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Regards
P. Shaw

Please **with compliments**
Pls
for the continuation
of tipping and
restoration works

For
Naylor Drainage Ltd

July 2008

Prepared by:

FCB Fennell, Green & Bates
MINING ENGINEERS, SURVEYORS & ENVIRONMENTAL CONSULTANTS

25 Smyth Street
Wakefield
WF1 1ED

Tel: (01924) 372197

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**PLANNING STATEMENT FOR THE CONTINUATION
OF TIPPING AND RESTORATION WORKS AT BANKS
WOOD QUARRY, CAWTHORNE, FOR NAYLORS
DRAINAGE LTD**

1.0 Introduction

This statement has been prepared by Fennell Green & Bates on behalf of Naylors Drainage Ltd to continue waste disposal activities at Banks Wood Quarry, South Lane, Cawthorne, Barnsley, in order to complete the restoration of the site.

This is an application to continue tipping inert demolition and excavation material into the void to provide the landform previously permitted in the permission to extract fireclay by surface excavation and restoration involving inert landfill, Reference No B/95/0221/PR.

The reason for the application is that due to changes in waste legislation, the site has not been completed in the time allowed in the previous permission.

The quarry and waste disposal site is operated by Naylor Industries PLC whose registered office is Clough Green, Cawthorne, Barnsley, S75 4AD.

Banks Wood Site is classified as an inert operational site, extracting Cumberworth Thin fireclay and shales and an amount of the overlying Coal Measures mudstone beds which are used as a feedstock for the works. Waste rock is excavated and tipped into the void created by the advance of working. It is anticipated that inert fill will be imported as part of the site restoration process from the pipe works and inert builders' rubble, construction and demolition waste, excavation waste and discarded pipes.

The site is situated on southern flank of Banks Bottom Dyke and Ellhirst Dyke in the mudstones between the Whinmoor Coal and the Cumberworth Thin Coal at the base of the Coal Measures above the Millstone Grit, south west of Cawthorne and Cannon Hall at an elevation of 160m AOD. The grid reference is SE273058.

The application area is to the south of the site and is known as Roger Royd and covers an area of 12801m² (1.28 Hectares)

The company have been involved in quarrying and the provision of clay pipes and fittings since 1880 and the manufacture of concrete products since the 1960's. They have operated pipe works, quarries and landfill sites since 1948 and they have held waste disposal licences at sites within the Barnsley and Huddersfield area since the imposition of the Control of Pollution act 1974.

The company have extracted clays since 1972 from the south side of Banks Wood in a westerly direction to supply clay minerals to the works to manufacture vitrified clay pipes and fittings. The clay is blended with other clays from surrounding quarries at Denby Dale, Shelley and Normanton to give a consistent product. The most important clays are the ones won from Banks Wood and the amount won requires waste to backfill the void and return the land to woodland and pasture after use.

The whole site is situated south of the village of Cawthorne some 2km south west of Cannon Hall and 8km west of Barnsley on South Lane and Hadden. To the south is Barnsley Road from Hoylandswaine to Silkstone and on the side of the road 500m south of the site is Pye Flats which is a SSSI. The Pye Flats is unimproved hay meadow with mature stands of grass and wild flowers.

The area around the site is used for livestock farming keeping sheep, beef cattle and some milk herds. The land around is also mown for hay twice a year.

The site is at an elevation of 120 to 160m AOD in upper pasture land with high plateau and steep valleys.

2.0 Site History

Naylors have operated Banks Wood Quarry landfill since 1983 within the Waste Management Licence No WD20 B351 which authorises the backfilling of the site with inert, non-combustible construction and demolition waste.

The quarry has been worked from east to west between 1972 and 1999. The quarry was then known as Banks Wood 4, 5 and the western extension is denoted as quarry 6. The Cumberworth Thin and the overlying mudstone was worked from the outcrop against Bank Bottom Dyke. Here has been a rolling restoration programme of excavation, filling and soiling at the site to provide pasture and woodland.

