| Data and information | | | | | |
|---|---|---|---|---|---|
| **Source** | **Harm** | **Pathway** | **Receptor** | **Probability of exposure** | **Consequence** |
| ***Dust/Particulates*** | | | | | |
| Particulate matter and dusts from delivery vehicles, handling and unloading wastes/materials, including trafficked mud and debris, dust from waste storage and treatment. | Harm to human health - respiratory irritation and illness. | Air transport, deposition then inhalation. | Local human population | Low | High |
| | Nuisance - dust on property, clothing etc. | Air transport then deposition. | Local human population | Low | Moderate |
| | Smothering of habitats and crops | Air transport then deposition. | Local wildlife habitats/ species | Low | Moderate |
| ***Odours*** | | | | | |

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| Fugitive odours from delivery and dispatch of wastes/materials.<br><br>Fugitive odours from waste unloading, handing and treatment of waste.<br><br>Fugitive odour emissions from waste storage.<br><br>Fugitive odour release during an abnormal event such as a spill or leak. | Nuisance, loss of amenity | Air transport then inhalation. | Local human population | Moderate | Moderate |
| ***Litter*** | | | | | |

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| Litter from waste delivery vehicles.<br><br>Litter from waste stored on site.<br><br>Litter from the welfare and office facilities. | Nuisance, loss of amenity, road traffic accidents and harm to animal health | Vehicles entering and leaving site.<br><br>Air transport and then deposition | Local human population, livestock and wildlife. Local road users | Moderate | Moderate |
| ***Mud and Debris*** | | | | | |
| Waste debris and mud on local roads.<br><br>Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users. | Nuisance, loss of amenity, road traffic accidents and harm to animal health | Vehicles entering and leaving site. | Local road users | Moderate | Moderate |
| ***Scavengers, Insects and Other Pests*** | | | | | |

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| Scavenging animals and scavenging birds, Pests (e.g. flies) attracted to or infesting wastes | Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity.<br><br>Negative effects on habitats and crops. | Air transport and over land. | Local human population, crops and local habitats. | High | Moderate |
| ***Noise & Vibration*** | | | | | |
| Noise and vibration caused by engine noise and vibrations from site plant and equipment, lorry movements etc. | Nuisance, loss of amenity, loss of sleep or harm. | Noise through the air and vibration through the ground | Local human population | Low | Moderate |
| ***Water*** | | | | | |

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| Generation of contaminated run-off and leachate from wastes | Harm to protected site through nutrient enrichment, leachate, contaminated surface water runoff | Surface water run-off, and sub-surface transport of leachates then base and spring flows to rivers. | Groundwater, surface water bodies and their associated habitats. | Low | Moderate |
| Flooding of the site | Contamination of buildings, gardens, agricultural land, natural habitats etc downstream resulting from waste washed off-site. | Flood waters | Local human population, crops and local habitats. | Very Low | Low |
| ***Accidents*** | | | | | |
| On site hazards: wastes, machinery, vehicles. | Bodily injury | Direct physical contact | Local human population | Low | High |
| Fire resulting from arson/vandalism or an accident causing the release of polluting materials (smoke, fumes and fire water) to air, water or land. | Harm to human health<br><br>Nuisance and loss of amenity.<br><br>Deterioration of water quality.<br><br>Negative effects on habitats.<br><br>Hazards to local infrastructure (e.g. roads). | Direct physical contact.<br><br>Air transport, deposition and/or inhalation.<br><br>Surface water run-off, and sub-surface transport of contaminant to the water table. | Local human population, road networks, groundwaters and habitats | Moderate | Moderate |

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| Leaks and Spillages of potential polluting substances (e.g. fuels and oils) from on-site plant/vehicles, and storage infrastructure | Deterioration of water quality, contamination of ground/surface waters. | Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater. | Groundwater, surface water bodies and their associated habitats. | Moderate | Moderate |

| Judgement | |
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| **Magnitude of risk** | **Justification for magnitude** |
| Moderate | General waste will be handled within a building. Materials stored externally will include glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers.<br><br>With regard to receptors in the form of public highways and private roads, dust from the site poses very little risk to human health due to the transient nature of these receptors, as members of the public are simply passing through these areas and no long-term dust exposure will occur. Dust is also unlikely to be a nuisance to these receptors due to the internalised nature of the operations. |
| Low-Moderate | |
| Low-Moderate | |

