LDP PLANNING

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PLANNING STATEMENT
INCLUDING
DESIGN AND ACCESS STATEMENT AND
FLOOD RISK STATEMENT

PLANNING APPLICATION FOR THE CONTINUATION OF THE USE OF LAND FOR THE CRUSHING AND SCREENING OF INERT WASTES IN THE OPEN AND ASSOCIATED ANCILLARY ACTIVITIES AT WHALLEY ROAD, LOW BARUGH, BARNSLEY

SUBMITTED ON BEHALF OF S I WORDSWORTH PROPETIES, 230 CUMBERWORTH LANE, DENBY DALE, HUDDERSFIELD, HD8 8PR.

MAY 2011

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1 Horsefair, Wetherby, Leeds, LS22 6JG. Tel: 01937 588833, Fax: 01937 580358,
Web: www.tldp.co.uk, Email: email@tldp.co.uk.

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1. INTRODUCTION

1.1 This statement is submitted on behalf of S I Wordsworth Properties ("the Applicant") in support of a planning application for a continuation of the use of land to the crushing and screening of inert wastes in the open and associated ancillary activities ("the Application"), on land at Low Barugh, Barnsley ("the Site".) This use includes the stockpiling, screening and crushing of inert waste in the open air, and its subsequent removal for commercial purposes. The inert waste consists of clean uncontaminated brick, concrete, stone and soils arising from demolition and excavation. No hazardous or special wastes will be brought on site.

1.2 The Site has been in use since 2006 when planning permission was granted under reference 2006/1242. The application covers an area of 1.76 ha as shown on the site plan drawing referenced 7015A/04B.

1.3 The Site is located in an existing industrial area to the north of Barnsley and is surrounded by agricultural land and industrial development. The north eastern boundary of the Site runs adjacent to the Barnsley to Wakefield railway line, beyond which is open countryside. A concrete product manufacturing business is located on the eastern boundary, but the southern and western boundaries abut vacant land within the South Yorkshire (Redbrooke) Industrial Estate.

1.4 Access is taken from Whalley Road as shown on drawing 7015A/04B.

1.5 The Applicant has registered an exemption from the Environmental Permitting system for the operations on site. A Standard Rules Environmental Permit will be needed from 1st October 2011.

1.6 The inert waste brought to the Site is manufactured into products suitable for use as a secondary aggregate. The recycling of these materials as proposed in the Application, contributes to sustainable waste management and resource use for Barnsley and the wider area, and substitutes for naturally quarried material.

1.7 The inert demolition and construction waste originates within the Barnsley, south east Kirklees and south west Wakefield areas, with the finished product being delivered to users in the same area.

2. THE PROPOSED DEVELOPMENT

2.1 Operations involve bringing inert waste onto the land in 20 tonne tipper lorries, to be placed within the raw material stockpile area, illustrated on drawing 7015A/04B. The inert waste is stockpiled to a maximum height of 5m. These stockpiled materials are screened and crushed using mobile processing equipment, and are then either transported off site or transferred to the processed material stockpile areas prior to their removal from the Site.

2.2 The mobile processing equipment will consist of a Powerscreen Chieftain 1400 screen, Terex/Pegson Premier crusher, a Case 921 wheeled loading shovel, and a JCB tracked excavator JS 220 NC. The screen and crusher are brought on site as and when necessary.

2.3 The stockpiles are arranged in such a way that they screen the processing area and therefore act as noise baffles (see drawing 7015A/04B.) For this purpose, the stockpile perimeter faces bordering the Site are retained. The stockpiled material furthest into the Site is drawn off for processing.

2.4 The processed materials are placed into the stocking areas, according to their category, awaiting transportation off-site to users as demand requires or taken directly off site.

2.5 The stockpiles and processing areas for the inert waste are accessed via an internal roadway. The internal site roadway will be surfaced with clean processed rolled secondary aggregate and will provide vehicular access to all areas of the Site, including the stocking ground bays. (See drawing 7015A/04B).

2.6 The maximum annual quantity of waste handled will be 75,000 tonnes, the limit allowed in a Standard Rules Environmental Permit (SR 2008 N0.11). The

average number of loads per week is therefore likely to be 83, based on 18 tonne loads in 20 tonne tipper wagons. On the basis of a 5 ½ week, this would be 15 per day or 30 movements. Deliveries of the product would be in return loads.

2.8 4 people are directly employed on site when the waste recycling centre is fully operational, in addition to HGV drivers transporting materials to and from the Site.

2.9 The hours of operation are proposed to be as follows:

Weekdays	07:00 hours to 17:30 hours
Saturdays	08:00 hours to 13:00 hours
Sundays and Public Holidays	no working

3. FLOOD RISK ASSESSMENT

3.1 The 2006 planning permission required drainage details to be submitted. As the site is free draining, no formal drainage scheme is necessary. All rainfall percolates into the ground and there is no run-off beyond the site boundaries.

3.2 As the site is over 1 hectare in extent and falls within Flood Zone 1, a Flood Risk Assessment is normally required. However, as the development does not require any drainage and there is no run-off beyond the site boundary, there is no requirement for any flood mitigation measures. A Flood Risk Assessment is therefore not required.