The quarry has been backfilled with inert waste since 1983. The site has been accepting pipes and fittings, inert works waste and construction, demolition and inert excavation waste and backfilling the worked out areas in layers from the west to the north working towards the south east corner. The area to the north is being filled under a planning permission B/99/1274/PR

The site is classified as inert due to the exclusion of biodegradable wastes, such as household and domestic wastes and the importation only of discarded clay products, construction and demolition waste such as brick; brick rubble; concrete and other similar construction or demolition waste.

Planning permission has been granted to extract fireclays to the west of the operational area on Whinmoor Plantation, Planning Reference B/02/1875/PR.

The application area is covered under a PPC permit which was issued along with the planning permission for the extension of the mineral working to the west

Landfilling of non-putrescible, inert construction, demolition and excavation waste began after planning permission was granted by Barnsley Council in May 1996, on a 10 year permission.

3.0 Geology

The site is situated on the outcrop of the Cumberworth Thin and Whinmoor Seam, which consists of fireclay, coal and mudstone. Above the Whinmoor Seam is a bed of sandstone approximately 3m thick, the Whinmoor is 0.9m to 1.2m thick, the mudstone below is in two distinct bands, one of which is brown in colour, approximately 4m thick and the blue band which is used in pipe manufacture, again 4m in thickness. The Cumberworth Coal is 0.22m and the fireclay seatearth is 2.4m. The general dip of the seam is to the north east at a gradient of 8%.

To the south of the 1973 permission area is a fault that runs in a west to east direction and has a downthrow to the south. The fault has thrown the Black Band coal seam down to the same horizon as the Cumberworth Thin Coal to the north of the fault approximately 127m AOD.

Above the Black Band is another seam of coal which is thought to be the Lousey but the Silkstone 4 Foot outcrops near the site on the published geological map reference 273 Yorkshire County Sheet series.

The strata consists of a sandstone bed near the surface down to a mudstone band that lies above the Coal sea, that is at an horizon of 146m AOD to 143m AOD dipping to the east.

Below this seam of coal is a fireclay bed of 1.3m and a bed of mudstone that overlies a thick sequence of coal and fireclay in thin beds up to 100mm alternating over a total thickness of 3.3m. Below this is a sandstone bed of 2.5m and then the Black Band Seam of 0.6m.

No further extraction has taken place south of the fault and the deepest part of the excavation in this area has been to the base of the fireclay associated with the uppermost coal seam encountered.

The mudstone and clays are known to provide a good barrier for the containment of the wastes permitted in the Licence and mineral waste will be tipped against the sandstone faces to provide a barrier between the waste stream and the sandstone faces in the high wall.

4.0 Transport and Access

The access to the working in the quarry is via the existing access on South Lane to the landfill site. The access is with fencing on both sides and locked double gate. The eastern part of the site is now restored and returned to pasture and woodland with the access road running through the filled area of the quarry.

The access to the quarry is filled with hardcore and will be regularly maintained, hard surfaced and drained near the lane. The waste will be transported to the landfill site via this access and the quarry will be progressively filled in. The access is a modern access and was constructed as a necessity for waste importation. There is no weighbridge, wheel cleaner or despatch office as the waste carriers are required to deliver the tickets to Naylor's offices at Clough Green.

The haul road and access route runs between the site and the pipe works approximately 1km north of the site. The haul road runs within private land and only crosses the highway at one location, South Lane, a minor road between the villages of Cawthorne and Hoylandswaine. It is considered that there is a low risk of nuisance from mud and debris from vehicles crossing South Lane. Mitigation measures are regularly reviewed and a road sweeper will be used if required. Prior to crossing the public road, all vehicles travel for a considerable distance along the hardcore haul road and all vehicles are inspected in order to ensure that mud or debris is not tracked onto the highway.