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| Moderate | Potentially odorous wastes will be permitted and accepted at the facility.<br><br>Wastes with a moderate to high odour generation potential will be handled internally. Only wastes with a low odour generation potential will be handled/stored externally.<br><br>No residential properties are located adjacent to the site. |

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| Moderate | Waste types to be permitted at the site may generate litter.<br><br>General wastes will be handled internally, and only wastes with a low quantity of light-fraction content will be handled externally. |
| Moderate | General waste will be handled within a building. Materials stored externally will include glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers.<br><br>Internal and external site surfaces comprise impermeable concrete surfacing which will be easy to clean. |

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| High | General waste will be handled within a building. Materials stored externally will include glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers.<br><br>Putrescible waste will be accepted at the site which has the potential to attract scavengers, insects and other pests.<br><br>The site is located in an industrial area and, therefore, a variety of wildlife is less likely to be in relatively close proximity to the proposed WTS. An increase in pests and scavengers to the area could create a nuisance. |
| Low-Moderate | Distance of site from receptors (the nearest residential property to the site is ~340m east of the boundary).<br><br>The site is located within an industrial setting, which typically exhibits higher background noise levels.<br><br>Adjacent industrial and commercial premises are unlikely to be adversely affected by noise as they are likely to generate noise themselves. |

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| Low-Moderate | General waste will be handled within a building. Materials stored externally will include glass, mixed C&D, and scrap metal, as well as wood, plasterboard and bonded asbestos in containers.<br><br>The internal and external site area comprise impermeable concrete surfacing.<br><br>The site external drainage network discharges to combined sewer.<br><br>The site is not located within a Source Protection Zone, and the site is situated in a low category groundwater vulnerability area (areas that provide the greatest protection to groundwater from pollution). |
| Very Low | According to the Environment Agency flood risk map, the site lies within a very low risk area for flooding from rivers and the sea and surface water (annual flood probability of less than 0.1%; low risk). Therefore, the site is not at risk of flooding.<br><br>Only non-hazardous wastes and double wrapped asbestos wastes will be handled at the site. |

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| Moderate | The site is fully secured. |
| Moderate | Combustible waste will be handled and stored at site.<br><br>The site is fully secured and monitored remotely when non-operational.<br><br>The internal and external site area comprise impermeable concrete surfacing.<br><br>The site external drainage network discharges to combined sewer.<br><br>The site is not located within a Source Protection Zone, and the site is situated in a low category groundwater vulnerability area (areas that provide the greatest protection to groundwater from pollution). |

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| Moderate | Only non-hazardous waste and double wrapped asbestos wastes will be accepted at the site.<br><br>Liquid waste will not be accepted at the site.<br><br>The internal and external site area comprise impermeable concrete surfacing.<br><br>The site external drainage network discharges to foul sewer.<br><br>The site is not located within a Source Protection Zone, and the site is situated in a low category groundwater vulnerability area (areas that provide the greatest protection to groundwater from pollution). |

| Action (by permitting) |
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| **Risk management / Control Measures** |
| All delivery and dispatch vehicles will be fully enclosed or sheeted.<br><br>Delivery vehicles will be compliant with the European emission standards. All site plant (i.e. waste handler and loading shovel) will have European emission standard engines.<br><br>A vehicle speed limit of 5 mph will be imposed at the site to prevent dust suspension by vehicle wheels.<br><br>Waste delivery vehicle drivers will be advised not to leave vehicles idle when engine power is not required.<br><br>Mechanical sweeping of the whole site will be carried out on a contractual basis to prevent the build-up of potential dusty materials on site surfaces. Manual sweeping can occur more frequently if required.<br><br>Materials stored externally will be limited to glass, mixed C&D, and scrap metal in the external storage bays, and storage of wood, plasterboard and bonded asbestos in containers stored externally.<br><br>The transfer station shed is fitted with a fixed rotary atomiser and the external storage bays are covered by a pacific nozzle line system that disperses mist water vapour for control of dust. In addition to the oscillating fan, the site is provided with equipment capable of suppressing dust caused by the operations by spraying with water.<br><br>Operational staff to be trained to assess dust generation at the site throughout the working day. Further visual assessment to be carried out daily by the site manager, TCM or nominated deputy.<br><br>The site surfaces, both internal and external, will comprise impermeable concrete surfacing which will be easy to clean.<br><br>Good housekeeping will be implemented at all times to ensure the internal and external site areas do not have a build-up of dust and debris which could become airborne.<br><br>Waste drop heights will be minimised during unloading and waste treatment to avoid dusty plumes.<br><br>A Dust Emissions Management Plan (Document Ref.: Middlesbrough_DEMP_A001_December 2023) has been prepared and will be maintained throughout the operational period of the site. |

Waste delivery vehicles will be fully enclosed or sheeted to minimise the risk of fugitive release of odour.

