Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

New Inn Transfer & Recycling Centre

FCC Recycling (UK) Ltd

Environmental Permit Variation Application

H1 Amenity and Accident Risk Assessment

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AMENITY AND ACCIDENT RISK ASSESSMENT

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1. INTRODUCTION

1.1 Background

1.1.1 FCC Recycling (UK) Ltd (the Operator) proposes to operate a Transfer Station & Household Waste Recycling Centre (HWRC) located at Panteg Way, New Inn in Pontypool.

1.1.2 Activities on site will include a transfer station for municipal waste and household waste recycling area where the public will bring their waste for recycling and disposal. The permit allows the operation of a hazardous and non-hazardous Household, Commercial and Industrial Waste Transfer Station and Household Waste Recycling Centre.

1.1.3 Part of the development of the site includes a small extension within the south west corner of the site. Whilst the scope of this assessment specifically covers the activities proposed within this additional area, the whole of the site is discussed for completeness.

1.1.4 This report is an amenity and accident risk assessment for the impact of the proposed activities at New Inn (the Site) and forms part of this Environmental Permit Variation Application. The assessment has been compiled in accordance with the H1 Horizontal Guidance; Annex (a) – Amenity and accident risks from installations and waste operations.

1.2 Identification of receptors

1.2.1 As also detailed in the Site Condition Report produced for the purpose of this application, the Site is located within the New Inn area of Pontypool. It is situated within an industrial estate off Panteg Road. The national grid reference at the centre of the Site is ST 29655 99760.

1.2.2 The nearest residential properties are on Coed Camlas approximately 110m to the north of the site. Other residential properties include the area of Coed-y-Gric Road and New Road to the south of the site.

1.2.3 Industrial premises surround the Site.

1.2.4 The A4042 duel carriageway runs in a north – south direction 125m to the west at its closest point. A services area is located approximately 75m to the west, comprising a petrol filling station, hotel and fast food outlets.

1.2.5 County hospital is located approximately 410m west of the site.

1.2.6 A railway line runs in a north – south direction 50m to the west at its closest point.

1.2.7 The closest specially protected nature conservation site is the Llandegfedd Reservoir SSSI approximately 1.75km to the east. Llandegfedd was designated a SSSI for its importance to over-wintering wildfowl.

1.2.8 Drawings showing the locations of receptors are included in the 'Supporting Document' section of the application, and the receptors are summarised in table 1 below:

Table 1: Potential Receptors

Receptor type	Potential receptors
Local human population	The Site is situated within an industrial estate in New Inn, Pontypool The nearest residential properties are on Coed Comlas approximately 110m to the north of the site. Some residential properties are also located 275m south of the Site on New Road. A railway line runs in a north –south direction 75m west at the closest point
Footpaths, recreational areas etc.	New Panteg Rugby Football Club located approximately 300m south east.
Drainage systems/sewers	All drainage on site passes through three stage interceptors, drainage from potentially contaminated areas or from the mess facilities drains to foul sewer, other areas drain to surface water.
Surface water	The nearest watercourse is the Afon Lywd which flows 50m to the east of the site and the Monmouthshire and Brecon Canal which runs 360m to the west of the site.
Groundwater	The Groundsure report identifies the site to not be located in a source protection zone. The site is situated on a Secondary (A) Aquifer.

2. RISK ASSESSMENTS

2.1 Assessments for facility

2.1.1 An amenity and accident risk assessment has been carried out for the proposed activity, in order to assess the risk mitigation measures that are needed.

2.2 Odour, noise and vibration, fugitive emissions and accidents risk assessments

2.2.1 Risk assessment tables have been completed for odour, noise and vibration, fugitive emissions and accidents in line with the H1 Annex (a) guidance.

2.2.2 Possible hazards (i.e. odour sources, sources of noise or vibration, sources of fugitive emissions that could be harm the environment or escape beyond the permit boundary and possible sources of accidents that could harm the environment) have been identified. For each possible hazard, an assessment of the risk that poses to potential receptors has been carried out; taking into account the control measures that will be in place.

