at the 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 activities at the site.

The assessment has been completed in accordance with EA Technical Guidance 'Risk Assessments for your Environmental Permit' dated November 2023. 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. The EA Guidance requires all receptors that are near the site and could reasonably be affected by the activities to be identified and considered as part of the assessment.

This ERA uses the following approach for identifying and assessing the risks from the proposed activities 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.

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.

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.

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 309861021_1_1 dated 13 April 2023).
- British Geological Survey[2].
- Environment Agency. Flood map for planning[3].

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

- Section 1: Non-Technical Summary (NTS).
- Section 2: Application Forms.
- Section 3: Best Available Techniques and Operating Techniques (BATOT).
- Section 5: Air Emissions Risk Assessment (AERA) and Air Quality Management Plan (AQMP).
- Section 6: A Noise Impact Assessment (NIA) and a Noise Management Plan (NMP).
- Section 7: Site Condition Report (SCR).
- Section 8: Drawings:
    - Drawing 001: Site Location.
    - Drawing 002: Environmental Permit Boundary and Emission Points Site Layout.
    - Drawing 003: Site Setting Plan - Local Receptors.
    - Drawing 004: Site Setting Plan - Cultural and Natural Heritage.
    - Drawing 005: Chemical Storage Areas.

1.2 Permitted Activities

The primary regulated activity at the site is the manufacture of organic polymers for use in laboratory consumables, which is listed in Schedule 1 Part 2 of the EPR as follows:

- *Section 4.1 Part A(1)(a)(viii) producing organic chemicals such as plastic materials (for example polymers, synthetic fibres and cellulose based fibres).*

The following directly associated activities take place on site:

- Storage of raw materials;
- Storage and handling of chemicals, oils, products and residues;
- Storage and off-site removal of waste solvent-based effluent;
- Storage and off-site disposal of solid waste;
- Combustion of natural gas in boilers to provide process heating; and
- Loading and dispatch of final products.

[1] Multi-Agency Geographical Information for the Countryside Map, available at www.magic.defra.gov.uk, accessed in May 2023.

[2] British Geological Survey, available at http://www.bgs.ac.uk, accessed May 2023.

[3] Flood map for planning, available at https://flood-map-for-planning.service.gov.uk/, accessed June 2023.

2.0 Identifying The Risks

Step 2 is a screening step to identify the potential risks to the environment from the development.

The EA Guidance identifies the potential risks that may require assessment for 'most sites' as follows:

- Any discharge, for example sewage or trade effluent to surface or groundwater;
- Accidents;
- Odour (not for standalone water discharge and groundwater activities);
- Noise and vibration (not for standalone water discharge and groundwater activities);
- Uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that should not be in the discharge;
- Visible emissions, e.g. smoke or visible plumes; and
- Release of bioaerosols, for example from shredding, screening and turning, or from stack or open point source release such as a biofilter.

In addition, the EA guidance identifies risks from specific activities for which additional risk assessments must be completed depending on the activity being carried out and where substances are released or discharged into the environment. The EA guidance *Risk assessment for installations, waste and mining waste operations and landfill sites* indicates that the following additional risk assessments may be required for this Site:

- Risks of air emissions;
- The global warming impact of your air emissions;
- Risks to groundwater; and
- Risks to surface water from hazardous pollutants, sanitary and other pollutants.

Potential risks can be screened out if they are not relevant for the site or by carrying out tests to check whether they are within acceptable limits or environmental standards. If they are, any further assessment of the pollutant is not necessary because the risk to the environment is insignificant.

Table 2-1 provides a summary of the potential environmental risks at the site; identifying those that can be screened out as not relevant (grey shaded) and the type of risk assessment carried out for those that are identified as relevant.

Table 2-1 Scope of Risk Assessment

Risk Type	Relevant	Justification	Type of Risk Assessment
Air Emissions	Yes	Release of volatile organic compounds (VOC) from onsite production.	Air Emissions Risk Assessment and Air Quality Management Plan (refer 410.064951.00001_AERA)
Photochemical Ozone Creation Potential	Yes	Release of volatile organic compounds (VOC) from onsite production	Photochemical Ozone Creation Potential Assessment (refer 410.064951.00001_BATOT)
Global Warming Potential	Yes	Release of VOCs, direct emissions of CO_2 from gas-fired boilers and indirect	Global Warming Potential Assessment (refer 410.064951.00001_BATOT). Quantitative assessment:

Risk Type	Relevant	Justification	Type of Risk Assessment
		emissions of CO_2 from the use of electricity	
Groundwater	No	Only uncontaminated surface water is discharged to the soakaway in the southern car park so a risk assessment is not required.	
Surface Water	Yes	No effluent emitted directly to surface water. Process cooling and equipment wash water discharged to sewer.	Qualitative Risk Assessment provided in 410.064951.00001_ERA.
Accidents	Yes	Potential for emissions from equipment failure etc.	Qualitative Risk Assessment provided in Table 4.4 below.
Odour	Yes	Emissions to air of VOCs	Qualitative Risk Assessment provided in Table 4.1 below.
Noise & Vibration	Yes	Use of mechanical equipment	Noise Impact Assessment (refer 410.064951.00001_NIA) Qualitative Risk Assessment provided in Table 4.2 below.
Fugitive Emissions	Yes	Dust, pests litter Emissions to air of VOCs	Qualitative Risk Assessment provided in Table 4.3 below. (also refer 410.064951.00001_BATOT)
Visible Emissions	No	No visible plume	Not required
Bioaerosols	No	None emitted	Not required

3.0 Site Setting and Receptors

This section identifies the potentially sensitive receptors in the vicinity of the site that could be harmed (at potentially significant risk) by emissions from the activities within the Agilent site.

The EA's guidance requires all receptors that are near the Site and could reasonably be affected by the activities to be identified and considered as part of the assessment.

Therefore, for the purpose of this report:

- A 2km radius from the site's proposed EP boundary has been adopted in reviewing potentially RAMSAR, SAC, 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).

3.1 Site Setting

The site is located in Church Stretton, Shropshire. The site is accessed via Essex Road and the National Grid Reference (NGR) for the site is centred on SO 45672 93772.