4. DESIGN AND ACCESS STATEMENT

4.1 The need for a Design and Access Statement for this Application arises from the development of the Site for the stockpiling and processing of construction, excavation and demolition waste. This Design and Access Statement seeks to demonstrate how the Applicant has sought to design the site to accommodate the facility equipment and to show how disabled access would be available throughout the site where appropriate.

4.2 The proposed development is located on the north side of a small industrial estate. The site layout has been designed to minimise any environmental impacts that this proposed development might have.

Disability Access and Provision of Facilities

4.3 Although access onto the Site would be restricted to company personnel, drivers and occasional visitors, it is recognised that there may be persons within those groups whose specific needs would have to be met. In general, due to the need to operate plant and machinery as well as perform manual handling tasks, persons with significant disabilities are unlikely to be suited to employment within the facility.

4.4 Parking places for disabled drivers would be provided in the designated car park shown on drawing 7105A/4b. Toilets for use by the disabled are installed in the adjacent amenity facility and lighting and signing are installed to meet the needs of partially sighted people.

5. ENVIRONMENTAL IMPACT

5.1 Overall environmental impact is low, and in line with the many surrounding industrial uses, including the adjacent concrete product plant. The waste materials being processed are unlikely to cause any ground contamination.

5.2 **Noise, Dust and Odour**

5.2.1 Noise from the Site is not anticipated to cause any damaging effects on local amenity. The Site is remote from residential areas and is surrounded by industrial and agricultural land. The nearest residential area (Springfields, Wood Acres and Coppice Avenue) is to the south east and is approximately 400m distant. The residential area of Medina Way and Medway Close is 600m to the west.

5.2.2 An appended noise impact assessment (Appendix 1), which was produced by noise consultants, S & D Garritt Ltd, confirms that sound from the facility is

predicted to be rated equal to or below the background at all times in the residential area around Medina Way and medway Close. At the slightly nearer dwellings in Coppice Avenue, the predicted sound is rated around or slightly below the background during most of the day. But it is predicted to be slightly above the lower levels of background sound during the early morning.

5.2.3 During the survey period early on a Saturday morning, the background sound level was particularly low at Coppice Avenue against which the predicted sound from the facility is rated 5 dB above and thereby of marginal significance. The report concludes that complaints are unlikely about sound from the proposed operations during workdays, and that at 08:00 on Saturdays, the noise levels will be of marginal significance. The report also contends that industrial neighbours will not be adversely affected by noise from the operation of this proposed facility.

5.2.4 Dust generated by site operations will be controlled using industry standard dust control measures based on the use of water to damp down and on good housekeeping. The dust control scheme proposed is appended to this submission (Appendix 2).

5.2.5 No odorous wastes will be brought onto or handled on the Site.

5.3 **Traffic Generation**

5.3.1 The rate of traffic moving on and off the Site will depend on the availability of inert waste and on demand for the secondary aggregate products. Only an additional 4 private vehicles for site employees are anticipated, with lorry drivers being based off-site. Adequate parking facilities are provided for these vehicles in the adjacent compound with additional HGV parking within the site boundary as shown on drawing 7015A/04B. Adequate space for the loading and turning of HGVs is also available within the site boundary.

5.3.2 The efficient use of transport requires that lorries bring inert waste to the site, and leave taking product to users. This is achieved for the majority of journeys. Given that the Site will be operational for 5 ½ days each week, the average daily traffic generation is anticipated to be approximately 30 20-tonne

tippers into and out of the Site, i.e. 60 movements per day or 6 per hour.

6. PLANNING POLICY

6.1.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that all planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. In this instance the statutory development plan consists of the Barnsley Unitary Development Plan adopted in 2000. The Courts have also held that the Government's statements on planning policy are material considerations which must be taken into account, (where relevant), in decisions on planning applications.

6.1.2 Barnsley Council is progressing with its Local Development Framework. The Core strategy was submitted for examination in September 2010 and the Barnsley, Rotherham and Doncaster Joint Waste Plan was published for public consultation in April 2011. Both documents will ultimately replace the Unitary Development Plan.

6.2 ***National Policy***

Planning Policy Statement (PPS) 1: Delivering Sustainable Development (2005)

6.2.1 PPS1 sets out the Government's policy objectives for planning and highlights the need to integrate and promote the key themes of sustainable development, economic development, social inclusion and environmental protection. PPS1 promotes the plan-led system, which means there is a preference for planning applications to be determined against policies within the adopted North Yorkshire Waste and Selby District Local Plans.

6.2.2 The site is situated within an Employment Policy Area designated in the Unitary Development Plan. Within this area, general industry uses are preferred. The recycling activity is basically a manufacturing process and so is akin to a B2 use. The proposed development therefore meets the

requirements set out in the Barnsley Unitary Development Plan and is thus in accordance with the Development Plan.