Waste Pre-acceptance and acceptance checks will be conducted to ensure the waste is compliant and acceptable. Malodorous waste will not be accepted.

An odour suppressant system is provided at the site, it comprises a fixed rotary atomiser in the waste transfer shed, and pacific nozzle line system that covers the waste transfer shed and external storage bays. The system disperses mist water vapour with deodoriser for control of odour. The system is fed by the mains water supply and is operated manually. This system will be used when odorous wastes have been received and/or are being processed, or where the results of site odour surveys have indicated that it may be necessary to control potential emissions.

The internally stored waste will have a limited amount of heating as a result of direct sunlight. Heating of potentially odorous waste and waste containing VOC's and SVOC's is a key factor in odour generation. Thereby, the storage and processing arrangements severely reduce the likelihood for the heating of waste by direct sunlight.

Only specified wastes with a low odour generation potential will be stored externally.

Putrescible waste will be stored for up to 2 days generally and no more than 5 days. This will minimise the likelihood of waste becoming malodourous when present at the site.

Good housekeeping measures will be implemented to ensure that there is no build-up of waste residues which could become malodorous. Equipment used in waste processing will be cleaned after use to remove any residual waste. Following waste dispatch, empty storage bays will be cleaned thoroughly prior to the next delivery of waste to the site.

Daily inspections of the site conditions and odour monitoring will be carried out to ensure that any issues are identified as soon as possible and mitigation measures can be implemented. Operational staff will also be trained to assess any odour generation at the site throughout the working day and will alert the site operations manager, TCM or nominated deputy who will investigate the issue and take corrective action.

Contact information for the site and the EA as well as the permit reference number will be displayed to the public via signage at the site entrance to ensure Biffa is made aware of any off-site nuisance as soon as possible to allow mitigation measures to be actioned. Any complaints received will be recorded on an 'Odour Complaint Form'.

An Odour Management Plan (OMP) (Doc Ref.: Middlesbrough_OMP_A001_December 2023) has been prepared and will be maintained throughout the operational period of the site.

All waste delivery and dispatch vehicles will be fully enclosed or sheeted.

All wastes will be inspected upon delivery to the site to ensure contaminated wastes are not accepted.

All vehicles to be inspected prior to leaving site. A jet wash will be present on a vehicle ramp for wheel cleaning where required.

Waste treatment, and much of the unloading, loading and storage of waste with some quantity of light-fraction will occur within the site buildings. The high level of containment at the site will significantly reduce the risk of any litter from escaping the building.

The site offices and welfare facilities will have plenty of rubbish bins for site staff to dispose of their waste in. Regular cleaning will also be undertaken in these areas which will ensure litter is not present which may escape from the building.

Security/litter palisade fencing around the operational area is lined with micro netting will be maintained along site boundary to prevent litter escaping. Litter caught in the fencing will be removed. In the unlikely event that these screens fail to capture any windblown litter, litter picking will be conducted within 24 hours.

Daily inspections of the site will be conducted which will include inspections for evidence of mud, debris and litter on the site surfaces.

Operational staff will also be trained to observe any evidence of such emissions and the site operations manager, TCM or nominated deputy will be altered. They will then investigate the issue and action the appropriate remedial measures.

Mechanical sweeping on a contractual basis is undertaken at the site to prevent the build-up of materials on site surfaces. Manual sweeping can occur more frequently if required. Litter picking will be conducted at the site upon signs of litter generation. The source of any litter will also be investigated and remediated.

Good housekeeping will be employed at the site to ensure there is not build up of waste residue or litter within the buildings or the external areas.

All waste delivery vehicles will be fully enclosed or sheeted.

All waste delivery vehicles will be inspected prior to entering and leaving the site.

Mechanical sweeping on a contractual basis is undertaken at the site to prevent the build-up of mud or debris on site surfaces. Manual sweeping can occur more frequently if required. This will prevent vehicles tracking mud and debris onto public highways and private roads.