2.3 Risk assessments

Table 1: Odour risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Smell from any odorous waste materials offloaded and stored in containers	Residential receptors in New Inn, the closest located 110m north of the site.	Air	Preventative measures include: • Source segregated food waste stored in separate bay in dedicated building. • Low residence times for all biodegradable wastes. • General housekeeping, such as sweeping of surfaces and containers being emptied regularly. Daily site inspections also include olfactory monitoring. Actions in the event of odour being detected outside the site: • The site manager should be informed. • The source of odour should be identified and the malodorous material should be covered with other wastes or otherwise contained. • The malodorous material should be	**Unlikely**. The nature of the wastes generally accepted into the revised HWRC normally contain very little putrescible material. However, the permitted waste types include food waste which is stored in a building. No history of odour complaints since food waste stored in building.	If particularly odorous waste material detected this would be dealt with as per site procedures and contained so any odorous emission would be brief.	**Low Risk**

			despatched from the site as soon as possible. All measures and responsibilities are outlined in management system for the site.			

Table 2: Noise risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Noise from incoming and outgoing traffic & exchanging of waste containers	Residential receptors in New Inn, the closest located 110m north of the site.	Air	Measures to mitigate against excessive noise from site activities are to be detailed in noise management plan but will include: • Any site vehicles and equipment will be maintained in accordance with manufacturers' specifications. • Rubble skips will be elevated to reduce drop heights into skip. Noise will be noted as part of daily site inspections. Actions in the event of excessive noise detected outside the site: • The site manager should be informed. • The source of noise should be identified and the activity should be stopped until appropriate measures to reduce noise levels from that activity are implemented. Appropriate measures needed will depend on the reason for the	**Unlikely**: Low level noise may be audible from the proposed activities beyond the site boundary. The noise is likely to be intermittent traffic noise but is not expected to increase from current levels. No history of complaints.	Noise may cause annoyance to people in nearby residential properties and the County Hospital.	**Low risk.**

			excessive noise generation.			

Table 3: Fugitive emissions risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Air						
Dust from waste offloading, storage and rehandling	Residential receptors within the area, the closest being 110m to the north. Hospital 410m to the west, Afon Lywd which runs 50m to the east of the site and the Monmouthshire and Brecon Canal which runs 360m to the west of the site.	Air - via wind borne dust and particulates.	Measures to mitigate against dust emissions affecting areas beyond the site boundary: • The wastes accepted are not inherently dusty. • Wastes stored in containers. • The site will be provided with bound surfaces, minimising dust generation from vehicle movement. • In general, good housekeeping with regular sweeping and clearing of waste areas is encouraged. • Visual dust monitoring is done as part of daily site inspections. Actions in the event of excessive dust detected outside the site: • The site manager should be informed. • The source of dust should be identified and, if appropriate, the activity should be stopped until appropriate measures to	**Unlikely**. Permitted waste types do not include dusts, powders or loose fibres so only a medium magnitude risk is estimated. Dust from proposed activities is unlikely to affect areas beyond the site boundary. No intensification of use with respect to dusty waste. No History of	Nuisance - dust on cars, clothing, vegetation etc. Human health effects from fine particulates (<10 µg).	**Low risk**

			reduce dust emissions from that activity are implemented. Appropriate measures needed will depend on the reason for the excessive dust generation.	complaints		
Airborne asbestos fibres from asbestos handling and storage.	Residential receptors within the area, the closest being 110m to the north. Hospital 410m to the west.	Air - via inhalation of wind borne asbestos fibres.	A separate procedure for asbestos handling is in place at site. The asbestos procedure will ensure that procedures remain appropriate for asbestos storage capacity for the site. Risk mitigation measures include: no treatment, bonded asbestos only; careful loading/unloading to minimise risk of damage to asbestos items or bags; secure containers; provisions in place for damping down; training of staff. Asbestos stored in lockable sealed container.	**Unlikely.** Probability of release of fibres from asbestos is low. Mitigation measures will further minimise the risk of fibres being released to air. The likelihood of inhalation of fibres by human receptors further reduced by their distance to areas where asbestos handling and storage will occur within the site.	Respiratory illness i.e. lung cancer and mesothelioma.	**Low.**

