



# Environmental Risk Assessment

## The Old Crown Dyeworks

EFR Ltd.

Document Reference: 346/1—R1.2 - ERA



Minerals  
Waste  
Environment

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## 1.0 Introduction

1.1 This document forms the Environmental Risk Assessment (ERA) for varying a Standard Rules Permit to a Bespoke Permit at Ellis Fairbank Recycling Ltd. (EFR)'s waste transfer station at the Old Crown Dyeworks, Birkshall Lane, Bradford.

1.2 The proposals are to add the waste code 19 12 12 to the existing Permit, to increase the tonnage for 75,000 tonnes per annum (tpa) to 150,000tpa, and to update the site layout, including the addition of a new building.

## 2.0 Environmental Risk Assessment

2.1 An assessment of potentially sensitive receptors within a 1km distance from The Site was carried out. A summary is represented in plan ref: *346/1-2 V2.0*.

2.2 The Site is located within a predominantly industrial area, located immediately adjacent to a metal recycling yard, household waste recycling centre and (separated by a road) a food wholesaler's industrial site. The nearest potentially sensitive receptor identified is a Council operated Travellers' site to the southeast. The following table shows all identified potentially sensitive receptors within 1km of The Site.

| Receptor                                       | Distance    |
|--|-------------|
| Railway line (Bradford – Leeds)                | 0.1km north |
| Residential Properties:<br>Gibson Street       | 0.2km north |
| Mary Street Caravan Site (Council run)         | 0.1km south |
| St Mary's & St Peter's Catholic Primary School | 0.4km north |
| Feversham Primary School                       | 0.6km north |
| Fearnville Primary School                      | 0.9km east  |
| Bradford Foster Academy                        | 1.0km south |

|   |   |
|---|---|
| <p>Lower Fields Primary Academy</p> <p>Byron Primary School</p> <p>Delius Special School</p>  | <p>1.0km south</p> <p>1.0km north</p> <p>1.0km north east</p>                     |
| <p>There are several industrial based businesses, including:</p> <p>EMR Bradford</p> <p>Bowling Back Lane HWRC</p> <p>Adams Food Service (food distribution)</p> <p>Bowling Court Industrial Estate</p> <p>KK Motor Parts Ltd Scrap Yard</p> <p>Bradford Waste Traders</p> <p>MP Automotive Parts UK</p> <p>BIFFA Bradford Transfer Station</p> | <p>These industrial/commercial facilities are on land within 1km of the site.</p> |

|  |   |
|--|---|
| <b>Facility:</b>   | Waste Operation: Household, Commercial and Industrial Waste Transfer Station with treatment |
| <b>Location:</b>   | Old Crown Dyeworks, Bradford BD4 8TB  |
| <b>Location of environmentally sensitive sites (km / m):</b> | Greater than 50m (see below)  |
| <b>Risk assessment carried out by:</b>                       | Environment Agency (for Standard Rules) and MPG (for bespoke)                               |
| <b>Date:</b>   | 30-Aug-23   |