The internal and external site surfaces comprise impermeable concrete surfacing which is easy to clean and will minimise the tracking of mud and debris onto public roads. A jet wash will be present on a vehicle ramp for wheel cleaning where required.

Daily site inspections will be conducted to ensure any issues are identified as soon as possible to allow remediation to be implemented. The access road will also be inspected to ensure no fugitive mud or debris emissions are causing nuisance. Site operational staff will be trained to observe any evidence of mud and debris on site surfaces and alert the site manager, TCM or nominated deputy immediately. An investigation into the source will be carried out and mitigation measures actioned.

Good housekeeping will be implemented at the site to ensure there is no build up of waste mud and debris within the buildings or the external site areas.

Waste delivery vehicles will be fully enclosed or sheeted.

Waste deliveries will be inspected upon delivery to the site. Infested loads will be rejected.

Waste treatment, and the unloading, loading and storage of potentially putrescible waste will occur within the site buildings. This level of containment will aid in reducing the risk of scavengers, insects and other pests being attracted to the site.

The site uses a facilities management company to control the activity of pests on a monthly basis, and where recent pest activities occur the frequency of visits is increased. The management of pest activity is generally increased during the spring and summer months.

Good housekeeping will be implemented at the site to ensure there is not build up of waste residue within the buildings or the external site areas which could attract scavengers and pests.

Mechanical sweeping on a contractual basis is undertaken at the site to prevent the build-up of debris on site surfaces. Manual sweeping can occur more frequently if required. This will ensure site surfaces remain clean.

Putrescible waste will be stored for up to 2 days generally and no more than 5 days.

Routine pest control measures are undertaken at the site by a third-party contractor who visits and inspects the site on a monthly basis. In the unlikely event that a waste stockpile becomes infested with insects, insecticides will be used and the waste will be transferred off site as soon as possible. If a stockpile becomes infested with scavengers, a pest control contractor will be deployed, and the waste will be transferred off site as soon as possible. These measures will be actioned quickly to reduce the risk of an infestation spreading to other waste stockpiles.

The Deodoriser System within the Waste Processing Building will aid in reducing the risk of scavengers and other pests being attracted to the site due to odour suppression.

Daily inspections of the site will be carried out and the results will be recorded. Site staff will also be trained to recognise and alert the site operations manager, TCM or nominated deputy of any suspected pest infestations. This enables any issues to be identified quickly and allow further investigation and remediation to take place.

Should insects posing a nuisance be observed at site, insecticides offering rapid knock-down and long-term treatment shall be utilised.

In the event that the daily site inspections or the observations of operational staff find evidence of the presence of scavengers such as rats and other pests, a specialist contractor will be called to attend the site for pest control.

A record of all incidents will be recorded in the site diary.

Appropriate handling, deposit, treatment, and transfer of wastes will be undertaken on site.

Whilst there is no ‘closed-door’ policy at the site, the entrances to these buildings are located away from the adjacent industrial receptors. This level of containment will aid in reducing the risk of noise emissions from the site affecting nearby receptors.

Speed limit of 5mph to be implemented at the site. Internal roads and surfaces will also be maintained and kept free of ruts and potholes to minimise noise from vehicles.

All plant and equipment used on site will be operated and maintained in accordance with manufacturer recommendations.

Noise levels will be monitored daily by site operations manager (or nominated deputy) to ensure that operations are not resulting in significant levels of noise beyond the site boundary.

Due to the scope and scale of the proposed operations and the proximity of the nearest residential property to the waste transfer building (~340m), it is considered that the risk potential for noise is low and a noise management plan is not required in accordance with the Environment Agency guidance.

Waste treatment, and much of the unloading, loading and storage will occur in areas with impermeable concrete pavement.

Spill kits will be stationed in the main Waste Processing Building, commodities building, and workshop in the event of leak or spill of potentially polluting liquids.

Drain mats will be located with spills kits to prevent any potentially polluting substances entering the drainage network.

The condition of the site surfacing will be inspected weekly. The drainage network will be inspected/surveyed every five years, or sooner if issues with the network are identified. Any repairs will be undertaken as soon as reasonably practicable.

The surface of the internal transfer shed and external storage bays will be cleared of all waste at least quarterly, to allow for a detailed inspection of the surfaces and infrastructure and recorded in the site diary. During this time, any required repairs will be carried out.

None

The site is surrounded by continuous, high palisade fencing and gates will be locked shut outside of operational hours.

Signs are present at the site entrance and along the perimeter to deter trespassers.