To Water						
Runoff from site surfacing into surface water	Closest water course is Afon Lwyd which runs 50m east of the site.	Surface water drainage system.	Preventative measures include: • All potentially polluting waste shall be stored and treated on an impermeable surface draining to foul sewer. • Areas draining HWRC will pass through 3 stage interceptor before discharging to surface water. Penstock valve to be installed to shut off drainage in event of spillage or fire. • All potentially polluting liquids shall be provided with secondary containment. • The drainage system provides discharge points to surface water via interceptor. • hazardous wastes will only be stored within suitable containers in an area with impermeable pavement. • Daily site inspections will include checks to see that waste are only deposited in their correct storage areas.	**Unlikely**. Given the waste storage arrangements, the run-off is unlikely to contain contaminants that may negatively affect the surface water. (Accidental spillages are dealt with in Table 4 below)	Contamination of local surface water	**Low risk.**
Runoff from areas containing waste and product into ground	Groundwater	Migration through site surfacing and underlying soil layer.	Measures to control contaminated runoff into ground will include: • Daily site inspections will include checks to see that wastes are stored in their designated containers. • All areas used for potentially polluting waste storage or handling will have impermeable pavements. • Any liquid waste will be stored in self-contained bunds or containers.	**Unlikely**. The areas used for potentially polluting waste activities are provided with impermeable pavements, so only in the unlikely failure of the pavement integrity could lead to the risk	Contamination of groundwater and surface water.	**Low**

			• Regular inspections of impermeable pavements: Any damage detected that could impair the integrity of the pavement should be recorded and repairs carried out as soon as possible.	of ground contamination.		
Pests						
Rats	Residential receptors and water receptors.	Over ground	The management plan for the site will include procedures to minimise the risk of pest infestations from all the operations on site. The measures will include: - • use of pest control contractor on regular basis; • ensuring loads with high content of food or other putrescible wastes are despatched as soon as possible; • General housekeeping.	**Unlikely**. Types of wastes and the high turnover are unlikely to result in rats being a significant problem.	General nuisance and health risk from rats being vectors for human pathogens (e.g. weil's disease)	**Low risk**
Pests e.g. flies	Residential receptors within the area, the closest being 110m to the north. Hospital 410m to the west, Afon Lywd which runs 50m to the east of the site and the Monmouthshire	Air	The management measures listed above to control rats will also be efficient in reducing the risk of fly infestations.	**Unlikely:** Flies are not anticipated as wastes contain only small amounts of food waste.	General nuisance	**Low risk**

	and Brecon Canal which runs 360m to the west of the site.					
Litter from off-loading light wastes	Residential receptors within the area, the closest being 110m to the north. Afon Lywd which runs 50m to the east of the site and the Monmouthshire and Brecon Canal which runs 360m to the west of the site.	Air - via wind	Appropriate measures include: • wastes stored in containers; • fencing surrounding site boundary; • clearing litter arising from the activities from affected areas outside the site.	**Unlikely**. Litter may escape the site from time to time but likely to be in relatively small quantities and only during high winds and will be collected. No additional litter is expected to be created with the extension of the site.	Nuisance to nearby receptors	**Low risk**
Mud/debris from waste storage area	Users of the adjacent road,	Deposited by vehicles with dirty wheels	The whole site is hard surfaced. Internal site roads to be kept free of waste.	**Unlikely**: Hard surfacing reduces the risk of mud/debris and facilitates cleaning the site.	Low level nuisance to other road users, and debris on the road will be a nuisance rather than a safety issue.	**Low risk**

Table 4: Accidents risk assessment and management plan

What do you do that can harm and what could be harmed			Managing the risk	Assessing the risk		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Spillage or leak of fuel or other hazardous liquids	Surface water and Groundwater.	Drainage on site passes through three stage interceptors, draining to foul sewer, or to surface water	Liquid used in equipment or waste oils. These could leak during storage or spillages could occur during use or acceptance. Preventative measures: • Site surfacing and drainage shut off valves (incl interceptors) will provide containment of spillages. • Appropriate storage, e.g. double skinned containers, self-contained bunds, storage locations safe from collisions with vehicle and machinery. • Regular inspections to check for integrity of site surfacing and correct storage of hazardous liquids. • Spill kits (e.g. pads, booms, absorbents) will be provided near any areas where hazardous liquids are being handled or stored. • All staff involved in waste handling will be inducted in the emergency procedures	**Unlikely**: Impermeable surfacing will prevent migration of spills or leakages to underlying ground. In the event of any uncontained spill, the drainage system interceptors will collect any oil spillages and the shut off valves will prevent any spills entering the surface water. On that basis, it is very unlikely that any spills would reach water courses or	Contamination of surface water drains and underlying groundwater.	**Low Risk -** as long as management procedures adhered to.