| Data and information                           |   |  |   | Judgement                   |   |  |   | Action (by permitting)  |
|--|---|--|---|-----------------------------|---|--|---|---|
| Receptor                                       | Source  | Harm   | Pathway   | Probability of exposure     | Consequence   | Magnitude of risk                          | Justification for magnitude   | Risk management   |
| What is at risk?<br>What do I wish to protect? | What is the agent or process with potential to cause harm?                | What are the harmful consequences if things go wrong?      | How might the receptor come into contact with the source? | How likely is this contact? | How severe will the consequences be if this occurs? | What is the overall magnitude of the risk? | On what did I base my judgement?  | How can I best manage the risk to reduce the magnitude?   |
| Local human population                         | Releases of particulate matter (dusts) and micro-organisms (bioaerosols). | Harm to human health - respiratory irritation and illness. | Air transport then inhalation.                            | High                        | Medium  | High                                       | Permitted waste types do not include dusts, powders or loose fibres but the treatment activities will produce particulate matter so a high magnitude risk is estimated. There is potential for exposure for those working close to the site (apart from the operator and employees), and residential receptors (travellers site). | Processing of potentially dust producing wastes carried out in buildings. Hard standing areas of The Site wetted down if necessary to reduce dust from vehicle / plant movements and waste stored outside. New buildings can cater for increased tonnage to 150,000 tpa. Processing of waste will be done at a rate suitable to prevent storage times above those stipulated in EMS. Potentially dust producing activities carried out predominantly in lowest parts of site. Travellers' site to south at higher elevation. Adjacent scrap metal yard to east also at higher elevation and furthest from processing area. Prevailing wind direction is away from travellers' site. Nearest residential receptors to north over 150m from processing area, separated from site by railway line and factories. Surrounding area is predominantly industrial / commercial - no other specific receptors identified that could be sensitive to dust. Site daily checks carried out to assess for the potential of dust. Railway is in cutting and separated from site by trees |

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|  |                                      |   |                                     |        |        |        |   |   |
|--|--------------------------------------|---|-------------------------------------|--------|--------|--------|---|---|
| Local human population, livestock and wildlife. Railway line | As above                             | Nuisance - dust on cars, clothing etc.              | Air transport then deposition       | Medium | Low    | Low    | Local residents (travellers site adjacent to south) often sensitive to dust. Staff at other sites parking cars etc. Railway line adjacent to site | As above  |
| Local human population, livestock and wildlife, railway line | Litter                               | Nuisance, loss of amenity and harm to animal health | Air transport then deposition       | Medium | Medium | Medium | Local residents often sensitive to litter. Railway line adjacent to the site  | Clearing of any litter arising from the activities from affected areas outside the site (eg. on access road) carried out daily, where necessary as part of site daily checks. New buildings can cater for increased tonnage to 150,000 tpa. Processing of waste will be done at a rate suitable to prevent storage times above those stipulated in EMS. Processing of waste that could potential produce litter carried out within a building. No adjacent receptors sensitive to litter. Railway is in cutting and separated from site by trees  |
| Local human population                                       | Waste, litter and mud on local roads | Nuisance, loss of amenity, road traffic accidents.  | Vehicles entering and leaving site. | Medium | Medium | Medium | Road safety, local residents often sensitive to mud on roads.   | As above, and use of hose / bowser to clean and or wet down areas where problems may arise. New buildings can cater for increased tonnage to 150,000 tpa. Processing of waste will be done at a rate suitable to prevent storage times above those stipulated in EMS. Access road is used only by operator to access the site. Approx. 230m of surfaced road between site and 'main' road. Majority of HGVs on site will only make use of surfaced areas, which will be kept clean to reduce likelihood of mud being brought out of The Site.   |
| Local human population                                       | Odour                                | Nuisance, loss of amenity                           | Air transport then inhalation.      | Medium | Medium | Medium | Local residents often sensitive to odour.   | All waste processing carried out in buildings, permitted wastes unlikely to produce significant odour. New buildings can cater for increased tonnage to 150,000 tpa. Processing of waste will be done at a rate suitable to prevent storage times above those stipulated in EMS. Appropriate waste acceptance and inspections carried out of waste (including new 19 12 12 waste code) to prevent non-conforming and odour producing materials arriving at The Site. Prevailing wind direction is away from travellers' site. No other specific receptors identified due to distance from site. Site daily checks carried out to assess for the potential of odour. |



