

Units 12, 8, 10 Harnham Trading Estate, Salisbury

Air Quality and Odour Assessment

Callen-Lenz Associates Limited

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Principal author	Checked by	Verified by
Signed by: f.jajarmi	Signed by: i.carrington	Signed by: d.wills

Executive summary

Cundall has been commissioned to prepare an Air Quality Assessment Report for Callen-Lenz Associates Limited to support the planning application for change of use of part of the existing facility from Use Class E (g)(iii) to Use Class B2 for the manufacturing and assembly facility at Harnham Trading Estate, Salisbury.

The Site is not located within an Air Quality Management Area (AQMA). Existing conditions within the study area indicate that there is unlikely potential for nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) concentrations in the wider area to exceed the National Air Quality Objective threshold levels.

This air quality assessment has considered the potential impact of emissions associated with the proposed manufacturing and assembly facility at Harnham Trading Estate, Salisbury. There are several airborne emissions sources associated with the manufacturing processes, including fine and ultrafine particulate matter including metal fume particulates, solvents and adhesive vapours). Appropriate source and exposure control is required to mitigate any impacts.

The fit-out of an existing warehouse enables the opportunity for configuring the layout and local exhaust ventilation (LEV) systems to overcome any constraints and ensure safe and compliant operations. The new facility layout will also enable effective separation of incompatible processes, and the implementation of purpose designed extraction systems. This should include appropriate dust collection, filtration plant and discharge away from any occupied areas and access routes. In addition to effective LEV systems, general ventilation for the spaces needs to be appropriate to ensure good indoor air quality.

The potential for odour nuisance is dependent on the presence and proximity of nearby receptors and the likelihood of a pathway. A qualitative source-pathway-receptor odour assessment has therefore been carried out in accordance with IAQM Guidance¹.

- The nearest high sensitive residential receptors are located 20 m to the west and east of the Site but approximately 45 m to the LEV extracts and therefore not expected to be downwind of the Site with respect to prevailing south-westerly winds. The West Harnham Chalk Pit Special Areas of Scientific Interest (SSSI) is located 170 m to the south-east of the Site and is determined to be of medium sensitivity to odour due to presence of human receptors accessing the space, who are only expected to be present intermittently but would expect a high level of amenity within the SAC area. The proposed on-site and nearby industrial /commercial land use within the Proposed Development is determined to be of medium sensitivity to odour. This judgement has been made because these receptors wouldn't reasonably be expected to be present continuously for extended periods and would not expect to enjoy the same level of amenity as in their home.
- Filtration is to be included on the Apollo CNC router systems, to mitigate the hazardous emissions, as required. The remaining LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere and relate to infrequent manufacturing processes. Accounting for the LEV systems with appropriate filtration or the release of very low trace amounts of vapours, the source odour potential is expected to be small. Considering a small odour source potential and based on an ineffective pathway the new industrial facility is expected to present a negligible odour risk. Based on the medium or high receptor sensitivity and negligible risk (magnitude), the scale of effect is anticipated to be negligible, which is not significant.

The MECHON Stage 1 report lists the exposure potentials, control factor and acceptable hood designs for each of the applicable substances and processes and should be used to inform the appropriateness of the control measures LEV system design. The various LEV systems are detailed in the MECHON Stage 3 report⁵⁴ along with the indicative extract details, are summarised in the following table². Filtration is required for the LEV10 (Apollo CNC router). The remaining

¹ Institute of Air Quality Management (IAQM), (2018) Guidance on the assessment of odour for planning, version 1.1, July 2018.

<http://www.iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

² Numbering for the LEV systems does not include LEV 06. It is understood that this system is incorporated into another LEV system and therefore has not been listed separately in the MECHON report.

LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere. The design of each flue, including height and efflux velocity, is to be confirmed during Stage 4a design.

It is understood there will also be two CNC Lasers which will be fitted with localised HEPA filters. This will comprise a laser fume extraction system (BOFA AD 500 IQ) which has an extremely large filter capacity with high airflow and pressure rates and is therefore capable of mitigating large amounts of particulate matter and gaseous organic compounds.

Final design must ensure compliance with legislative air quality objectives, workplace exposure limits (listed in Appendix A and B of this report), and ensure exposure is reduced to as low as reasonably practicable (ALARP) for hazardous substances at risk of causing cancer, damage to genes or occupational exposure. The MECHON Stage 1 report should be referred to for a full list of exposure targets, exposure potential values and hood design requirements for applicable chemicals (Table 40.104 and Table 40.105 of MECHON Stage 1 report²⁹).

The Dangerous Substances and Explosive Atmosphere Regulations (DSEAR)³ require employers to control risks to safety from fire, explosions and substances corrosive to metals. EEUK carried out a DSEAR assessment of the existing facility in 2025 and concluded that on considering dangerous substances and explosive atmosphere risks on the site, together with the nature, operation and management of those risks, the overall level of risk was medium. Medium classification was due to the nature of fire and explosion risk having the potential to result in severe life-threatening injury requiring immediate hospitalisation. The likelihood was considered to be unlikely based on the current control measures in place. The DSEAR assessment listed several recommendations to manage the risks from dangerous substances and explosives which need to be followed.

This assessment focuses on the operational impact of the industrial workshop. Consideration of construction impacts is outside the scope of this assessment. A Dust Management Plan is expected to be required by Wiltshire Council, prior to the commencement of any on-site works and to ensure that the measures and monitoring protocols to mitigate against construction dust are to be implemented throughout the construction phase.

Based on the provision of appropriate LEV system design and filtration provision, where required and adherence to the recommendations outlined in the DSEAR assessment, it can therefore be concluded that there are not expected to be any air quality constraints associated with the Proposed Development. There are no expected to be any significant impacts on local air quality.

³ Health and Safety Executive (HSE) The Dangerous Substances and Explosive Atmospheres Regulations 2002, <https://www.hse.gov.uk/fireandexplosion/dsear.htm>

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1.0

Introduction

1.0 Introduction

Cundall has been commissioned to prepare an Air Quality Assessment Report for Callen-Lenz Associates Limited to support the planning application for change of use of part of the existing facility from Use Class E (g)(iii) to Use Class B2 for the proposed manufacturing and assembly facility at Harnham Trading Estate, Salisbury. The refit of a large existing warehouse enables the opportunity for configuring the layout and local exhaust ventilation (LEV) systems to overcome any constraints and ensure safe and compliant operations.

1.1 Scope of Work

The proposed industrial workshop facility will include welding and metal fabrication, spray painting and coating, solvent and adhesive use, machining and sanding, carbon fibre and wood working and model-making processes involving glues and resins. Consideration of potential air quality and odour impacts is therefore required to support a planning application.

Given the nature of these industrial activities, a proportionate assessment demonstrating that pollutant and odour emissions from the Local Exhaust Ventilation (LEV) systems and general workshop operations will not adversely impact nearby receptors is required for submission to the Local Planning Authority (LPA) - Wiltshire Council.

This report includes the following elements to inform the assessment:

- **Baseline and Planning review** – review of site layout and proposed activities to enable identification of pollutant sources. Consideration of legislative and planning requirements; in particular considerations of air quality objectives for particulates (PM), metals, volatile organic compounds (VOCs) and gases
- **Emissions Source Assessment** – preparation of an emissions inventory based on welding and fabrication; spray painting, solvent and adhesive and other machine emissions and any on-site combustion plant. Review of LEV discharge arrangements (including proposed discharge heights) and likely near-field emissions behaviour.
- Estimation of potential emissions and therefore potential change in local air quality from workshop operations.
- **Qualitative Odour Assessment** - The Proposed Development has the potential to introduce several new sources of odour. The potential for odour nuisance is dependent on the presence and proximity of nearby receptors and the likelihood of a pathway. A qualitative source-pathway-receptor odour assessment has therefore been carried out in accordance with IAQM Guidance.
- **Mitigation Strategy** – any recommended mitigation measures related to filtration / abatement measures (HEPA, carbon filters etc.). Recommendations relating to ventilation optimisation and good-practice operational controls including maintenance and inspection recommendations (LEV, filters, ducting).

The assessment focuses on the operational impact of the industrial workshop. There are no requirements for any combustion plant, such as standby generators for heating and cooling provision. Consideration of traffic emission is outside the scope of this assessment. Cundall produced a Transport Technical Note in June 2026⁴, the findings of which are summarised in section 2.3 of this report. Based on the proposed site use and location of the site outside an Air Quality Management Area (AQMA) and within a commercial/industrial trading estate, the change in traffic flows is not expected to be above the threshold to necessitate any detailed assessment. Consideration of construction impacts is also outside the scope of this assessment. A Dust Management Plan is expected to be required by Wiltshire Council, prior to the commencement of any on-site works and to ensure that the measures and monitoring protocols to mitigate against construction dust are to be implemented throughout the construction phase.

⁴ Cundall (2026) Netherhampton Road, Salisbury, Transport Technical Note, Ref: CLA-CDL-XX-XX-T-TC-75201, revision P02, 04/08/2026

1.2 Limitations and Assumptions

This assessment relies on the accuracy of the information provided by the client. This includes information and assessment provided by other consultants.

The assessment includes a qualitative assessment of potential for odour nuisance and refers to the findings of a semi-quantitative assessment of risk of exposure to hazardous substances carried out by MECHON.

2.0

Site and Proposed Development

2.0 Site and Proposed Development

2.1 Site Location

The Site is located at the Units 12, 8/10 Harnham Trading Estate, Netherhampton Road in Salisbury.

The site covers an area of approximately 2,318 sq.m on an Industrial Estate. The building consists of three single storey attached steel portal frame light industrial units. Units 8 and 10 (now combined) and Unit 12.

The existing comprises industrial buildings consisting of two units, one has a floor area of 372 m² (Unit 8/10) and currently operates under use class B2 general industrial, and the other has a floor area of 747 m² (Unit 12) and operates under use class E(g)(iii) light industrial.

The surrounding land use can be summarised as follows:

- To the north – car parking, Stonehenge Crossfit and residential properties.
- To the east - Harnham Trading Estate access road, beyond which are residential properties
- To the south –New Garage (Harnham) and Phill Small Marquees of Salisbury
- To the west – residential properties

The location of the Site is shown in Figure 2-1.

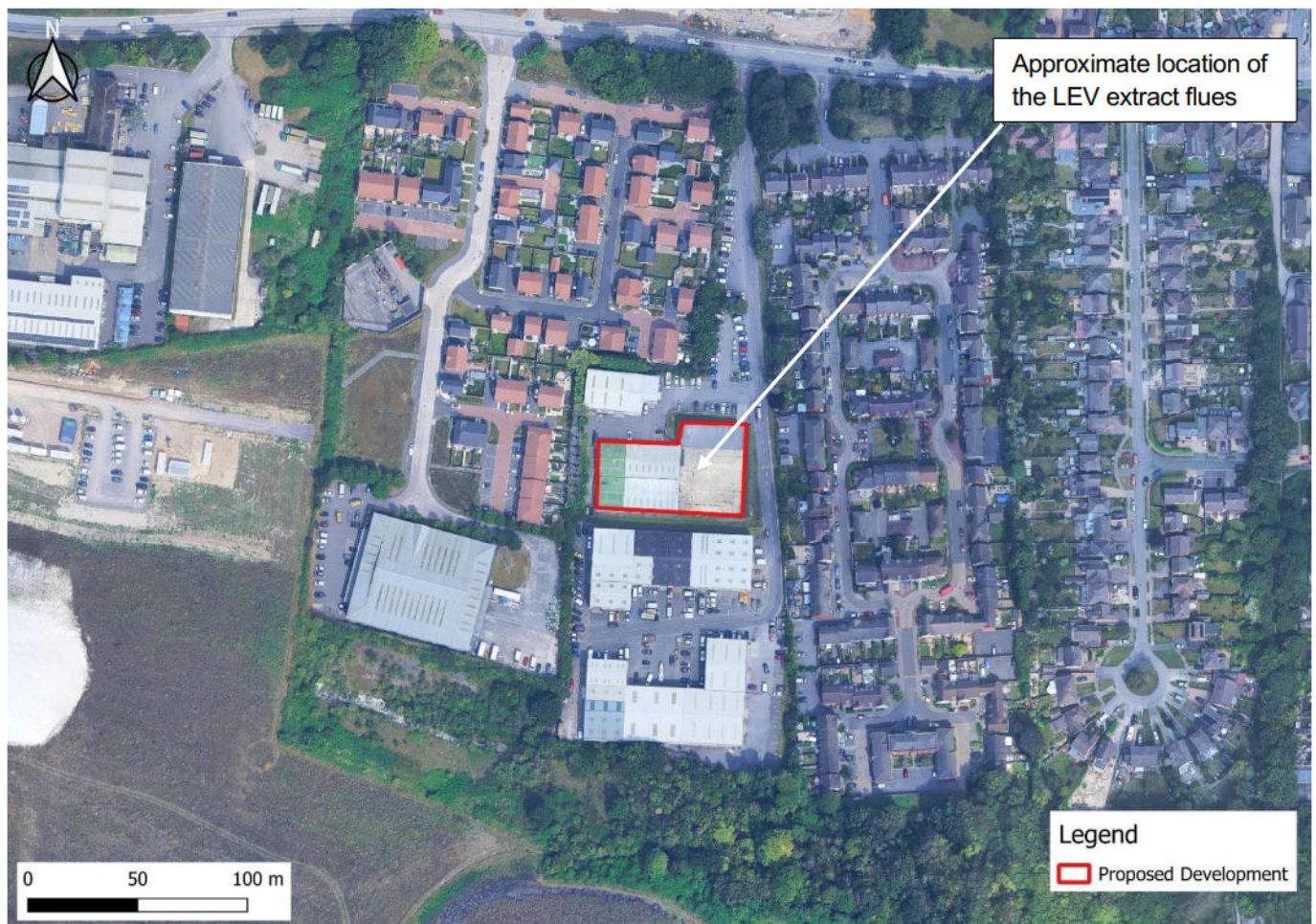


Figure 2-1111: Site Location

2.2 Proposed Development

Proposals are for change of use of part of the existing facility from Use Class E (g)(iii) to Use Class B2 for the manufacturing and assembly facility at Harnham Trading Estate. A proposed elevations plan has been reproduced as Figure 2-4, courtesy of Roberts Limbrick⁵. The approximate location of the local exhaust ventilation (LEV) flue extracts is shown in Figure 2-1.

Cundall have produced a Building Services Stage 3 Specification⁶ to inform Stage 3 design. There are no requirements for any combustion plant, such as standby generators for heating and cooling provision.

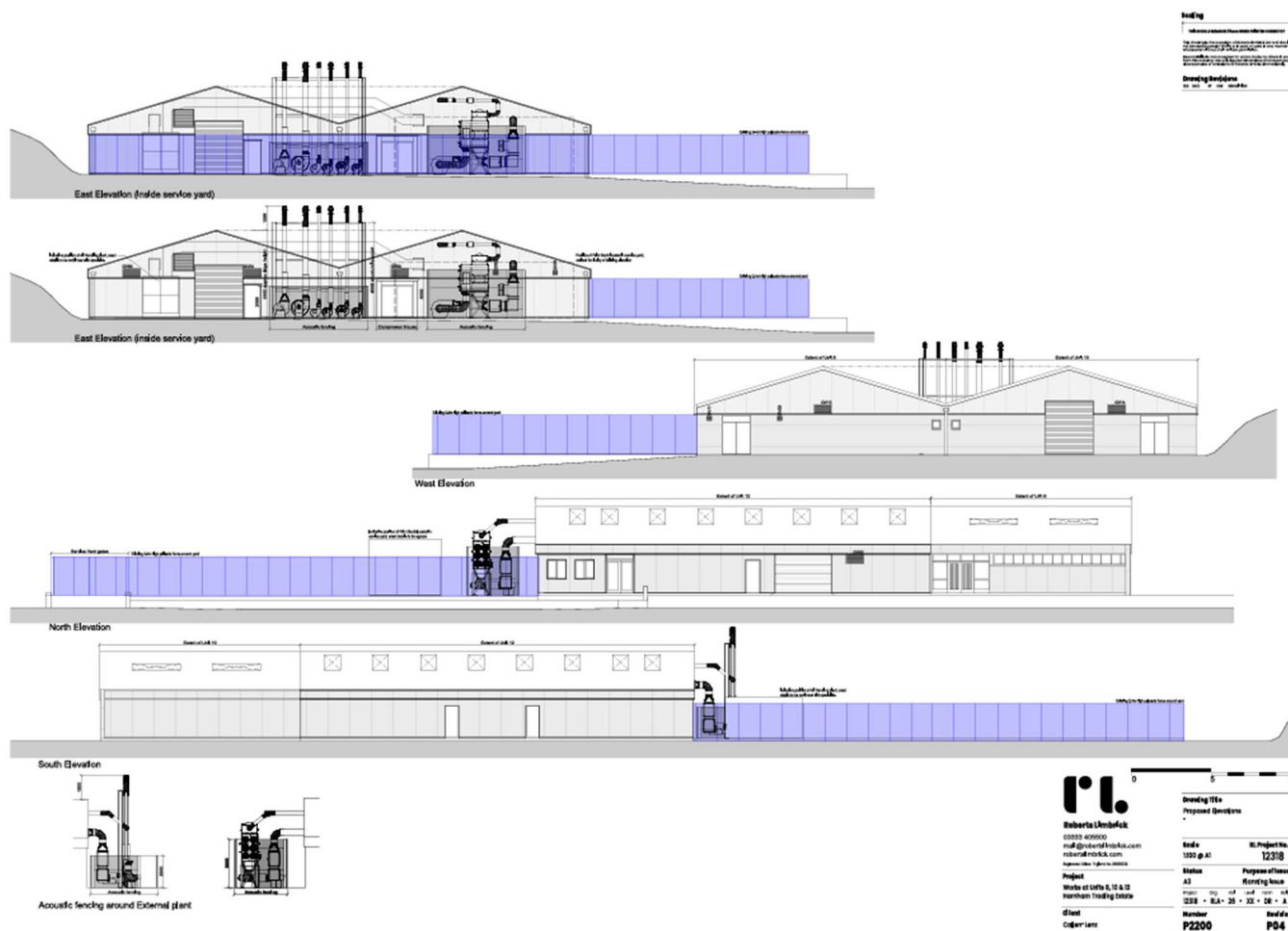


Figure 2-2222: Proposed Elevations (courtesy of Roberts Limbrick)

⁵ Roberts Limbrick (2026) Proposed Elevations, Works at Units 8, 10 & 12 Harnham Trading Estate, Ref: 12318-RLA-26-XX-DR-A, revision P04

⁶ Cundall (2026) Units 8, 10 & 12 Harnham Trading estate, Netherhampton Road, Salisbury, Building Services Stage 3 Specification, Ref: CLA-CDL-XX-XX-T-Z-91001, revision P01, 16 June 2026

2.3 Transport Emissions

The Proposed Development will include a vehicle service yard and associated parking facilities. Cundall produced a Transport Technical Note in June 2026⁴. The Transport Note concluded that the proposed change of use application from E(g)(iii) Industrial to B2 General Industrial at Units 8/10 and Unit 12 within the Harnham Trading Estate is considered acceptable on transport and highways grounds. It is noted that the existing 10 staff occupy up to 10 parking spaces at any one time, which is to remain unchanged as part of the proposals. An assessment was made of the existing surrounding area and its accessibility for pedestrians, cyclists, and public transport facilities and concluded a good level of accessibility by non-car modes of travel to and from the site. A total of four-cycle parking spaces are to be provided in form of two Sheffield stands located in a secure cycle store within the on-site service yard, which is in excess of minimum WC standards and therefore is compliant.