The haul road is surfaced with rolled compacted hardcore and broken pipe and is inspected daily. The site does not have a wheel cleaner; this has not proved necessary given the length of the access road (400 m). The haul road is within the quarry to the works and no mud or debris should be deposited on the highway. If mud is carried onto the highway, South Lane, a road sweeper is used to remove deposits of mud and dirt. Any pot-holes developing on the haul road that are greater than 0.5m diameter and 150mm deep are repaired within two days using hardcore.

Other minor roads in the vicinity are not used, other than South Lane, by heavy vehicles leaving the site and are therefore considered to be at low risk from mud and debris. Heavy vehicles travel from the pipe works and the distance involved renders the risk of mud and debris deposition onto the public highway to be low. Vehicles running from Barnsley will turn onto South Lane and then turn into the site access road that runs down the northern flank of the watercourse and over the beck into the site.

All reasonable steps shall be taken to ensure that all vehicles accessing and egressing the site are in such condition as not to emit dust or deposit slurry, mud, clay or other material onto the public highway. The access points/site haul roads shall be maintained in a clean condition for the duration of the development. Notwithstanding, such arrangements, should any material nevertheless be accidentally deposited on the public highway, such material shall be immediately removed by the operator.

4.1 Site Security

The gate at the entrance to the site haul road off South Lane is locked at all times unless required for access during site opening hours or in an emergency. The access to the site off South Lane is normally through the Clough Green works on the paved route into the works for all traffic and then through the clay stockyard. Any trucks delivering inert or excavation waste would either have to drive through the works and be checked in or along South Lane. The truck would proceed to the quarry area where the waste would be inspected and then allowed to carry on along the haul road to the tip. There is no immediate access to the tip from the public highway or off the Lane by walkers. The site is within a quarry and the boundary is fenced and walled with stone and screened by trees. The site is not easily visible from South Lane by car users and most people are not aware there is a landfill site near to the works and quarry

The operational area of the site is fenced and gated to prevent the unauthorised entry of the general public, farm stock and wildlife, and the unauthorised depositing of wastes. The integrity of the perimeter stock proof fence and stone wall is regularly checked and repairs effected as necessary.

4.2 Local Policy

Policy WD4 of the Barnsley UDP states:

The following transportation criteria will be taken into account in consideration of planning applications for waste disposal

- a) The effect which traffic generated by the proposed waste disposal will have on road safety, property and the amenities of the people living in the vicinity of the development, or along the transportation routes to be used***
- b) The degree to which alternative transport modes can be used to minimise traffic disturbance***

Waste disposal sites and facilities generate considerable volumes of road traffic. Good location and acceptable access to a major highway are important elements in an acceptable site. Proper management of vehicles, the site and loading are essential to prevent nuisances and the deposit of material on adjacent roads.

5.0 Proposals

As under the previous planning permission, materials for landfilling operations will consist of broken pipes and fittings, discarded clay, solid construction and demolition waste and bulk excavation materials and will be imported and tipped in three layers.

The excavation material will be tipped and compacted into the void and will be restored in three phases, east to west as shown on the phasing plan drawing BW/2008-04.

The existing quarry void will have waste tipped in the area of the application area and the existing void will be lined to accept inert wastes. It is proposed to continue tipping in accordance with the restoration contours which will form a dome from 158m AOD falling gradually to 147m AOD on the northern boundary, please refer to plan number BW/2008-05 and the cross sections drawing, BW/2008-06. The existing void space will require approximately 37630 cubic metres (56450 tonnes) of fill to restore the site to levels as per the restoration design which will join into the area currently being filled under the Waste Management Licence.

Each load of waste delivered to the landfill site shall be, where possible, visually inspected when unloading and before loading into the dumper or pushing out by a dozer. The site operatives know from the company's waste procedures what types of waste are accepted at the facility. The company have a recycling policy for paper, glass, cardboard and metals. No food waste is accepted at any of the waste facilities as it is collected by an authorised waste company. General office waste is disposed off the sites to a recognised pre-treatment centre by an authorised waste haulier. The visual inspection will ensure that the waste conforms to the description gathered as part of the basic characterisation of the waste.