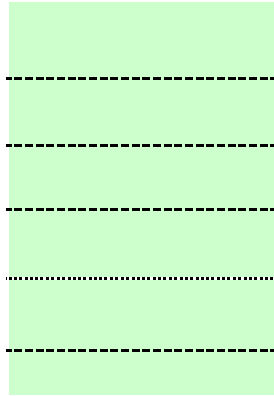
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|--|--|---|---|--------|--------|--------|--|--|
| Local human population, railway line   | Noise and vibration                                  | Nuisance, loss of amenity, loss of sleep. Vibration impacting the railway line by disturbing the ground                                   | Noise through the air and vibration through the ground. | Medium | Medium | Medium | Local residents often sensitive to noise and vibration. Railway line adjacent  | Noise Impact Assessment concluded no adverse impact regarding noise as a result of the proposals. Noise management plan implemented, and controls on operation hours (processing of waste only to take place 06:00 to 18:00 weekdays and 8:00 to 16:00 weekends). Majority of processing is not adjacent to southern boundary (nearest boundary to travellers' site). Next nearest residential receptor is over 150m away, separated from site by railway line and other industrial buildings / sites. Adjacent operations include other waste activities such as scrap metal recycling. Some noise is already established in the locale of The Site. Vibration from operations is not a concern due to the limited type of plant. |
| Local human population and railway line  | Scavenging animals and scavenging birds              | Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity. Causing disturbance to the adjacent railway. | Air transport and over land                             | Medium | Medium | Medium | Permitted wastes may attract scavenging animals and birds. Specified low-risk wastes stored outside may become nesting / breeding sites.                       | Processing of waste carried out in buildings, limits in EMS on how long different waste types can be stored on site. New buildings can cater for increased tonnage to 150,000 tpa. Processing of waste will be done at a rate suitable to prevent storage times above those stipulated in EMS. Appropriate waste acceptance and inspection of waste (including new 19 12 12 waste code) prevents non-conforming waste that could attract scavenging animals / birds. No specific receptors identified that would be sensitive to such impacts should they occur.   |
| Local human population   | Pests (e.g. flies)                                   | Harm to human health, nuisance, loss of amenity. Causing disturbance to the adjacent railway.   | Air transport and over land                             | Medium | Medium | Medium | Insect pests can multiply on permitted wastes, particularly in summer months   | Processing of waste carried out in buildings. Permitted waste types unlikely to attract pests. Site daily checks include vermin inspections and requirement in EMS to employ pest controller within 48 hours of an issue being identified. Appropriate waste acceptance and inspection of waste (including new 19 12 12 waste code) prevents non-conforming waste that could attract pests. Limited storage time of waste on site reduces the potential for pests. No adjacent receptors that would be sensitive to impacts should they occur.   |
| Local human population and local environment including adjacent railway                            | Flooding of site                                     | If waste is washed off site it may contaminate buildings / gardens / natural habitats downstream.   | Flood waters  | Low    | Medium | Low    | Permitted waste types are non-hazardous so any waste washed off site will add to the volume of the local post-flood clean up workload, rather than the hazard. | Site entirely within Flood Zone 1, controlled surface water management system. No flooding issues previously at The Site.  |
| Local human population and / or livestock after gaining unauthorised access to the waste operation | All on-site hazards: wastes; machinery and vehicles. | Bodily injury   | Direct physical contact                                 | Medium | Medium | Medium | Permitted waste types are non-hazardous so only a medium magnitude risk is estimated.  | EMS places strict controls over on-site risks. Visitors to the site are required to sign into and out of the site and be accompanied at all times by a member of staff. Warning signs (both for environmental hazards and health and safety) are present across site. Appropriate staff training. Non-hazardous wastes. Security measures including security staff outside of hours.   |