3.0

Legislation, Policy and Guidance

3.0 Legislation, Policy and Guidance

3.1 Key Legislation and Policy

This assessment of operational impacts considers key air quality legislation, which is summarised in Table 3-1.

Legislation	Description
Environmental Improvement Plan, 2023 ⁷	The Environmental Improvement Plan (EIP23) highlights that air quality continues to be the biggest environmental risk to human health and a source of harm to the natural environment. The document makes provision about targets and plans with the focus of improving the environmental quality. This includes reducing emissions in the home, driving effective local action through local authorities, maintaining and improving regulatory framework for industrial emissions, supporting farmers to cut the impact of agriculture on air quality and reducing emissions from cars and other forms of transport. Ten environmental goals were set in the 25 Year Environmental Plan. The second goal is clean air and the EIP23 seeks to address this further through the following targets and commitments: ▪ In 2040 reduce population exposure of fine particulate matter (PM_{2.5}) by 35% compared to 2018 levels (with an interim target of a 22% reduction by January 2028) ▪ Work towards meeting compliance with a 40 µg/m³ limit for nitrogen dioxide (NO₂) ▪ Maximum annual mean 10 µg/m³ for PM_{2.5} (with an interim target of 12 µg/m³ by January 2028) ▪ Legal emission reduction targets for five damaging pollutants by 2030 relative to 2005 levels: – Reduce emissions of nitrogen oxides by 73%. – Reduce emissions of sulphur dioxide by 88%. – Reduce emission of (PM_{2.5}) by 46%. – Reduce emissions of ammonia by 16%. – Reduce emissions of non-methane volatile organic compounds by 39%. Progress towards delivering the EIP23 will be monitored through Annual Progress Reports and the Outcome Indicator Framework. This framework contains 66 indicators, six which are relevant to clean air.
The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 ⁸	The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 mandate two key goals for England by 2040 which are: ▪ An annual mean concentration of PM_{2.5} no higher than 10 µg/m³ at any monitoring station in England, ▪ and a 35% reduction in population exposure to PM_{2.5} compared to 2018 levels. These regulations are part of the Environment Act 2021 and aim to improve air quality by addressing fine particulate matter pollution.

⁷ HM Government (2025) Environmental Improvement Plan 2025, <https://www.gov.uk/government/publications/environmental-improvement-plan-2025/environmental-improvement-plan-eip-2025>

⁸ HMSO (2023) The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, <https://www.legislation.gov.uk/uksi/2023/96/contents/made>

Legislation	Description
The Air Quality Strategy for England (2023) ⁹	Defra's framework for local authorities to make best use of their powers and make air quality improvements for their communities. Defra published a Clean Air Strategy in August 2023, updating the 2019 document and setting out a framework to help local authorities support their communities and achieve long-term air quality objectives, including new, ambitious targets for fine particulate matter (PM_{2.5}). This Strategy provides a wide range of actions for UK Government to reduce pollutant emissions and improve air quality. The range of power available to local authorities includes taking actions on domestic burning, industrial emissions, transport and non-road mobile machinery, agriculture, indoor air quality, and communicating air quality information. The Clean Air Strategy sets out the case for action and demonstrates the government's determination to improve air quality. In some cases, the goals are even more ambitious than EU requirements to reduce people's exposure to toxic pollutants like nitrogen oxides, ammonia, particulate matter, non-methane volatile organic compounds and sulphur dioxide.
Environment Act, 2021 ¹⁰ .	The Act makes provision about targets, plans and policies with the focus of improving the natural environment. This includes air quality, as well as water, nature and biodiversity, regulation of chemicals, waste and resource efficiency and recall of products failing to meet environmental standards. The Act introduces a duty on government to bring forward at least two air quality targets by October 2022 for consultation. These are to be to reduce the annual average level of fine particulate matter (PM_{2.5}) and to set a long-term (minimum of 15 year) target for its reduction. The 2021 Act amends the Environment Act 1995 Part IV by seeking to strength local air quality a management (LAQM) through greater cooperation at local level and broadening the range of organisations that play a role in improving air quality. Responsibility for tackling air pollution is to be shared between designated local authorities, all tiers of local government and neighbouring authorities. The environment secretary will be required to review the Air Quality Strategy at least every five years and publish annual progress reports to parliament. The 2021 Act amends the Clean Air Act 1993 to give local authorities more power to reduce pollution in smoke control areas by replacing the criminal offence of emitting smoke from a chimney in a smoke control area with a civil penalty regime, seeking to enable simpler, quicker and more proportionate enforcement at local level. It also amends the Environmental Protection Act 1990 by extending the system of statutory nuisance to private dwellings in smoke control areas, which could result in abatement notice and issuing fines for criminal offence of breaches. The 2021 Act introduces new powers for the government to compel vehicle manufacturers to recall vehicles and non-road machinery that fails to meet legal binding standards.
UK REACH Regulations 2021 ¹¹	UK REACH is the chemical regulatory framework for Great Britain, which mirrors the EU's REACH system. It places legal responsibility on businesses to identify and manage chemical risks to ensure safety. Businesses are required to report to the HSE as needed.
Environment Protection Act 1990, amended by the Pollution Prevention and Control Act 1999 ¹² and the Environment Act 2021 ¹⁰	Part III provides statutory nuisance provisions for nuisance dust. Nuisance complaints about dust would need to be investigated by the Local Authority. In practice, dust deposition is generally managed appropriately by suitable on-site practices and mitigation, avoiding the determination of statutory nuisance and/or prosecution or enforcement notices.

⁹ Department for Environment, Food and Rural Affairs (Defra) (2023), The Air Quality Strategy for England (2023), last updated 25th August 2023, <https://www.gov.uk/government/publications/the-air-quality-strategy-for-england>

¹⁰ HMSO (2021) Environment Act 2021, November 2021, <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

¹¹ HMSO (2021) The REACH etc (Amendment) Regulations 2021, UK statutory instrument 2021 No. 904, <https://www.legislation.gov.uk/uksi/2021/904/made>

¹² Environmental Protection Act 1990, Chapter 43, Part III Statutory Nuisances and Clean Air <https://www.legislation.gov.uk/ukpga/1990/43/part/III>

Legislation	Description
The Air Quality Standards (Amendment) Regulations 2016 ¹³	The 2016 amendment is an update of the now superseded 2010 UK Air Quality Standards, which transposed formalised EU Limit Values which were set out in directive 2008/50/EC ¹⁴ to UK law. These Limit Values were set for a variety of pollutants for human-health and the environment.
Environmental Permitting (England and Wales) regulations 2016 (as amended) ¹⁵	Legal framework for governing industrial pollution and waste. Designed to protect human health and the environment, through the requirement to obtain permits before carrying out potentially polluting activities. Specific requirements are imposed on industrial emissions to mitigate environmental impacts. through provision of a permit
Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 ¹⁶	Guidance for businesses on the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations. Outlines obligations for manufacturers, their authorised representatives, importers and distributors.
Control of Substances Hazardous to Health (COSHH) Regulations 2002 ¹⁷	COSHH provides a framework for controlling hazardous substances in the workplace. Key requirements relate to risk assessment for all hazardous substances, removing or reducing exposure where feasible, implementation of appropriate control measures, compliance with Workplace Exposure Limits (WELs), recording keeping and exposure monitoring, employee health surveillance programmes, employee information and training and emergency procedures provision. Regulation 7(5) of COSHH refers to specific requirements for controlling exposure to carcinogenic, mutagenic and reprotoxic (CMR) substances where it is not reasonably practicable to prevent exposure: <i>“(a) totally enclosing the process and handling systems, unless this is not reasonably practicable;</i> <i>(b) the prohibition of eating, drinking and smoking in areas that may be contaminated by carcinogens [or mutagens];</i> <i>(c) cleaning floors, walls and other surfaces at regular intervals and whenever necessary;</i> <i>(d) designating those areas and installations which may be contaminated by carcinogens [or mutagens] and using suitable and sufficient warning signs; and</i> <i>(e) storing, handling and disposing of carcinogens [or mutagens] safely, including using closed and clearly labelled containers”.</i> Regulation 7(7)(c) requires exposure to be reduced as low as reasonably practicable (ALARP) for substances with hazard statements H340, H350 or H350i. Additional details are provided on the Health and Safety Executive (HSE) website¹⁸.

¹³ HMSO (2016). Statutory Instrument 2016 No. 1184, Environmental Protection, England, The Air Quality Standards (Amendment) Regulations 2016, London: HMSO, <https://www.legislation.gov.uk/ukSI/2016/1184/contents/made>

¹⁴ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe

¹⁵ HMSO (2016) The Environmental Permitting (England and Wales) Regulations 2016, , UK Statutory Instruments, 2016 No. 1154 <https://www.legislation.gov.uk/ukSI/2016/1154/contents>

¹⁶ HMSO (2016) The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UK statutory instrument 2016 No. 1107, <https://www.legislation.gov.uk/ukSI/2016/1107/contents>

¹⁷ HMSO (2002) The Control of Substances Hazardous to Health (COSHH), UK statutory instrument 2002 No. 2677, Regulation 7 <https://www.legislation.gov.uk/ukSI/2002/2677/regulation/7>

¹⁸ Health and Safety Executive (HSE) Control of Substances Hazardous to Health (COSHH) <https://www.hse.gov.uk/coshh/index.htm>

Legislation	Description
Dangerous Substances and Explosive Atmosphere Regulations 2002 ¹⁹	The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) require employers to control the risks to safety from fire, explosions and substances corrosive to metals. Summary details are provided on the Health and Safety Executive (HSE) website²⁰, including the following key DSEAR requirements for employers: • <i>“find out what dangerous substances are in their workplace and what the risks are</i> • <i>put control measures in place to either remove those risks or, where this is not possible, control them</i> • <i>put controls in place to reduce the effects of any incidents involving dangerous substances</i> • <i>prepare plans and procedures to deal with accidents, incidents and emergencies involving dangerous substances</i> • <i>make sure employees are properly informed about and trained to control or deal with the risks from the dangerous substances</i> • <i>identify and classify areas of the workplace where explosive atmospheres may occur and avoid ignition sources (from unprotected equipment, for example) in those areas”</i>
Health and Safety at Work Act 1974 ²¹	The primary legislation governing workplace health and safety in the UK. Outlines the requirements of employers, employees and self-employed to ensure a safe, healthy working environment as far as reasonably practicable.

Table 3-1111: Key Legislation

3.2 Air Quality Objectives and Guideline Values

The UK Air Quality Objectives (AQOs)²² which apply to this assessment²³ are listed in Appendix A. Relevant Future Targets outlined in the Environmental Improvement Plan 2025⁷ and WHO Guidelines^{24,25} are also listed. Some pollutants have long-term (annual mean) objectives due to the chronic way they affect human health, or the natural environment and others have short-term (1-hour, 24-hour mean) objectives due to the acute way they affect human health or the natural environment.

¹⁹ HMSO (2002) The Dangerous Substances and Explosive Atmospheres Regulations 2002, UK statutory instrument 2002 No. 2776, <https://www.legislation.gov.uk/ukSI/2002/2776/contents>

²⁰ Health and Safety Executive (HSE) The Dangerous Substances and Explosive Atmospheres Regulations 2002 <https://www.hse.gov.uk/fireandexplosion/dsear.htm>

²¹ Health and Safety Executive (HSE) Health and Safety at Work etc Act 1974 <https://www.hse.gov.uk/legislation/hswa.htm>

²² Department for Environment Food & Rural Affairs (Defra) UK Air Information Resource (UK AIR), National air quality objectives, https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf

²³ Other pollutants have been screened out of this assessment as exceedance of their respective objectives is not anticipated to be associated with the pollutant sources of relevance to this assessment. Sulphur dioxide emissions are not expected to be significant, based on the assumption of the use of low sulphur diesel fuel.

²⁴ World Health Organisation (WHO) (2021) WHO global air quality guidelines, Particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide, <https://apps.who.int/iris/handle/10665/345329>

²⁵ Good practice design (e.g., Building Regulations) often considers WHO guidelines, which are usually more stringent (see Table 9-1111Table 9-11). Compliance with WHO recommended guidelines for residential and non-residential elements is considered 'best practice' but is non-mandatory at present, i.e., suitable control can be adopted on an 'as-required' basis.

3.3 Workplace Exposure

This air quality assessment considers the Control of Substances Hazardous to Health (COSHH)²⁶ and the Health and Safety at Work Act²⁷ requirements. Employers are required by law to adequately control exposure to materials in the workplace that cause ill health.

Workplace exposure limits (WELs) are set by the Health and Safety Executive (HSE) in order to help protect the health of workers. There are WELs for a large number of hazardous airborne substances that are time-weighted average (TWA) over long-term (8 hours) or short-term (15-minutes). The WELs are listed in the latest version of the EH40/2005 Workplace Exposure Limits²⁸ and have been listed in Appendix B.

Long-term (8-hour) and short-term (15-minute) exposure are both considered applicable for the industrial setting. Advisories are listed for several of these chemicals, such as being capable of causing cancer and/or heritable genetic damage (Carc), capable of causing occupational asthma (Sen), can be dermally absorbed through the skin and may cause systemic toxicity (Sk) and those with biological monitoring guidance values (BMGVs).

Appendix B also lists all other relevant (as listed in the MECHON stage 1 report²⁹) substances and associated hazard statements which are classed as hazardous substances according to EH40, CLP (Classification, Labelling and Packaging)³⁰, and European Chemicals Agency (ECHA)³¹, but do not have WEL limit values.

The MECHON Stage 1²⁹ report lists the results of exposure benchmarking which was used to evaluate the level of control required to reduce airborne exposure from individual substances to a level of exposure that is deemed safe (exposure target). Target exposure limits listed in the MECHON Stage 1 report have been determined based on a factor of the workplace exposure limit; typically, as follows:

- 20% of WEL for standard substances
- 10% of WEL for substances with the following hazard statements in accordance with HSE guidance on ALARP.

The full limit of exposure targets for the applicable hazardous chemicals are listed in the MECHON Stage 1 report and should be used to inform the appropriateness of LEV system design.

The MECHON Stage 1²⁹ report also explores the exposure potential, control factors and hood types to inform LEV system requirements. Exposure potential data may have been derived from air sampling, research or using methodology outlines in HSG 258³². The quantity, temperature and volatility of each substance is used to inform exposure potential and therefore anticipated concentration of contaminant in air, in the absence of any engineering controls. Control factors (ratio of exposure potential over target exposure limit) were derived for each substance and process as part of the MECHON Stage 1 assessment and the following was reported:

- Substances and processes with a control factor <1 may only require general ventilation as the control approach.
- Substances and processes with a control factor >1 but <80 have possibility of achieving adequate control without containment (such as capturing or receiving hoods)
- Substances and processes with a control factor >80 require containment

Table 40.105 of the MECHON Stage 1 report lists the exposure potentials, control factor and acceptable hood designs for each of the applicable substances and processes and should be used to inform the appropriateness of the control measures LEV system design.

²⁶ Health and Safety Executive (HSE) Control of Substances Hazardous to Health (COSHH) <https://www.hse.gov.uk/coshh/index.htm>

²⁷ Health and Safety Executive (HSE) Health and Safety at Work etc Act 1974 <https://www.hse.gov.uk/legislation/hswa.htm>

²⁸ HSE (2020) EH40/2005 Workplace exposure limits, Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations 2002 (as amended), EH40/2005 (Fourth Edition 2020) <https://www.hse.gov.uk/pubns/priced/eh40.pdf>

²⁹ MECHON (2025) Stage 1 Risk Assessment for Callen-Lenz (Salisbury), ref: CAS24-1219-10-1001, 31 March 2025

³⁰ CLP (Classification, Labelling and Packaging) <https://cefic.org/guidance-and-management-frameworks/reach-clp/>

³¹ European Chemicals Agency (ECHA) https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/search-all-eu-institutions-and-bodies/european-chemicals-agency-echa_en

³² Health and Safety Executive (HSE) (2017) HSG258: Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV), <https://www.hse.gov.uk/pubns/books/hsg258.htm>

3.4 Planning Policy and Guidance

Consideration of the strategic location and design of new developments is of key importance in the land-use planning process and can provide a means of improving air quality. Air quality considerations as part of development applications may become material in determining planning applications. Relevant planning policy and guidance at the National, Regional, and Local levels as summarised in Table 3-2.

Policy / Guidance	Description
National Policy and Guidance	
Ministry of Housing, Communities & Local Government – National Planning Policy Framework (NPPF) (2025) ³³	The National Planning Policy (NPPF) first published March 2012 and last updated in February 2025, with the purpose of planning and achieving sustainable development. Paragraph 199 of the NPPF states that: <i>“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan”.</i> In addition, paragraph 110 states that: <i>“The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.”</i> Paragraph 187 discusses how planning policies and decisions should contribute to and enhance the natural and local environment. Of relevance to air quality, NPPF notes that this can be achieved by: <i>“e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans”</i>
Planning Policy Guidance – Air Quality (updated 2019) ³⁴	Planning Practice Guidance (PPG) documents have been published as part of the NPPF. PPG relating to air quality was last updated in November 2019. It provides guidance on the significance of air quality in determining the local impact of proposed developments and highlights the importance of local and neighbourhood plans with regard to air quality. A flowchart is provided to assist local authorities in determining how air quality considerations might fit into development management processes.

