PLANNING APPLICATION FOR A PROPOSED WASTE TRANSFER STATION (WTS) 
AND MATERIALS RECYCLING FACILITY (MRF)

BODDINGTON ROAD, BYFIELD, DAVENTRY, NORTHAMPTONSHIRE, NN11 6XU

BAUGHANS LTD
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1 INTRODUCTION

1.1 Introduction

1.1.1 GP Planning Ltd has been instructed by Baughans Ltd (the Applicant) to prepare and submit a planning application for a Waste Transfer Station (WTS)/ Materials Recycling Facility (MRF) at Boddington Road, Byfield, Daventry, Northamptonshire (the Application Site).

1.1.2 A planning application was previously submitted for an identical development to this in 2011. However, the application was subsequently withdrawn by the agent (DJC Associates) to allow time to sufficiently respond to the comments raised by various statutory consultees in the consultation process. This application seeks to gain planning permission for the WTS/MRF and address the various comments made on the previous planning application.

1.1.3 This planning application is comprised of the following documents and drawings:
- Planning Portal Application Form
- Planning Statement
- Site Location Plan and Proposed Layout Plan - 10.56.10A
- Proposed Building Elevations and Floor Plan – 10.56.11 & 10.56.12
- Proposed Site Section – 10.56.10
- Catchment Area Plan
- Proposed Acoustic Screen 10.56.15
- Traffic Routing Plan – GPP/B/BRB/15/04

1.1.4 Northamptonshire County Council’s Validation Checklist is included in Appendix 1. Compliance, as appropriate, is identified in the list.

1.2 The Site and Site Context

1.2.1 The Application Site is located on part of an old prisoner of war (POW) site in the open countryside, midway between Byfield and Upper Boddington in Northamptonshire. The location of the Application Site is shown on Drawing 10.56.10A.

1.2.2 The entire POW complex is now an established commercial area, with several similar operations, all of which in planning use terms should be considered to be B2 General Industrial or Sui Generis (waste). Other uses on the complex include a waste collection and recycling centre and industrial and commercial units and yard. The site contains a number of military style buildings that have been adapted to commercial use. The whole of the area is enclosed by substantial hedge and tree planting which restricts views into and out of the complex.

1.2.3 The Application Site is approximately 0.3 hectares in size and lies on a west facing sloping land. The proposed site boundary and land ownership boundary is shown on Site Plan Drawing 10.56.10A, shown edged red and blue respectively.

1.2.4 The primary sensitive receptors are the residential properties on the western edge of Byfield village, about 700 metres and the closest of which are those properties in The Twistle. To the west, the closest residential property is at Cherry Tree Farm Byfield Road Upper Boddington, more than 1300 metres away. Boddington Reservoir lies to the west and is about 600m at its closest. North of the site lies Pitwell Farm about 850 metres away.
1.2.5 There is existing access to the Application Site, off the Boddington Road a local rural road. The access from the site has good visibility in both directions on to Boddington Road and there is good forward visibility for vehicles on the highway. The strategic highway network can be accessed quickly from the Application Site; Boddington Road passes through the edge of Byfield village to join the county principal A class road, A361 Daventry to Banbury Road.

1.3 Key Benefits of the Proposed Development

1.3.1 The proposed waste transfer station/ material recycling facility has many benefits. These include:

- The existing number of vehicle movements associated with the site is not restricted by the current planning permission. If planning permission were granted for this development, it would bring the site under greater control.
- Restricting the amount of vehicle movements associated with the site, would reduce the amount of noise generated by the site.
- The proposed building would contain much of the storage and processing of material. This would provide a landscape enhancement as currently a lot of the scrap parts are stored externally.
- Improvements will be made to the access to make it safer to use.
- 8 direct jobs will be created if the application is granted planning permission. The development will provide extra job security to the other uses at the site and also create jobs during the construction of the building.

1.4 Planning History

1.4.1 The site and surrounding industrial complex have a long and complex planning history. Uses on the complex have previously had planning permission for skip hire storage, sorting scrap, scrap yard, motor vehicle dismantling and storage and sorting of demolition materials.