All site staff and visitors will receive an induction to the site to ensure safety protocols are adhered to.

All site staff will receive thorough training on the site safety procedures and the use of the plant and equipment on site.

Appropriate personal protective equipment (PPE) will be provided for all site staff, particularly those handling waste.

Designated pedestrian routes are clearly marked around the site.

No fires are permitted on site. There is a dedicated smoking shelter and smoking will not be permitted in any other location on site.

All flammable substances (e.g. fuels) will be kept in double skinned plastic bunded storage static tanks. The containment and integrity of the tanks is checked daily and recorded on the site daily check sheet. In the event that damage to a tank or bund has been detected, repairs are undertaken as soon as practicably possible. Should the damage be deemed to affect the integrity of the tank/bund, the contents will be transferred to a temporary storage unit until repairs are undertaken.

The site is surrounded by continuous, high palisade fencing and gates will be locked shut outside of operational hours. Signs are present at the site entrance and along the perimeter to deter trespassers.

Plant and equipment will be operated and regularly maintained in line with manufacturers recommendations.

Plant and equipment will be inspected daily as part of the site checks. In the event any damage is observed, it will be recorded and reported to the site operations manager, TCM or nominated deputy. Any repairs will be affected as soon as possible or within 5 working days (subject to replacement material availability). Mitigation measures will be undertaken immediately if there is a possibility for ignition.

All plant is fitted with fire extinguishers and stored outside the building in the yard area overnight.

The site is surrounded by continuous, high palisade fencing and gates which will be locked shut outside of operational hours. Signs are present at the site entrance and along the perimeter to deter trespassers.

A Fire Prevention Plan (FPP) (Doc Ref.: Middlesbrough_FPP_A001_December 2023) has been prepared in accordance with current EA guidelines to prevent fires occurring the minimise the impact of a fire to the local environment. This plan will be maintained throughout the operational period of the site.

All flammable substances (e.g. fuels) will be kept in double skinned plastic bunded storage static tanks. The containment and integrity of the tanks is checked daily and recorded on the site daily check sheet. In the event that damage to a tank or bund has been detected, repairs are undertaken as soon as practicably possible. Should the damage be deemed to affect the integrity of the tank/bund, the contents will be transferred to a temporary storage unit until repairs are undertaken.

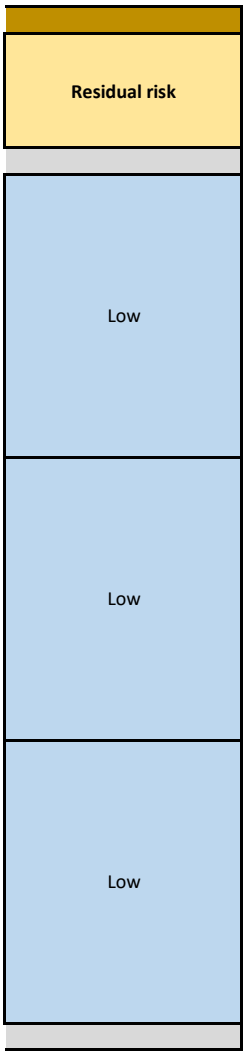
Spill kits will be stationed in the transfer station building and workshop in the event of leak or spill of potentially polluting liquids.

Drain mats will be located with spill kits to prevent any potentially polluting substances entering the drainage network.

The condition of the site surfacing will be inspected weekly. The drainage network will be inspected/surveyed every five years, or sooner if issues with the network are identified. Any repairs will be undertaken as soon as reasonably practicable.

The surface of the internal transfer bays and external material storage bays will be cleared of all waste at least quarterly, to allow for a detailed inspection of the surfaces and infrastructure and recorded in the site diary. During this time, any required repairs will be carried out.