³³ Ministry of Housing, Communities & Local Government, National Planning Policy Framework, February 2025
<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

³⁴ Ministry of Housing, Communities and Local Government (2024) Planning Practice Guidance: Air Quality, updated 1 November 2019
<https://www.gov.uk/guidance/air-quality--3>

Policy / Guidance	Description
Regional / Local Planning Policies	
Wiltshire Core Strategy ³⁵	The Wiltshire Core Strategy Development Plan Document ('the plan') was formally adopted on 20 January 2015. The plan provides a positive and flexible overarching planning policy framework for Wiltshire for the period up to 2026. The following core policy relates directly to air quality. Core Policy 55 – Air Quality <i>“Development proposals, which by virtue of their scale, nature or location are likely to exacerbate existing areas of poor air quality, will need to demonstrate that measures can be taken to effectively mitigate emission levels in order to protect public health, environmental quality, and amenity. Mitigation measures should demonstrate how they will make a positive contribution to the aims of the Air Quality Strategy for Wiltshire and where relevant, the Wiltshire Air Quality Action Plan. Mitigation may include:</i> <i>i. landscaping, bunding or separation to increase distance from highways and junctions</i> <i>ii. possible traffic management or highway improvements to be agreed with the local authority</i> <i>iii. abatement technology and incorporating site layout/separation and other conditions in site planning</i> <i>iv. traffic routing, site management, site layout and phasing</i> <i>v. where appropriate, contributions will be sought toward the mitigation of the impact a development may have on levels of air pollutants.</i> <i>We have developed Supplementary Planning Documentation which was approved by Wiltshire Council's Cabinet on the 7 October 2025 and is awaiting final approval by full council on the 21 October 2025. Until such time it indicates the direction of travel and our approach to assessing the impact of development on air quality.</i> <i>We will not accept assessments based on the 'Land-use Planning & Development Control: Planning for Air Quality' Impact Assessment (IAQMs). However, the guidance does provide some useful advice on tackling air quality issues and mitigation. The following are provided as useful resources in addressing potential air quality issues associated with development of different types”.</i>
Wiltshire Air Quality Supplementary Planning Document (SPD) ³⁶	The Supplementary Planning Document (SPD) seeks to assist developers in improving air quality and lowering transport emissions in line with national planning and the aims and objectives of Wiltshire's Air Quality Action Plan and Air Quality Strategy The SPD outlines the importance of the following: 1. The base design of the development 2. How to classify a development site and what type of air quality assessment is appropriate 3. Emissions calculations 4. Appropriate mitigation/design including our policy on financial 'off setting' contribution
Air Quality Action Plan for Wiltshire ³⁷	The purpose of the air quality action plan is, on the evidence available, to set out the strategic and locally generated actions that will be implemented to improve air quality and work towards meeting the air quality objectives. The plan details 17 strategic actions, the implementation of which, will work towards achieving the objective for nitrogen dioxide and small particulates. These actions share synergies with many other council policies and strategies notably the Local Transport plan and Climate Change Strategy. The Action Plan refers to the intention to produce an Air Quality SPD. The Action Plan also includes an Appendix relating to Salisbury which highlighted that the source of pollutant exceedance in Salisbury is exhaust emissions from traffic.

³⁵ Wiltshire Council (2015) Wiltshire Core Strategy, adopted January 2015, <https://www.wiltshire.gov.uk/planning-policy-core-strategy>

³⁶ Wiltshire Council (2026) Wiltshire Council Air Quality Supplementary Planning Document (SPD), July 2026, https://www.wiltshire.gov.uk/media/20539/Air-quality-supplementary-planning-guidance/pdf/Air_Quality_SPD_Final_2026.pdf?m=1781089134093

³⁷ Wiltshire Council (2015) Air Quality Action Plan for Wiltshire, June 2015, <https://cms.wiltshire.gov.uk/documents/s149491/WCO23AirQualityActionPlanforWiltshire.pdf>

Policy / Guidance	Description
Other Relevant Policy and Guidance	
Defra Local Air Quality Management (LAQM) Policy Guidance (PG22) (2022) ³⁸ and Technical Guidance (TG22) (2022) ³⁹	The guidance issued under Part IV of the Environment Act 1995 is designed to help local authorities with their LAQM duties. The guidance sets out the general approach to use and detailed technical guidance to guide local authorities through the Review and Assessment process.
World Health Organisation (WHO) Global Air Quality Guidelines (2021) ⁴⁰	Since 1987, WHO has periodically issued health-based air quality guidelines to assist governments and civil society to reduce human exposure to air pollution and its adverse effects. The WHO air quality guidelines published in 2006 provided health-based guideline levels for the major health-damaging air pollutants, including particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), nitrogen dioxide (NO₂) and sulphur dioxide (SO₂). These guidelines had a significant impact on pollution abatement policies all over the world and led to the first universal frame of reference. Following extensive research which started in 2016 and has referred to numerous epidemiological studies, WHO have reassessed their guideline values and recently (September 2021) provided updated values.
IAQM Indoor Air Quality Guidance (2021) ⁴¹	The IAQM have provided guidance on the assessment of indoor air quality. This was published in September 2021 and covers assessment, monitoring, modelling and mitigation relating to indoor air quality.
Technical Guidance Note on Dispersion (TGN-D1) ⁴²	Outlines method of approximately determining the heights of discharge stacks for polluting emissions, which should be adequate in normal circumstances. Intended for use by Inspectors, Local Authorities, Industry, for processes regulated by Local Authorities.
Environmental Protection (EPUK)/Institute of Air Quality Management (IAQM) Land Use Planning & Development Control (2017) ⁴³	This guidance has been produced to ensure that air quality is adequately considered in the land use planning and development control processes by relevant officers within local authorities, developers, and consultants involved in the preparation of development proposals and planning applications. This document is best practice guidance and has no formal or legal status.
IAQM assessment of air quality impacts on designated nature conservation sites ⁴⁴	This guidance signposts the appropriate thresholds used by local authorities, the Environment Agency and other regulators to determine the potential for air quality damage on sensitive ecological sites. Should threshold be likely to be exceeded, a suitably qualified and experienced ecologist is required to determine whether there is likely to be a significant impact on the habitat.
HSE (2017) HSG258: Controlling airborne contaminants at work ⁴⁵	The guidance describes the principles of designing, commissioning and testing of local exhaust ventilation (LEV) systems. It outlines roles and legal responsibilities of employers and suppliers of LEV; competence requirements; principles of good design practice for effective LEV hoods and their classification; ducts; air movers; air cleaners; and system documentation with checking and maintenance schedules and marking of defective equipment.

Table 3-2222: Key Policy and Guidance

³⁸ Defra (2022) Local Air Quality Management Policy Guidance (PG22) <https://iaqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-Policy-Guidance-2022.pdf>

³⁹ Defra (2022) Local Air Quality Management Technical Guidance (TG22) August 2022 <https://iaqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>

⁴⁰ World Health Organisation (WHO) (2021) WHO global air quality guidelines, Particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide, <https://apps.who.int/iris/handle/10665/345329>.

⁴¹ Institute of Air Quality Management (IAQM) (2021), Indoor Air Quality Guidance: Assessment, Monitoring, Modelling and Mitigation, version 1.0, September 2021, https://iaqm.co.uk/wp-content/uploads/2013/02/iaqm_indoorairquality.pdf

⁴² Her Majesty's Inspectorate of Pollution (HMIP) (1993) Technical Guidance Note (Dispersion) Guidelines on Discharge Stack Heights for Polluting Emissions D1. June 1993 HMSO, https://www.aivc.org/sites/default/files/airbase_9005.pdf

⁴³ Environmental Protection UK (EPUK)/Institute of Air Quality Management (IAQM), (2017) Land-Use Planning & Development Control: Planning for Air Quality <https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf>

⁴⁴ Institute of Air Quality Management (IAQM) (2020) A guide to the assessment of air quality impacts on designated nature conservation sites, version 1.1, May 2020, <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>

⁴⁵ Health and Safety Executive (HSE) (2017) HSG258: Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV), <https://www.hse.gov.uk/pubns/books/hsg258.htm>

4.0

Baseline Assessment

4.0 Baseline Assessment and Planning Review

To assess the significance of any new development proposal (in terms of air quality), it is necessary to identify and understand the baseline air quality conditions in and around the study area. This provides a reference against which any potential changes in air quality can be assessed. Since air quality is predicted to change in the future (mainly because of changes to vehicle emissions), the baseline situation is extrapolated forward to the opening year. The future baseline scenario is the predicted baseline for the opening year.

To identify the existing air quality conditions, a review of publicly available information has been undertaken, including the latest local authority air quality reports, monitoring data, and background concentration maps. This section presents the results of the review.

4.1 Local Sources of Pollution

Industrial air pollution sources are regulated through operating permits or authorisations, which list stringent emission requirements. Regulated industrial processes are classified as either Part A or Part B processes and are regulated through Environmental Permitting (England and Wales) Regulations 2016⁴⁶. The larger, more polluting, Part A processes are regulated by the Environment Agency for emissions to air, water and land. The smaller, less polluting processes are regulated by the local authority for emission to air.

A review of the Environment Agency Pollutant Inventory for 2021⁴⁷ indicated that there are no Part A permit sites within 2 km of the Proposed Development. Given the distance and the location of the nearest site, the NHS Foundation Trust (approximately 2.8 km south-east), emission from Part A permit sites are not expected to have a significant impact on air quality at the Proposed Development.

The Part B processes are regulated and reviewed by the Local Authorities and given the nature of these processes, are unlikely to significantly affect ambient air quality in the vicinity of the Proposed Development.

Any emissions from these installations are assumed to be represented in the Defra background concentrations.

The most recent 2025 ASR⁴⁸ also confirmed that there were no new industrial and other sources identified.

⁴⁶ HMSO (2016) The Environmental Permitting (England and Wales) Regulations 2016, UK Statutory Instrument 2016 No. 1154
<https://www.legislation.gov.uk/uksi/2016/1154/contents/made>

⁴⁷ HMSO (2016) The Environmental Permitting (England and Wales) Regulations 2016, UK Statutory Instrument 2016 No. 1154
<https://www.legislation.gov.uk/uksi/2016/1154/contents/made>

⁴⁸ Wiltshire Council (2025) Wiltshire Council 2025 Air Quality Annual Status Report (ASR), June 2025, <https://www.wiltshire.gov.uk/air-quality-reports>

4.2 Local Air Quality Management

The Environment Act 1995⁴⁹ requires local authorities to review and assess air quality with respect to the objectives for seven pollutants specified in the National Air Quality Strategy. Local authorities are required to carry out an assessment and provide an Annual Status Report (ASR) of their area every year. If the ASR identifies any potential hotspot areas likely to exceed air quality objectives, a detailed assessment of those areas is required. If objectives are not predicted to be met, the local authority must declare the area as an Air Quality Management Area (AQMA). If an AQMA has been declared, the Local Authority will also need to produce an Air Quality Action Plan (AQAP), to include measures to improve air quality in the AQMA.

The Proposed Development is in Wiltshire, and the baseline assessment includes a brief review and summary of the Council's latest LAQM Annual Status Report (ASR). The 2025 ASR concluded that road transport emissions are one of the major sources of air pollution in Wiltshire, in particular nitrogen dioxide (NO₂) and particulate matter (PM) at locations close to busy, congested roads where people may live, work or shop.

The Site is located more than 1 km from the nearest Air Quality Management Area (AQMA). The Salisbury City Centre and Salisbury Wilton Road AQMAs is located 1.4 km to east and covers the entirety of the city centre and a portion of the A36, respectively. Wiltshire Council declared the Salisbury City Centre AQMA in 2007 for exceedances of the annual mean NO₂ objective, with the Wilton Road AQMA was declared in 2007 and amended in 2016 for the same reason. The location of the Proposed Development in relation to the AQMA boundaries is shown in Figure 4-1.

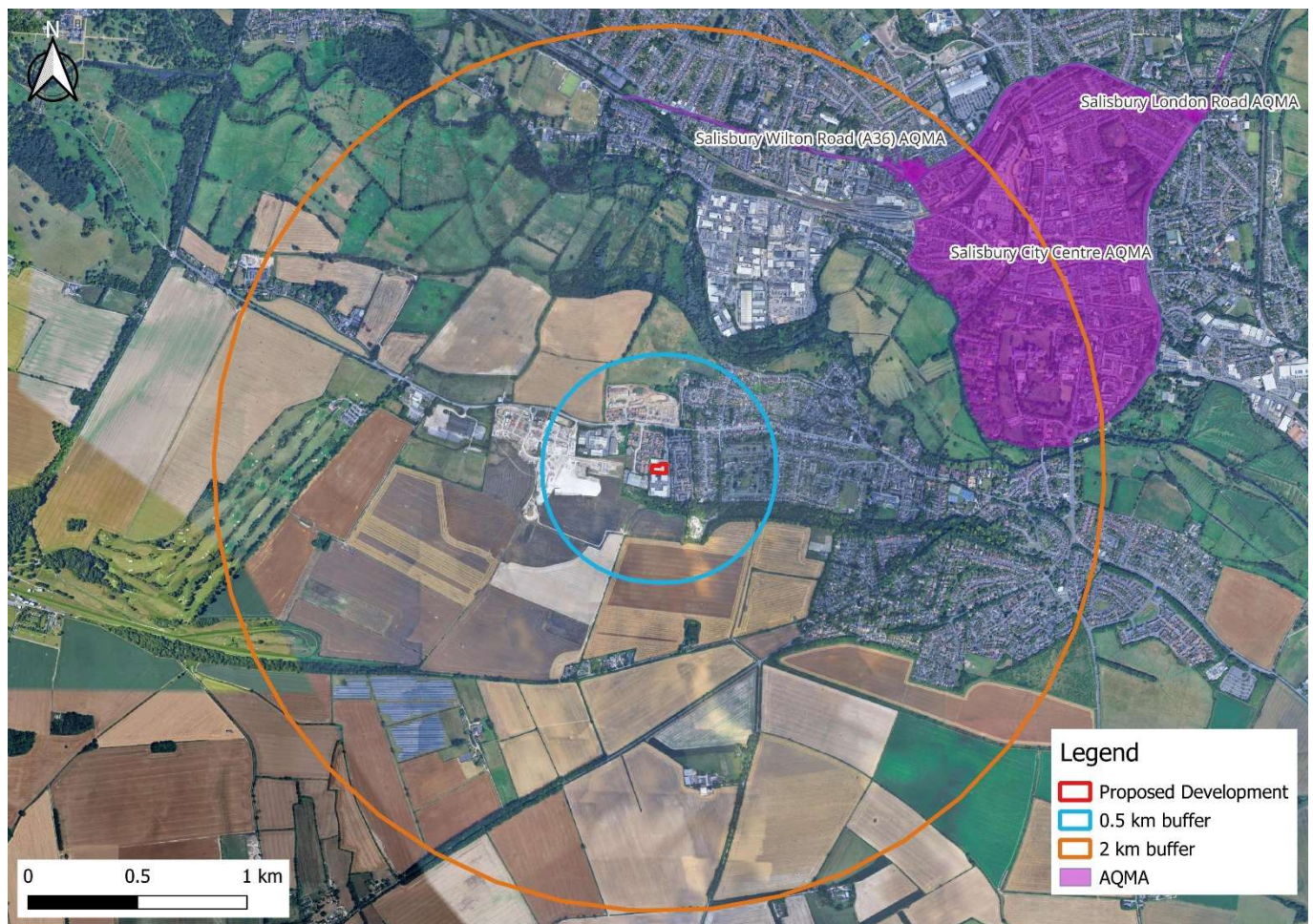


Figure 4-1111: Quality Management Area (AQMA)

⁴⁹ Environment Act 1995, Chapter 25, Part IV Air Quality

4.2.1 Local Air Quality Monitoring

A review of existing local air quality conditions in the vicinity of the Proposed Development has been undertaken. Automatic and diffusion tube monitors within 2 km of the Proposed Development have been evaluated as part of this assessment.

4.2.1.1 Automatic Monitoring

Automatic or continuous monitoring involves drawing air through an analyser continuously to obtain near real-time pollutant concentration data. A review of the most recent ASRs from Wiltshire showed that there are no automatic monitoring stations within 2 km of the Site. The nearest automatic monitoring station is located approximately 2.5 km to the east of the Proposed Development. The location of the automatic monitors is shown in Figure 4-2 and details about the automatic monitoring site are provided in Table 4-1.

Site ID	Site Location	OS Grid Reference		Site Type	Pollutants Monitored	Distance to kerb of nearest road (m)
		x	y			
AM1	Exeter St, Salisbury	414547	129575	Roadside	NO ₂ , PM ₁₀	2.5

Table 4-1111: Details of Local Automatic Monitoring Sites

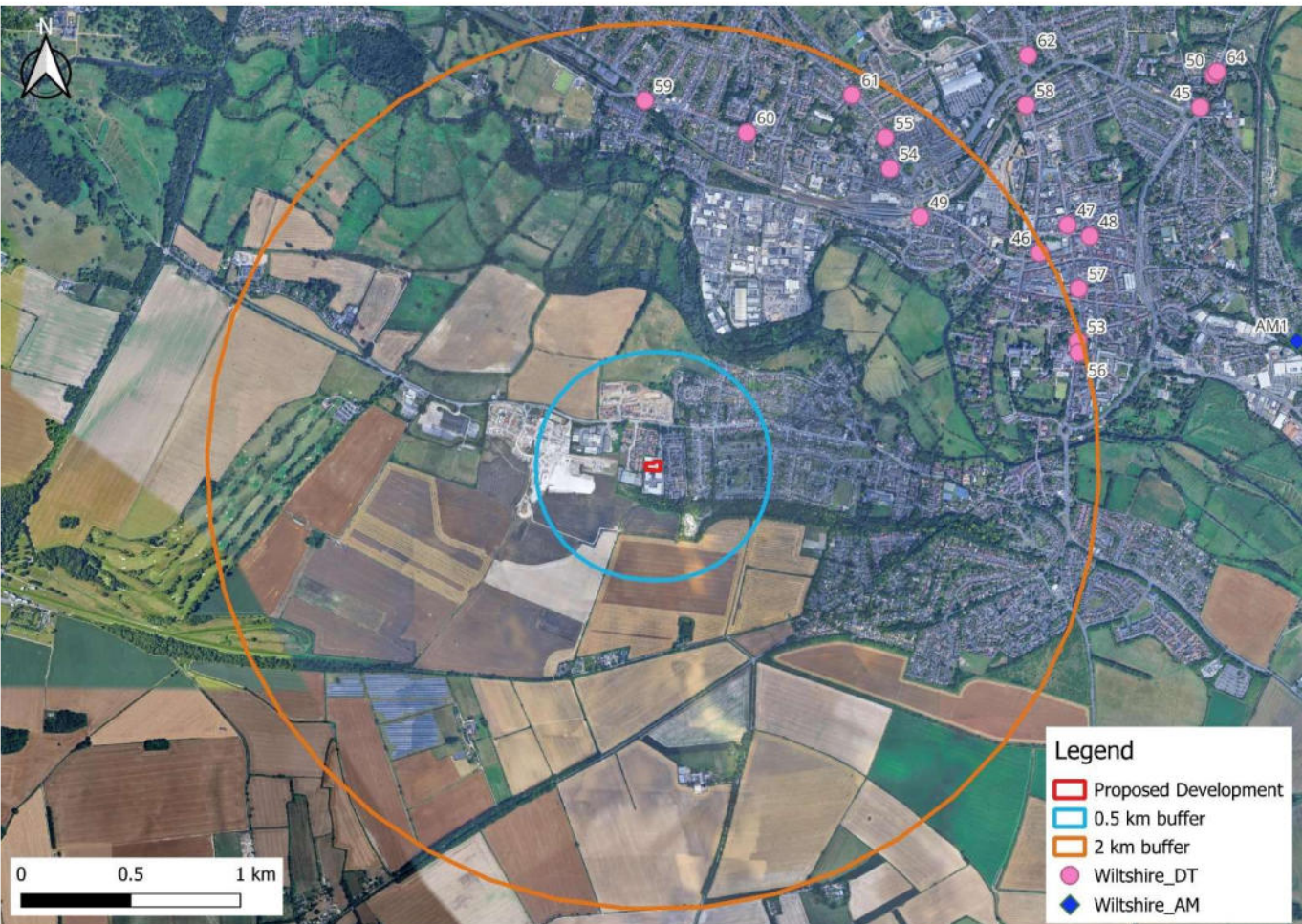


Figure 4-2222: Local Monitoring Sites

Recent NO₂ monitoring results from site AM1, from 2020 to 2024 are shown in Table 4-2, with numbers of hourly exceedances of 200 µg/m³ indicated in brackets. An exceedance is defined as an annual mean greater than 40 µg/m³ for NO₂, or when the hourly value exceeds 200 µg/m³ more than 18 times within a calendar year.