The majority of the waste will be delivered in authorised waste disposal contractor's own vehicles and will also be inspected at the point of collection.

All the vehicles delivering waste enter the site by way of the haul road between the site and Naylor's pipe works to the reception point or directly to the waste cells of the landfill area. When the cell is completely full it will receive a capping layer of mineral overburden. Clay wastes will be accepted at the site and used in the construction of separation bunds or capping. The vehicle will be inspected for the type of waste and where the waste can be used in the engineering or the deposit layer to ensure that the coarser fraction is placed in the base and finer materials are used near the capping layer.

It is proposed that the site will be completed within 5 years of planning application being granted.

Soils have been stored on the eastern and southern edges of the cell in bunds and will remain there until the completion of the tipping, see plan BW/2008-03.

It is proposed that the final landform at Banks Wood will be finally restored to pasture/agricultural use with adequate falls on the land to assist in surface water run-off.

6.0 Planning Policies

The primary concern of this part of the plan is the land use implications of waste disposal and this is reflected in the policies previously mentioned. These policies are consistent with the 'relevant objectives' set out in the EC Framework Directive on Waste and PPS23.

Waste disposal was not identified as a key issue during the preparation of South Yorkshire Structure Plan, due to the lack of essential survey work information. At a late stage in its preparation it was accepted that waste disposal policies should be developed in the review of the Plan but this review was never carried out. Consequently, there was only a general statement of intent in the Plan, and a reference to restoration of mineral workings by infill with waste, and these now need to be replaced by updated policies.

The South Yorkshire Minerals Local Plan did not deal with waste disposal as a self contained issue, but it did recognise the close linkages between mineral extraction and waste disposal, especially in the field of restoration. The possibility of using waste disposal as a means of restoration has several potential benefits. It can reduce the net amount of land taken out of agriculture or other uses; better land form can be achieved; more effective use of investment in infrastructure can be obtained, and often the environmental impact can be reduced by effective screening.

The Minerals Local Plan also identified the problems and risks that could be created by waste disposal. The issue of potential pollution to surface and underground water is a major factor, and the Environment Agency groundwater protection policy is an important basis for proposals. Waste disposal can also damage local amenity as a result of traffic, smells, fumes, wind blown material and pest infestation, although all of these can be reduced by good management.

There is an important need to relate the planning process to on-site control through waste disposal licences, and to have regard to the best practice procedures set out in the series of Waste management Papers which are available. The Environment Agency is preparing a Waste Disposal Plan under the requirements of the 1990 Environmental Protection Act, but it is a planning responsibility to deal with the land use issues and the impact of the site on the surrounding area. The operational policies of the Waste Disposal Authority are set out in the draft Waste Management Plan and these will complement the policies contained in the Unitary Development Plan and its replacement Local Development Framework.

Because of this situation, therefore, most of the policies referred to below relate to landfill, although some are equally relevant to waste processing facilities. Should there be a major change in the waste disposal market, then these policies will need to be reviewed.

6.1 National Policy

Planning Policy Statement 10 (PPS10)

PPS 10 'Planning and Waste Management' (1999) provides policy guidance on waste management. The guidance advocates that future waste management decisions should be based upon the following principles:

1. Consideration of the Best Practicable Environmental Option (BPEO) for each waste stream;
2. Regional self sufficiency;
3. The proximity principle;
4. A waste hierarchy.

The waste hierarchy is:

- Reduction
- Re-use
- Recovery (recycling, composting and energy recovery)
- Disposal

Whilst each level of the hierarchy has a role to play, it provides a theoretical framework to be used as a guide for ranking waste management options being considered as part of the BPEO assessment for individual waste streams. The aim being to direct component materials within each waste stream further up the hierarchy.