1.4.2 The most relevant planning permission to the Application Site is DA/84/390/EU, which is an Established Use Certificate (EUC) for vehicle dismantling (included in Appendix 2). This certificate does not restrict vehicle numbers, operating hours or tonnages.

1.4.3 Other planning permissions which the Applicant has, but relate to separate pieces of land on the POW complex are as follows:

- DA/83/437: Planning permission was granted in June 1983 for the change of use of the site to skip hire with a compound for scrap sorting.
- DA/74/57/C: Scrap yard
- DA/94/00834: Vehicular access and parking area

1.4.4 This planning application for a waste transfer station/ materials recycling facility was submitted in DJC Associates on behalf of Baughans in 2011. It was subsequently withdrawn, due further information required in the Traffic Statement. The Applicant now has updated the Traffic Statement to address the comments made.

1.5 Designations

1.5.1 The Application Site and surrounding industrial complex is a former prisoner of war camp. The Byfield WWII Prisoner of War Camp (MNN16805) is an historic environmental asset.
1.5.2 There are several listed buildings located within the towns of Upper Boddington and Byfield. There are no scheduled ancient monuments or Sites of Scientific Interest within 3 kilometres of the Application Site.

1.5.3 The Application Site is located in Flood Risk Zone 1 and therefore has a less than 1 in 1000 chance of flooding.
2 PROPOSED DEVELOPMENT

2.1 Overview

2.1.1 This planning application seeks planning permission for the use of the Application Site as a Waste Transfer Station (WTS) and Materials Recycling Facility (MRF). The extent of the Application Site is edged red on Drawing 10.56.10A. The area is currently used for the storage of scrap material, under an Established Use Certificate (DA/84/390/EU). The extent of the land ownership by the Applicant is also shown on Drawing 10.56.10A. The proposed Site Layout is shown on Drawing 10.56.10A.

2.1.2 It is proposed that a building will be erected in order to contain the material sorting plant, including a picking line and a trommel and the storage of material. The dimensions of this are detailed below. It is considered by the Applicant that this will have a beneficial impact on visual amenity as the majority of material will be contained within a building.

2.1.3 It is proposed that the WTS/MRF will accept 25,000 tonnes of dry waste and inert material per annum. No hazardous waste will be accepted at the site and this will be controlled through the Environmental Permit and site monitoring by the Environment Agency.

2.1.4 The site will be levelled in order to create an even base for the building. The material taken out will be processed at the adjacent inert recycling operations.

2.1.5 Some minor access improvements are proposed, as shown in the Transport Statement.

2.2 New Building

2.2.1 A new building is proposed to provide undercover storage areas and sorting facility as well as a site office to oversee the management of the facility. The location of the proposed building is shown on Drawing 10.56.10A. The layout and design of the building is shown on Drg. nos. 10.56.11 and 10.56.12. The building would be open fronted and measure:

- Footprint: 23.8 metres x 23.8 metres
- Height to ridge: 9.4 metres

2.2.2 It is proposed that some acoustic insulation is provided in the existing building in order to mitigated the noise generated from the sorting plant. Noise is considered further in Chapter 4.1.

2.3 Storage of Material

2.3.1 A limited amount of inert material would stored in stockpiles outside the building. The stockpiles would be limited to 3 metres in height.

2.4 Traffic and Vehicle Numbers

2.4.1 The proposed development will generate a maximum of 60 HGV trips per day. This is a worst case scenario, based on the site accepting the maximum allowance of 25,000 tonnes per annum in 3 tonne loads. It is likely that the material will be often be brought to the site in
larger loads than this and consequently there will be less vehicle movements. There will also be 8 staff that will generate 16 trips per day.

2.5 Site Operations and Process Description

2.5.1 Inputs would be brought to the Application Site in HGVs via an existing access to the Application Site onto Boddington Road. This access is separate to the main access to the wider site complex, and would only be used in association with this development. This proposed entrance has adequate visibility splays in each direction, as shown on Appendix F of the Transport Statement.

2.5.2 The material would be stored partially within the proposed building and partially within the designated storage area, indicated on Drawing 10.56.10A. There is sufficient room in the yard areas for HGVs to turn and leave to site in a forward gear. This is shown on Drawing 10.56.10A.