The site is located approximately 300m north of Church Stretton town centre and 17.5 km south of Shrewsbury, and is situated within a mix of commercial, recreational and residential property. The A49 runs in a north-south direction approximately 115m east of the site. Residential properties are in close proximity, with the closest located approximately 20m to the north and 35m to the west of the site respectively.

The site's location is illustrated on Drawing 001; the site layout and emission points on Drawing 002. The surrounding land uses, local receptors within 500m are illustrated on Drawing 003 and cultural and natural heritage receptors within 2km are identified on Drawing 004.

Table 3-1: Surrounding Land Uses

Boundary	Description
North	Directly north of the site comprises residential properties, with the closest property located approximately 20m north on Windsor Place. Ash Brook is located approximately 90m north. Church Stretton Cricket Club and Churchill Park are located approximately 140m to the north-west and Coppice Leasowes Nature Reserve is located approximately 120m to the north-east.
East	A railway line is located directly adjacent to the eastern site boundary. A bowling green, tennis courts and a play area are located beyond the railway line. Residential properties are also located approximately 200m east.
South	Sandford Avenue (B4371) is located directly adjacent to the southern site boundary. Commercial/industrial premises are located a further 75m south. Church Stretton railway station and an unnamed surface water feature are located 120m and 165m south of the site respectively.
West	Essex road and residential properties bound the site to the west, with the closest dwelling located 35m west. Church Stretton town centre and a playing field are located 300m and 340m west respectively.

3.1.1 Residential

The site is located in a predominantly residential area, with the closest properties a located approximately 20m to the north and 35m to the west of the site.

3.1.2 Commercial & Industrial

There are several commercial and industrial premises within 500m of the permit boundary, with the closest premises (Stretton Stonemasons) being approximately 75m south. Additional commercial / industrial premises that comprise garage services (76m south) and a printing business (104m south) are located in the vicinity. Longmynd Service Station Ltd is also located 117m south of the site.

3.1.3 Local Transport Network

Vehicular access to the site is via Essex Road located adjacent to the west of the site, with a private road off Essex Road to the southwest acting as the works entrance. Sandford Avenue (B4371) is located to the south of site and the A49 is located approximately 115m east. A railway line is located adjacent to the east of the site, with Church Stretton railway station being located 120m south.

3.1.4 Open Ground / Agricultural

The closest agricultural land is located approximately 500m northeast of the site. The closest area of open ground is 'Russel's Meadow' located approximately 100m west of site.

3.1.5 Educational

St Lawrence C of E Primary School is located approximately 500m north of the site.

3.1.6 Recreational

A Bowling Green, tennis courts and a play area are located beyond the railway line that is adjacent to the site. Church Stretton Cricket Club and Churchill Park are located approximately 140m to the north-west of the site and Coppice Leasowes Nature Reserve is located approximately 120m to the north-east.

Shops and amenities in Church Stretton town centre are located approximately 300m west.

3.1.7 Surface Water Features

A culverted stream, Town Brook passes directly beneath the site in an easterly direction from Essex Road, beneath the central carpark and below Unit 2. The culverted section of Town Brook ends approximately 250m northeast of site. Ash Brook is located approximately 90m north of the site's permit boundary.

Four streams have been identified south of the site, the closest being approximately 165m away.

3.1.8 Geology, Hydrogeology and Hydrology

3.1.8.1 Geology

A review of the British Geological Survey (BGS) map reveals that the site is underlain by the following:

Superficial deposits

- 80% of the site (east): Alluvium consisting of clay, silt, sand and gravel which formed between 11.8 thousand years ago and the present during the Quaternary period.
- 20% of the site (west): Alluvial Fan Deposits consisting of clay, silt, sand and gravel which formed between 2.588 million years ago and the present during the Quaternary period.

Bedrock geology

- Coalbrookdale Formation comprising of mudstone. The sedimentary bedrock formed between 433.4 and 427.4 million years ago during the Silurian period.

3.1.8.2 Hydrogeology

Aquifer Classifications

Multi Agency Geographical Information for the Countryside (MAGIC) map identifies the bedrock as a Secondary B aquifer, which is defined as:

"predominantly lower permeability strata which may in part have the ability to store and yield limited amounts of groundwater by virtue of localised features such as fissures, thin permeable horizons and weathering."

The superficial drift aquifer is defined as a Secondary A aquifer defined as permeable, unconsolidated (loose) deposits.

Groundwater

No specific depth to groundwater for the site is available.

The Polymer Laboratories Ltd 2000 report states that:

- *The water table is 'quite high'*.

Review of nearby publicly available BGS borehole data revealed groundwater encountered at approximately 2m below ground level in borehole SO/49SE/10 located approximately 140m northwest, drilled in 1961.

Groundwater Abstractions

No groundwater abstractions identified within 500m.

3.1.8.3 Hydrology

Surface Water Features

A culverted stream, Town Brook passes directly beneath the site in an easterly direction from Essex Road, beneath the central car park and below Unit 2. The culverted section of Town Brook ends approximately 250m northeast of the site (refer to the OS Water Network Map in Appendix A). Four streams have been identified south of the site, the closest being approximately 165m away.

Ash brook is located approximately 90m north of the site's EP boundary. An unnamed stream is also located approximately 100m east.

Surface Water Abstractions

No surface water abstractions identified within 500m.

3.1.8.4 Flooding

The Flood Map for Planning[4] reveals that the site lies within Flood Zone 3 and has a high probability of flooding from rivers.

The extent of flooding from surface water has been identified as a low risk and signifies that the area has a chance of flooding of between 0.1% and 1% each year.

The Long Term Flood Risk Assessment[5] indicates that the site is at 'medium risk' of flooding from surface water. Medium risk means that this area has a chance of flooding of between

[4] Flood Map for Planning, available at https://flood-map-for-planning.service.gov.uk/, accessed in June 2022.

5 Long Term Flood Risk Assessment – Available at Check the long term flood risk for an area in England – GOV.UK (www.gov.uk), accessed April 2023

1% and 3.3% each year. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

During the site walkover, the site representative mentioned that offsite surface water flooding along Essex Road has previously impacted the site. When this occurs, the site access road floods and water collects in the 10,000 L attenuation tank, where it is over pumped to discharge point S1 for release.

The site has confirmed that flooding only occurs along the access road that joins Essex Road and in the central car parking area away from raw material, waste and chemical storage.