Site ID	Site Type	Distance from Site	Annual Mean NO ₂ Concentration (µg/m ³)				
			2020	2021	2022	2023	2024
AM1	Roadside	3.5 km	26 (0)	27 (0)	26 (0)	26 (0)	19.5 (0)

Table 4-2222: Results of Local Air Quality Monitoring at Automatic Sites – Nitrogen Dioxide

These results show that the NO₂ annual mean air quality objective was not exceeded at the site in the period 2020 to 2024. A maximum annual mean concentration of 27 µg/m³ was recorded in 2021, with concentrations having reduced to 19.5 µg/m³ in 2024. The short-term NO₂ objective was met at all locations during monitoring period between 2020 and 2024, with no exceedances of 200 µg/m³ recorded. The annual average recorded at this site during this monitoring period have been well below 60 µg/m³.

Annual mean concentrations of PM₁₀ recorded at monitoring site AM1 are shown in Table 4-3, with number of days exceedance shown in brackets. An exceedance is defined as an annual mean greater than 40 µg/m³ for PM₁₀, or when the daily value exceeds 50 µg/m³ more than 35 days within a calendar year.

Site ID	Site Type	Distance from Site	Annual Mean PM ₁₀ Concentration (µg/m ³)				
			2020	2021	2022	2023	2024
AM1	Roadside	3.5 km	21 (0)	19 (3)	20 (3)	20 (1)	22.5 (3)

Table 4-3333: Results of Local Air Quality Monitoring at Automatic Sites- PM₁₀

Annual mean concentrations of PM₁₀ have met the air quality objective (40 µg/m³) at the site in all years. A maximum concentration of 22.5 µg/m³ was recorded in 2024. The number of daily exceedances of 50 µg/m³ have remained well below the permissible 35 days per year, with a maximum of 3 days recorded in 2021, 2022 and 2024.

Annual mean concentrations of PM_{2.5} recorded at the AM1 monitoring site are shown in Table 4-4. An exceedance is defined as an annual mean greater than 20 µg/m³ for PM_{2.5}.

Site ID	Site Type	Distance from Site	Annual Mean PM _{2.5} Concentration (µg/m ³)				
			2020	2021	2022	2023	2024
AM1	Roadside	3.5 km	14.7	13.3	14.3	14.1	16.5

Table 4-4444: Results of Local Air Quality Monitoring at Automatic Sites- PM_{2.5}

Annual mean concentrations of PM_{2.5} have met the air quality objective at the site in all years. The maximum recorded concentration of 16.5 µg/m³ recorded in 2024 is below the annual mean objective (20 µg/m³).

4.2.1.2 Non-Automatic Monitoring

The latest ASR indicates that Wiltshire has 64 diffusion tubes monitoring NO₂ across the borough, 11 of which are within 2 km of the Proposed Development; all of these are classified as either "Kerbside" or "Roadside". The locations of the sites within 2 km are shown in Figure 4-2, above. Details of the diffusion tubes within 2 km and recent monitoring results are given in Table 4-5. An exceedance is defined as an annual mean greater than 40 µg/m³ for NO₂.

Site ID	Site Location	OS Grid Reference		Site Type	Annual Mean NO ₂ Concentration (µg/m ³)				
		X	Y		2020	2021	2022	2023	2024
46	2 Minster Street, Salisbury	414373	129979	Kerbside	29.6	32.2	29.8	30.1	29.1
49	123 South Western Road, Salisbury	413828	130142	Roadside	33.0	33.4	30.1	26.0	23.8
51, 52, 53	Co-location Exeter Street, Salisbury	414547	129575	Roadside	26.9	27.9	25.1	21.5	21.4
54	17 Wilton Road, Salisbury	413690	130362	Roadside	45.7	45.7	43.1	36.1	35.3
55	31 Devizes Road, Salisbury	413669	130503	Roadside	32.4	31.8	31.2	24.1	16.9
56	91 Exeter Street, Salisbury	414550	129523	Roadside	27.3	31.3	29.3	24.8	24.9
59	225 Wilton Rd, Salisbury	412572	130673	Roadside	32.4	36.1	31.9	29.6	29.2
60	107 Wilton Rd, Salisbury	413038	130526	Roadside	25.9	28.6	26.7	21.6	20.7
61	99 Devizes Rd, Salisbury	413517	130698	Roadside	25.0	24.9	24.1	22.0	20.5
Notes:									
Exceedances of the annual mean air quality objective are indicated in bold.									

Table 4-5555: Diffusion Tube Monitoring Results 2020 to 2024

Of the 11 diffusion tube monitoring locations within 2 km, only one of the sites exceeded the NO₂ objective (40 µg/m³) during the period between 2020 and 2024. The maximum recorded concentration was 45.7 µg/m³, recorded in 2020 and 2021 at site 54 which is a roadside site located at 17 Wilton Road, Salisbury. No exceedances were recorded at this site in the years 2023 or 2024. The maximum concentration recorded across all sites in 2024 was 35.3 µg/m³, also recorded at site 54.

As Wilton Road is an A road and has been identified as a major source of pollutant emissions, as shown by the AQMA noted in section 3.2, site 54 is not expected to be fully representative of the anticipated concentrations at the Proposed Development. The site off Netherhampton Road is not located near to an A road. As such the anticipated concentrations at the Site are likely to be similar to the average roadside monitoring sites, of which exceedances were not shown in the latest years of monitoring. Due to the distance from roads and car parks, the lowest on-site concentrations are anticipated to be in the south-eastern area of the site.

The annual mean NO₂ concentrations recorded at all of the 14 sites within 2 km between 2020 and 2024 are well below 60 µg/m³. Exceedances of the short-term objective are therefore considered to be unlikely.

4.3 Defra's Background Pollutant Concentration Mapping

Background concentrations refer to existing levels of pollution in the atmosphere, as a result of emission from a variety of sources, such as traffic, industrial and agricultural processes. Defra publishes background pollutant mapping⁵⁰ for every 1 km x 1 km OS grid square across the UK for NO_x, NO₂, PM₁₀ and PM_{2.5}. Background pollutant mapping has been reviewed for the grid square in which the Proposed Development lies and surrounding grid squares. The 2021 (baseline year) and 2026 background concentrations (which are based on 2021 monitoring data) are presented in Table 4-6.

OS Grid Square		Annual Mean Concentration (µg/m ³)							
		NO _x		NO ₂		PM ₁₀		PM _{2.5}	
X	Y	2021	2026	2021	2026	2021	2026	2021	2026
412500	129500	8.0	6.8	6.4	5.4	11.8	11.4	6.9	6.5
411500	129500	7.3	6.2	5.8	5.0	12.1	11.7	6.6	6.3
413500	129500	9.2	7.8	7.2	6.2	11.4	11.0	7.1	6.7
412500	128500	8.0	6.9	6.3	5.5	13.2	12.7	7.5	7.0
412500	130500	8.9	7.5	7.0	5.9	11.5	11.0	7.0	6.6
Average		8.3	7.0	6.5	5.6	12.0	11.6	7.0	6.6

Table 4-6666: Defra's 2021 and 2026 background concentrations of NO_x, NO₂, PM₁₀ and PM_{2.5}

Defra background concentrations are all below the air quality objectives for annual mean NO₂ and PM₁₀ and PM_{2.5}.

4.4 Local Traffic Data

The presence of any heavily trafficked roads, with emissions that could give rise to significantly higher concentrations of pollutants (e.g., NO₂), may cause unacceptably high exposure for users of the new development. The emissions from roads in the area are assumed to be represented in the Defra background concentrations reported.

There are no railway lines, A roads or airfields located within 500 m of the Proposed Development. The emissions from roads, rail and aircraft in the area are represented in the Defra background concentrations (Section 4.3).

⁵⁰ <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>.

4.5 Sensitive Receptors

Sensitive receptors near the development were identified with reference to mapping data provided by Ordnance Survey. Sensitive receptors within 500 m are illustrated in Figure 4-3 and include receptors within 20 m of the red line boundary.



Figure 4-3333:: Sensitive Receptors

The Site is located close to several residential areas. The nearest residential receptors are located 20 m to the west and 20 m to the east of the Proposed Development building, but 90 m to the west and 45 m to the east of the LEV flue extract locations. There are also residential properties located 50 m to the north. There are therefore a high number of highly sensitive receptors to be located within 250 m of the Site.

There are also commercial / industrial facilities within 250 m. This includes Stonehenge Crossfit 11 m to the north but 35m to the north-west of the LEV extracts and New Garage (Harnham) and Phill Small Marquees of Salisbury located 8 m to the south and 25m to the south of the LEV flue extracts, beyond which is Venture Marine and Munich Motorworks.

Defra MAGIC mapping⁵¹ has been reviewed to determine the presence of any sensitive ecological sites⁵². There are designated ecological receptors with 1 km of the site boundary. The West Harnham Chalk Pit Special Areas of Scientific Interest (SSSI) is located 170 m to the south-east of the Site. The River Avon System, a Special Area of Conservation (SAC) and SSSI is located approximately 540 m to the north-east of the Site. These sites are illustrated in Figure 4-4.

⁵¹ Department for Environment, Food and Rural Affairs (Defra) (2019). MAGIC <https://magic.defra.gov.uk/MagicMap.aspx>

⁵² Typical ecological receptors of significance include Special Conservation Areas (SCAs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs), RAMSAR sites, Local Nature Reserves with dust sensitive features.

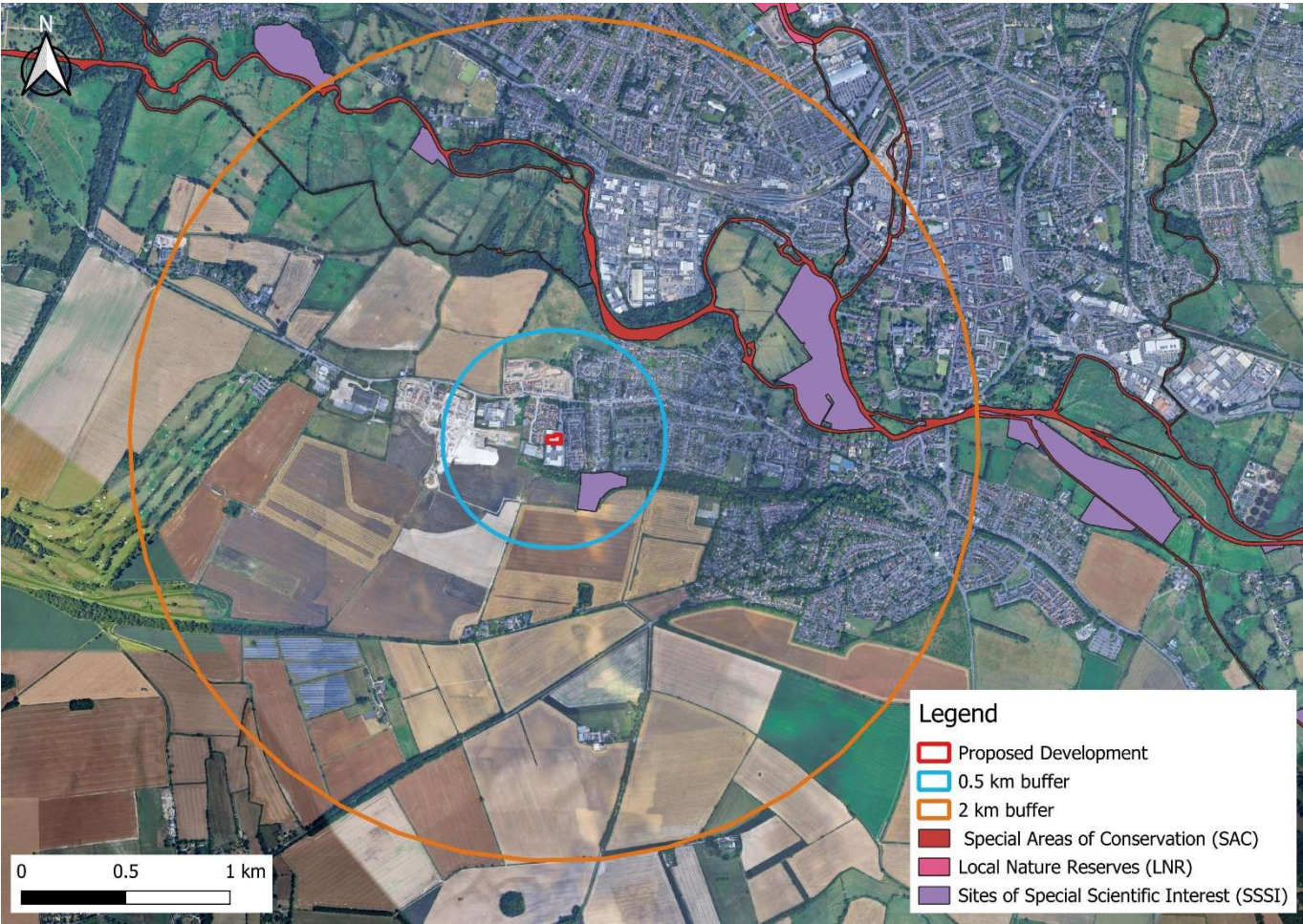


Figure 4-4444: Sensitive Ecological Sites

5.0

Emissions Source Assessment

5.0 Emissions Source Assessment

5.1 Emission Sources

A Stage 1 Risk Assessment report was conducted by MECHON⁵³ to evaluate exposure risks to personnel, fire and explosivity hazards and environmental emission impacts associated with Callen-Lenz existing Salisbury facility. The assessment reviewed the adequacy of existing control measures for ensuring compliance with UK regulatory requirements. The assessment identified the following primary emission sources:

- Hazardous vapours including MEKP, naptha and formaldehyde from composite processing
- Lead and rosin-based flux fumes from soldering activities – Callen Lenz have since confirmed that all soldering at the new facility will be lead-free. Rosin fumes will still be an issue.
- Ultrafine particles and VOCs from 3D printing processes (particularly from carbon fibre impregnated filaments)
- Metal and composite dusts and metal working fluid mists from machining operations.
- Potential isocyanate and hydrogen cyanide release during thermal decomposition during profile cutting of boards

The Stage 1 report also highlighted the following secondary risk of exposure to sources of contamination:

- Dust accumulation
- Material spillage
- Contaminated equipment.

The proposed industrial facility at Harnham will include several manufacturing processes which will require LEV system. MECHON has produced a Stage 3 Design report⁵⁴ which outlines the engineering solutions for controlling exposure to potentially harmful airborne contaminants generated during the advanced composite manufacturing and assembly operations for aerial vehicle production. This includes the following key aspects

Process	Details	Air Quality Emissions
Electronics Laboratory – Soldering Operations	Electronic assembly and components to be joined with lead-free solder.	Generates rosin-based flux vapours. Higher temperatures are required for lead-free soldering and therefore there is potential for generation of thick smoke that can cause respiratory irritation. A fume extractor is therefore required,
Printing	Eight Fused Deposition Modelling (FDM) printers within Kora cabinets. Process various polymer filaments, including ABS and PETG materials and some carbon fibre.	Heated exhaust generates ultrafine particles and VOCs.
Assembly Operations	Application of adhesives and bonding agents.	VOC vapours generated during application and curing of solvents and adhesives.
Composite Manufacturing: Composite Mixing	Two-part resin systems, including MEKP catalysed resins measured and mixed in varying batches for subsequent lay-up operations.	Process releases styrene, naptha, formaldehyde and other VOC vapours Releases occur during mixing and pot-life periods.

⁵³ MECHON (2025) Stage 1 Risk Assessment for Callen-Lenz (Salisbury), ref: CAS24-1219-10-1001, 31 March 2025

⁵⁴ MECHON (2026) Stage 3 Design report, new LEV for Harnham, Ref: CCS24-1219-10-3001, 31st March 2026

Process	Details	Air Quality Emissions
Composite Manufacturing: Composite Lay-up	Pre-impregnated fibres and wet resins applied to moulds to create composite structures.	Generates VOC emissions from uncured resins and potential fibre release during material handling.
Composite Manufacturing: Curing Operations	Ambient and heated curing processes.	Curing accelerates VOC emissions with potential for thermal decomposition if temperature limits are exceeded. The operation of vacuum pumps during curing results in exhausts of vapours into the workspace.
Composite Manufacturing: Trimming and Surface Conditioning	Cured composite parts undergo trimming, drilling, sanding and surface preparation using both powered and manual tools.	Generation of respirable composite dusts containing carbon, glass or other reinforcement fibres. Compressed air cleaning re-entrains settled dust and creates secondary exposure risks.
Composite Manufacturing: Component Preparation and Cleaning	Moulds are prepared with release agents prior to lay-up and finished components undergo cleaning with solvents.	Generation of VOC vapours from release agents and cleaning solvents.
Apollo CNC Router	Performs automated machining and profile cutting operations on substrate materials which include wood products, composite material and polymer materials.	Curing accelerates VOC emissions with potential for thermal decomposition if temperature limits are exceeded.

