

SECTION 12 – DUST

12.1 INTRODUCTION

- 12.1.1 This document comprises an assessment of the likely dust impacts in respect of the proposed waste Materials Recycling Facility (MRF) located in a 0.45ha building on land at Clarks Farm, Yateley, Hampshire. Full details of the proposed development are set out in the Planning Statement which accompanied the application.
- 12.1.2 The assessment describes the existing site, the proposed development and considers the potential for dust impacts and hence proposes mitigation where such impacts might otherwise arise and give cause for concern in relation to the amenities of nearby residential properties.
- 12.1.3 Following the completion of a qualitative dust assessment of the proposed material recycling operations, it was concluded that the proposed development would not result in a significant adverse impact on sensitive receptors providing a number of controls, were undertaken.
- 12.1.4 The following sections set out the dust mitigation measures incorporated within the scheme together with the proposed site operational controls.
- 12.1.5 It should be noted that the operations at the site do not involve domestic or other bio-degradable waste streams that might give rise to issues relating to odour and hence no such issues are likely to arise. Odour is not therefore, considered further in this assessment.

12.2 SITE DESCRIPTION

- 12.2.1 The site comprises an existing industrial facility formerly used for the production of compost in a large steel framed building and series of tunnels located in the west of the site and from windrows of compost arranged across a large concrete hardstanding in the east of the site.
- 12.2.2 The production of compost ceased some years ago and the site is now utilised for a variety of industrial and associated operations, including vehicle workshops, pipe works and equipment repair and fabrication, construction and

demolition waste recycling, wood recycling/processing, offices and associated uses.

- 12.2.3 The site is located off Darby Green Lane via Reading Road (B3272) in Yateley, Hampshire and falls within the jurisdiction of Hart District Council.
- 12.2.4 The site lies between Yateley and Frogmore to the immediate North of Reading Road (B3272), which links the two towns. The majority of the site is enveloped by green land, particularly to the North and West. The nearest residential properties are located to the South and South East in the form of detached houses on Darby Green Lane and Sydney Loader Place only a few tens of metres from the nearest site boundary. Residential properties are also located over 100 metres away to the East on Darby Green Lane and to the South West over Reading Road. NB Clark Farm to the South is excluded from the assessment as this is occupied by site associates.
- 12.2.5 There are a number of buildings located throughout the site of varying ages and construction.
- 12.2.6 The boundaries of the site comprise former hedge lines with chain link fencing supplemented in places by earth bunds.
- 12.2.7 There are a number of sensitive receptors lying in close proximity to the site, the closest of these being Yew Tree Cottage adjacent (east) of the site entrance and the houses at 1-5 Sydney Loader Place. Clark's Farmhouse also adjoins the site entrance, but is owned by the applicant and occupied by the site manager.

12.3 PROPOSED DEVELOPMENT

- 12.3.1 The application proposes the use of the existing industrial building for use as a waste materials recycling facility for construction, demolition, industrial, commercial waste and skip waste in conjunction with the existing use of the external yard area. The types of waste materials that would be processed at the site include concrete, brick, soil, stone, wood, glass, metal, plastic, paper and card. No domestic or organic wastes would be handled at the site.

- 12.3.2 Waste recycling activities already occur outside the building under the terms of the general industrial use permitted for the site. These occur under the 1960's planning permissions that granted the use of the yard area for commercial composting and the permission for the use of the building for compost manufacture, which was accompanied by an Industrial Development Certificate. The use of the building was however, limited to compost manufacture by condition. The development therefore, proposes the relocation of these recycling activities within the building in order to enhance the operational and environmental control of the operations.
- 12.3.3 The throughput of the site is estimated to be around 50,000 tonnes per annum, though this will depend on demand, with the waste materials processed comprising predominantly inert construction and demolition waste with some limited quantities of industrial and commercial wastes. These would mainly comprise brick, concrete, clays, soils, plastic, timber, metal and glass with some paper and card. This would make up some 90% of throughput.
- 12.3.4 There may be a limited throughput of white goods which would be collected, stored and forwarded to authorised off site locations for decommissioning and recycling. A limited quantity of tyres are accepted at the site at present, which are shredded and exported to processing facilities for reuse and this would remain as part of the operations proposed.
- 12.3.5 It is not proposed to alter the building or amend its form in any material way that constitutes development under the terms of the Town and Country Planning Act 1990.
- 12.3.6 There will be a need for ongoing repair and maintenance of the building over time and the replacement of doors and cladding as necessary, where this has become damaged or broken, but the structure of the building is sound and will simply be maintained. Internally bays and infrastructure will be installed, including a mist air system and plant.
- 12.3.7 The external arrangement of the site is as existing and reflects in large part the existing operation of the site, which will continue outside the scope of this

application, other than insofar as the waste management operations will be brought within the building itself.