			regarding the handling of spills. Actions in the event of spillages: • Incidents to be managed in accordance with emergency procedures regarding the handling of spills. • Spillages will be contained using appropriate spill kits or absorbent waste materials. • Where the spill is near any drains, drains should be protected. • Depending on the severity of the spill, the Environment Agency will be contacted. The emergency procedure will include incident reporting and, as part of the environmental management system, incidents will be reviewed by management on a regular basis.	groundwater.		
Spillage of asbestos & other hazardous wastes	Residential receptors	Air	Only small quantities of hazardous waste stored on site at any one time. The accident management plan will include emergency procedures regarding measures to be taken in the event of asbestos wastes spilling onto the floor in a manner likely to have caused dispersion of fibres, i.e. the wastes not being contained by plastic packaging and pieces of asbestos being broken. The measures will include: - 1. Dampening down of the area to avoid	**Very unlikely.** Mitigation measures will minimise the risk of fibres being released to air. The likelihood of inhalation of fibres by human receptors further reduced by their distance to areas where asbestos	Respiratory illness i.e. lung cancer and Mesothelioma.	**Low.**

			dispersion of fibres to the air; 2. Containing the area; 3. Cover the surface (e.g. with tarpaulin/plastic sheeting) until the waste can be removed and the area cleaned under controlled conditions.	handling and storage will occur within the site.		
Fire in buildings or outside in containers	Surface water. Nearby properties	The drainage system Air	Fires could occur as a result of arson or from sources of ignition or from electrical faults. Preventative measures: • waste stored in containers so offers a degree of separation. • Flammable liquid products will be kept within self-contained bunded areas. • Gas cylinders stored outside in locked cage. • Maintain tidy site and restrict storage of combustible materials. • No smoking policy. • Site security to prevent vandalism and arson attacks. • Emergency vehicles will be able to gain access to the site at all times whilst the site is operational. • Equipment available to put out small fires. • Drain protection kits will be available at the site in order that drains can be blocked up to prevent escape of firewater run-off – see the for spills/leaks measures above. Shut off valves employed. • All staff involved in waste handling will be	**Very Low:** Even with measures in place to prevent the occurrence of fires, it is possible that fires could break out. However, measures in place to prevent the fire spreading or to limit its consequences will significantly reduce the probability of receptors being affected by a fire.	Smoke, local nuisance, risk of fire spreading to other areas or premises	**Low risk** as long as control measures in place management procedures adhered to.

			inducted in the emergency procedures including the fire action plan. Actions in the event of fire: • Where it is safe to do so, site staff will use on-site firefighting equipment to extinguish fires. • Where possible and safe, combustible materials will be isolated from the fire. • Where a fire may have been caused by electricity or is close to electrical equipment, electricity to that area should be switched off and isolated. • Clear directions will be given to the fire service and a member of staff will wait at the entrance to the site to direct the service to the site on arrival, to ensure that the speediest service is provided. The emergency procedure will include incident reporting. As part of the environmental management system, incidents will be reviewed by management on a regular basis to identify whether lessons can be learnt and procedures improved.			

3. CONCLUSION

3.1.1 The risk assessments above enabled identification of appropriate mitigation measures to control the amenity and accident risks from the proposed activities. All identified risk mitigation measures will form part of the minimum Technical Standards itemised in the technical standards document.

3.1.2 The amenity and accident risk assessment indicates that provided the identified risk mitigation measures which are detailed as minimum Technical Standards are implemented, the risk of nuisance or pollution from fugitive emissions or accidents is low.

4. REFERENCES

1. Environment Agency (2011): How to comply with your environmental permit. Additional guidance for: Horizontal Guidance Note H1 - Annex (a).

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