Table 5-1111 Manufacturing processes, associated emission and mitigation

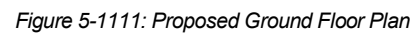
There are a number of airborne emissions sources associated with the manufacturing processes:

- Welding and fabrication emissions (metal fume particulates, gases).
- Spray-painting emissions (VOCs, fine particulates).
- Solvent and adhesive vapours.
- Dust from machining, wood working and model-making.
- 3D printing (ultrafine particles and VOC emissions)

Appropriate source and exposure control is required to mitigation any impacts.

Figure 5-1 shows the proposed floor plan, courtesy of Roberts Limbrick⁵⁵.

⁵⁵ Roberts Limbrick (2026) Works at Units 8, 10 & 12 Harnham Trading Estate, Proposed Site Layout, Proposed Ground Floor plan, ref: 12318-RLA-26-XX-DR-A, revision P05, Status A3



5.2 Exposure Control Systems

There is a requirement for emissions to be managed to ensure dispersion is in accordance with the industrial permit and requirements of Environmental Permitting (England and Wales) regulations 2016¹⁵, national Air Quality Objectives²² (Appendix A of this report), Technical Guidance on Dispersion (TGN-D1)⁴² and for the provision of filtration to enable the capture of contaminants to acceptable emission levels to prevent any breaches or legislative air quality objectives and the requirements of the industrial permit.

The Mechon Stage 3 report⁵⁴ indicates that the LEV systems at the current facility includes:

- Weller recirculation units with integral hoods to serve the soldering workstations;
- built-in HEPA and carbon filtration for the 3D printer cabinets;
- downdraft table for dust control during composite finishing operations; and
- small curing ovens with recirculation fans.

The various LEV systems detailed in the Stage 3 report along with the indicative extract details, are summarised in the following table⁵⁶. Filtration is required for LEV10 (Apollo CNC router). The remaining LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere. LEV 01 was originally designed based on soldering with lead. Callen Lenz have confirmed the use of lead-free soldering for their new facility.

The schematics of the LEV systems have been included in Appendix C, courtesy of MECHON, and include flue details relating to flue diameter, air volume and velocities. The design of each flue, including height and efflux velocity, is to be confirmed during Stage 4a design.

Process and Emissions	LEV system	Indicative Extract Details
Electronics Laboratory / Soldering Operations - Generates rosin-based flux vapours. (Lead-free soldering is now confirmed).	LEV 01: High-volume-low-velocity (HVLV) Lead-free soldering uses tin-based alloys, which require higher operating temperatures than traditional leaded solder. These higher temperatures cause the rosin flux core to vaporise more rapidly, producing greater volumes of soldering fumes (thick smoke) that may cause respiratory irritation if inhaled. To minimise workplace exposure, a dedicated fume extraction system is required to capture the fumes at source and discharge them above roof level. The extracted air will be discharged directly to atmosphere without abatement, as emissions consist only of negligible trace quantities of contaminants. Given the insignificant level of emissions, filtration or other treatment of the extracted air prior to discharge is not required. Alternative mobile recirculating extraction would require client to be responsible for ongoing filter maintenance Filtration requirements expected to be pre-filter, HEPA H13 minimum and activated carbon).	1m above roof level 140 -150mm diameter Fan and stack in east yard area
Printing - Ultrafine particles and VOCs	LEV 02: High-volume-low-velocity (HVLV) Recommendation to supplement the existing cabinets with ducted extract system. Each exhaust point to interface with the LEV system via an air break. Existing cabinets system requires management and monitoring of filtration (HEPA and carbon) to specific filament types and on-site management to ensure doors remain closed for required clearance period after printing completion.	1m above roof level 150mm diameter

⁵⁶ Numbering for the LEV systems does not include LEV 06. It is understood that this system is incorporated into another LEV system and therefore has not been listed separately in the MECHON report.

Process and Emissions	LEV system	Indicative Extract Details
Assembly Operations – Heated exhaust generates ultrafine particles and VOCs.	Assembly operations and general ventilation requirements are addressed in a separate concept design report.	
Composite Manufacturing: Composite Mixing – VOCs	LEV03: High-volume-low-velocity (HVLV); ATEX certified Partial enclosure ventilated workbench with contaminated air discharged directly to atmosphere.	1m above roof level 200mm diameter
Composite Manufacturing: Composite Lay-up – VOC vapours generated during application and curing of solvents and adhesives.	LEV04: Layup Enclosure To be integrated with LEV 05 to capture emissions from vacuum pumps. To have two ventilation modes. During active emission-generating operations the system shall operate in full fresh-air mode with all extracted air discharge to atmosphere. During standby, system to switch to recirculation-dominant operation, returning majority of extracted air to the enclosure, to reduce energy and heating demands.	1m to 2m above roof level 325mm diameter
	LEV05: Composite bad vacuum exhaust; High-volume-low-velocity (HVLV); ATEX certified Air-break arrangement to decouple vacuum pump exhausts from the LEV system, ensuring capture of expelled oil mist and VOC vapours. Oil mist and process volatiles to discharge to atmosphere via high-level stack.	1m above roof level 150mm diameter
Composite Manufacturing: Curing Operations – Process releases styrene, naptha, formaldehyde and other VOC vapours	LEV 07 High-volume-low-velocity (HVLV); ATEX certified LEV system to collect oven exhaust via an air-break arrangement above the oven and exhaust to atmosphere.	High temperature flue, not a conventional stack. Height above roof to be confirmed. Diameter 224 to 250mm
Composite Manufacturing: Trimming and Surface Conditioning - Releases occur during mixing and pot-life periods.	LEV 08 On tool extract: High vacuum system; Low-volume-high-velocity (LVHV); ATEX certified Reverse jet filter for high pressure vacuum applications, incorporating reverse jet cleaning with direct discharge into a collection bin or rotary valve for dust separation. ATEX-compliant filtration with HEPA filters before being returned to workspace. To be certified for use with combustible dusts in accordance with DSEAR assessment. Extract airflow rates to be confirmed during Stage 4.	Recirculating, no external discharge
Composite Manufacturing: Component Preparation and Cleaning – Generates VOC emissions from uncured resins and	LEV 09 Small component finishing bench: High-volume-low-velocity (HVLV). Potentially ATEX certified.	Recirculating, no external discharge

Process and Emissions	LEV system	Indicative Extract Details
potential fibre release during material handling.	Rear extract bench system to draw contaminated air through a rear extract plenum into integral filtration located below the bench, before returning cleaned air to the workplace. Number of benches required to be determined at detailed design. Face velocity of 1.0 m/s to be maintained across the front opening to enable containment of dust, which requires a nominal airflow of approximately 4,360 m³/hr to achieve effective containment. Two-stage air filtration for ATEX version (G4 + H13 HEPA) To be used in conjunction with on tool-extraction (LEV-08).	
Apollo CNC Router – Curing accelerates VOC emissions with potential for thermal decomposition if temperature limits are exceeded.	LEV10: High-volume-low-velocity (HVLV); ATEX certified LEV system (filter, fan and ductwork) designed to deliver sufficient pressure capacity to accommodate a range of interchangeable hood configurations. Design flow rate of 1,250 m³/hr. Full-cartridge reverse jet filter unit and high-pressure centrifugal fan. Dust disposal via a sealed bin or rotary valve. HEPA H14 final stage filter (99.995% efficiency at 0.3 microns) within recirculation of cleaned air, upstream of return ductwork entering building.	Recirculation of clean air to workshop. HEPA H14 final filter before discharge to atmosphere

It is understood there will also be two CNC Lasers which will be fitted with localised HEPA filters. This will comprise a laser fume extraction system (BOFA AD 500 IQ) which has an extremely large filter capacity with high airflow and pressure rates and is therefore capable of mitigating large amounts of particulate matter and gaseous organic compounds.

Relocation to Harnham presents the opportunity to replace/upgrade any control systems. According to the Stage 3 report, the LEV system for the Apollo CNC router requires a system upgrade and therefore a new LEV system is required. The new facility layout will also enable effective separation of incompatible processes, and the implementation of purpose designed extraction systems. This should include appropriate dust collection, filtration plant and discharge away from any occupied areas and access routes.

In addition to effective LEV systems, general ventilation for the spaces needs to be appropriate to ensure good indoor air quality.

The Dangerous Substances and Explosive Atmosphere Regulations (DSEAR)⁵⁷ require employers to control risks to safety from fire, explosions and substances corrosive to metals. On 6th February 2025 EEUK made a visit to Callen Lenz (Unit A) to undertake a risk assessment in accordance with the DSEAR and produced a DSEAR risk assessment report in February 2025⁵⁸. The report concluded that on considering dangerous substances and explosive atmosphere risks on the site, together with the nature, operation and management of those risks, the overall level of risk was medium. Medium classification was due to the nature of fire and explosion risk having the potential to result in severe life-

⁵⁷ Health and Safety Executive (HSE) The Dangerous Substances and Explosive Atmospheres Regulations 2002, <https://www.hse.gov.uk/fireandexplosion/dsear.htm>

⁵⁸ EEUK (2025) DSEAR Risk Assessment, Callen Lenz (Unit A), Ref: OP19466 – DSEAR Risk Assessment – RJ, 6th February 2025

threatening injury requiring immediate hospitalisation. The likelihood was considered to be unlikely based on the current control measures in place. The DSEAR report listed the following points of significance:

The DSEAR assessment⁵⁸ considers the risk from on-site dust as follows:

“The dusts produced are considered hybrid as other materials are also used in the routing process which include carbon, GRP, polystyrene, and aluminium etc. For clarity as to whether the dust is potentially explosive when suspended in air it is recommended that initial A/B flammability testing is carried out on dust samples taken from the areas surrounding the Apollo Router. If the dusts are found to be combustible then further testing will be necessary to determine the minimum explosive concentration (MEC), Minimum ignition energy (MIE), Layer ignition temperature (LIT) and Pmax (maximum explosive pressure). For the purpose of this assessment hybrid dust generation from process is considered as combustible dust until further clarification as recommended”.

6.0

Qualitative Odour Assessment

6.0 Qualitative Odour Assessment

6.1 IAQM Screening Assessment Methodology

The Proposed Development has the potential to introduce several new sources of odour. The potential for odour nuisance is dependent on the presence and proximity of nearby receptors and the likelihood of a pathway. A qualitative source-pathway-receptor odour assessment has therefore been carried out in accordance with IAQM Guidance⁵⁹.

The basic concept of risk assessment is that the overall risk depends on the probability of the event together with the likely consequence if that event actually occurred. The probability can be considered to be the likelihood of exposure (impact), and the consequence can be considered to be the effect of the receptor if the exposure (impact) took place.

Odour exposure (impact) has been determined by FIDO of the FIDOL factors:

- Frequency
- Intensity
- Duration
- Odour Unpleasantness

The effect is the result of the change on specific receptors considering their sensitivities (specifically, their responsiveness to odour); the L (location) in FIDOL is used to categorise the sensitivity.

6.1.1 Source Odour Potential Criteria

Estimates of Source Odour Potential (SOP) were made taking into account:

- the scale (magnitude) of the release from the odour source
- how inherently odorous the emission is
- the relative pleasantness / unpleasantness of the odour

In line with the IAQM guidance, the Source Odour Potential can be categorised as small, medium or large, as shown in Table 6-1.

Source Odour Potential	Example Risk Factors / Criteria
Large	Scale – Larger Permitted processes of odorous nature or large STWs; materials usage hundreds of thousands of tonnes/m³ per year; area sources of thousands of m². Odorous The compounds involved are very odorous (e.g., mercaptans), having very low Odour Detection Thresholds (ODTs) where known. Unpleasantness – processes classed as “Most offensive” in (as identified in Table 5 of the IAQM guidance⁵⁹ ; or (where known) compounds/odours having unpleasant (-2) to very unpleasant (-4) hedonic score. Mitigation/control – open air operation with no containment, reliance solely on good management techniques and best practice
Medium	Scale – smaller Permitted processes or small Sewage Treatment Works (STWs); materials usage thousands of tonnes/m³ per year; area sources of hundreds of m² Odorous - The compounds involved are moderately odorous. Unpleasantness – processes classed in H4 as “Moderately offensive”; or (where known) odours having neutral (0) to unpleasant (-2) hedonic score. Mitigation/control – some mitigation measures in place, but significant residual odour remains.

⁵⁹ Institute of Air Quality Management (IAQM), (2018) Guidance on the assessment of odour for planning, version 1.1, July 2018.
<http://www.iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

Source Odour Potential	Example Risk Factors / Criteria
Small	Scale – falls below Phart B threshold; materials usage hundreds of tonnes/m³ per year; area sources of tens m² Odorous - The compounds involved are only mildly odorous, having relatively high ODTs where known. Unpleasantness – processes classed as “Less offensive” in H4; or (where known) compounds/odours having neutral (0) to very pleasant (+4) hedonic score. Mitigation/control – effective, tangible mitigation measures in place (e.g., BAT, BPM) leading to little or no residual odour

Table 6-1111: Example Risk Factors for Source Odour Potential

6.1.2 Pathway Effectiveness Criteria

The effectiveness of the pollutant pathway, as the transport mechanism for odour through the air to the receptor, versus dilution / dispersion in the atmosphere was estimated considering:

- the distance of (sensitive) receptors from the odour source
- the location of receptors relative to the odour source
- the effectiveness of the point of release of odour
- the topography and terrain between the source and the receptor

In line with the IAQM guidance, the effectiveness of the pollutant pathway from source to receptor can be categorised as ineffective, moderately effective, or highly effective. The example criteria for each of these is presented in Table 6-2.

Pathway Effectiveness	Example Risk Factors / Criteria
Highly Effective Pathway	Distance – receptor is adjacent to the source/site; distance well below any official set-back distances; Direction – high frequency (%) of winds from source to receptor (or, qualitatively, receptors downwind of source with respect to prevailing wind). Effectiveness of dispersion/dilution – open processes with low-level releases, e.g., lagoons, uncovered effluent treatment plant, landfilling of putrescible wastes.
Moderately Effective Pathway	Distance – receptor is local to the source. Effectiveness of dispersion/dilution – where mitigation relies on dispersion/dilution, releases are elevated, but compromised by building effects.
Ineffective Effective Pathway	Distance – receptor is remote from the source; distance exceeds any official set-back distances. Direction – low frequency (%) of winds from source to receptor (or, qualitatively, receptors upwind of source with respect to prevailing wind). Effectiveness of dispersion/dilution – Where mitigation relies on dispersion/ dilution, releases are from high level (e.g., stacks, or roof vents >3m above ridge height) and are not compromised by surrounding buildings

Table 6-2222 Example Risk Factors for pathway effectiveness

6.1.3 Risk of Odour Exposure (Impact) Criteria

The estimates of Source Odour Potential and Pathway Effectiveness were then considered together to predict the risk of odour exposure (impact) at the screening assessment receptors using the matrix presented in Table 6-3.

Pathway Effectiveness	Source Odour Potential		
	Small	Medium	Large
Highly Effective Pathway	Low Risk	Medium Risk	High Risk
Moderately Effective Pathway	Negligible Risk	Low Risk	Medium Risk
Ineffective Effective Pathway	Negligible Risk	Negligible Risk	Low Risk

Table 6-3333 Risk of Odour Exposure (impact) at a specific receptor location

6.1.4 Determining the Effect of Odour

Estimates of the effect of odour impacts on exposed receptors have been made taking account receptor sensitivity, using the matrix presented in Table 6-4.

Risk of Exposure	Receptor Sensitivity		
	Low	Medium	High
High	Slight Adverse Effect	Moderate Adverse Effect	Substantial Adverse Effect
Medium	Negligible Effect	Slight Adverse Effect	Moderate Adverse Effect
Low	Negligible Effect	Negligible Effect	Slight Adverse Effect
Negligible	Negligible Effect	Negligible Effect	Negligible Effect

Table 6-4444: Likely Magnitude of Odour Effect at Specific Receptor Location

Likely odour effects at individual screening assessment receptors were then summarised to estimate the overall odour effect on the surrounding area.

Where the overall effect is greater than 'slight adverse', the effect can be considered to be significant. Concluding that an effect is significant does not mean, of itself, that a development is unacceptable; rather it means that careful consideration needs to be given to the consequences, scope for securing further mitigation, and the balance with any wider environmental, social and economic benefits that the Proposed Development would bring.

Where the overall effect is equal to or less than 'slight adverse', the effect can be considered to be not significant

6.2 Potential for Odour Nuisance Assessment

6.2.1 Source Odour Potential

In accordance with IAQM Guidance⁴⁴, the factors affecting the source odour potential include:

- the magnitude of the odour release (considering odour-control measures)
- how inherently odorous the compounds are; and
- the unpleasantness of the odour

Section 5.1 lists a number of potentially odorous processes proposed for within the proposed layout for the industrial facility. Section 5.2 lists the proposed emission control systems. Filtration is to be included on the soldering and Apollo CNC router systems, to mitigate the hazardous emissions, as required. The remaining LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere and relate to infrequent manufacturing processes. Accounting for the LEV systems with appropriate filtration or the release of very low trace amounts of vapours, the source odour potential is expected to be small.

There are other commercial industrial sites located less than 250 m. In particular, New Garage (Harnham) 11 m to the south and Munch Motorworks and Venture Marine located further to the south. A review of the local industrial permit

sites (section 4.1 of this report) indicates that there are no Environment Agency Part A permitted sites within 2 km of the Proposed Development. Any nearby industrial sites are nearby expected to either light industrial without significant magnitude of odour releases or Part B processes regulated by Wiltshire Council and given the nature of the Part B processes, are unlikely to significantly affect ambient air quality in the vicinity of the Proposed Development. Any odorous processes are expected to be appropriately managed. The nearby industrial units are therefore anticipated to have a low to medium odour potential.

6.2.2 Receptors and Sensitivity to Odour Effects

In accordance with IAQM Guidance, the proposed and nearby existing industrial /commercial land use are determined to be of medium sensitivity to odour. This judgement has been made because these receptors wouldn't reasonably be expected to be present continuously for extended periods and would not expect to enjoy the same level of amenity as in their home.

The nearest residential receptors are located 20 m to the west and 20 m to the east of the Proposed Development building. There are also residential properties located 50 m to the north. In accordance with IAQM Guidance, the residential properties are determined to be of high sensitivity to odour. This judgement has been made because these receptors would reasonably be expected to be present continuously or regularly for extended periods and would expect to a high level of amenity.

The West Harnham Chalk Pit Special Areas of Scientific Interest (SSSI) is located 170 m to the south-east of the Site. This is determined to be of medium sensitivity to odour due to presence of human receptors accessing the space, who are only expected to be present intermittently but would expect a high level of amenity within the SAC area.