12.3.8 Existing boundary fencing for the site would remain as existing with the exception of the eastern boundary. A new 4m boundary fence is to be erected within the eastern boundary of the site behind the existing boundary screening and trees nearest to Sydney Loader Place as shown on the proposed layout plan, in order to provide an enhanced acoustic and visual screen for the site overall.

12.3.9 This would be a close boarded fence and would extend part way along the eastern boundary in the vicinity of the houses, but would be located within the site, separated from the rear boundary of the properties by the existing access track and their own boundary fences.

12.3.10 Vehicle movements to and from the MRF building are likely to be in the order of 26 HGV loads per day, or 52 movements.

12.3.11 This is based on an estimate of around 50,000 tonnes throughput per annum, broken down by the payload of the current fleet of vehicles that will be operating from the building (payloads are averaged).

- 1 miniskip vehicle with 3 tonne payload
- 5 skip vehicles with 5 tonne payload
- 1 grab vehicle with 14 tonne payload
- 1 roll on off with 18 tonne payload
- 1 articulated vehicle with 20 tonne payload
- 1 tipper with 20 tonne payload

12.3.12 The Hours of operation for the recycling operations are proposed as:

7.00 am to 6 pm Monday to Friday

7.00 am to 1 pm Saturday

12.3.13 There would be no processing of waste and only essential maintenance and emergency operations would be undertaken outside of these hours. There would be no processing operations on Sundays or Bank Holidays.

12.3.14 The receipt, separation and recycling of construction and demolition waste would be the predominant activity within the building in both volume and space terms. The materials would be deposited inside the building and inspected before segregation and processing. A grab or 360⁰ excavator would be used to sort and load the concrete, brick and other elements into a mobile crusher and screen which would produce graded recycled aggregates and soils. The crusher and screen would be used when there were sufficient hardcore or similar materials that required crushing to meet specific grades of recycled aggregate use. The screen would discharge recycled aggregate and soil via a conveyor to stockpiles of finished product through a portal in the building wall.

12.3.15 Environmental controls are proposed to be incorporated into the design of the development, these include measures to ensure:

- All waste management activities are carried out within the building
- The building is accessed from the west, away from housing
- Activities to the east are limited to storage and despatch of finished product
- A mist air system is installed within the building to control dust

12.4 POTENTIAL AND PREDICTED IMPACTS

12.4.1 The development proposed involves the handling of construction and demolition materials, wood and other inert waste streams and their processing. It has the potential therefore, to generate dust in the absence of site control or other mitigation that may be of concern to the amenities of nearby sensitive receptors.

12.4.2 In this case, the focus is on the amenity impacts of dust and the appropriate control of site based activities to ensure that as far as practicable, any impacts are minimised and meet acceptable standards.

- 12.4.3 Amenity dust can arise from the action of a force to fine particulate matter, whether as a result of vehicle movement, processing equipment or wind, which can cause such particles to become airborne and be carried outside the site (fugitive dust). These are most likely to occur only when there is a combination of factors, including a period of extended dry weather, high wind speeds and the action of vehicle movement over dusty ground or exposed processing activity. Mitigation seeks to prevent such occurrence at source.
- 12.4.4 The Air Quality Regulations (AQR) prescribe National Air Quality Strategy (NAQS) objectives to be achieved for a range of pollutants. Under AQR, local authorities are required to review the existing and projected airborne concentrations of these pollutants and to compare them with the NAQS objectives. If an exceedence of any NAQS objective appears likely, then an Air Quality Management Area (AQMA) is to be designated with the aim of achieving the objective by the due date. The site does not lie within a designated AQMA and the proposed development does not give rise to an increase in vehicle movements so is not likely to lead to any significant increase in these4 pollutants, hence this is not considered further in this report.

Dust Deposition

- 12.4.5 Human reaction to airborne dust can relate to the rate of deposition and/or to the level of dustiness. Nuisance is likely to occur when the coverage of smooth surfaces is visible in contrast with clean areas, especially when it happens regularly. Severe nuisance may be alleged if dust is perceptible without reference to a clean surface.
- 12.4.6 There are no UK statutory or recommended dust deposition rates which constitute an acknowledged nuisance. It is generally accepted that adverse conditions may occur when dust deposition rates exceed two or three times the background rate. With a baseline deposition rate for undissolved solids possibly in excess of 80 mg/m²/day, the onset of nuisance may occur if the deposition rate for undissolved solids exceeds about 200 mg/m²/day at a residential property in the vicinity of the application site.