Planning Policy Statement (PPS) 7: Sustainable Development in Rural Areas (2004)

6.2.3 Paragraph 1 of PPS7 sets out the document's key principal which is to promote sustainable patterns of development by encouraging:

I) Decisions on development proposals should be based on sustainable development principles, ensuring an integrated approach to the consideration of:

i Social inclusion, recognising the needs of everyone;

ii Effective protection and enhancement of the environment;

iii Prudent use of natural resources; and maintaining high and stable levels of economic growth and employment.…

iv New building development in the open countryside away from existing settlements, or outside areas allocated for development in development plans, should be strictly controlled; the Government's overall aim is to protect the countryside for the sake of its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, the wealth of its natural resources and so it may be enjoyed by all.

6.2.4 Paragraphs three and four set out policy on the 'location of development'; they state:

3. *Away from larger urban areas, planning authorities should focus most new development in or near to local service centres where employment, housing (including affordable housing), services and other facilities can be provided close together. This should help to ensure these facilities are served by public transport and provide improved opportunities for access by walking and cycling. These centres (which might be a country town, a single large village or a group of villages) should be identified in the development plan as the preferred location for such development.*
4. *Planning authorities should set out in LDDs their policies for allowing some limited development in, or next to, rural settlements that are not designated as local service centres, in order to meet local business and*

community needs and to maintain the vitality of these communities. In particular, authorities should be supportive of small-scale development of this nature where it provides the most sustainable option in villages that are remote from, and have poor public transport links with, service centres.

6.2.5 The development is an established construction, excavation and demolition waste recycling site. The use of this site will maintain recycling rates and is primarily designed to service the Barnsley, south east Kirklees and southern Wakefield area. It is thus centrally located and accords with sustainable development policies.

Planning Policy Statement (PPS) 10: Planning for Sustainable Waste Management (2005)

6.2.6 Paragraph 1 of PPS10 the Government sets out its stance on the need for better and sustainable waste management within the UK. The paragraph goes on to state the need to move *'…the management of waste up the 'waste hierarchy' of reduction, reuse, recycling and composting, using waste as a source of energy, and only disposing as a last resort the Government aims to break the link between economic growth and the environmental impact of waste.*'

6.2.7 The proposed development enhances the facilities available in the locality for the recycling of construction, demolition and excavation waste. It therefore assists in moving the management of waste up the waste hierarchy and providing materials for reuse rather than disposal.

6.2.8 Paragraph 2 notes that the land-use planning system has an important role to play in developing sustainable waste management *"through the development of appropriate strategies for growth, regeneration and the prudent use of resources; and, by providing sufficient opportunities for new waste management facilities of the right type, in the right place and at the right time."* Paragraph 3 encourages planning authorities to *"provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management*

facilities to meet the needs of their communities" and help secure the recovery or disposal of waste without endangering human health and without harming the environment, and enable waste to be disposed of in one of the nearest appropriate installations."

6.2.9 Where proposed sites are not allocated for waste management facilities in local plans, Paragraph 24 notes that:

Planning applications for sites that have not been identified, or are not located in an area identified, in a development plan document as suitable for new or enhanced waste management facilities should be considered favourably when consistent with:

(i) the policies in this PPS, including the criteria set out in paragraph 21;

(ii) the waste planning authority's core strategy.

6.2.10 Paragraph 21 states:

In deciding which sites and areas to identify for waste management facilities, waste planning authorities should:

(i) assess their suitability for development against each of the following criteria:

- *the extent to which they support the policies in this PPS;*
- *the physical and environmental constraints on development, including existing and proposed neighbouring land uses (see Annex E);*
- *the cumulative effect of previous waste disposal facilities on the well-being of the local community, including any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential;*
- *the capacity of existing and potential transport infrastructure to support the sustainable movement of waste, and products arising from resource recovery, seeking when practicable and beneficial to use modes other than road transport.*

(ii) give priority to the re-use of previously-developed land, and redundant agricultural and forestry buildings and their curtilages.

6.2.11 This site is an existing recycling site and has been in operation since 2006. Environmental impacts are minimal and so the activity is therefore fully in

accordance with PPS 10 requirements.

Planning Policy Guidance Note (PPG) 13: Transport (2001)

6.2.13 Paragraph 4 of PPG13 sets out the Governments objectives, which are:
To integrate planning and transport at the national, regional, strategic and local level and to:

- *promote more sustainable transport choices for both people and for moving freight;*
- *promote accessibility to jobs, shopping, leisure facilities and services by public transport,*
- *walking and cycling, and*
- *reduce the need to travel, especially by car.*

6.2.14 This proposal cannot be classed as a major scheme in terms of its traffic generation. Paragraph 23 of PPG13 advises that for small schemes, a Transport Assessment should simply outline the transport aspects of the application.

6.2.15 The proposed site is well located close to the junction of the A635 and the A637, which give access to the wider from which the waste is drawn. It is therefore proximate to the market served and assists the community in managing its waste management needs at one of the nearest appropriate installations. Although the site is not specifically identified for waste management development, the location and type of facility proposed are in accordance with the Barnsley Unitary Development Plan policies, as well as National planning policies. Overall, the proposed development meets all planning policy requirements and is thus a sustainable development.