The 'Best Practicable Environmental Option' (BPEO) is considered to be the option of waste management that provides the most benefit or the least damage to the environment, whilst remaining practicable.

The principle of regional self sufficiency states that each region should provide for facilities with sufficient capacity to manage the quantity of waste that the region expects to deal with in a specific area, over at least the next ten years. For the future, given the expected significant increases in the levels of waste that will have to be managed, a large number of additional landfill facilities, such as the proposed development, will inevitably be required.

The proximity principle requires waste to be managed as near as possible to its place of production because the transportation of waste has an environmental impact.

Annex A of PPS 10 considers the future need for landfill development in the UK. The guidance states that although in the interests of sustainable development, alternative forms of waste management must be used to deal with waste, it also underlines the need to continue to send some wastes to landfill, stating that landfilling;

'May be the only practicable way of finally disposing of some materials, such as incineration residues and other inert materials, including mineral wastes, which cannot be recycled or treated'.

6.2 Local Policies

The main objectives as outlined in the Barnsley UDP with regards to waste disposal are:

1. To minimise the generation of waste and to encourage re-cycling.
2. To protect the environment of the Borough and to avoid loss of amenity to its residents.
3. To ensure that waste is disposed of safely, efficiently and effectively.
4. To ensure control over waste operations and the full restoration of sites to a beneficial afteruse.

The policies which are particularly relevant to this proposal in the Barnsley UDP are:

POLICY WD1

The council will seek to make provision for sufficient sites and facilities to cater for the waste disposal needs arising within the borough during the UDP period, subject to all appropriate environmental safeguards being met. The council accepts the need for a strategic approach to waste disposal and will co-operate with neighbouring authorities and other interested parties in the assessment of suitable opportunities to deal with waste materials.

Proposals for waste disposal sites and facilities will be considered on their merits, and the environmental acceptability of such proposals will be assessed with regard to the following:

- (a) ***The effect on local amenity based on an assessment of visual impact, dust, fumes, noise and other potential disturbance, taking into account screening and other protective measures, which are available.***
- (b) ***The likely duration of tipping***
- (c) ***The proposed final appearance and landform of the site***
- (d) ***The effect on the natural and built environment***
- (e) ***The effect on agricultural land***

These effects shall be demonstrated wherever appropriate by the preparation of an environmental statement. Planning permission will not be granted where there is significant and unavoidable damage to the environment resulting from any of the factors identified above.

POLICY WD5

The council will seek to ensure the use of the best available techniques to improve standards of design and control in waste disposal operations.

7.0 Noise

The nearest residential properties to the site boundary are 'Roger Royd', located approximately 75m south east of the site and Small Lanes Farm, located approximately 200m north west of the site. Both 'Roger Royd' and Small Lanes Farm are separated from the site by open fields and the woodland edge of Whin Moor Plantation. The next closest properties are at least 300m from the site. The clay and coal extraction operations are currently in a westerly direction and operate throughout the working week, including Saturdays. Minerals extraction is likely to continue advancing to the west, with quarry waste and pipe manufactory discards being tipped in 2.5 metre layers on 30 metres wide levels until the site is covered with clay overburden, subsoil and topsoil in phases to complete the restoration.

The landfill operations will take place on a progressive basis from east to west, filling the open void against Roger Royd. Within the working area the perimeter woodland edge and quarry walls provide a degree of noise attenuation and reduce the effect of noise experienced at all receptors. The noise of machinery working on site will be most noticeable when site operations commence and later when working has reached the western limit, when the final landfill levels are being achieved and later during site restoration works (soil spreading). These factors, combined with the proximity of 'Roger Royd' results in that receptor being at medium risk from noise impact. The distance to the other nearest receptors results in those receptors being at low risk from noise impact.