Agilent are in discussions with the 'Drainage and Flood Risk Manager' at Shropshire County Council and also Severn Trent to try and resolve this issue. Preliminary work by Severn Trent along Essex Road has lessened the impact of the surface water flooding. Agilent report all flood events to both parties. It is understood by Agilent that Severn Trent intend to undertake further remedial work to manage the offsite surface water flooding issue.

Due to the risk of flooding, the site operates under an Emergency Flood Plan procedure (reference FM-09 V3.3 dated 18 September 2022). The procedure on how to manage the localised surface water flooding from Essex Road is listed under 'Flash Flooding' in the plan.

3.1.9 Ecology

3.1.9.1 European/International Designated Sites

A search of MAGIC Map identified Long Mynd Site of Special Scientific Interest (SSSI) approximately 870m west of the site.

3.1.9.2 Other Designated Sites

Searches on MAGIC confirmed there are none of the following within 2km of the permit boundary:

- Special Areas of Conservation;
- Special Protection Areas; and
- RAMSAR sites.

3.1.9.3 National / Locally Designated Sites

MAGIC Map identified areas of Priority Habitat Deciduous Woodland, with the closest being approximately 370m west of the site boundary.

Additional Priority Habitats include:

- Upland Heathland (approximately 800m west);
- Upland Flushes, Fens and Swamps (approximately 980m west);
- Good quality semi-improved grassland (1200m south-east); and
- Lowland Dry Acid Grassland (closest being 1200m south-west).

MAGIC confirmed the site to be within an Area of Outstanding Natural Beauty and an Environmentally Sensitive Area (Shropshire Hills).

Two Local Nature Reserves were also identified in MAGIC Map, the first being Coppice Leasowes located approximately 120m northeast and Rectory Wood and Field located approximately 365m west of the site boundary.

Six Ancient Woodlands have also been identified between 500 m and 2km of the site boundary:

- Old Rectory Wood;
- Coles Wood;
- Ragleth Wood;
- Helmeth Hill;
- Brockhurst Wood;
- Caradoc Coppice; and
- Houghs Coppice.

Searches on MAGIC confirmed there are none of the following within 2km of the permit boundary:

- National Nature Reserves (NNR);
- National Parks;
- RSPB Reserves;
- Biosphere Reserves; and
- World Heritage Sites.

The EA prepared a Nature and Heritage Conservation assessment (EPR/MP3646QZ/A001 dated 14 February 2023). This screen identified two local wildlife sites within 2 km. The closet of these sites is approximately 110 m to the northeast of the site. This site is also classified as a local nature reserve.

3.1.10 Cultural and Heritage

3.1.10.1 Listed Buildings

A review of MAGIC Map confirmed that 58 listed buildings are present within 2km of the site, and predominantly lie to the west and north of the site boundary. These mostly consist of Grade II listed buildings, and the closest is ’13 and 15, High Street’ located approximately 280 west. The Church of St Lawrence is the only Grade 1 listed building and lies approximately 360m west. The closest Grade II* listed building, ’17 High Street’, lies approximately 285m west of the site boundary.

3.1.10.2 Scheduled Monuments

A review of MAGIC Map confirmed that six scheduled monuments lie within 2km of the permit boundary, the closest of which is an enclosure and building platform on Nover’s Hill that lies approximately 1200m north of the permit boundary.

Searches on MAGIC confirmed there are none of the following within 2km of the permit boundary:

- Registered Parks and Gardens; or
- Registered Battlefields.

3.2 Identified Receptors

Table 3-1 below, Drawing 003, and Drawing 004 show the locations of receptors that are considered to be potentially sensitive and could reasonably be affected by the operations carried out on site.

Table 3-1: Identified Receptors

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (at nearest point) (m)
Local receptors within 500m of the Environmental Permit Boundary as shown on Drawing 003 Local Receptors			
Town Brook	Surface Water Feature (refer Appendix A)	On site	On site
Essex Road	Local Transport Network	West	Adjacent
Railway line	Local Transport Network	East	Adjacent
Sandford Avenue	Local Transport Network	South	Adjacent
Residential properties	Residential properties	North	20
Residential properties	Residential properties	West	35
Church Stretton Bowling Club	Recreational Facilities	East	50
Church Stretton Croquet Club	Recreational Facilities	East	50
Church Stretton Tennis Club	Recreational Facilities	East	50
Play space	Recreational Facilities	East	50
Stretton Stonemasons	Commercial/Industrial	South	75
Longmynd Service Station Ltd	Commercial/Industrial	South	75
Applegreen Church Stretton	Commercial/Industrial	South	75
Church Stretton Motorcycles	Commercial/Industrial	South	75
Coltech Motor Services	Commercial/Industrial	South	75
Trials + Tribulations	Commercial/Industrial	South	75
Church Stretton Cricket Club	Recreational Facilities	Northwest	90
Ashbrook	Surface Water Feature	North	90
Crossways (A49)	Local Transport Network	East	115
Church Stretton Station	Local Transport Network	South	120
Brooksbury	Open ground	North	120
St Milburga’s Church	Religious Premises	East	140