Waste Strategy for England (2007)

6.2.16 The Waste Strategy (2007) sets the overall objective for Government policy on waste.
Protection of human health and the environment by producing less waste and by using it as a resource wherever possible. Through more sustainable

waste management – reduction, re-use, recycling, composting and using waste as a source of energy – the Government aims to break the link between economic growth and the environmental impact of waste (taken from box 1.5 on page 27).

This proposed development would assist in achieving the objectives of the Government's Waste Strategy.

6.3 ***The Barnsley Unitary Development Plan***

6.3.1 The current Development Plan relating to the site and the proposed development consists of the Barnsley Unitary Development Plan (UDP), which was adopted in 2000.

6.3.2 The Waste Disposal section of the UDP covers waste disposal and outlines the Council's strategy in dealing with waste materials. Policy WD1 states that

"*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.*"

6.3.3 Policy WD2 applies specifically to recycling and reclamation and states that the local authority is committed to reducing the use of waste disposal sites and is committed to achieving

"The maximum amount of re-use and recycling of potential waste materials."

6.3.4 Paragraph 4.66 states that

"The prevention of waste generation by re-use and re-cycling is an essential long term policy which will reduce the take of land for waste disposal purposes."

However, it is also noted that waste facilities such as waste transfer stations need to be carefully located and their affect on local amenity carefully considered.

6.3.5 The proposed development will assist in achieving Barnsley Metropolitan

Borough Council's aims of increasing recycling and developing facilities for recycling. Such activity on this site is not incompatible with surrounding land uses which are mainly of an industrial nature.

6.3.6 The site is located within an area denoted on the UDP Proposals Map as Employment Policy Area (Policy BA5) and an existing employment area (Policy ED7). Within this Area, General Industry (B2) uses are preferred. The proposed use is a manufacturing process and is arguably a B2 use.

6.3.7 It can therefore be clearly stated that the proposed use of the site for recycling, carried out on land allocated for industrial use, is in accordance with the policies contained in the Barnsley Unitary Development Plan.

6.4 The Local Development Framework for Barnsley

6.4.1 The Core Strategy, which has been submitted for Examination, does not contain policies for dealing with waste management. However, it does express a need to move away from landfill to energy recovery, recycling, composting, re-use and reduction. Detailed policies are contained in the Joint Waste Plan for Barnsley, Doncaster and Rotherham which has been published for consultation.

6.4.2 The Joint Waste Plan notes in paragraph 2.14 that 90% of South Yorkshire's construction, demolition and excavation waste is recycled, recovered or re-used. The Plan's express aim (Aim A) is to move waste up the hierarchy towards greater re-use and recycling, and away from landfill. Paragraph 3.3 notes that it is necessary to maintain a range of sites in accessible locations to manage waste. Aim C wishes to deal with waste locally within accessible urban locations, and Aim F seeks to make use of vacant and underused brownfield land within existing industrial or employment areas.

6.4.3 Policy WSC4 deals with waste management on non-allocated sites such as the site subject to this application. It states:
"Proposals for waste development on non-allocated sites such as designated employment sites and areas, waste water treatment/sewage

works, active mineral workings, collieries, landfill sites and agricultural buildings will be permitted provided they:

- *contribute towards the vision and aims of the Joint Waste Plan;*
- *do not significantly alter the character of the site or surrounding uses;*
- *do not undermine the delivery of the waste management hierarchy;*
- *do not undermine the provision of waste development on strategic sites set out under policy WCS3;*
- *do not prevent the timely reclamation of the site and facilitate quicker and better quality restoration (where applicable); and*
- *comply with other relevant requirements, particularly those under policies WCS1, WCS6 and WCS7.*

Proposals for waste development which are ancillary to the principal land use must relate to the existing operations on the site."

6.4.4 This is an existing waste management site which recycles construction, demolition and excavation waste and has done so successfully for the past 5 years. The use of this site complies with the requirements of Policy WCS4; it contributes towards the local provision of sites for the management of waste in an accessible location, it does not impact on the surrounding area and is located on brownfield land within an industrial estate.

6.4.5 Policy WCS6 deals in the main with limiting the environmental impacts of waste management. The site has ready access to the main transport network without any capacity or safety impacts. It uses suitable technology to process the waste and to minimise the main impacts which are noise and dust. It has no impact on ecological interests, ground or surface water. The use of this site therefore accords with the requirements of Policy WCS6.

6.4.6 Overall, the use of this site for recycling construction, demolition and excavation wastes is in full accordance with national and local policies.

7. CONCLUSION

7.1 As with any development of this nature, there are a number of ways in which operations on the Site will affect the locality. However, the impact assessment set out in section 3 of this statement shows that any impacts will be within acceptable limits.

7.2 The scheme benefits include the following:

- The recovery of recyclable materials from household, commercial and industrial wastes and a reduction in the quantity of wastes being landfilled;
- Progress towards the achievement of Government policies for sustainable development, recycling and minimisation of waste to landfill; and
- The maintenance of 4 jobs with additional employment for HGV drivers.