Operating Hours

Working hours will be as the previous planning permission and shall be limited to the hours of:

08.00 – 17.30 Monday to Friday

09.00 – 13.00 Saturdays

No working shall be undertaken at all on Sundays and Bank Holidays. No plant or vehicle engines shall be started and no operations shall take place, including haulage/tipping vehicle movements, at any time outside of these hours.

All machinery used on site will be part of a modern, well maintained fleet and are fitted with efficient exhaust silencers allowing them to comfortably comply with ISO 6395 standards.

7.1 Noise Monitoring

Naylor Industries PLC, the operator, will investigate any complaints concerning noise and will take steps to reduce any noise effects that are caused by on-site operations. If necessary, noise measurements will be taken at the nearest noise sensitive façade on properties or any other reported location.

7.2 Vibration

The sources of vibration at the site include the machinery involved with the excavation operations, the engineering of the landfill cells, the waste disposal and the restoration of the site with the associated HGV movements. The sensitive receptors are the same as those identified for noise. The potential for vibration from activities on the site impacting on receptors is minimal due to the nature of the operations being generally 'non vibrational'. Also, the natural 'cushioning effect' of the ground will absorb any vibrations. The overall impact of vibration is therefore considered to be low. The engineering of the clay liner will be below the general level of the ground and therefore vibration is likely to be a low to medium risk.

7.3 National Policy

Minerals Policy Statement 2 (MPS 2)

Where appropriate, planning conditions should be used to ensure that minerals operations are carried out in such a way that the noise emissions are minimised at source and thereby controlled to acceptable levels.

The layout and plant location, the sequencing of operations and the hours of working can have significant effect on the levels of noise emissions and their impact on sensitive receptors.

Planning conditions may be used to apply absolute controls on noise emissions with limits normally being set at particular noise sensitive properties. This enables the effect of noise to be related most directly to its impact on local people.

In some circumstances, however it might be more appropriate to set the limits at the site boundary or some other point. Subject to a maximum of 55dB(A) Laeq, MPA's should aim to establish a noise limit at the noise sensitive property that does not exceed the background level by more than 10dB(A).

It is recognised, however, that this will in many circumstances be difficult to achieve without imposing unreasonable burdens on the mineral operators. In such cases the limit set should be as near that level as practicable during normal working hours (07.00 – 19.00) and should not exceed 55dB(A) Laeq.

All mineral operations will have some particularly noisy short-term activities that cannot meet the limits set for normal operations. Examples include soil stripping, the construction and removal of soil storage mounds and the construction of new permanent landforms. However, these activities can bring longer term environmental benefits.

Increased temporary daytime noise limits of up to 70dB(A) Laeq, for periods of up to 8 weeks per year at specified noise sensitive properties should be considered to facilitate

essential site preparation and restoration work where it is clear that this will bring longer term environmental benefits to the site.

Where work is likely to take longer than 8 weeks, a lower limit over a longer period should be considered.

Operators should seek ways of minimising noisier activities and the noise emissions from them when designing the layout and sequencing of temporary operations and should liaise with local residents prior to such operations taking place.

Where possible, workings should be arranged so that earlier operations provide screening for noise sensitive properties from noise generated by subsequent activities. This could influence both the direction of working and the placement of overburden and soil mounds on the site perimeter.

7.4 Summary

The potential for noise impacting on sensitive receptors is low to medium. However, any impact on users of the public rights of way in the vicinity of the site is unlikely to be prolonged and will generally be an occasional and short term activity (i.e. for not longer than an hour or so as the users walk by). The following mitigation measures will be implemented at the site to control noise emissions to the levels set in Mineral Planning Statement 2 (MPS 2 – Annex 2) and the mitigated risk factor will be low:-

- All noise related activities will be confined to the operating hours permitted in the planning permission;
- All plant and machinery will have effective silencers and be maintained in accordance with manufacturers' specification;
- All equipment, when not in regular use, shall be kept switched off;
- The dense woodland edge to the west will act as an aural barrier.