All vehicles delivering and dispatching wastes will be sheeted or fully enclosed.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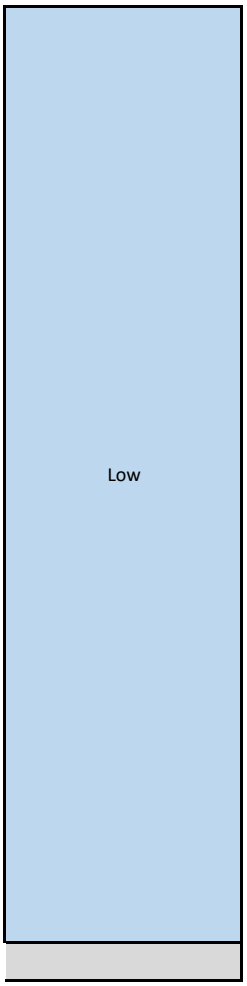
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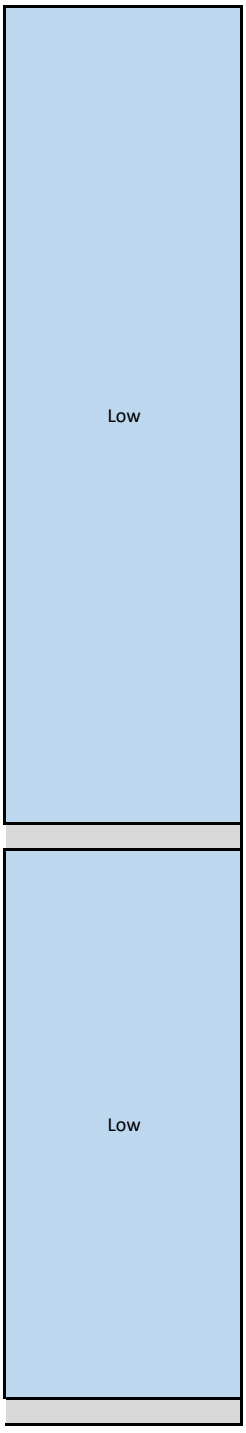
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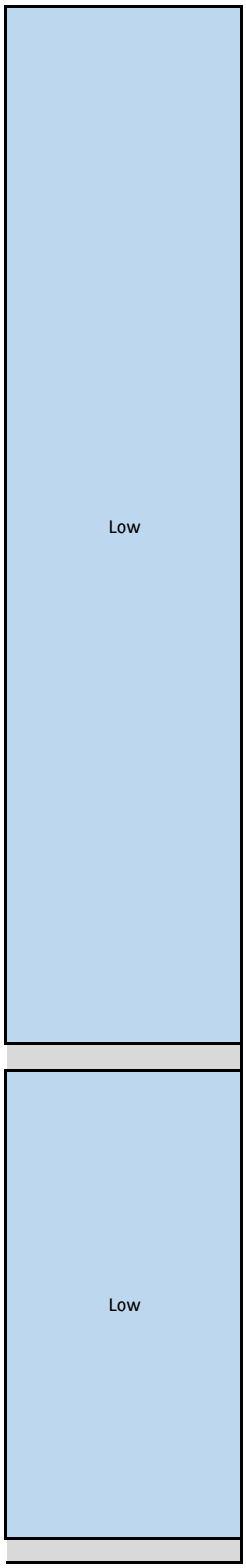
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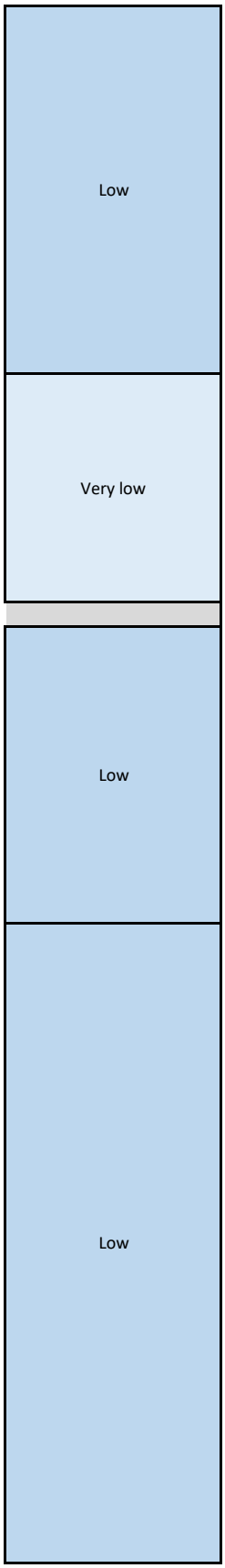
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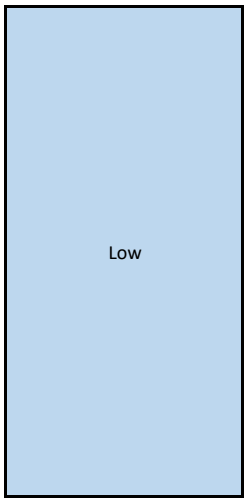
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