7.3 The activity would be ideally located at the Site because:

- The Site is located within an industrial area, in which there are numerous other industrial uses;
- The proposed development will not have a significant impact on the locality.

APPENDICES

APPENDIX 1

NOISE IMPACT ASSESSMENT

S. & D. Garritt Ltd.

Noise & Vibration
Design & Consultancy

Vicarage Cottage, High Street, Wadworth, Doncaster DN11 9BG. Telephone & Fax: 01302 854303

SECOND REPORT

of

NOISE IMPACT ASSESSMENT

at

PROPOSED INERT WASTE RECYCLING FACILITY, LAND AT WHALEY ROAD, LOW BARUGH, BARNSLEY.

Date of this report: 13th May 2011
Date of first report: 23rd June 2006

Prepared for: SI Wordsworth Properties,
Cumberworth Lane,
Denby Dale,
Huddersfield HD8 8PR.

Consultants: The Land & Development Practice,
1 Horsefair,
Wetherby,
Leeds LS22 6JG.

CONTENTS

1.0 Summary and Conclusions

Our first report dated 23.06.2006 provided a noise impact assessment at the Inert Waste Recycling facility which was then being proposed at Whaley Road, Low Barugh, Barnsley. Permission was subsequently granted and the facility has since been in operation. An application is now being submitted for continuation of use of the facility but for only part of its former activities. The current proposal is for inert waste screening, crushing and storage only, there will be no handling or processing of waste ash.

The applicant has commissioned this noise impact assessment to accompany the proposal to the Local Planning Authority. Sound levels are predicted at the nearest dwellings based on data provided by the suppliers of the plant items to be used. The predicted sound levels are assessed in accordance with BS 4142: 1997.

1.1 The overall sound levels from the proposed waste recycling activities are predicted at the nearest dwellings at 36 dB LA_{eq} (1-hour) during the proposed operating hours from 07.00 to 17.30 on weekdays and 08.00 to 13.00 on Saturdays.

1.2 Existing background levels have been measured between these times, being in the range 39-42 dB LA_{90} on weekdays and 36-43 dB LA_{90} early on Saturday mornings.

1.3 After adding a correction factor for the character of the sound it is predicted that the rating level from the waste recycling facility will be around or below the background at dwellings generally on weekdays. It is concluded that 'complaints are unlikely' during weekdays

1.4 The background is lower at the proposed start time early on Saturdays with the result that the rating level from the full site operations is predicted up to 5 dB above the background. The site sound levels would be 'of marginal significance'. If considered necessary this may be mitigated by not operating the proposed excavator and shovel early on Saturdays.

1.5 The sound level from the waste recycling facility is predicted at other premises on the adjacent industrial estate at 58 LA_{eq} at a nominal distance of 50m. The existing sound levels have been measured at Whaley Road in a developed part of the industrial estate at 57 to 61 LA_{eq}. Sound from the facility as affecting other business premises is thereby expected to be of the same order as that which already exists.

1.6 The results and conclusions are slightly more favourable than those of our first report.

2.0 Planning Requirements on Noise

The noise acceptance criteria used in our first report remain current and are used again here. The documents are summarised below for convenience.

2.1 PPG24 'Planning and Noise'

Guidance to local authorities on the considerations of noise affecting dwellings was issued in 1994 as Planning Policy Guidance 24: 'Planning and Noise'. Paragraph 19 of Annex 3 deals specifically with noise from industrial or commercial developments near to existing dwellings. The basic assessment method called for is a complaints rating to BS 4142.

2.2 BS 4142: 1997

The method recommended by BS 4142 is to measure outdoor sound levels at dwellings during the emission of noise from the industrial or commercial premises under investigation and measure the background level at the same location in the absence of the industrial noise. A correction factor is applied if appropriate to the measured levels for some specific factors which affect its acceptability, described as "a distinguishable, discrete, continuous note (whine, hiss, screech, hum, etc.) or if there are distinct impulses in the noise (bangs, clicks, clatters, or thumps), or if the noise is irregular enough in character to attract attention".

The corrected measured level, the rating level, is compared with the background from which it is concluded that:

- complaints are likely if the rating level exceeds the background by around 10 dBA or more,
- a difference of around 5 dBA is 'of marginal significance',
- if the rating level is more than 10 dB below the background level then this is a positive indication that complaints are unlikely.

3.0 **Proposed Site Operations**

Operations at the site will consist of the import of inert waste material by 20 tonne tipper lorries via the entrance off Whaley Road, movement across the site by the same lorries, tipping and stockpiling. Screening and crushing of the imported material will be carried out on an occasional basis using plant items brought to the site temporarily. The processed material will then be stockpiled prior to transport off the site.

There will be a maximum of 200 lorry movements in and 200 movements out per week, as now. Mobile plant based at the site will consist of a Case 921 wheeled loading shovel and a JCB JS 220 NS tracked excavator.

The plant items brought to the site on a temporary basis will be a Powerscreen Chieftain 1400 screen and a Terex / Pegson Premier crusher.