2.5.3 All sorting of material will take place within the building and it is proposed that sorting machinery (including a picking line and a trommel) will be placed within the building to enable to efficient sorting of material. The processed material will then be stored in the designated storage area and bulked up, ready to be taken off site.

2.5.4 An employee car parking area is proposed along the eastern side of the site away from the waste activity operation areas.

2.5.5 The proposed site layout, building elevations and floor plans are shown on drawing nos. 10.56.10, 11 and 12 respectively. The building is open-fronted, with a square footprint, measuring 23.8 metres x 23.8 metres and height to ridge of 9.4 metres. The building would have a floor area of 566 square metres. The internal layout will be arranged to accommodate specialised waste sorting equipment, to provide an efficient sorting of waste at the site. The proposed building will provide shelter and containment for the processing operations.

2.5.6 The site would be divided into separate areas to allow the recyclable material to be brought to site and stored in enclosed compounds before being sorted and transferred in specific collection areas. The site would be hard surfaced and the existing access along the eastern boundary would provide sole access into and out of the site.

2.5.7 Once material is sorted it will be bulked up for recycling on other sites elsewhere.

2.6 Operating Hours

2.6.1 Except in the case of an emergency, the site would normally operate within the following hours:
   - Monday to Friday: 07:00 - 18:00
   - Saturdays: 08:00 - 13:00
   - Sundays and Bank Holidays: Closed

2.7 Employment and Local Economy

2.7.1 The site will employ 8 members of staff and support the jobs of many of the existing employees currently working at the Baughans site.
2.8 Proposed Tonnages

2.8.1 It is proposed that the site accepts in the region of 25,000 tonnes per annum of dry waste/inert material.

2.9 Catchment Area

2.9.1 The indicative catchment area for the facility is shown on the attached Catchment Area Plan.

2.10 Routing to and from the Application Site

2.10.1 The routing to and from the Application Site will be as shown on Drawing GPP/B/BRB/15/04 and will avoid the Twistle.

2.11 Lighting

2.11.1 No overnight lighting will be required. There is existing lighting on site, in the form of spotlights mounted on poles. All additional lighting will be downward facing in order to reduce the risk of light spillage outside the industrial complex.

2.12 Fire Risk

2.12.1 Fire extinguishers will be kept on site for use in the event of a fire.

2.13 Environmental Permit

2.13.1 If planning permission is secured for the Waste Transfer Station, the Applicant will apply for an Environmental Permit.
3 PLANNING POLICY CONTEXT

3.1 Introduction

3.1.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that determination of a planning application must be made in accordance with the Development Plan unless material considerations indicate otherwise.

3.1.2 In reaching a decision on this planning application, the first consideration is therefore whether the proposal is in accordance with the Development Plan. Having done this it is then necessary to have regard to all other material planning considerations, which include all relevant policy considerations contained in the emerging Development Plan as well as National Planning Policy Guidance.

3.2 Development Plan

Northamptonshire County Council’s (NCC’s) Minerals and Waste Local Plan (2014)

3.2.1 Policy 12 sets out NCC’s spatial strategy for waste management. It provides that:

Northamptonshire’s waste management network, particularly advanced treatment facilities with a sub-regional or wider catchment, will be focused within the central spine and the sub-regional centre of Daventry. Development should be concentrated in Northampton, Wellingborough, Kettering, Corby and Daventry. Development in the smaller towns should be consistent with their local service role. Facilities in urban areas should be co-located together and with complementary activities.

3.2.2 Policy 13 provides development criteria for waste management facilities which are not allocated:

Proposals for waste management facilities on non-allocated sites (including extensions to existing sites and extension to allocated sites) must demonstrate that the development:

- Does not conflict with the spatial strategy for waste management;
- Promotes the development of a sustainable waste network and facilitates delivery of Northamptonshire’s waste management capacity requirements;
- Clearly establishes a need for the facility identifying the intended functional role, intended catchment area for the waste to be managed, market base for any outputs, and where applicable the requirement for a specialist facility;
- Is in general conformity with the principles of sustainability (particularly regarding the intended catchment area);
- Facilitates the efficient collection and recovery of waste materials; and
- Where intended for use by the local community, is readily and safely accessible to those it is intended to serve.