6.2.2.1 Pathway Effectiveness for Odour Flux

The pathway effectiveness was assessed in accordance with IAQM guidance⁶⁹, paying due consideration to the following:

- Distance from source to receptor
- The frequency of winds from source to receptors, with respect to prevailing winds
- The effectiveness of any mitigation/control measures which may be in place to reduce flux
- The effectiveness of dispersion/dilution in reducing odour flux to the receptor, such as the height of odour release and the presence of surrounding buildings.
- Topography and terrain

The New Garage (Harnham) and Phill Small Marquees of Salisbury medium sensitive commercial / industrial facilities are located 25 m to the south of the LEV extract and are therefore not expected to be downwind of the Proposed Development with respect to prevailing south-westerly winds. Stonehenge Crossfit medium sensitive commercial facility is located 35 m to the north-west of the on-site LEV extract and are therefore not downwind. There are no buildings located in between. The new industrial processes introduced as part of the Proposed Development are expected to have a small odour potential due to the provision of suitably designed extraction and filtration (as required) and appropriate extract location, height and the incorporation of appropriate filtration in order to meet general planning requirements. Having considered these factors, the overall pathway effectiveness to the commercial / industrial receptors has therefore been determined to be 'Ineffective'.

The nearest high sensitive residential receptors are located 45 m to the east and 50 m to the west of the proposed LEV extract locations and therefore not expected to be downwind of the Site with respect to prevailing south-westerly winds. In addition, accounting for the provision of appropriate extraction design and filtration, the overall pathway effectiveness to the residential receptors has therefore been determined to be 'Ineffective'.

The West Harnham Chalk Pit Special Areas of Scientific Interest (SSSI) is located 170 m to the south-east of the Site and therefore not expected to be downwind of the Site with respect to prevailing south-westerly winds. In addition, accounting for the provision of appropriate extraction design and filtration, the overall pathway effectiveness has therefore been determined to be 'Ineffective'.

The new industrial processes introduced as part of the Proposed Development are expected to have a small odour. However, accounting for the provision suitably designed extraction and filtration (as required) and appropriate extract

location, height and the incorporation of appropriate filtration in order to meet general planning requirements, the overall pathway effectiveness to the nearby receptors has been determined to be 'Ineffective'. Having considered these factors, the overall pathway effectiveness was determined to be 'Ineffective'. Considering a small odour source potential and based on an ineffective pathway the new industrial facility is expected to present a negligible odour risk. Based on the medium or high receptor sensitivity and negligible risk (magnitude), the scale of effect is anticipated to be negligible, which is not significant.

7.0

Mitigation

7.0 Mitigation

The Stage 1 Risk Assessment report⁶⁰ listed several recommendations to reduce emission impacts and enable compliance with regulatory requirements.

- Implementation of total enclosure for composition laying up processes and partial enclosure for composite mixing.
- Provision of appropriate controls such as local exhaust ventilation (LEV), respiratory protective equipment (RPE) and on-tool control for all composite post-processing operations.
- Ensure efficiency of dust extraction system (previous deficiencies note at workshop 4 at existing facility).
- Total enclosure for machining operations to control metal working fluid mists.
- Appropriate LEV for CNC mill and manual lathe.
- Provision of appropriate vacuum systems for air cleaning to prevent secondary exposure (Instead of compressed air cleaning methods at existing facility).
- All LEV systems to be installed with airflow indicators and pressure differential monitors with visible indicators at operator positions.

Should the proposed facility at Harnham still include lead soldering, the following recommendations were listed in the Stage 1 risk assessment.

- Dedicated controls for workshop/soldering room to prevent lead exposure in accordance with CLAW 2002. Requirement for adequate welfare areas.
- Health surveillance programme for personnel working with lead-based solder with particular focus on blood lead level monitoring.

Callen Lenz have confirmed that the new facility will have only lead-free soldering. Exposure to lead emissions is therefore no longer applicable.

The Stage 1 report also recommends careful consideration of the hazardous area classification approach (existing workshop 4 in particular) and the need to ensure appropriate DSEAR risk assessment and implementation of associated compliance measures.

The various LEV systems are detailed in the MECHON Stage 3 report⁵⁴ along with the indicative extract details, are summarised in the following table⁶¹. Filtration is required for the LEV10 (Apollo CNC router). The remaining LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere. The design of each flue, including height and efflux velocity, is to be confirmed during Stage 4a design.

It is understood there will also be two CNC Lasers which will be fitted with localised HEPA filters. This will comprise a laser fume extraction system (BOFA AD 500 IQ) which has an extremely large filter capacity with high airflow and pressure rates and is therefore capable of mitigating large amounts of particulate matter and gaseous organic compounds. Final design must ensure compliance with legislative air quality objectives, workplace exposure limits (listed in Appendix A and B of this report). and ensure exposure is reduced to as low as reasonably practicable (ALARP) for hazardous substances at risk of causing cancer, damage to genes or occupational exposure. The MECHON Stage 1 report should be referred to for a full list of exposure targets, exposure potential values and hood design requirements for applicable chemicals (Table 40.104 and Table 40.105 of MECHON Stage 1 report²⁹).

The DSEAR assessment⁵⁸ listed several recommendations to manage the risks from dangerous substances and explosives. This included the following of relevance to air quality.

- Implementing a cleaning regime in accordance with BS EN60079-10-2:2015 Annex B, B2
- Measurement of velocity of extraction dusting on suitable periodic basis by a competent person in accordance with HSG258 - Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV).

⁶⁰ MECHON (2025) Stage 1 Risk Assessment for Callen-Lenz (Salisbury), ref: CAS24-1219-10-1001, 31 March 2025.

⁶¹ Numbering for the LEV systems does not include LEV 06. It is understood that this system is incorporated into another LEV system and therefore has not been listed separately in the MECHON report.

- Measures to stop the Apollo CNC Router if dust extraction system fails.
- Prevent use of compressed air lines for housekeeping due to the risk of disturbing dust and giving rise to secondary explosion risk.
- Ensure that the plastic liners in dust collection units (DCU) are antistatic type. Use of proper metal dust collection vessel is recommended to prevent static electricity buildup and ensure containment of potential explosions.
- Ensure that explosion vents on DCUs have been suitably sized in accordance with EN14491 vent area calculation.
- DCU to be located externally, outside the machine shop, to minimum explosion risk inside the workshop.

The DSEAR report⁵⁸ listed various other recommendations relating to electrical and fire safety.

8.0

Conclusions

8.0 Conclusions

Cundall has been commissioned to prepare an Air Quality Assessment Report for Callen-Lenz Associates Limited to support the planning application for change of use of part of the existing facility from Use Class E (g)(iii) to Use Class B2 for the manufacturing and assembly facility at Harnham Trading Estate, Salisbury.

The Site is not located within an Air Quality Management Area (AQMA). Existing conditions within the study area indicate that there is unlikely potential for nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) concentrations in the wider area to exceed the National Air Quality Objective threshold levels.

This air quality assessment has considered the potential impact of emissions associated with the proposed manufacturing and assembly facility at Harnham Trading Estate, Salisbury. There are several airborne emissions sources associated with the manufacturing processes, including fine and ultrafine particulate matter including metal fume particulates, solvents and adhesive vapours). Appropriate source and exposure control is required to mitigate any impacts.

The refit of a large existing warehouse enables the opportunity for configuring the layout and local exhaust ventilation (LEV) systems to overcome any constraints and ensure safe and compliant operations. Relocation to Harnham presents the opportunity to replace/upgrade any control systems. The new facility layout will also enable effective separation of incompatible processes, and the implementation of purpose designed extraction systems. This should include appropriate dust collection, filtration plant and discharge away from any occupied areas and access routes. In addition to effective LEV systems, general ventilation for the spaces needs to be appropriate to ensure good indoor air quality.

The potential for odour nuisance is dependent on the presence and proximity of nearby receptors and the likelihood of a pathway. A qualitative source-pathway-receptor odour assessment has therefore been carried out in accordance with IAQM Guidance⁶².

- The nearest high sensitive residential receptors are located 20 m to the west and east of the Site but approximately 45 m to the LEV extracts and therefore not expected to be downwind of the Site with respect to prevailing south-westerly winds. The West Harnham Chalk Pit Special Areas of Scientific Interest (SSSI) is located 170 m to the south-east of the Site and is determined to be of medium sensitivity to odour due to presence of human receptors accessing the space, who are only expected to be present intermittently but would expect a high level of amenity within the SAC area. The proposed on-site and nearby industrial /commercial land use within the Proposed Development is determined to be of medium sensitivity to odour. This judgement has been made because these receptors wouldn't reasonably be expected to be present continuously for extended periods and would not expect to enjoy the same level of amenity as in their home.
- Filtration is to be included on the soldering and Apollo CNC router systems, to mitigate the hazardous emissions, as required. The remaining LEV systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere and relate to infrequent manufacturing processes. Accounting for the LEV systems with appropriate filtration or the release of very low trace amounts of vapours, the source odour potential is expected to be small. Considering a small odour source potential and based on an ineffective pathway the new industrial facility is expected to present a negligible odour risk. Based on the medium or high receptor sensitivity and negligible risk (magnitude), the scale of effect is anticipated to be negligible, which is not significant.

The MECHON Stage 1 report lists the exposure potentials, control factor and acceptable hood designs for each of the applicable substances and processes and should be used to inform the appropriateness of the control measures LEV system design. The various LEV systems are detailed in the MECHON Stage 3 report⁶⁴ along with the indicative extract details, are summarised in the following table⁶³. Filtration is required for LEV10 (Apollo CNC router). The remaining LEV

⁶² Institute of Air Quality Management (IAQM), (2018) Guidance on the assessment of odour for planning, version 1.1, July 2018.

<http://www.iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

⁶³ Numbering for the LEV systems does not include LEV 06. It is understood that this system is incorporated into another LEV system and therefore has not been listed separately in the MECHON report.

systems relate to processes with trace amounts of vapours which are diluted with high volumes of air before being released to atmosphere. The design of each flue, including height and efflux velocity, is to be confirmed during Stage 4a design.

It is understood there will also be two CNC Lasers which will be fitted with localised HEPA filters. This will comprise a laser fume extraction system (BOFA AD 500 IQ) which has an extremely large filter capacity with high airflow and pressure rates and is therefore capable of mitigating large amounts of particulate matter and gaseous organic compounds.

Final design must ensure compliance with legislative air quality objectives, workplace exposure limits (listed in Appendix A and B of this report), and ensure exposure is reduced to as low as reasonably practicable (ALARP) for hazardous substances at risk of causing cancer, damage to genes or occupational exposure. The MECHON Stage 1 report should be referred to for a full list of exposure targets, exposure potential values and hood design requirements for applicable chemicals (Table 40.104 and Table 40.105 of MECHON Stage 1 report²⁹).

The Dangerous Substances and Explosive Atmosphere Regulations (DSEAR)⁶⁴ require employers to control risks to safety from fire, explosions and substances corrosive to metals. EEUUK carried out a DSEAR assessment of the existing facility in 2025 and concluded that on considering dangerous substances and explosive atmosphere risks on the site, together with the nature, operation and management of those risks, the overall level of risk was medium. Medium classification was due to the nature of fire and explosion risk having the potential to result in severe life-threatening injury requiring immediate hospitalisation. The likelihood was considered to be unlikely based on the current control measures in place. The DSEAR assessment listed several recommendations to manage the risks from dangerous substances and explosives which need to be followed.

This assessment focuses on the operational impact of the industrial workshop. Consideration of construction impacts is outside the scope of this assessment. A Dust Management Plan is expected to be required by Wiltshire Council, prior to the commencement of any on-site works and to ensure that the measures and monitoring protocols to mitigate against construction dust are to be implemented throughout the construction phase.

Based on the provision of appropriate LEV system design and filtration provision, where required and adherence to the recommendations outlined in the DSEAR assessment, it can therefore be concluded that there are not expected to be any air quality constraints associated with the Proposed Development. There are no expected to be any significant impacts on local air quality.

⁶⁴ Health and Safety Executive (HSE) The Dangerous Substances and Explosive Atmospheres Regulations 2002, <https://www.hse.gov.uk/fireandexplosion/dsear.htm>

9.0

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Appendices

Appendix A - Air Quality Objectives, Guidelines and Targets

Pollutant	Averaging Period	Objective Threshold (England)	WHO Guidelines (µg/m³)	
			Interim Target	AQG Level
For the protection of human health				
Nitrogen Dioxide (NO ₂)	Annual mean	40 µg/m³	40 µg/m³, 30 µg/m³ and 20 µg/m³	10
	24-hour mean		120 µg/m³ and 50 µg/m³	25
	1-hour mean	200 µg/m³ Not to be exceeded more than 18 times per year (equivalent to the 99.79 th percentile of 1-hour mean values)		
Particulate Matter (PM ₁₀)	Annual mean	40 µg/m³	70 µg/m³, 50 µg/m³, 30 µg/m³, 20 µg/m³	15
	24-hour mean	50 µg/m³ Not to be exceeded more than 35 times per year (equivalent to the 90.4 th percentile of 24-hour mean values)	150 µg/m³, 100 µg/m³, 75 µg/m³, 50 µg/m³	45
Fine Particulate Matter (PM _{2.5})	Annual mean	20 µg/m³ <i>(Future target EIP25: 10 µg/m³ by end of 2040 46% reduced by 2030 based on 2005 levels 30% reduced by end of 2030 based on 2018 levels)</i>	35 µg/m³, 25 µg/m³, 15 µg/m³, 10 µg/m³	5
	24-hour mean		75 µg/m³, 50 µg/m³, 37.5 µg/m³, 25 µg/m³	15
Lead (Pb)	Annual mean	0.25 µg/m³		
Benzene (C ₆ H ₆)	Running annual mean	16.25 µg/m³	No safe level of exposure can be recommended	
	Annual mean	5 µg/m³		
Carbon monoxide (CO)	24-hour mean		7 mg/m³	4 mg/m³
	8-hour mean	10 mg/m³		

Pollutant	Averaging Period	Objective Threshold (England)	WHO Guidelines ($\mu\text{g}/\text{m}^3$)	
			Interim Target	AQG Level
Sulphur dioxide (SO_2)	24-hour mean	125 $\mu\text{g}/\text{m}^3$ Not to be exceeded more than 3 times per year	125 $\mu\text{g}/\text{m}^3$ and 50 $\mu\text{g}/\text{m}^3$	40 $\mu\text{g}/\text{m}^3$
	1-hour mean	350 $\mu\text{g}/\text{m}^3$ Not to be exceeded more than 24 times per year		
	15-minute mean	266 $\mu\text{g}/\text{m}^3$ Not to be exceeded more than 35 times per year		
	10-minute mean			500 $\mu\text{g}/\text{m}^3$
Arsenic	Annual mean	6 ng/m^3		
Cadmium	Annual mean	5 ng/m^3		
Nickel	Annual mean	20 ng/m^3		
Polycyclic Aromatic Hydrocarbons (benzo(a)pyrene)	Annual mean	0.25 ng/m^3		
Ozone	8-hour mean	100 $\mu\text{g}/\text{m}^3$ Not to be exceeded more than 10 times per year	60 $\mu\text{g}/\text{m}^3$ and 120 $\mu\text{g}/\text{m}^3$	100 $\mu\text{g}/\text{m}^3$
For the protection of vegetation and ecosystems				
Nitrogen oxides (NO_x)	Annual mean	30 $\mu\text{g}/\text{m}^3$ <i>(Future target EIP25: 73% reduced by 2030 based on 2005 levels)</i>		
Sulphur dioxide (SO_2)	Annual mean	20 $\mu\text{g}/\text{m}^3$		

Table 9-1111: UK Air Quality Objectives (AQO), future targets from EIP25, and WHO Guidelines

Appendix B – Hazardous Substances

Substance	CAS number	Workplace exposure limit (mg/m ³)		EH40 comments
		Long-term exposure limit (8-hr TWA reference period)	Short-term exposure limit (15-minute reference period)	
Acetaldehyde	75-07-0	37	92	Hazard band E, H224, H350, H341, H335, H319 Carc. 1B Muta.2
Aluminium metal inhalable dust respirable dust	7429-90-5	10 4	- -	H250 H261
Aniline	62-53-3	4	-	Sk
N,N-bis(2,3-epoxypropyl)aniline	2095-06-9			Hazard band E, H302, H315
Benzene	71-43-2	3.25	-	Hazard band E, H225, H350, H304, H315, H319, H340, H350, H372
Carbon black	1333-86-4	3.5	7	Hazard band A BMGV
Chromium	7440-47-3	0.5	-	Hazard band A Carc, sen, BMGV
Cobalt and Cobalt compounds (as Co)		0.1	-	Carc (cobalt dichloride and sulphate), Sen
Copper fume (as Cu)	7440-50-8	0.2	-	Hazard band A
Ethane-1,2-diol particulate vapour	107-21-1	10 52	- 104	Hazard B Sk H302
Ethanol	64-17-5	1920	-	Hazard band A
2-2'-ethylenedioxydiethyldimethacrylate	109-16-0	-	-	Hazard C Skin 1B H317
Formaldehyde solution	50-00-0	2.5	2.5	Hazard band E Carc, dermal sensitisation H350, H341, H331, H311, H301, H314, H317
Graphite inhalable dust respirable	7440-44-0	10 4	- -	Hazard band A
Hardwood dust (inhalable fraction)		3	-	Carc, Sen
n-Hexane	110-54-3	72	NV	Hazard band D H225, H316f, H304, H336, H373, H315, H411

Substance	CAS number	Workplace exposure limit (mg/m ³)		EH40 comments
		Long-term exposure limit (8-hr TWA reference period)	Short-term exposure limit (15-minute reference period)	
				Sk
1,6-Hexanolactam (dust only, dust and vapour)	105-60-2	1 10	3 20	Hazard band C Sk H302, H315, H319, H332, H335
Hydrogen cyanide	74-90-8	1	5	Hazard band D Sk H224, H330, H400, H410
Iron oxide, fume (as Fe)	1309-37-1	5	10	
Iron salts (as Fe)		1	2	
Liquefied petroleum gas	68476-85-7	1750	2180	Hazard band E H220, H350, H340 Carc (only applies if LPG contains more than 0.1% of buta-1,3-diene)
Butan-2-one (Methyl ethyl ketone)	78-93-3	600	899	Hazard band A H225, H336, H319 Sk, BMGV
Methyl ethyl ketone peroxides (MEKP)	1338-23-4	-	1.5	
Phenol	108-95-2	7.8	16	Hazard band E H301, H311, H314, H331, H341, H373 SK
Phosphorus, yellow	7723-14-0	0.1	0.3	Hazard band A Sen
Propan-2-ol	67-63-0	999	1250	Hazard band A H225, H336, H319
Rosin-based solder flux fume	8050-09-7	0.05	0.15	Hazard band C H317
Silica, amorphous inhalable dust respirable dust	112945-52-5	6 2.4	Nv	Hazard Band: C Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 H315, H319, H335
Silicon inhalable dust respirable dust	7440-21-3	10 4	- -	Hazard band A