The operational areas including the crusher, screen, mobile plant, tipping and loading areas are located inside baffle mounds formed by stockpiles, which will be retained in all directions except a short length of the northeast boundary facing the railway and open countryside.

Hours of operation will be 07.00 - 17.30 hours on weekdays and 08.00 to 13.00 hours on Saturdays. There will be no working on Sundays or Bank Holidays.

4.0 **Plant Sound Levels**

Base data on the sound level generated by the crusher has been supplied by its manufacturer. The sound levels of the tracked excavator and the wheeled loading shovel are taken from standard data on the typical sound levels of construction equipment as provided in BS 5228 ‘Noise control on construction and open sites’. The sound level from the screen is based on measurements which we have taken on operational screens (Extec and Viper screens) at other sites.

The sound levels of 8-wheel lorries delivering waste materials along a site access road and depositing the waste by tipping were measured at Vigo Utopia landfill site near Walsall. The lorries were of overall capacity 32 tonnes with actual loads around 20 tonnes, as is normal for this type of load. The base data is listed overleaf and used in the predictions.

Machine	Model & Manufacturer	Number Used	Sound Pressure/ Power Level
Crusher	Terex/Pegson	1	105 dBA sound power
Screen	Chieftain 1400	1	80 dBA L_{eq} @ 7m
Shovel	Case 921	1	110 dBA sound power
Excavator	JCB JS 220	1	110 dBA sound power
Tipper lorry	Various	40/day	74-78 dBA L_{eq} @ 10m

5.0 Predicted Sound Levels at Receptors

5.1 Receptor Locations

Dwellings are located in the housing area of Springfields, Wood Acres and Coppice Avenue at 400m distance to the south and southeast. A concrete products plant is located immediately adjacent to the site which shields it from dwellings in this direction, added to which the permanent stockpiles of processed material also completely shield the operational area from dwellings.

Dwellings are located at Medina Way and Medway Close at 600m distance to the west of the site. These dwellings are shielded from view of the site by the existing industrial estate and the stockpiles of raw and processed material.

There are industrial and commercial premises adjacent to the southeast and southwest site boundaries. Although such premises are not usually regarded as being noise-sensitive, predictions are made for completeness in this report of the sound levels reaching them.

5.2 Barrier Attenuation

The sound attenuation achieved by outdoor barriers such as the stockpiles and adjacent buildings depends on the geometry of the source location, the receptor location and the barrier position and height. Research work by Maekawa quantified the sound reduction achieved by outdoor barriers and forms the recognised basis of such predictions. For the convenience of usage and of illustration, Maekawa's formulae and method have been summarised by other

technical authors into graphical methods, which are easier to use. The graphical method shown in *Woods Practical Guide to Noise Control* is used in this report to predict the sound reduction achieved by barriers.

5.3 Sound Predictions from On-Site Activities

The sound pressure and power levels of the mobile plant items as listed in section 5.0 have been translated over the appropriate distance to dwellings by the method of BS 5228. The calculations are given in the Appendix and the resulting predictions from all sources as affecting the dwellings are summarised below as dB LA_{eq} (1-hour).

Source	**Number**	**Sound Pressure Level Received at Dwellings**
Crusher	1	27 dBA
Screen	1	27 dBA
Shovel	1	32 dBA
Excavator	1	32 dBA
Tipper lorries	40/day	14 dBA
All sources together		**36 dBA L_{eq} (1-hour)**

6.0 Impact Assessment

6.1 Background Sound Levels

The method of BS 4142 rates the sound reaching dwellings by comparing the outdoor sound level from the operations against the background when there is no operational sound.

Background sound levels were measured as part of this second survey at three receptors at the nearest dwellings and at two positions on the adjacent industrial estate. Measurements were taken on Saturday 16th April and Monday 9th May at the proposed start of site operations at 07.00 / 08.00 hours, also during the mid-afternoon of Monday 9th May. These times are believed to represent a meaningful cross-section of background levels.

Background Levels dB LA_{90}	Weekday 0700-0800	Weekday 1400-1530	Saturday 0730-0800
Dwellings:			
Medina Way/Medway Close	41.6	41.0	43.0
Coppice Avenue	38.8	42.2	35.5
Industrial Estate:			
Whaley Road	44.8	44.0	33.6
Site boundary	41.6	40.0	32.2

6.2 **Rating at Dwellings**

Sound from the site operations may contain impulsive characteristics and for this reason a correction factor of 5 dBA is added to the predicted sound levels to allow for an acoustic feature. The rating levels at dwellings are 5 dB higher than the value shown in 5.3, ie. the rating level is 41 dB. Comparison of the rating levels with the measured background levels at each dwelling position shows:

Receptor	Rating Level dB	Background Level LA_{90}	Comparison v. Background
Medina Way / Medway Close			
Weekday 0700	41 dB	42 dBA	1 dB below
Weekday 1400-1530	41 dB	41 dBA	equal
Saturday 0800	41 dB	43 dBA	2 dB below
Coppice Avenue			
Weekday 0700	41 dB	39 dBA	2 dB above
Weekday 1400-1530	41 dB	42 dBA	1 dB below
Saturday 0800	41 dB	36 dBA	5 dB above

6.3 **Conclusions on Noise Impact at Dwellings**

Sound from the facility is predicted to be rated equal to or below the background at all times in the residential area around Medina Way and Medway Close. At the slightly nearer dwellings in Coppice Avenue the predicted sound is rated around or slightly below the background during most of the day but slightly above the lower levels of

background sound during the early morning. During our survey period early on a Saturday morning the background sound level was particularly low at Coppice Avenue against which the predicted sound from the facility is rated 5 dB above and thereby 'of marginal significance'.