3.2.3 Policy 22 is concerned with addressing the impact of proposed minerals and waste development:

Proposals for minerals and waste development must demonstrate that the following matters have been considered and addressed:
• Protecting Northamptonshire’s natural resources and key environmental designations (including heritage assets);
• Avoiding and / or minimising potentially adverse impacts to an acceptable level, specifically addressing air emissions (including dust), odour, bioaerosols, noise and vibration, slope stability, vermin and pests, birdstrike, litter, land use conflict and cumulative impact;
• Impacts on flood risk as well as the flow and quantity of surface and groundwater;
• Ensuring built development is of a design and layout that has regard to its visual appearance in the context of the defining characteristics of the local area;
• Ensuring access is sustainable, safe and environmentally acceptable, and
• Ensuring that local amenity is protected.

3.2.4 Policy 23 relates to encouraging sustainable transport and provides that minerals and waste related development should seek to minimise transport movements and maximise the use of sustainable or alternative transport modes. Where possible minerals and waste related development should be located, designed and operated to enable transport by rail, water, pipeline or conveyor. It states that minerals and waste related development should be well placed to serve their intended markets or catchment area(s) in order to reduce transport distances and movements in order to support the development of sustainable communities that take responsibility for the waste that they produce and work towards self-sufficiency. Proposals for new development or development that would result in a significant increase in transport movements should include a sustainable transport statement to demonstrate how the above has been taken into consideration.

3.2.5 Policy 24 is concerned with natural assets and resources:
Minerals and waste development should seek to achieve a net gain in natural assets and resources, through:
• Protecting and enhancing international and national designated sites;
• Delivery of wider environmental benefits in the vicinity where development would adversely affect locally designated sites or other features of local interest;
• Protecting and enhancing green infrastructure and strategic biodiversity networks, in particular the River Nene and other sub-regional corridors; and
• Contributing towards Northamptonshire Biodiversity Action Plan targets for habitats and species.

Proposals for minerals and waste development will be required to undertaken an assessment (where appropriate) in order to:
• Identify and determine the nature, extent and level of importance of the natural assets and resources, as well as any potential impacts, and
• Identify mitigation measures and / or requirement for compensation (where necessary) to avoid, reduce and manage potentially adverse impacts.

3.2.6 Policy 27 provides guidance on layout and design quality:
The layout and overall appearance of waste management facilities, and where appropriate minerals development, will be required to demonstrate that the development:
• Supports local identity and relates well to neighbouring sites and buildings;
• Is set in the context of the area in which it is to be sited in a manner that enhances the overall townscape, landscape or streetscape (as appropriate);
• Utilises local building materials as appropriate;
• Incorporates specific elements of visual interest; and
• Builds-in safety and security.

Catchment Areas

3.2.7 Paragraph 5.108-5 states that:

Proposals for waste development will need to specify the intended catchment area. This will assist the WPA in determining the extent to which a proposal supports the development of sustainable communities which take responsibility for the waste they produce.

To this end broad catchment areas have been identified. Catchment areas identified for the purpose of this Local Plan include national, regional, sub-regional, local and neighbourhood.

Proposals must identify the relevant catchment area(s) and demonstrate how this is linked to the waste to be managed on the site; this should be clearly shown on an indicative map to accompany the planning application. Integrated waste management facilities may require a range of waste types from different catchment areas in order to satisfy the operational requirements of the individual facilities present onsite; the differentiation between what types of waste fall within each catchment area will need to be identified.

3.3 Other Relevant Documents

National Planning Policy for Waste (October 2014)

3.3.1 Paragraph 5 provides guidance on suitable sites and areas:

Waste planning authorities should assess the suitability of sites and/or areas for new or enhanced waste management facilities against each of the following criteria:

• The extent to which the site or area will support the other policies set out in this document;
• Physical and environmental constraints on development, including existing and proposed neighbouring land uses, and having regard to the factors in Appendix B to the appropriate level of detail needed to prepare the Local Plan;

3.3.2 Paragraph 7 is concerned with determining planning applications. It provides that:

When determining waste planning applications, waste planning authorities should:

• Consider the likely impact on the local environment and on amenity against the criteria set out in Appendix B...
• Ensure that waste management facilities in themselves are well-designed, so that they contribute positively to the character and quality of the area in which they are located.