Substance	CAS number	Workplace exposure limit (mg/m ³)		EH40 comments
		Long-term exposure limit (8-hr TWA reference period)	Short-term exposure limit (15-minute reference period)	
Softwood dust		5		Sen, if softwood dust mixed with hardwood, WEL for hardwood is applicable.
Styrene, monomer	100-42-5	430	1080	Hazard band D H226, H361d, H332, H372
Titanium dioxide total inhalable respirable	13463-67-7	10 4	- -	Hazard band D Carc. 2 H351
Toluene	108-88-3	191	384	Hazard band D Sk H225 H361d H304 H336 H373 H315
MMMF (Machine-made mineral fibre) (except for refractory ceramic fibres and special purpose fibres)		5mg.m3 and 2 fibres/ml	-	
General dusts		4	-	
Hydrocarbons, C10 - C12, isoalkanes, <2% aromatic		1167.5		

Table B-1 Workplace Exposure Limits and EH40 comments

Substance	CAS number	Comments
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Hazard band C Sensitization, Skin Skin Sens. 1B H317
Cobalt bis(2-ethylhexanoate)	136-52-7	Hazard Band: D Skin Sens. 1A Eye Irrit. 2 Repr. 1B Aquatic Acute 1 Aquatic Chronic 3 H317, H319, H360, H400, H412
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Hazard Band: C Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1 H315, H319, H317
N,N-bis(2,3-epoxypropyle)aniline	2095-06-9	Hazard Band: E Acute Tox. 4 Skin Sens. 1 Muta. 2 Aquatic Chronic 2 H302, H315, H317, H319, H341, H411
1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether	2425-79-8	Hazard Band: C Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1 H332, H312, H315, H319, H317
reaction product: bisphenol-A (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	25068-38-6	Hazard Band: C Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1 Aquatic Chronic 2 H315, H319, H317, H411
Neodecanoic acid, cobalt salt a c	27253-31-2	Hazard Band: D Acute Tox. 4 Skin Sens. 1 STOT RE 1 Aquatic Chronic 3 H302, H317, H372
Phenol, polymer with formaldehyde, glycidyl ether a c	28064-14-4	Hazard Band: C Skin Irrit. 2 Skin Sens. 1 Eye Irrit. 2

Substance	CAS number	Comments
		Aquatic Chronic 2 H315, H317, H319, H411
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Hazard Band: C Acute Tox. 4 Skin Corr. 1B Eye Dam. 1 Skin Sens. 1A H302, H314, H318, H317
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	28768-32-3	Hazard Band: E Skin Sens. 1 Muta. 2 Aquatic Chronic 2 H317, H341, H411
1,3-Propanediol, 2-ethyl-2 (hydroxymethyl)-, polymer with (chloromethyl)oxirane	30499-70-8	Hazard Band: C Skin Irrit. 2 Skin Sens. 1 Eye Irrit. 2 Aquatic Chronic 3 H315, H317, H319, H412
3,5-diethyl-1,2-dihydro-1 phenyl-2-propylpyridine	34562-31-7	Hazard Band: B Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2B Aquatic Acute 1 Aquatic Chronic 1 H302, H315, H319, H400, H410
Sodium borate silicate	50815-87-7	Hazard band: A
octamethylcyclotetrasiloxane; [D4]	556-67-2	Hazard Band: D Repr. 2 Aquatic Chronic 1 H361f, H410
oxirane, mono[(C12-14 alkyloxy)methyl] derivs.	68609-97-2	Hazard Band: C Skin Irrit. 2 Skin Sens. 1 H315, H317
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Hazard band: A
Silicon dioxide	7631-86-9	Hazard Band: C Skin Irrit. 2 Eye Irrit. 2A STOT SE 3

Substance	CAS number	Comments
		H315 H319 H335
4-Nonylphenol, branched and linear	84852-15-3	Hazard Band: D Repr. 2 Acute Tox. 4 Skin Corr. 1B Aquatic Acute 1 Aquatic Chronic 1 H361fd, H302, H314, H400, H410
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	9003-36-5	Hazard Band: C Skin Irrit. 2 Skin Sens. 1 Aquatic Chronic 2 H315, H317, H411
Poly[oxy(methyl-1,2 ethanediyl)], α-(2 aminomethylethyl)-.omega.-(2 aminomethylethoxy)-	9046-10-0	Hazard Band: C Acute Tox. 4 Acute Tox. 4 Skin Corr. 1B Eye Dam. 1 Aquatic Chronic 3 H302, H312, H314, H318, H412
reaction mass of ethylbenzene and xylene	905-588-0	Hazard Band: E Flam. Liq. 2 Asp. Tox. 1 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2 Acute Tox. 4 STOT SE 3 Carc. 1B STOT RE 2 Aquatic Chronic 3 H225, H304, H312, H315, H319, H332, H335, H350, H373, H412
Mercaptan/amine polymer		Hazard Band: C Serious eye damage/eye irritation Skin corrosion/irritation Sensitization, Skin H319, H315, H317
Iron	7439-89-6	Hazard band: A
magnesium powder (pyrophoric)	7439-95-4	Hazard band: A
Manganese	7439-96-5	Hazard band: A
zinc powder - zinc dust (pyrophoric)	7440-66-6	Hazard band: A

Substance	CAS number	Comments
Sulfur	7704-34-9	Hazard Band: A Skin Irrit. 2 H315
2,2'-(methylinino)diethanol; N methyldiethanolamine	105-59-9	Hazard Band: A Eye Irrit. 2 H319
1-aminopropan-2-ol; isopropanolamine	78-96-6	Hazard Band: C Skin Corr. 1B H314
Nickel	7440-02-0	Hazard Band: D Carc. 2 STOT RE 1 Skin Sens. 1 H351, H372, H317
Titanium	7440-32-6	Hazard band: A
Vanadium	7440-62-2	Hazard band: A
MWF		
Isocyanates, all (as –NCO) Except methyl isocyanate		
Polymide 6	25038-91-9	
2-hydroxypropanoic acid	26100-51-6	
Polyphthalamide (PPA)	25134-54-5	
1,4-phenylene sulfide	25212-74-2	
1,3-Benzenedicarboxylic acid, polymer with 1,4-dimethyl 1,4 benzenedicarboxylate, 2,2 dimethyl-1,3- propanediol, 1,2 ethanediol and nonanedioic acid	75701-44-9	
Dilactide		Flam. Liq. 3 Skin Irrit. 2 Skin Sens. 1 Aquatic Chronic 3
Cyclopentanone	120-92-3	Hazard Band: A Flam. Liq. 3 Skin Irrit. 2 Eye Irrit. 2 H226, H315, H319
Methylene Diphenyl Diisocyanate	101-68-8	Hazard Band: E Carc. 2

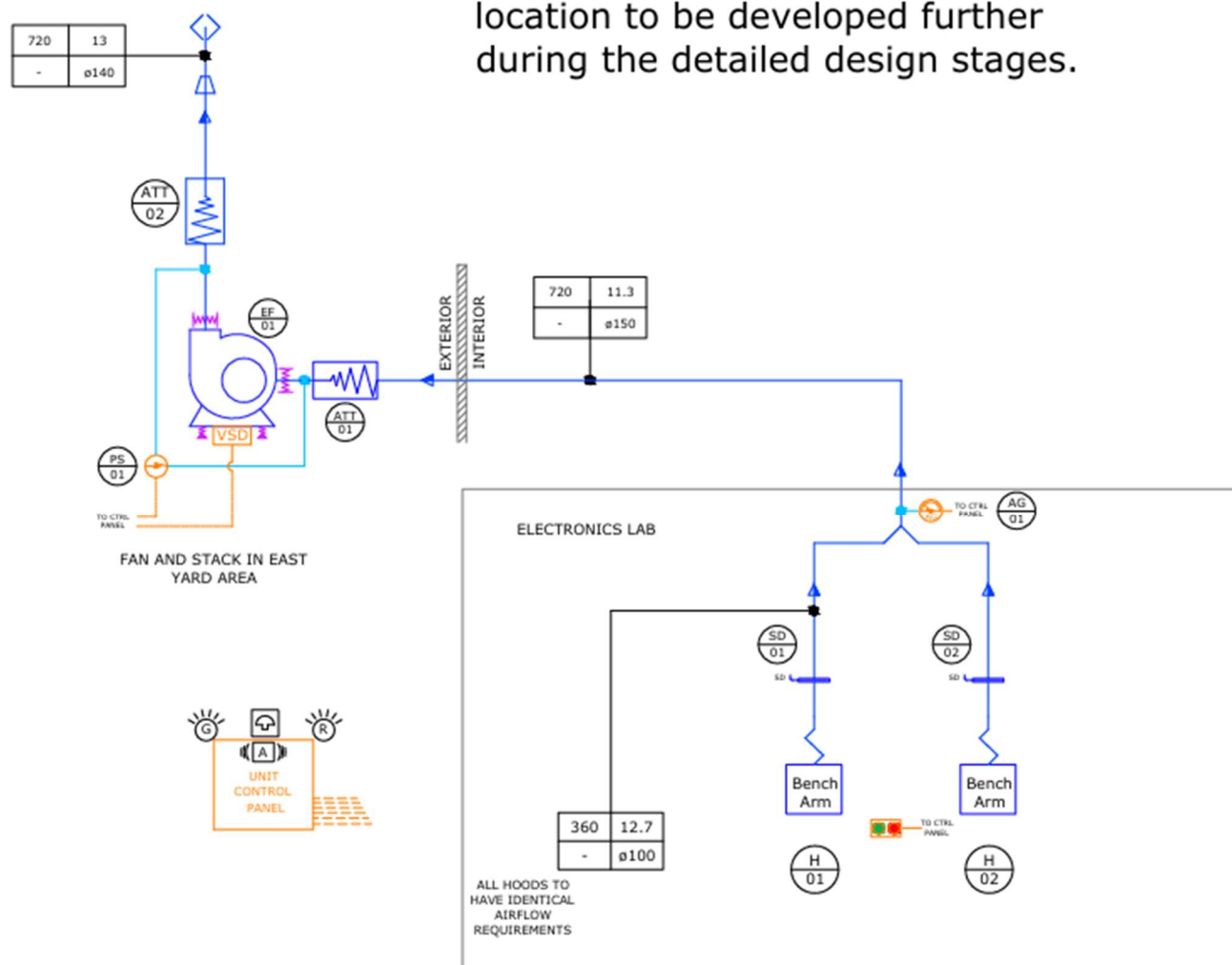
Substance	CAS number	Comments
		Acute Tox. 4 STOT SE 3 STOT RE 2 Skin Irrit. 2 Eye Irrit. 2 Resp. Sens. 1 Skin Sens. 1 H351, H332, H335, H373, H315, H319, H334, H317
Tin	7440-31-5	Hazard band A
lead powder; [particle diameter < 1 mm]	7439-92-1	Hazard Band: D Repr. 1A Lact. Aquatic Acute 1 Aquatic Chronic 1 H360FD, H362, H400, H410
Trans-1,2-Dichloroethylene	156-60-5	Hazard Band: B Flam. Liq. 2 Acute Tox. 4 Aquatic Chronic 3 H225, H332, H412

Table B-2: Hazardous Substances

Appendix C – LEV Systems

LEV01 Soldering⁶⁵

Indicative airflow rates and equipment locations shown for concept design. Airflow rates, hoods, plant equipment and equipment location to be developed further during the detailed design stages.

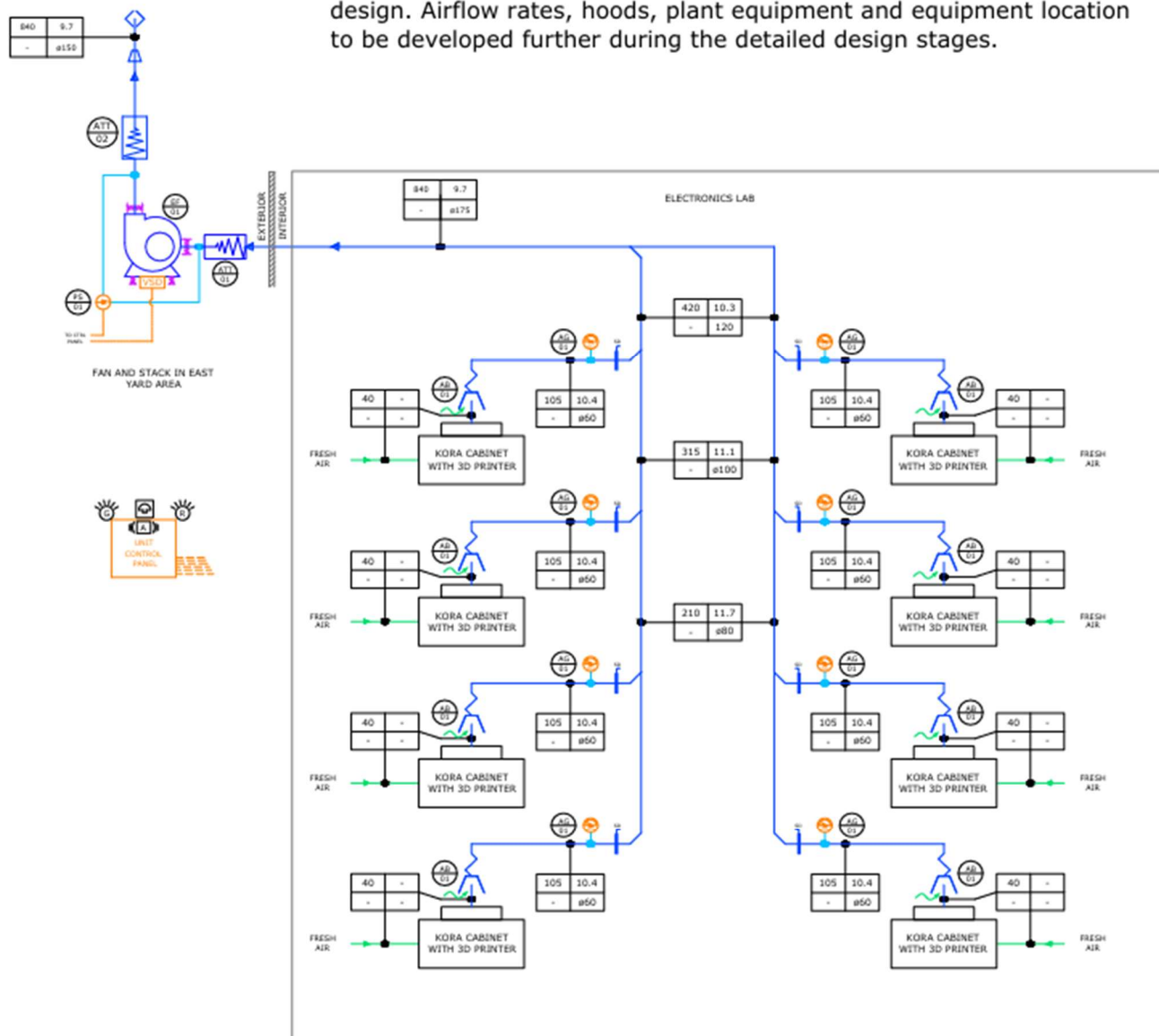


⁶⁵ MECHON (2026) Harnham, New LEV Systems, LEV 01 Soldering, Ref: DC24 MEC 1219 3001, Issue 1, 31/03/2026

LEV 02 3D Print⁶⁶

LEV 02

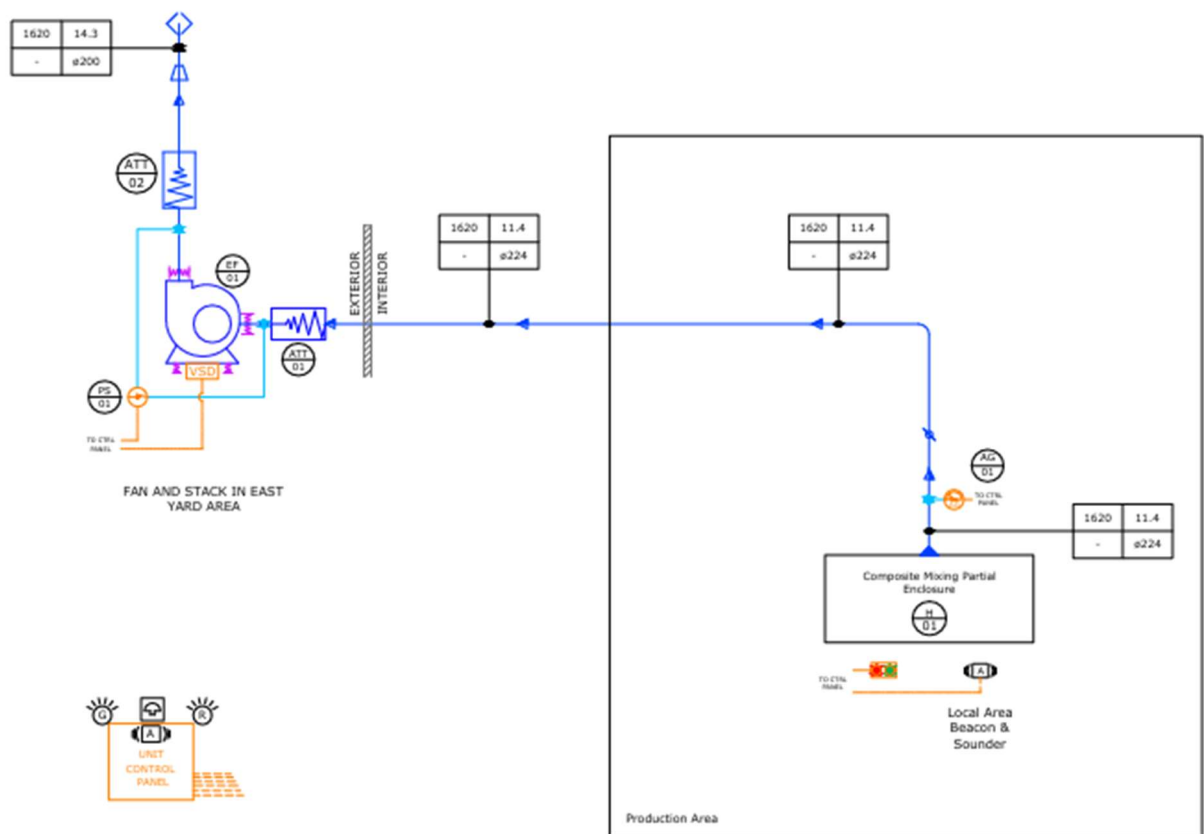
Indicative airflow rates and equipment locations shown for concept design. Airflow rates, hoods, plant equipment and equipment location to be developed further during the detailed design stages.