It is concluded that 'complaints are unlikely' about sound from the proposed operations during weekdays.

At 08.00 on Saturdays the prediction at the nearest dwellings is 'of marginal significance'.

6.4 Mitigation Possibility

If considered necessary, the situation early on Saturday mornings could be mitigated by not running the excavator and wheeled shovel. From the table in section 5.3 on page 8 it can be seen that these two plant items are each predicted to contribute 32 dBA to the overall sound levels at dwellings. Taken together these plant items will provide 35 dBA and without them the overall site sound as received at dwellings would be 30 dBA. After adding 5 dB for 'acoustic feature' the rating level of the site sound, without the excavator and shovel, would be 35 dB which is below the background level at 08.00 hours at all dwellings.

It is concluded that if the excavator and shovel were excluded from the operations for the initial period at 08.00 hours on Saturdays the overall site sound at that time would be rated below the background at all dwellings.

7.0 Sound Levels at Adjacent Industrial Premises

The sound level at a nominal distance of 50m from the site boundaries is estimated by the same method at **58 dBA** L_{eq} (1-hour). The existing sound levels in the developed industrial estate were measured as part of this survey, shown as background sound levels at Whaley Road in the table of section 6.1 on page 8. The ambient LA_{eq} sound levels at this position were **57.3 and 60.6 dBA** L_{eq} corresponding to the 44.8 and 44.0 LA_{90} background levels.

From this it is concluded that the site operations will cause similar sound levels locally within the industrial estate to those which already

exist in the developed areas of the estate from existing nearby industrial premises.

APPENDIX TO REPORT

SOUND LEVEL CALCULATIONS

A. Screening Effect of Stockpiles and Buildings

For the purpose of calculation the height of the stockpiles around the operational areas is taken as 3.5m although they may rise higher than this on some occasions. The height of the sound sources on the plant items are taken as 1.5m. Although equipment on the plant items is higher than this the dominant sound source in every case will be the diesel engine, transmission, hydraulic drives, etc. which are generally within the assumed height of 1.5m. The effective height of the acoustic barrier (h_e) caused by the stockpiles is 2.0m. The angle turned by the sound as it passes over the top edge of the barrier, turning downwards to the receiving positions at dwellings will be at least 10^o. In the direction of dwellings to the south and southeast the plant sound is attenuated also by the building at the concrete products factory which is estimated to have an effective height of 5.0m.

The *Woods* method needs a comparison to be made between the effective barrier height (h_e) and the wavelength of sound emitted by the source, in each musical octave across the audible range. The table below shows this relationship for this application. From the values of 'h_e / wavelength' in the table and the angle of 10^o turned by the sound the sound reductions achieved by the barrier can be read off the graph from *Woods*. These are:

Attenuation of barriers dB linear:

Frequency (Hz)	63	125	250	500	1k	2k	4k	8k
Stockpiles, all directions	7	9	11	13	15	18	20	22
Buildings, towards S&SE	10	13	15	17	19	20	20	20

From the above spectra overall sound reductions off the sound levels of the plant items are predicted at 14 dBA in all directions and 18 dBA towards the south and southeast.

B. Onsite Plant

Sound Power Levels of Plant Items

The sound power levels of the crusher, shovel and excavator have been quoted as shown in section 4.0. The sound pressure levels at a distance 'd' are given by the equation:

SPL at distance d = SWL - 20 log 400 - 8 dB

Sound Pressure Level of Plant Items

The sound pressure level of the screen at a distance of 7m is quoted in section 4.0. The corresponding sound pressure level which this causes at a distance 'd' is given by the equation:

SPL at distance d = SPL at 7m - 20 log (d/7) dB

Both equations assume the worst case that the sources will operate on a hard reflective surface. There will be screening attenuations of 18 dBA towards dwellings to the south / southeast and 14 dBA in all other directions.