On occasions the noise level at the site may increase to 70dB(A) as permitted in the planning permission as discussed in MPS2, such as during removal of the soil bunds and during restoration including laying the clay cap and the soil cover. These activities, however, will be confined to the normal operating hours of the site, with the exception of emergency procedures for which the approval of the relevant authorities will be sought.

The best practicable means shall be employed to minimise the emission of noise from operations on the site. In particular all plant, machinery and vehicles shall be equipped with the most effective available silencers.

A noise impact report produced in March 2006 by S & D Garritt Ltd for the proposed extension area and continued waste disposal activities is included with this report.

8.0 Dust

The nearest residential property to the site boundary is 'Roger Royd', approximately 75m south east of the site. This is separated from the site by an open field and the perimeter woodland edge of Whin Moor Plantation. The next closest property is Small Lanes Farm 200m north west of the site. This is separated from the site by a number of open fields and the woodland edge of Whin Moor Plantation. The nuisance associated with general dust deposition is unlikely to be significant as dust particles which are responsible for most dust annoyance, i.e. greater than 30µm, will typically deposit up to 100m from the source. The proportion of fine and ultra fine particles (PM10 and smaller) generated at this site is likely to be very small.

The prevailing wind conditions in this locality are from the west and south west. During the periods when wind is from these directions the nearest domestic dwellings south of the site will be up wind of the site. These properties are considered to be at a low risk of nuisance from particulate matter. Properties which are likely to be directly down wind of the site are located at a greater distance (400 – 450m) from the source and are considered to be at a low risk of nuisance from particulate matter.

Roger Royd' situated to the south and south east of the site could be in the path of the prevailing wind during exceptionally windy days in the United Kingdom when winds turn from the north west or north. The extreme gales are caused by low pressure off the Atlantic which creates strong winds and gales across the UK usually associated with rain. The short distance involved from the site to this receptor property renders the risk as medium to high.

Operational procedures, as discussed below, will help to prevent and minimise particulate matter escaping beyond the site boundary.

8.1 *Public Rights of Way*

There are two public footpaths in the vicinity of the site. The footpath to the north and west of the site is well screened by intervening woodland and therefore carries a low risk of being affected by strong winds picking up dust. The second footpath comes to within 75 m from the site but lies mainly to the south and is therefore upwind and also unlikely to be affected by dust. However, the use of the footpaths is typically a short term activity and the overall risk is low.

8.2 *Highways or Roads*

Dust generation is likely to occur along the site access and where the haul road crosses South Lane. In dry conditions, the haul road will be dampened to ensure that dust emissions from vehicles are minimised. The haul road is filled with hardcore and within the quarry lies on the top of a mudstone bed. No wheel cleaning device will be utilised by vehicles prior to leaving the site as the site is for the use of the operator and nominated contractors. A wheel cleaner exists at the works which can be utilised to clean wheels before the vehicles enter the public highway. Haulage vehicles will travel between the site and Naylor's pipe works and along South Lane only. A road sweeper

is regularly used in the works and on the site entrance if required. Therefore, both South Lane and the main highway are considered to be at low risk from dust nuisance.

8.3 Current Regulations

The amount of dust that might cause a potential nuisance is extremely difficult to determine. Similarly, numerous attempts have been made at identifying a nuisance standard for dust, without success.

Currently, there are no statutory or recommended levels of dust deposition that may constitute an official nuisance. It is normally left to the Local Environmental Health Officer, under Part III Section 791(d) of the Environmental Protection Act, to determine, if, in his opinion, a statutory nuisance exists.

Planning permissions incorporate a number of conditions for the minimisation of dust emissions, and these were generally based on the principle of the Best Practical Environmental Option appropriate for the site under consideration.