⁶⁶ MECHON (2026) Harnham, New LEV Systems, LEV 02 3D Print, Ref: DC24 MEC 1219 3002, Issue 1, 23/05/2026

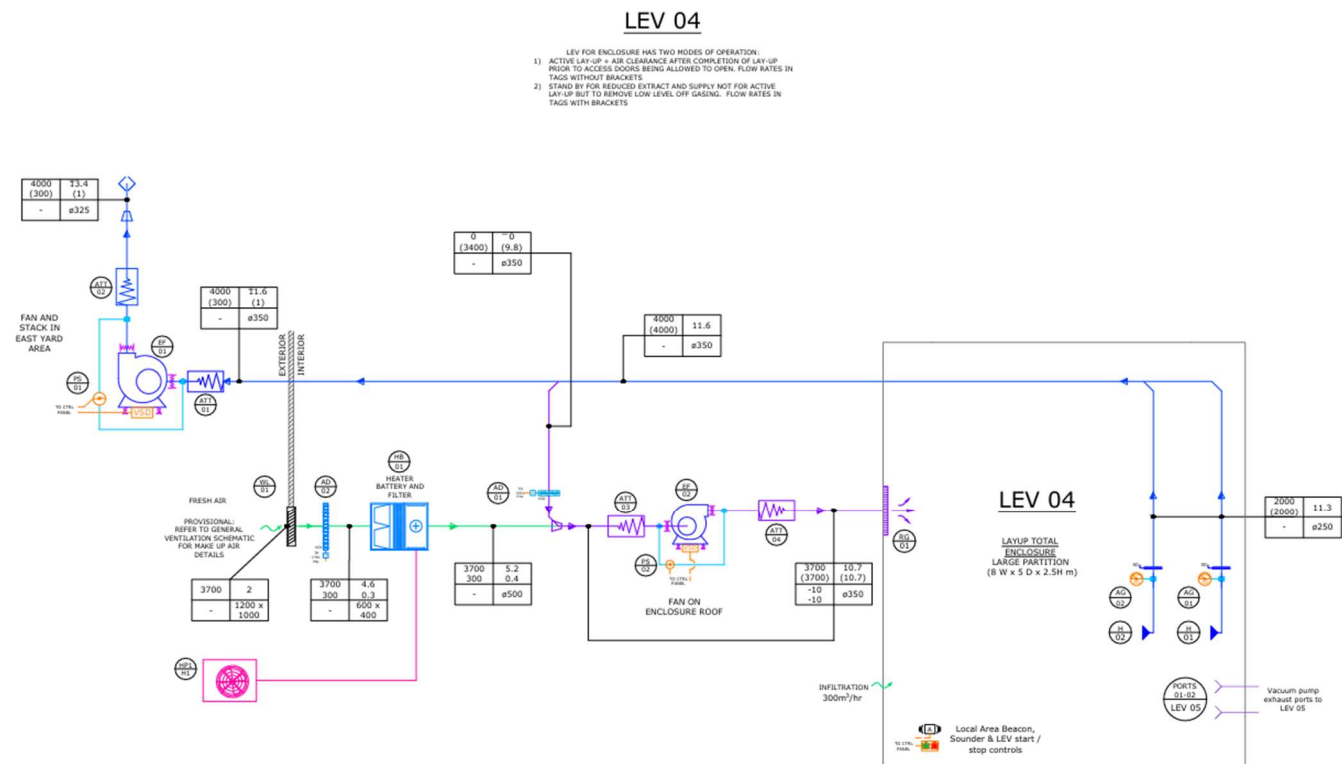
LEV 03 Mixing⁶⁷

LEV 03



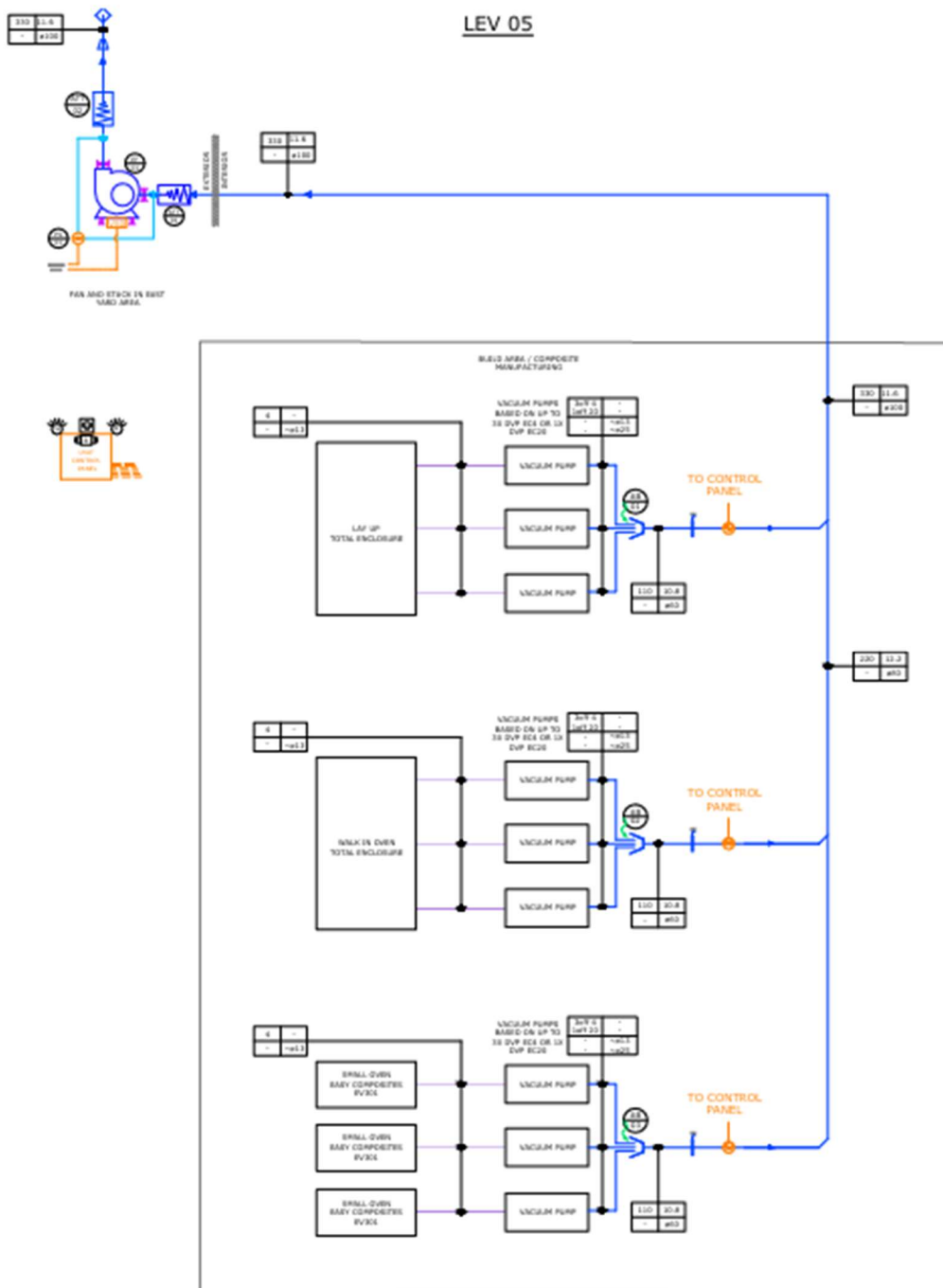
⁶⁷ MECHON (2026) Harnham, New LEV Systems, LEV 03 Mixing, Ref: DC24 MEC 1219 3003, Issue 1, 31/05/2026

LEV 04 Lay Up⁶⁸



⁶⁸ MECHON (2026) Harnham, New LEV Systems, LEV 04 Lay Up, Ref: DC24 MEC 1219 3004, Issue 1, 3103/2026

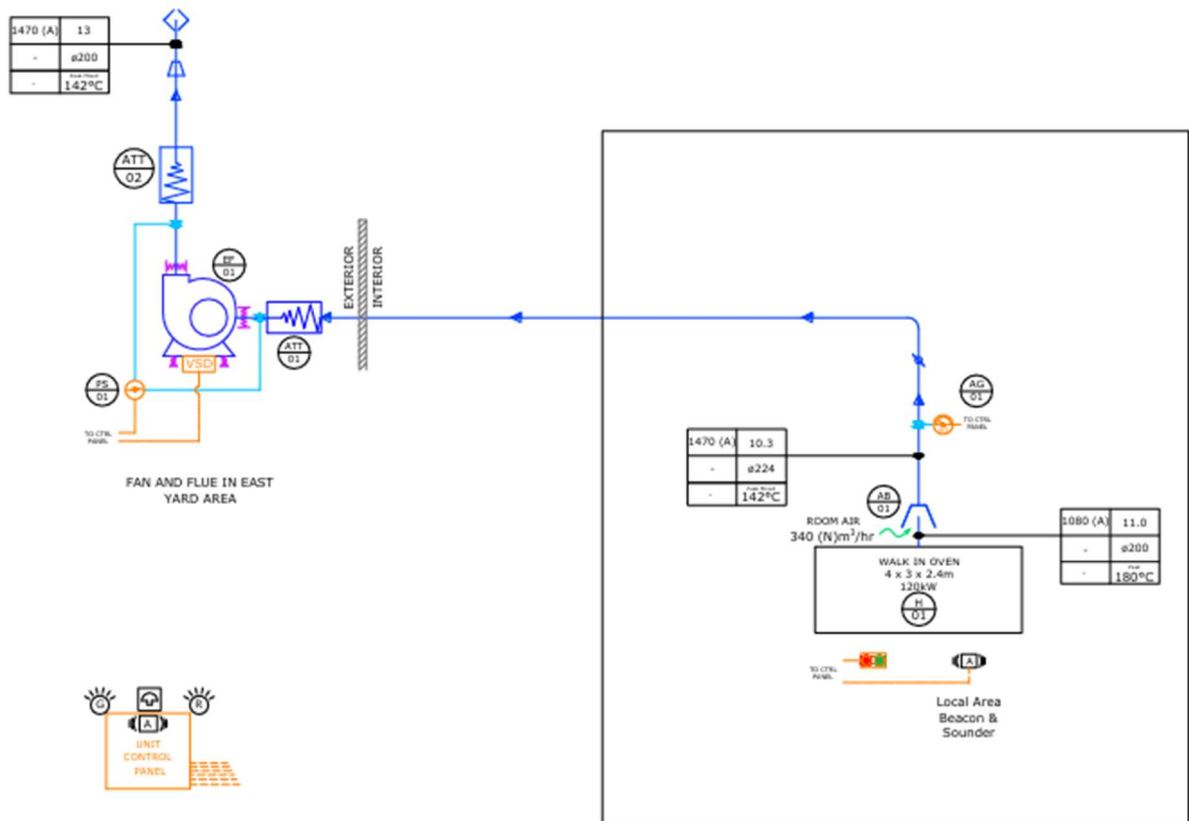
LEV 05 Lay Up VAC Pump Exhausts⁶⁹



⁶⁹ MECHON (2026) Harnham, New LEV Systems, LEV 05 Lay Up Vac Pump Exhausts, Ref: DC24 MEC 1219 3005, Issue 1, 31/05/2026

LEV 07 Walk in Oven LEV⁷⁰LEV 07

Indicative airflow rates and air-brake arrangement shown for spatial design purposes, based on provisional oven performance data. Design to be reviewed and finalised during the detailed design stage once confirmed oven drawings and exhaust flow rates are received from the manufacturer.

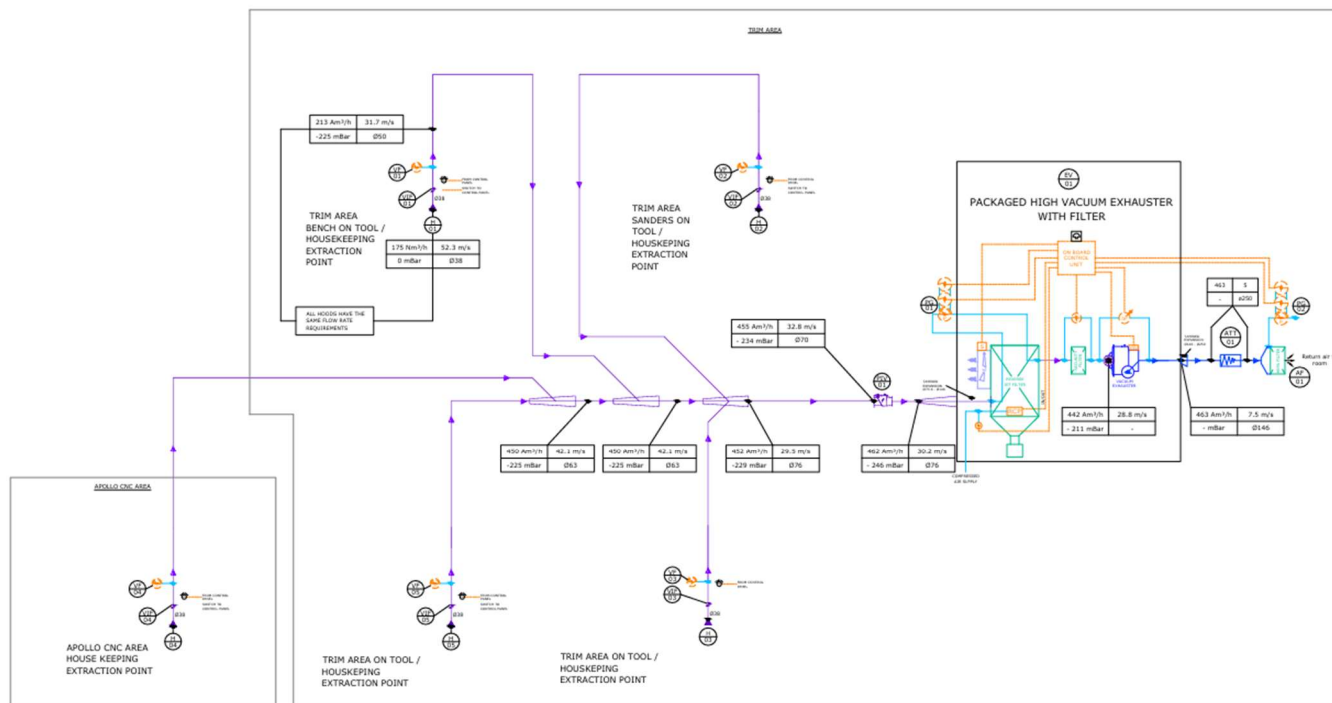


⁷⁰ MECHON (2026) Harnham, New LEV Systems, LEV 07 Walk in Oven LEV, Ref: DC24 MEC 1219 3007, Issue 1, 31/03/2026

LEV 08 Trim Area Vacuum System (incorporating LEV 06)⁷¹

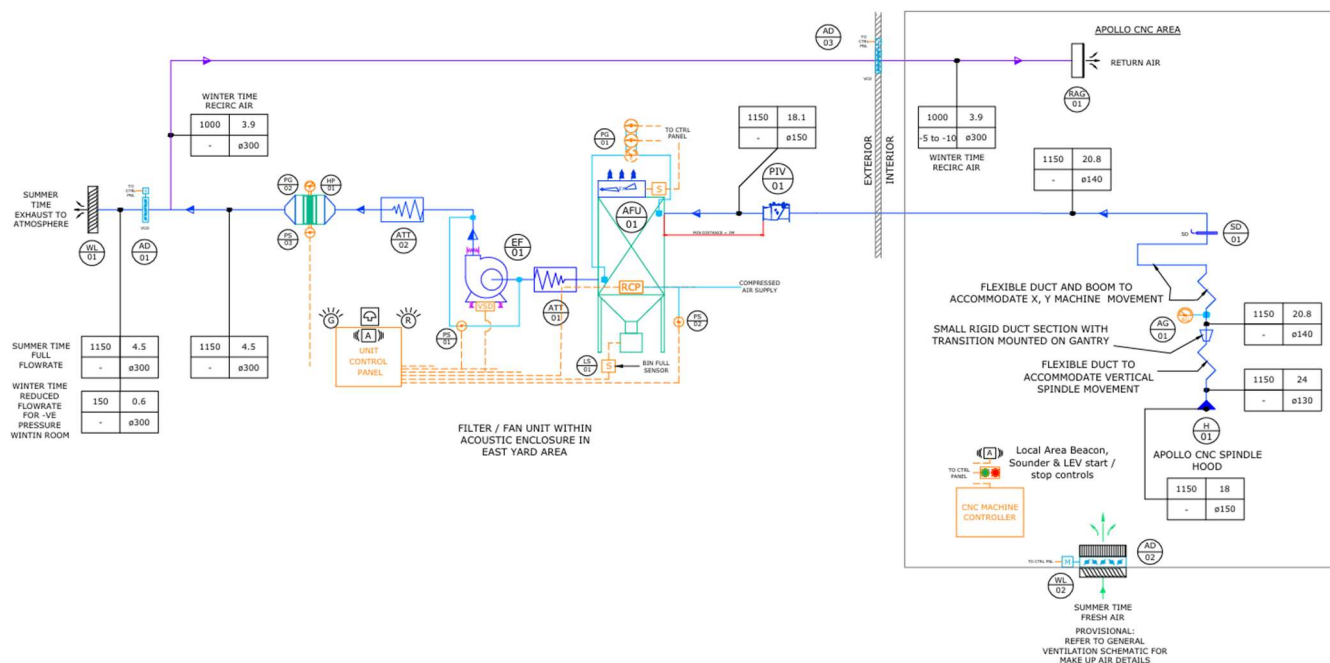
LEV 06

Fixed pipework arrangement with 4 off hose extraction connection points within the Trim Area for on tool extraction and housekeeping and 1 off extraction connection point within the Apollo CNC area for housekeeping. Vacuum capacity for a maximum of two points only in use at any time.



⁷¹ MECHON (2026) Harnham, New LEV Systems, LEV 08 Trim Area Vacuum System, Ref: DC24 MEC 1219 3008, Issue 1, 31/03/2026

LEV 10 Apollo CNC Router⁷²



⁷² MECHON (2026) Hamham, New LEV Systems, LEV 10 – Apollo CNC Router, Ref: DC24 MEC 1219 3009, Issue 1, 23/05/2026

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