It is assumed that in any one hour of operation (as specified in BS 4142 for daytime assessments) all of the plant items may be operating with 100% utilisation. The sound levels will be:

Dwellings at Coppice Ave/Wood Acres/ Springfields

Machine	Sound Pressure/ Power Level of Plant	SPL at 400m	Barrier Reduction	SPL at Dwellings
Crusher	105 dBA sound power	45 dBA	18 dBA	**27 dBA**
Screen	80 dBA L_{eq} @ 7m	45 dBA	18 dBA	**27 dBA**
Shovel	110 dBA sound power	50 dBA	18 dBA	**32 dBA**
Excavator	110 dBA sound power	50 dBA	18 dBA	**32 dBA**

Dwellings at Medina Way / Medway Close

Machine	Sound Pressure/ Power Level of Plant	SPL at 400m	Barrier Reduction	SPL at Dwellings
Crusher	105 dBA sound power	41 dBA	14 dBA	**27 dBA**
Screen	80 dBA L_{eq} @ 7m	41 dBA	14 dBA	**27 dBA**
Shovel	110 dBA sound power	46 dBA	14 dBA	**32 dBA**
Excavator	110 dBA sound power	46 dBA	14 dBA	**32 dBA**

C. Lorries on Site Road

The haul road formula of BS 5228 is used:

$LA_{eq} = L_{WA} - 33 + 10 \log Q - 10 \log V - 10 \log d$

The average number of lorry movements Q will be 8 per hour, based on 40 loads per day, one movement is in or out, 10 hour working day.

An average speed V of 15 mph (24 kph) is assumed on the site road.

Distance d is the 400m distance from dwellings to the site road.

A correction is made for the angle of view = 10 log (angle^{o} / 180) as given in MPG11 paragraph 23.

From the measured sound pressure levels of 74-78 dBA at 10m distance from moving road vehicles at the site the sound power level L_{WA} is 102-106 dBA. The average figure of 104 dBA L_{WA} is used.

Sound Level At Dwellings

Will be:

$LA_{eq} = 104 - 33 + 10 \log 8 - 10 \log 24 - 10 \log 400 + 10 \log (10/180)$

$= 104 - 33 + 9.0 - 13.8 - 26.0 - 12.6$

$= 27.6$ dB LA_{eq} (1-hour).

less the 14 dBA attenuation of the stockpiles, ie. **13.6 dB LA_{eq}** (1-hour).

APPENDIX 2

DUST CONTROL SCHEME

LDP PLANNING

Land and Development Practice
CHARTERED TOWN PLANNERS & SURVEYORS

DUST CONTROL SCHEME

PLANNING APPLICATION FOR THE CONTINUATION OF THE USE OF LAND FOR THE CRUSHING AND SCREENING OF INERT WASTES IN THE OPEN AND ASSOCIATED ANCILLARY ACTIVITIES AT WHALLEY ROAD, LOW BARUGH, BARNSLEY.

SUBMITTED ON BEHALF OF
S I WORDSWORTH PROPETIES,
230 CUMBERWORTH LANE, DENBY DALE,
HUDDERSFIELD, HD8 8PR.

MAY 2011

RTPI mediation of space · making of place

1 Horsefair, Wetherby, Leeds, LS22 6JG. Tel: 01937 588833, Fax: 01937 580358,
Web: www.tldp.co.uk, Email: email@tldp.co.uk.
Directors: P.G. Torrible M.R.I.C.S., F.C.I.O.B., D.Isaac M.R.I.C.S., F.Inst.C.E.S., F.C.I.O.B., C.J Ballam BSc. (Hons), M.Phil., F.I.Q., S.R. Harrison M.C.Inst. C.E.S., I.C. I.O.B., M. Madge M.A., M.R.T.P.I., I. Torrible, P. Schofield F.C.C.A.
Senior Associate: R. Lee B.A. (Hons), M.R.T.P.I. Associate: S. Natkus MTCP, PGDip, MRTPI.
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1. Any crushing and screening plant used on site will be subject to local authority authorisation under Part 1 of the Environmental Protection Act 1990, covering the emission of dust to the atmosphere. This authorisation will set conditions for dust control additional to those imposed under the planning system.

2. The operator will instigate a strict dust control system within the site boundary. The dust control system will include the following measures:

    - The use of upward pointing exhausts and radiator fan deflector plates on all mobile plant.

    - The frequent maintenance of all running surfaces for mobile plant and road vehicles to ensure that they are dust and mud free.

    - The minimisation of drop heights from machine buckets onto the ground, into crushers and screens, and the shrouding of conveyor discharge heads.

    - The maintenance of smooth profiles to mounded stockpiles of crushed/screened material. All such stockpiles containing fines will be conditioned with water immediately after formation and after material has been added to or removed from the stockpile.

    - Stockpiles of crushed/screened material will be maintained within discrete areas, separated by roadways, to avoid mobile plant running over stockpiled materials.

    - The suspension of the movement within the site boundaries of all operations involving crushing, screening, tipping and placement of fill and graded materials, when local wind speeds exceed 20 metres per second.

    - All running surfaces for mobile plant and road vehicles will be damped down with water as dictated by usage and weather conditions.

3. In the event of any complaint from local businesses, an investigation will be undertaken into the circumstances. Where the complaint resulted from activities within the site, steps will be taken where possible to reduce the impact of, or remove, the dust source.

4. Specific measures are deployed on the site to control dust, including fixed water sprays covering the roadway and the use of a mobile water bowser.

5. The internal roadway is kept clean of dust and mud, and as far as possible, the movement of road vehicles is be kept separate from areas used by mobile plant.