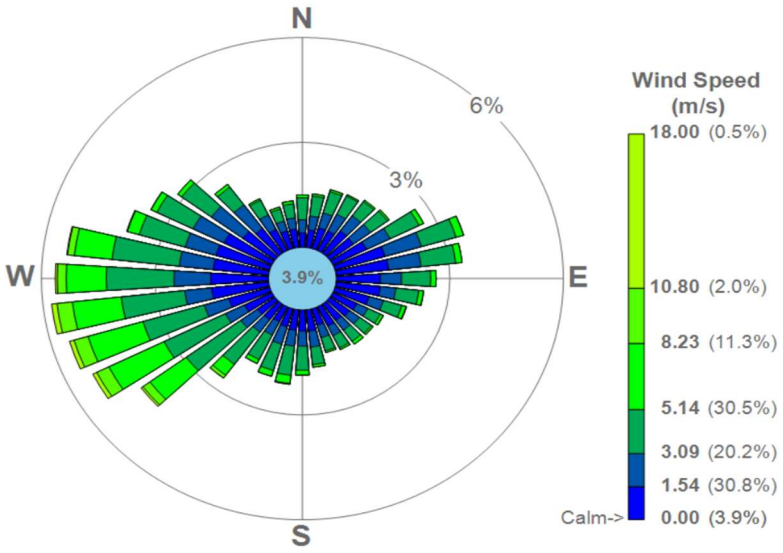
Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (at nearest point) (m)
Churchill Park	Recreational Facilities	Northwest	200
Shops/amenities – Church Stretton town centre	Recreational Facilities	South-west	300
Open ground	Open ground	West	340
St Lawrence School	Educational Premises	North	500
Old Rectory Wood	Woodland	West	500
Freestyle Martial Arts	Recreational Facilities	North	500
Cultural and ecological receptors within 2km of the EP boundary as shown in Drawing 004 Natural and Cultural Heritage			
Coppice Leasowes	Local Nature Reserve	Northwest	120
13 and 15 High Street	Grade II Listed Building	West	280
17 High Street	Grade II* Listed Building	West	285
Church of St Lawrence	Grade I Listed Building	West	360
Rectory Wood and Field	Local Nature Reserve	West	365
Deciduous woodland	Priority Habitat	West	370
Old Rectory Wood	Ancient Woodland	West	500
Upland Heathland	Priority Habitat	West	800
Coles Wood	Ancient Woodland	South	800
Ragleth Wood	Ancient Woodland	South-east	860
Long Mynd	SSSI	West	870
Helmeth Hill	Ancient Woodland	North-east	920
Upland Flushes, Fens & Swamps	Priority Habitat	West	980
Brockhurst Wood	Ancient Woodland	South-west	1000
Good quality semi-improved grassland	Priority Habitat	South-east	1200
Lowland dry acid grassland	Priority Habitat	South-west	1200
Caradoc Coppice	Ancient Woodland	North-east	1300
Brockhurst Castle	Scheduled Monument	South-west	1500
Bodbury Ring	Scheduled Monument	North-west	1550
Bowl barrow on summit of Bodbury Hill	Scheduled Monument	North-west	1560
Bowl barrow on Ashlet Hill	Scheduled Monument	South-west	1600

Receptor Name	Receptor Type	Direction from Site	Approximate Distance from Site Boundary (at nearest point) (m)
Cross-dyke at Devil's Mouth	Scheduled Monument	West	1700
Houghs Coppice	Ancient Woodland	North	1800

3.3 Windrose

Figure 3-1 below shows the wind patterns between 2016-2020 as identified by Shobdon's Meteorological Station in Herefordshire. The most prominent wind directions are from the southwest and northwest. Winds from the north, northeast and southeast are relatively infrequent by comparison.

Figure 3-1: Shobdon Meteorological Station Windrose, 2016-2020



4.0 Environmental Risk Assessment

This section considers the potential pathways between source and receptor and where appropriate, the assessment demonstrates how the risk of pollution or harm can be mitigated by measures to manage these risks and/or block the pathways. An assessment in terms of hazards posed, receptors and pathways, along with management and residual risks for the following hazards has been carried out in accordance with the risks identified in Table 2-1 of this report:

- Air Emissions;
- Photochemical Ozone Creation Potential (POCP);
- Global Warming Potential (GWP);
- Surface Water;
- Accidents;

- Odour;
- Noise & Vibration; and
- Fugitive Emissions.

As outlined in Section 2 'Identifying the Risks' above, standard assessment in this instance is considered applicable for odour, fugitive emissions (including dust, mud, litter and pests), groundwater and accidents in relation to the proposed development. Quantitative assessments will be undertaken for potential risks to receptors from emissions to air and noise. These assessments are presented in Sections 5 and 6 of this application respectively.

Quantitative risk assessments for POCP and GWP based on the H1 methodology are presented in this section.

Qualitative risk assessments for accidents, odour and fugitive emissions are provided in Tables 4.4, 4.1 and 4.3 below respectively. These assess the risks in terms of potential hazards posed, the associated receptors and pathways, along with measures to manage the identified risks.

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.

4.1 Air Emissions Risk Assessment

An air emissions risk assessment has been undertaken (refer to 410.064951.00001_AERA) in accordance with Environmental Agency (EA) Guidance - '*Air emissions risk assessment for your environmental permit*'[6].

The AERA quantified and assessed the potential air quality impacts associated with potential emissions from the process operations at the Agilent's organic polymer manufacturing site. The AERA concluded that the emissions process contribution can be considered 'insignificant' against relevant long-term and short-term standards for the protection of human health.

Air emissions monitoring undertaken in Q4 2023 indicated that Agilent may need to review the waste gas abatement systems in order to meet applicable BAT AELs. Agilent intends to replace the current waste gas abatement system. An initial design basis statement and BAT assessment has been undertaken which has indicated that a water based wet scrubber system followed by a polishing stage using an activated carbon filter is currently proposed to enable compliance with applicable BAT AEL's. Agilent intends that the upgraded waste gas abatement system should be operational by approximately Q3 2025 (based on a 42 week lead in time prior to installation).

[6] https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit

Whilst the new waste gas abatement system is being commissioned and installed; Agilent proposes to hire a temporary scrubber to reduce concentrations of compounds in emissions to air. This will replace the current waste gas abatement system.

4.2 Photochemical Ozone Creation Potential (POCP)

An assessment of the annual VOC emissions for the site for photochemical ozone creation potential (POCP) has been undertaken. This is summarised in Table 4.1.

Table 4-1 Photochemical Ozone Creation Potential (POCP) Assessment

Substance	Annual Mass (Tonnes)	POCP for Chemical	Annual POCP - Site
Acetone	7.44	9.4	69.94
Methanol	5.14	14	71.96
Styrene	0.13	14.2	1.85
Tetrahydrofuran	0.4	Not listed as POCP	-
Toluene	0.18	63.7	11.47
Ethanol	1.24	39.9	49.48
Diethylbenzene	0.01	Not listed as POCP	-
Ethylene diamine	0.0002	Not listed as POCP	-
Heptane	0.03	49.4	1.48
Iso-Amyl Alcohol	0.02	Not listed as POCP	-
Vinylbenzene chloride	0.02	Not listed as POCP	-
Divinylbenzene	0.14	Not listed as POCP	-
TOTAL POCP			206.17
Annual Mass (tonnes) calculated by converting average emissions rate (g/s) used for the long term (annual average) calculation in the AERA (410.064951.00001_AERA). This value has been converted to tonnes and then to per year. POCP values presented within: Horizontal Guidance Note Environmental Assessment and Appraisal of BAT - H1 Annex F – Air Emissions: Appendix A - Photochemical Ozone Creation Potential dated July 2023.			