3.3.3 The Waste Framework Directive sets the basic concepts and definitions related to waste management, such as definitions of waste, recycling, recovery. It requires that waste be managed without endangering human health and harming the environment and without adversely affecting the countryside or places of special interest.

3.3.4 The main objective of the 2007 Waste Strategy is to significantly reduce the amount of waste that is disposed at landfill. Fundamental to this objective is the concept of the waste hierarchy, where by operators are encouraged through policy, targets and levies to move up the waste hierarchy through more efficient and sustainable waste management.


3.3.5 The Waste Review 2011 builds upon the waste hierarchy which was the core of the 2007 Waste Strategy for England. The key themes that are discussed within the review are;
- The need to focus on preventing waste as a priority, as a key component of broader resource efficiency;
- The importance of treating waste as a resource and embedding waste policies into a wider resource and material security policy;
- The need to remove barriers which prevent greater integration of household and business waste policy and service delivery;
- The importance of policies which continue to promote high levels of high quality recycling; and
- The need to continue to reduce the amount of waste going to landfill.

National Planning Policy Framework, March 2012

3.3.6 The National Planning Policy Framework was published on the 27th March 2012 and came into force immediately with respect to plan and decision making. The NPPF states at paragraph 5 of its introduction that it does not contain specific waste policies ‘since national waste planning policy will be published alongside the National Waste Management Plan for England’. However, paragraph 5 goes on to say that local authorities should have regard to the policies in the National Planning Policy Framework in preparing their waste plans.

3.3.7 The NPPF provides a presumption given in favour of development with sustainable credentials. Paragraph 14 of the NPPF states:

At the heart of the planning system is a presumption in favour of sustainable development, which should be seen as a golden thread running through both planning and decision taking. For decision-taking this means
- Approving development proposals that accord with the development plan without delay and
- Where the development plan is absent, silent or relevant policies are out of date, granting planning permission unless:
Any adverse impact of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole or 
Specific policies in this Framework indicate development should be restricted.
4 ASSESSMENT OF THE PROPOSAL

4.1 Introduction

4.1.1 From an assessment of the pertinent Development Plan policies and other material planning considerations the main issues in the determination of this planning application are considered to be:
- Location of the Development
- Sustainable Development/Compliance with the Waste Hierarchy
- Environmental and Local Amenity Considerations

4.1.2 These will be considered in turn.

4.2 Location of the Development

4.2.1 Policy 12 of Northamptonshire County Council’s Local Plan (2014) sets out the spatial strategy for waste management. The Application Site is located in the rural hinterlands on an already permitted waste site. Policy 12 provides that “in the rural hinterlands only facilities with a local or neighbourhood catchment providing preliminary treatment, or that are incompatible with urban development, should be provided”. The proposed operations (accepting and sorting of dry recyclable waste) are classed as preliminary treatment and therefore the location of the facility is appropriate. The intended catchment area for the facility is shown on the Catchment Area Drawing and is local in size, therefore complying with Policy 12.

4.2.2 Policy 12 goes on to provide that facilities in rural areas should be associated with existing rural employment uses. The proposed waste transfer station would provide up to 8 additional jobs and support the jobs of the existing associated scrap yard which is adjacent to the Application Site on the POW complex. For the reasons outlined above, the proposed development is considered to be compliant with Policy 12 of Northamptonshire County Council’s Local Plan (2014).

4.2.3 Policy 13 is concerned with setting the development criteria for waste management facilities. It states (inter alia) that “development should, where appropriate, integrate and co-locate waste management facilities together and with complementary activities.” The Applicant has other complimentary activities on the POW complex, such as inert waste recycling, which is complimentary to this proposed use of the land. Therefore, there are co-location benefits of locating this activity next to the other uses. For the reasons outlined above, the proposed development is considered to be compliant with Policy 13 of Northamptonshire County Council’s Local Plan (2014).

4.3 Sustainable Development/ Compliance with the Waste Hierarchy

4.3.1 The NPPF states a presumption in favour of sustainable development, which this development meets through its recycling operations. Storing and recycling plastic related waste enables it to be effectively reused instead of going landfill, where it takes a long time to biodegrade.