The three main factors, which potentially affect the sensitivity of the site with regard to dust, are:

- The distance of inhabited areas from site activities
- The location of the inhabited areas relative to the prevailing winds
- The density of habitation

The most critical element in the consideration of the potential for a dust nuisance to be caused is the direction of the prevailing winds. The general prevailing winds in the U.K are South-Westerlies (blowing from Southwest to the Northeast). To determine the sensitivity of the surrounding area, the location of residential areas to the site activities has to be examined.

The operator shall appoint a responsible person for dealing with environmental issues on the site. That person will keep a daily log of the weather conditions, including the direction of the prevailing wind. This log will include any complaints received, with a record of any investigations carried out and changes to the working practices on that day. The log will be available for inspection on the site.

The following shall be implemented:

- All unsurfaced roads to be dampened when necessary
- Vehicles used for the movement of materials on the site, where appropriate, shall be fitted with exhausts pointed away from the ground
- A speed restriction shall be imposed on the site of 15mph.

In the event that the wind is blowing towards any sensitive properties, the responsible person shall satisfy himself that the control measures are adequate. If the control

measures are insufficient to prevent dust blow from the operations to the sensitive locations, the filling operations shall cease until the conditions improve.

It is not anticipated that dust will be a problem but the soiling operations could be potential sources of dust during periods of prolonged dry weather.

The spreading of the material, either by dozer or front end loader, involves the slow movement of these items and therefore vehicle speed is not a significant factor when considering the potential for dust nuisance being caused.

A water bowser will be used to suppress any unacceptable levels of dust during soiling operations. In the event that weather conditions mean that the suppression of dust by these methods is not successful, operations on the site will be suspended until weather conditions improve to permit resumption.

In particularly dry conditions the haul road into the site may need to be dampened to ensure that dust emissions are minimised so that dust is not carried onto the main road network.

Also the movement of topsoil and subsoil will be suspended in adverse weather conditions to further reduce the possibility of dust emissions.

8.4 Summary

Only one potentially sensitive receptor is close enough to the site to be affected by wind-borne dust emanating from the site and the risk is considered to be medium.

On this basis, the possible nuisance of wind borne dust remains low and it is not considered necessary to undertake particulate matter monitoring at the site.

9.0 Restoration

Following replacement of the backfill material to within 1.0 metres of the final surface level, any surface stone or deleterious material exceeding 225 mm in any dimension shall be removed and buried at least 3 metres below the final surface.

During a period of dry weather, subsoil is to be lifted from storage and spread in 2 layers over the agricultural area to a final thickness of 0.7 metres. After each layer has been spread, the subsoil will be ripped using a winged tine subsoiler and any stone or deleterious material exceeding 150mm in any direction shall be removed.

Following replacement of the subsoil, topsoil will be laid to a thickness of 0.3 metres. Any aftercare measures using plant or machinery that may be capable of causing damage to the soil will only be carried out in suitable weather conditions and when the topsoil is in a dry and friable condition.

CULTIVATION

Following replacement of topsoil, the agricultural area shall be cross-ripped to the full depth of topsoil to relieve any compaction. Any stones larger than 15cm, or other impediment to cultivation, shall be removed from the surface and not buried within the topsoil material.

The area shall be cultivated to provide an even seedbed. Cultivation shall include chisel ploughing, multiple passes with discs and rolling. During this operation, any stones or deleterious material larger than would pass through a 15cm wire screen mesh shall be removed from the surface.

The topsoil will be analysed in order to identify levels of soil nutrients and pH. Any deficiency in nutrients or indication that liming is required will be addressed by the application of fertiliser or lime, in accordance with the requirements indicated by the analysis.

Each spring, further soil samples shall be analysed to determine any additional nutrient requirements. Fertiliser and other nutrients, as indicated by the soil analysis, shall be applied. The growing crop will be treated with suitable herbicide and pesticide as and when required.

Aftercare meetings shall be convened in late summer each year in order to discuss the detailed proposals for the forthcoming year, and to review the results of the previous year. These annual meetings shall be attended by representatives of the landowner, site operator and the MPA.

Fennell Green & Bates
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