The annual mass of emissions from the process that contribute to photochemical ozone creation potential are relatively small and are therefore not considered significant. The overall POCP for the process is 206.17 per year.

4.3 Global Warming Potential Assessment

The Global Warming Potential is summarised in Table 4.2.

Direct Emissions

Closed loop refrigeration systems utilised onsite contain refrigerant gases R410, R404A and R407C. Refrigeration systems onsite are checked and serviced periodically by a registered contractor. As the refrigerant gases are expected to be enclosed within the refrigerant systems and not released to air, this has not been considered further.

Onsite boilers and the emergency generator will emit carbon dioxide from the combustion of gas.

Indirect Emissions

The process generates indirect emissions from the use of electricity to heat and power the site.

Table 4-2 Global Warming Potential

Source	Annual Energy Consumption (FY2023)	Conversion Factor[1]	CO_2 Tonnes	CO_2 kg
Electricity	1045.915 MWh	0.166 MWh	173.621 tonnes	173,621 kg
Gas	1192.886 MWh	0.19 MWh	226.64 tonnes	226,648.34 kg
Total				400,269.34 kg
Values obtained from Assess the impact of air emissions on global warming - GOV.UK (www.gov.uk) accessed on 05 January 2024.				

4.4 Odour

Potential sources of odour from the chemical manufacturing activities include point-source VOC emissions associated with the feedstocks, reagents and solvents as well as liquid wastes produced. The potential for fugitive emissions to be generated at the site is considered to be minimal. It is understood that the site has not received any complaints from nearby receptors in recent years. In addition, the vast majority of raw materials handled onsite are odourless or have low odour potential.

4.4.1 Noise & Vibration

A Noise Impact Assessment (NIA) has been carried out for the proposed activities and is presented in Section 6 of this application (410.064951.00001_NIA). Details of the locations, sources, frequency and estimated noise levels associated with operations at the site have been addressed as part of the NIA.

Noise emissions from the facility were calculated using proprietary modelling software and noise data for the plant and processes at the site. The Rating Noise level was compared to the existing background noise levels measured at the nearest properties and assessed in accordance with BS4142:2014.

A Noise Management Plan (410.064951.00001_NMP) has been prepared for the site due to the potential for noise exceedances when equipment is running at 100% capacity (conservative assessment for potential noise generation).

While modelling indicates the impact of site on the surrounding area is considered adverse, operating certain plant components at 25% capacity instead of the modelled 100% (due to data limitations) is likely to reduce noise levels at nearby receptors. This coupled with the implementation of the measures contained in the Noise Management Plan (NMP) (refer 410.064951.00001_NMP), has the potential to lessen the impact, reducing this to a low impact at the closest receptors.

It is noted that it is unlikely for all equipment to be running at 100% capacity at the same time and that the modelling within the NIA is considered to be conservative.

4.4.2 Surface Water

There are no direct discharges to surface water.

4.4.3 Effluent

Wastewater generated at the site comprises process cooling and equipment wash water (laboratory wastewater[7], cooling water, compressor condensate, ion exchange[8], sieving of polymer particles[9] and emptying of laboratory tanks[10]) and chlorinated and unchlorinated waste solvent (containing water) from process vessels. The current boilers do not generate boiler blowdown.

Process cooling and equipment wash water is discharged to sewer under a series of four trade effluent discharge consents with Severn Trent. The chlorinated and unchlorinated waste solvent (containing water) from process vessel is collected twice a week by a waste contractor and reused as cement kiln fuel.

4.4.4 Fugitive Emissions

Uncontrolled or unintended emissions may arise from the processing, storage and handling of materials at the site. The EA's guidance states that these may include dust, litter, pests and pollutants that should not be in the discharge.

A qualitative assessment of fugitive risk is provided in Table 4-4 which assesses the probability of exposure in terms of the likelihood of the receptors being exposed to the hazard.

4.4.5 Accident Risk Assessment

The potential consequences from accidents and mitigation of risks is provided in Table 4-6. It is considered that the mitigation measures in place will mean that the risk of impacts from accidents on receptors will be low.

[7] Laboratory waste water containing small volumes of detergents, residual acetone, polymeric solids and de-ionised water from glassware washing.

[8] Ion exchange from the reverse osmosis process.

[9] Sieving of polymer particles containing predominantly mains water, with a small amount of inert polymeric solids. Sieves and filters are used to removed particulates for discharges to sewer.

[10] Emptying of laboratory tanks comprises reserve osmosis water, deionised water and mains water. This does not contain any R&D chemicals.

Table 4-3 Odour Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
Odour from the manufacturing of products and storing of raw material.	Commercial and industrial, local transport network and residential, receptors as identified in Table 3-1. Drawing 003 & 004.	Air	The site has not received any odour complaints from neighbours in recent years. The vast majority of raw materials handled onsite are odourless. For the small number of chemicals utilised onsite that have the potential to generate odour; the following measures are employed on site to minimise the risk of impact from odour: • A scrubber is used to removed VOCs from the exhaust gases from the main processing area. • Vents from vacuum pumps are routed via the gas scrubber. • Potentially odorous chemicals are stored in sealed containers. • Potentially odorous chemicals are handled in low volumes, no more than 100 litres at a time. • Potentially odorous chemicals are handled indoors. • Potentially odorous chemicals are used within high integrity closed systems. 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 management team is responsible for implementing Risk Management measures in accordance with operational and management procedures.	Low – with the measures implemented on site. The probability is very low for both source – pathway – receptor linkages due to the integrity of the primary containment systems, and the control measures in place.	Odour Nuisance and loss of amenity.	Not significant.