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|--|---|---|--|--------|--------|--------|--|---|
| Local human population and local environment including the adjacent railway.           | Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.           | Respiratory irritation, illness and nuisance to local population. Injury to staff, firefighters or arsonists/vandals. Pollution of water or land. Disturbance to railway. | Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches. | Medium | Medium | Medium | Permitted waste types do not include sludges or liquids and are non-hazardous so only a medium magnitude risk is estimated.  | Processing of waste carried out in buildings, FPP to prevent fire, spread of fire including fire alarms. Sealed drainage system to contain fire water, tyres not typically accepted and max 50 tonnes permitted at any one time. No liquid or sludge wastes. Appropriate testing of waste (including new 19 12 12 waste code). Security measures including security staff outside of operational hours. |
| Local human population and local environment and the adjacent railway.                 | Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.                    | Respiratory irritation, illness and nuisance to local population. Injury to staff or firefighters. Pollution of water or land. Disturbance to railway                     | As above.  | Medium | Medium | Medium | Risk of accidental combustion of waste is moderate.  | As above  |
| All surface waters close to and downstream of site.                                    | Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids. | Acute effects: oxygen depletion, fish kill and algal blooms   | Direct run-off from site across ground surface, via surface water drains, ditches etc.   | Medium | Medium | Medium | Permitted waste types do not include sludges or liquids so only a medium magnitude risk is estimated. There is potential for contaminated rainwater run-off from wastes stored outside buildings especially during heavy rain. | Any fuels etc. have secondary containment. All storage and processing of wastes that may cause leachate carried out on impermeable surface with sealed drainage system. Spill kit(s) on site. No liquid or sludge wastes accepted. Appropriate waste acceptance and inspection of waste (including new 19 12 12 waste code)   |
| All surface waters close to and downstream of site.                                    | As above  | Chronic effects: deterioration of water quality   | As above. Indirect run-off via the soil layer  | Medium | Low    | Low    | Waste types are non-hazardous so harm is likely to be temporary and reversible.  | As above  |
| Abstraction from watercourse downstream of facility (for agricultural or potable use). | As above  | Acute effects, closure of abstraction intakes.  | Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.                           | Medium | Medium | Medium | Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.  | No known surface water courses within vicinity of site. Activities not carried out within 50m of any water abstraction borehole. Sealed drainage system from storage and processing area. No liquid or sludge wastes accepted at the site.  |
| Groundwater  | As above  | Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.   | Transport through soil/groundwater then extraction at borehole.  | Medium | Medium | Medium | There is a potential for contaminated rainwater run-off or leachate from permitted waste types.  | As above  |



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| Local human population   | Contaminated waters used for recreational purposes | Harm to human health - skin damage or gastro-intestinal illness.   | Direct contact or ingestion  | Very Low | Medium | Low    | Unlikely to occur, but might restrict recreational use.  | Sealed drainage system, no water from site used for recreational purposes   |
| Protected sites - European sites and SSSIs   | Any  | Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc. | Any  | Medium   | Medium | Medium | Waste operations may cause harm to and deterioration of nature conservation sites.   | Not within 500m of SSSI or European Site. Nearest SSSI is Leeds Liverpool Canal, over 6km from The Site. Nearest SAC (South Pennine Moors) is over 12km from The Site.  |
| Local human population and all surface waters close to and downstream of site and adjacent railway | Serious Fire                                       | Nuisance, harm to human health, loss of amenity, deterioration of water quality and disturbance to railway       | Air transport then inhalation or deposition. Direct run off of fire water across site to surface waters. | Low      | High   | Medium | Waste fires are not common but approximately 300 fires pa linked to waste activities. Impact on health and amenity can be significant for many days or weeks.  | Processing of waste carried out in buildings, FPP to prevent fire, spread of fire including fire alarms. Sealed drainage system to contain fire water. Appropriate testing of waste (including new 19 12 12 waste code). Security measures including security staff outside of operational hours. Limited storage times for waste stipulated in EMS, total tonnage limit, tyres not typically accepted but max 50 tonnes at any one time. |
| All surface waters close to and downstream of site.  | Serious Fire                                       | Loss of amenity, deterioration of water quality  | Direct run off of fire water across site to surface waters.  | Low      | High   | Medium | Waste fires are not common but approximately 300 fires pa linked to waste activities. In event of fire, fire water can be produced for days/ weeks. Contaminated firewater run-off can kill fish and aquatic life. | As above.   |



| Residual risk  |
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| What is the magnitude of the risk after management?<br>(This residual risk will be controlled by Compliance Assessment). |
| Low  |

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