- 12.4.7 This equates to the rate above which level the need for cleaning is said to become excessive and which has been previously accepted as a standard or guideline by some MPAs.
- 12.4.8 The onset of potential nuisance due to soiling is generally considered to occur when the daily effective area coverage exceeds 0.5% at a sensitive property.

Planning Controls

- 12.4.9 Modern planning consents for surface mineral workings feature conditions to prevent or control environmental impacts. Invariably, these now include conditions relating to airborne dust. Although a deposition rate has been suggested below which it is unlikely that dust will constitute a nuisance, current guidance is to the effect that it is inadvisable to set definitive standards or guidelines by condition. The essence of the guidance is the control of emissions through good site management.
- 12.4.10 Accordingly, it is the practice of planning authorities to set conditions relating to the control of dust at source. Typically these include a requirement to submit for approval a scheme of measures for the management of dust emissions. This is therefore, the focus of the next section.

12.5 MITIGATION

- 12.5.1 Notwithstanding the potentially limited duration of dust events, the emphasis of the dust mitigation scheme is to operate the site in a manner that ensures nuisance due to dust does not arise. In this regard the following measures will greatly assist the control and limitation of environmental particulate pollution.
- 12.5.2 Since the MRF will be storing and processing wood and construction and demolition waste, there is also the potential for dust emissions, during periods of dry weather or windy weather. Hence, a series of measures are proposed as part of the Application to ensure that dust issues do not arise and are adequately controlled.
- 12.5.3 The present and previous use of the site involves the external receipt and processing of waste, currently in the area west of the building though formerly

with compost arranged across the whole of the concrete yard area to the east and hence giving rise to potential for dust and odour.

12.5.4 The product stockpiles located within bays on the east side of the building will be damped down within dry or windy weather and their containment in bays against the building will ensure that there are no significant dust impacts.

Best Practice

12.5.5 The proposed development will incorporate best principle and practices to control dust. The following measures will be undertaken as part of the overall management of the Site:

- The waste deposit and processing activities will be located within the main building and that waste vehicles approach from the site entrance and west side of the building;
- Activities within the building will be controlled by a mist air system, involving fans within the building that disperse a very fine mist that suppresses dust to the building floor without resulting in excess moisture;
- Minimising drop heights during loading, processing and stockpiling operations;
- Enclosing potentially dusty product stockpiles within defined bays wherever practicable to minimise the potential for wind derived dust events;
- Enclosing conveyors openings with rubber sheeting, chutes etc where necessary and if required the provision of dust suppressing sprays on any external equipment;
- Damping down or surface spraying of stockpiles during weather conditions likely to give rise to a dust nuisance;
- Carrying out visual inspections of dust events, particularly during dry and windy conditions. Such inspections will continue throughout the life of the operations and appropriate action/measures will be taken in the case of

any significant dust event occurring, to include potential suspension of the originating activity until control is in place;

- Restricting the speeds of vehicles using the site access and internal hard surfaces to a maximum 20mph;
- Sheeting the loads of all road going vehicles carrying waste or potentially dusty materials;
- Sweeping of the access and site exit as necessary to remove any accumulation or spillage of material;
- Ensuring that good standards of housekeeping are upheld and maintained through proper and effective site management and that all employees and subcontractors are aware of the importance of dust control;
- The Site Manager should act in a liaison capacity if complaints arise and appropriate contact details should be identified at the entrance to the site;
- Establishing and maintaining good local liaison to keep neighbours informed about the scope and duration of possibly sensitive operations.
- Undertaking regular inspection of all plant, enclosures and systems to ensure proper functioning.

12.6 CONCLUSIONS

12.6.1 A dust assessment has been carried out of the proposals to utilise the current industrial building for a MRF. This has considered the potential sources of dust and the means of ameliorating any potential dust impacts on nearby properties.

12.6.2 The proposed development has been planned and designed to ensure that the development adopts a dust mitigation scheme that will minimise the creation of dust and control the 'escape' of fugitive dust from the Site. The relevant mitigation measures are set out above.

12.3.2 It is concluded that subject to the proposed controls it is unlikely that there will be significant dust emissions from the site, with the development proposed, improving the control of existing site based operations that currently occur in the open, some of which are to the east of the building, closer to sensitive receptors. It is concluded therefore, that dust emissions can be controlled to a standard that ensures that the development does not cause a significant adverse impact in respect of amenity nuisance, accords with best practice principles and is acceptable.