Table 4-4 Fugitive Emissions Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
To Air:						
Dust Dust from vehicle movement	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Air	The following measures are used to prevent mobilisation of dust generally at the site: • 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. • Material imported or exported from the site is transported in enclosed vehicles. The site management team is responsible for implementing risk management measures in accordance with operational and management procedures.	Low – with the operational procedures and mitigation measures implemented on site.	Nuisance and health risk to human receptors	Not significant .
Dust Dust from machinery and equipment (e.g., raw material powder) / Product supply / Equipment failure.	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Air	Dust is not a significant concern as most of the processing is wet. The final drying stages of the product are carried out in a sealed system. Visual inspections are carried out daily and good house-keeping measures are undertaken. 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.	Low – with the operational procedures and mitigation measures implemented on site.	Nuisance and health risk to human receptors	Not significant

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
			A planned preventative maintenance programme is implemented on site. The site management team is responsible for implementing risk management measures in accordance with operational and management procedures.			
Fugitive VOC Emissions	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004	Air, land and water	No significant diffuse VOC emission sources are anticipated. • The amount of raw materials inputted into the process is low at 185.09 tonnes per year. • Pipework is located indoors and is minimal. Pipework is maintained under a planned preventative maintenance system. • Controls are in place where chemicals are transferred. • Tetrahydrofuran, acetone and methanol are all transferred to process via a Diaphragm pump from a DENIOS unit. These chemicals are delivered in sealed containers, transferred via minimal sealed indoor pipework into a sealed process that vents to a channelled emission point to air. • Smaller volumes of chemicals (205 L) are transferred into smaller containers within the drum store utilising pumps. The site management team is responsible for implementing risk management measures in accordance with appropriate procedures as outlined in the Best Available Technique (BATOT) assessment (410.064951.00001) and EMS.	Low	Fugitive emissions to air, odour nuisance, water contamination.	Not significant.

Table 4-5 Water Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
To Water:						
Runoff from the Site Runoff from site surfaces, access roads and haul roads. Percolation of contaminated water	Commercial and industrial, local transport network, residential, controlled water, ecological and groundwater receptors as identified in Table 3-1. Drawing 003 & 004.	Land and surface water. Percolation through the ground.	The site benefits from impermeable concrete surfacing and a sealed drainage system to collect surface water and spills and minimise risk of run-off. Raw and waste materials associated with the site are stored in suitable containers and where required provided with adequate secondary containment within the covered 'drum store'. Process effluent is collected from site twice a week to prevent stockpiling. Uncontaminated rainwater from non-operational areas in the north of the site is captured in the surface water drainage system and passed through an 10,000L attenuation tank prior to discharge to an offsite Severn Trent storm water drain. This process is managed via discharge consent with Severn Trent. Uncontaminated rainwater from non-operational areas in the south of the site drains to a soakaway. No raw materials, chemicals or waste is stored in this area. Environmental awareness training at the site also informs employees of the potential risk posed by the presence of the soakaway. Raw materials, chemicals and waste are all stored in bunded, covered areas in the northern area of the site. Spill kits are stored on site containing appropriate absorbent materials to use in the event of a spillage. Site operations are inspected daily for signs of spillages. The site operates a Spill Management Plan (Church Stretton Emergency Spill Plan EHS-58 V1.4 dated 31 January 2023).	The probability is very low for both source – pathway – receptor linkages due to the integrity of the primary containment systems, and the control measures in place.	Negligible Impact	Not significant.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
			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. 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. Any weaknesses in surfacing are repaired immediately using temporary solutions, with permanent measures implemented as soon as practicable. The site management team is responsible for implementing risk management measures.			
Pests:						
Birds, vermin, and pests	Commercial and industrial, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Land and air.	No biodegradable or putrescible waste is generated from the process. Therefore, the wastes on-site will not attract birds, vermin and pests. Waste is stored either in sealed drums or is covered. The site management team is responsible for implementing risk management measures in accordance with operational and management procedures.	Low	Nuisance, potential risk to human health.	Not significant.
Litter:						
Litter from waste	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Air	The site management team and operatives inspect the site and surrounding area on a regular basis to collect any litter and return it to the main storage areas. Waste accumulation within production areas is controlled and limited with external waste collection containers. Waste streams are clearly labelled and segregated. Waste is removed from site regularly by licensed and approved contractors. Incoming raw material is transported in enclosed vehicles to ensure no escape of materials (e.g., packaging) during transit. The material is stored within the covered drum store prior use within indoor production areas. Finished products are despatched from the site in enclosed vehicles. The site management team are responsible for implementing risk management measures in accordance with operational and management procedures.	Low – due to the nature of the waste accepted on Site.	Nuisance from litter. Loss of amenity. Dangerous conditions on roads.	Not significant.

Table 4-6 Accidents Risk Assessment

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
Spillage and Leakage of liquid raw materials Spills and leaks of fuels and oils from vehicles. Spillage of solid product and	Local land quality, groundwater and surface water as identified in Table 3-1. Drawing 003 & 004.	Runoff and percolation through ground.	Refer to 410.064951.00001_SCR for a full appraisal of fuel and chemical containment measures present on site. The drum store comprises bunded stillages that act as secondary containment and the drum store bund acts as tertiary containment. The drum store bund has recently been repaired to meet CIRIA 736 requirements. The chemical store contains a perimeter bund. The diesel generator is stored within a small bunded building. Diesel for the generator is stored within the drum store.	The probability is very low for both source – pathway – receptor linkages due to the integrity of the primary containment systems, and the control measures in place.	Contamination of local land, groundwater and surface waters.	Not significant.