4.3.2 At the core of the Government’s waste strategy is the objective of moving waste up the hierarchy. National Waste Plan for England (2013) builds upon the waste hierarchy and aims to create a ‘zero waste economy’ where the amount of waste being sent to landfill is reduced.
through reuse, recycling or energy from waste facilities and material resources are only disposed of as a last resort.

4.3.3 Not only is maximising landfill diversion the main thrust of national policy, there is also a legal obligation on waste planning authorities to maximise landfill diversion through the Waste Framework Directive and the Waste (England and Wales) Regulations 2011 (which transpose this into UK law) which contains a clear obligation to apply the waste hierarchy as a priority order.

4.3.4 The proposed waste management and recycling operations will assist with national planning guidance for waste by moving waste up the hierarchy. The bulking up of waste material for onward recycling will reduce the number of vehicle movements on the road and therefore the proposed operations are considered sustainable and in compliance with the NPPF.

4.3.5 The site will bring waste in from a local catchment area, which is appropriate for this type of preliminary facility. The catchment area is shown on the Catchment Area Drawing.

4.3.6 Policy 11 of Northamptonshire’s Local Plan (2014) sets out Northamptonshire’s waste management capacity. The indicative capacity requirement for recycling (non-inert) is 0.26 million tonnes per annum by 2021 and 0.74 million tonnes of inert recycling by 2021. The proposed facility will make a contribution towards meeting these targets.

4.4 Environmental and Local Amenity Considerations

4.4.1 In accordance with Policy 22 of Northamptonshire County Council’s Waste Local Plan (2014), this section considers the potential impact of the proposal on amenity and the environment. Where appropriate, mitigation measures will be proposed to ensure there is no adverse environmental impact as a result of this development proposal.

Traffic and Transport

4.4.2 Policy 23 of Northamptonshire County Council’s Waste Local Plan (2014) is concerned with minimising the transportation of waste and ensuring that waste development is well placed to serve the market it serves.

4.4.3 The Application Site is currently used for the dismantling and storage of vehicles, using the western-most access. The dismantling of vehicles on the Application Site is permitted under an Established Use Certificate (Ref: DA/84/390/EU). The certificate does not restrict the number of vehicle movements or the hours of delivery associated with the Application Site. A survey of the existing vehicle movements associated with the entire complex using the western-most access has been carried out and it is understood the entire complex currently generates 166 vehicle trips per day. The eastern-most access, proposed to be used for this planning application, is not currently used in relation to the operations authorised by certificate DA/84/390/EU; all vehicles currently use the western-most access.

4.4.4 The number of HGV movements to be generated in relation to the proposed Waste Transfer Station and Materials Recycling Facility has been calculated based on a worst-case scenario. This is that all loads to the WTS would be brought to the site in 3 tonne loads. Based on this calculation, it is proposed that the proposed WTS would generate 60 vehicle movements per day (30 in and 30 out) and 16 staff movements (8 in and 8 out).
4.4.5 A Transport Statement (attached at Appendix 4) has been prepared and considers the impact of proposed HGV movements to be generated at the Application Site in the context of those already generated via the westernmost access. The Statement therefore considers the impact of the proposed development in conjunction with existing vehicle movements generated at the wider POW site. In conclusion the Transport Statement states that:

'It is considered that the proposed waste transfer and recycling centre will not have a detrimental impact on the operation of the local highway network with a maximum predicted number of additional generated trips between 4 and 7 per hour.'

4.4.6 In order to provide appropriate restriction on the proposed activities it is suggested that HGV access and egress to the Waste Transfer Station is restricted to the eastern access point. It is proposed to undertake some minor improvements to the easternmost access point in the form of resurfacing and the provision of kerbs to improve kerb radii and is shown on Drawing 20237_03_00b.

4.4.7 In addition to the above restriction it is also proposed to restrict daily HGV movements and the delivery hours to between 7.00am – 16.00pm, which would avoid peak hours in the evening. The logic of this is to limit the impact of HGV movements on the wider strategic highway network at peak times, particularly the double roundabout in Byfield.