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
intermediates during transfer and handling			Storm water drainage in the northern portion of site incorporates an underground attenuation tank (10,000L) to hold any surface water in the event of spillages. Spill kits are kept on site and in the event of any minor spillages associated with vehicles or plant machinery will be cleaned up immediately using appropriate materials such as sand or absorbent material and afterwards placed in suitable sealed containers. Site staff are trained in environmental procedures, including the following spill procedures: • Emergency Plan – Church Stretton Site (EHS-33 V5 dated 29 November 2022). • Church Stretton Emergency Spill Plan (EHS-58 V1.4 dated 31 January 2023). Raw materials, waste and chemicals are not stored in the proximity of the soakaway in the southern car park. Daily visual inspections are carried out to identify any evidence of spillages or leakages. The results of any inspections or investigations are recorded. The site management team is responsible for implanting risk management measures in accordance with the appropriate procedures as outlined in the environmental management system (EMS).			
Fire	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Air (smoke). Ground (spillages and firewater).	The following plan and procedure outlines how the site will respond to a fire: • Emergency Plan – Church Stretton Site (EHS-33 V5 dated 29 November 2022). • CS Fire Procedures Policy Document EHS-25 (date unknown). The plan also outlines how fire water is to be managed. The on-site surface water drainage system and 10,000L attenuation tank will be used to collect fire water in case of a fire. The existing pumps which over pump surface water to Severn Trent's sewer on Essex Road will be switched off to contain the water onsite. Contaminated water will then be over pumped to a tanker for offsite treatment or disposal at a suitably licenced facility. The site management team are responsible for implementing risk management measures detailed within the Emergency Plan.	Low – with control measures in place.	Harm to human health and the environment and nuisance.	Not significant.
Vandalism/Security	Commercial and industrial, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Land, surface water, groundwater, air.	The site benefits from security measures in place including gates, fencing and brick walls to prevent and deter any unauthorised entrance. The site benefits from operational procedures, including regular inspections, to ensure continual monitoring of security provision. Security infrastructure is inspected daily to identify any deteriorations and need for repairs. If deterioration or damage is found, then actions are taken to prevent unauthorised access and temporary repairs made within 24 hours. Permanent repairs will then be made as soon as practically possible after this. All visitors to site will be required to sign in and out of the electronic visitor iLobby system. This minimises the risk of unauthorised visitors gaining access to the site. The site management team will be responsible for implementing risk management measures in accordance with appropriate procedures outlined in the EMS.	Low	Theft. Harm to human health.	Not significant.
Flooding	Commercial and industrial, residential,	Flood waters over land.	The site has confirmed that the local Severn Trent storm water drain along Essex Road has been known to flood. When this occurs flood water egresses from the	Low to medium with the operational procedures	Contaminated flood waters impacting land in	**Low to Medium**

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
Contamination Loss of equipment and operational control Lack of access to site	controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.		storm drain onto site, enters the site drainage system, collects in the onsite 10,000 litre attenuation tank and is over pumped back into the storm water system at emission point W2. The site has confirmed that flooding only occurs along the access road that joins Essex Road and in the central car parking area away from raw material, waste and chemical storage. Agilent are in discussions with the 'Drainage and Flood Risk Manager' at Shropshire County Council and also Severn Trent to try and resolve this issue. Preliminary work by Severn Trent along Essex Road has lessened the impact of the surface water flooding. Agilent report all flood events to both parties. It is understood by Agilent that Severn Trent intend to undertake further remedial work to manage the offsite surface water flooding issue. Due to the risk of flooding, the site operates under an Emergency Flood Plan procedure (reference FM-09 V3.3 dated 18 September 2022). The procedure on how to manage the localised surface water flooding from Essex Road is listed under 'Flash Flooding' in the plan, which states: 'Localised flash flooding occurs in urban areas or on roads where drainage systems are unable to cope with heavy spells of rain. Rainwater is unable to drain away and quickly builds up causing flooding in unexpected places. On the Essex Road site a pumping station pumps water up to the storm drain in Essex Road. If rainfall rates are above that which the system can cope with the area around the drum store is designed to allow for a build-up of surface water, this can be pumped out when the rain subsides'. 'Where more significant flooding is expected, site have spill containment systems in the back-up generator and transformer houses to mitigate potential incidents. The site management team will be responsible for implementing risk management measures in accordance with appropriate procedures outlined in the EMS.	and mitigation measures implemented on site.	residential, ecological and commercial local areas.	Agilent in discussion with stakeholders to try and prevent / minimise this offsite source of impact
Failure of site surfacing and site containment, including firewater	Commercial and industrial, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Land, surface water, groundwater, air.	All equipment is subject to pre-planned preventative maintenance checks and maintained in accordance with manufacturer's recommendations. A Planned Preventative Maintenance (PPM) system will be in place to reduce the likelihood of a mechanical failure, the abatement plant will be part of this PPM schedule. Operating procedures and training in place for failure modes. The site benefits from impermeable concrete surfacing and a sealed drainage system to collect surface water and spills and minimise risk of run-off. Raw and waste materials associated with the site are stored in suitable containers and where required provided with adequate secondary containment within the covered 'drum store'. Wastewater effluent is collected from site twice a week to prevent stockpiling. The drum store comprises bunded stillages that act as secondary containment and the drum store bund acts as tertiary containment. The drum store bund has recently been repaired to meet CIRIA 736 requirements. The chemical store contains a perimeter bund. The diesel generator is stored within a small bunded building. Diesel for the generator is stored within the drum store. The on-site surface water drainage system and 10,000L attenuation tank will be used to collect fire water in case of a fire. The existing pumps which over pump surface water to Severn Trent's sewer on Essex Road will be switched off to contain the	Low with the operational procedures and mitigation measures implemented on site.	Contaminated firewater runoff or spillages impacting land in residential, ecological and commercial local areas.	**Low**

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
			water onsite. Contaminated water will then be over pumped to a tanker for offsite treatment or disposal at a suitably licenced facility.			
Asphyxiation and toxicity	Commercial and industrial, local transport network, residential, controlled water and ecological receptors as identified in Table 3-1. Drawing 003 & 004.	Land, surface water, groundwater, air.	An Emergency Plan is implemented and maintained at the site to ensure the site's staff are fully prepared to manage onsite chemicals. The plan will be reviewed every three years as a minimum, and after any reportable incident on site. The document will be continually improved in these reviews to include best practice and minimise the risk of accidents occurring.	Low – with the preventative measures implemented.	Contaminated land, air pollution and harm to human health.	**Not significant**
Explosion	Commercial and industrial, local transport network, residential, controlled water and ecological receptors. Drawing 003 & 004.	Land, surface water, groundwater, air.	Flammable solvents are stored in an external, fully secured and bunded storage compounds that are ATEX rated. Within the main "drum store" compound there are 90-minute Fire Rated storage units (Fire Vaults) within which the drums of solvent are stored. The storage units have self-contained bunding, fire detection and automated monitoring devices to ensure doors are closed when not in operation. All electrical equipment is subject to inspections and marked appropriately to conform with applicable regulations and legislation. Incompatible materials are stored separately. Training is provided to all operative on site to understand the risks. 'No Smoking' signs are in place, as appropriate. The site operates a permit to work system and any 'hot works' will only be permitted if the atmosphere is free from explosive gases.	Low – with the preventative measures implemented.	Contaminated land, air pollution and harm to human health.	**Not significant**
Failure of equipment or abatement technology	Commercial and industrial, local transport network, residential, controlled water and ecological receptors. 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 may involve the use of standby equipment. The site management team will be responsible for implementing risk management measures in conjunction with the Best Available Techniques and Operating Techniques (Ref: 410.V62639.00001_BATOT).	Low – with the preventative systems in place on site.	Nuisance, harm to human health and environmental harm.	**Not significant**
Failure of site services: heating, power, water supply	Commercial and industrial, local transport network, residential, controlled water and ecological receptors. 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. The site has an emergency back up generator to supply electricity in the event of disruption to the power supply.	Low – with the preventative systems in place on site.	Nuisance, harm to human health and environmental harm.	**Not significant**

5.0 Conclusion

This ERA has been undertaken in accordance with EA guidance. The assessment is provided as part of the application for an EP for the Agilent, Church Stretton site.

This qualitative risk assessment has considered odour, noise, fugitive emissions, dust, releases to water, flooding, litter and potential for accidents and incidents.

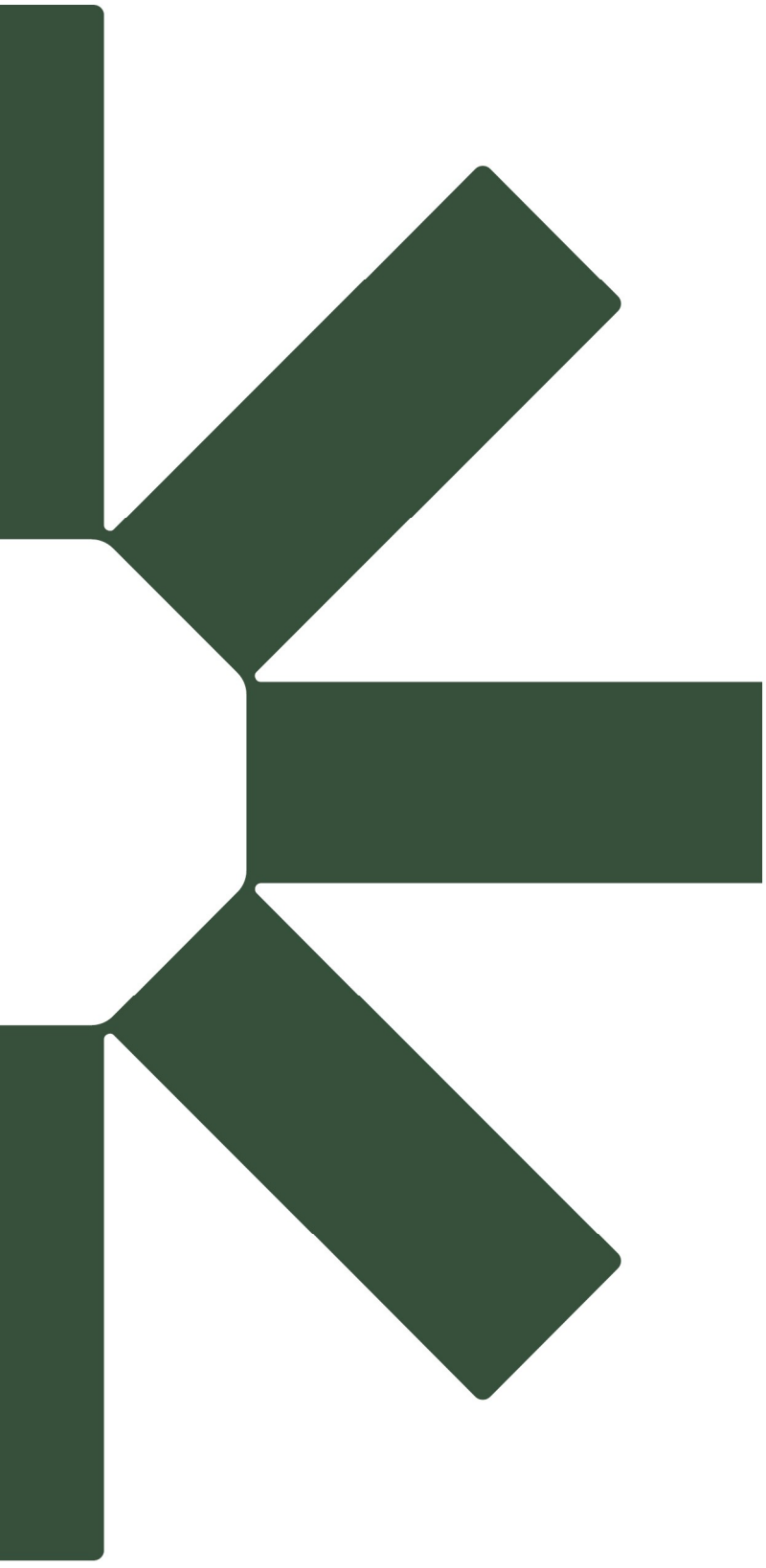
Agilent are in discussions with the 'Drainage and Flood Risk Manager' at Shropshire County Council and also Severn Trent to try and mitigate the offsite source of surface water flooding. Preliminary work by Severn Trent along Essex Road has lessened the impact of the surface water flooding. It is understood by Agilent that Severn Trent intend to undertake further remedial work to manage the offsite surface water flooding issue.

The AERA quantified and assessed the potential air quality impacts associated with potential emissions from the process operations at the Agilent's organic polymer manufacturing site. The AERA concluded that the emissions process contribution can be considered 'insignificant' against relevant long-term and short-term standards for the protection of human health. Abate to emission points in line with BAT are being considered which will likely reduce the impact further.

To ensure that the site does not cause an impact to amenity via noise emissions, the site will operate under a noise management plan (410.064951.00001_NMP).

The assessment concluded that with the implementation of the risk management measures described above, potential hazards from the facility are not likely to be significant and no further assessment is required.

Appendix A Envirocheck OS Water Map



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