4.4.8 The Transport Statement includes vehicle tracking which shows that two HGV’s can safely enter and leave the site. As stated above minor improvements are proposed to the site access, which include resurfacing and the provision of kerbs in order to improve the current site access. It also shows that there are acceptable visibility splays in both directions.

4.4.9 The proposed catchment area is shown on the Catchment Area Plan included in Appendix 5. This is local in scale and therefore in accordance with the guidance for preliminary treatment facilities and Policies 12 and 13 of Northamptonshire’s Local Plan (2014).

4.4.10 The Transport Statement included in Appendix 4 includes consideration of staff movements. As far reasonably practicable, staff will be encouraged to car share or cycle to work. A bicycle rack will be provided to facilitate this.

4.4.11 As there is no current restriction on vehicle movements from the area of the Application Site, the noise generated from the current HGVs entering and leaving the site is not restricted. This planning application, if permitted, would put a restriction on the amount of HGVs entering and leaving the site and therefore bring greater control over the noise generated from the HGVs. Noise is covered further in the following section.

4.4.12 Overall, for the reasons outlined above the proposed development is considered to be compliant with Policy 23 of Northamptonshire County Council’s Waste Local Plan (2014).

**Noise**

4.4.13 Policy 22 of Northamptonshire County Council’s Local Plan (2014) is concerned with protecting local amenity. There are no residential dwellings within a 650 metre radius of the Application Site. The closest residential property is located on the Twistle Road which is approximately 700 metres to the east of the site.
4.4.14 There is already some noise created from the existing industrial and waste activities on the POW complex. Therefore, the background noise levels within the site are already relatively high. The Application Site also benefits from an Established Use Certificate (DA/84/390/EU) for vehicle dismantling which does not set a restriction on noise, vehicle movements, hours of operation or tonnages. The existing site therefore could potentially generate a significant amount of noise, especially since the vehicle dismantling does not take place within a building.

4.4.15 The proposed development seeks to bring the Application Site under greater control, with a limit by way of planning condition on noise and vehicle movements. The processing of material would also take place within a building, as opposed to outside (which is currently the case with the vehicle dismantling operations. A noise assessment has been carried out, in order to fully understand the amount of noise that would be generated by the proposed development. This is included in Appendix 6. It concludes that noise levels from the proposed development will be at an acceptable level providing that there is acoustic insulation included on the proposed building. The requirement of the acoustic fence will be determined one the site is operational and noise levels have been monitored. If the acoustic insulation on the building ensures the required noise limit of 65dB(a) at the site boundary, then an acoustic fence will not be required. The acoustic barrier specification is included in Appendix 3.

4.4.16 The current hours of operation are unrestricted. The proposed hours of operations are restricted to:
- Monday to Friday: 07:00 - 18:00
- Saturdays: 08:00 - 13:00
- Sundays and Bank Holidays: Closed

4.4.17 Therefore, the noise generated from site operations and deliveries will only be during the working day.

4.4.18 If the proposed development is granted planning permission, it would bring the site under greater control. For the reasons outlined above, the proposed development is considered to be compliant with Policy 22 of Northamptonshire County Council’s Local Plan (2014).

Landscape and Visual Amenity

4.4.19 Policy 22 of Northamptonshire County Council’s Local Plan (2014) is concerned with protecting local amenity. The site is located in on an already established waste/industrial complex which benefits from several grants of planning permission.

4.4.20 The entire POW complex is contained by a mature belt of established planting. Consequently, views into and out of the site are limited. The Application Site is bordered on three sides by other waste/industrial uses on the POW site and a mature hedgerow to the east.

4.4.21 If an acoustic fence is required, an appropriate stand-off distance from the hedgerow to the east will be maintained in order to ensure that no harm is caused. The requirement of an acoustic fence will be determined by whether the appropriate noise limits at the boundary of the site can be met by the specification of the building (see the previous noise section).

4.4.22 The current vehicle dismantlers operation stores material in stockpiles on the site. These can partially be seen from outside the site. The proposed building will provide a benefit in terms of views of the site as it will neaten the overall appearance of the Application Site.
There are no long distance views of the Application Site, which is part of an existing industrial complex. The entire industrial complex is surrounded by established tree planting and a 1.8 metre high fence.

For the reasons outlined above, the proposed development is considered to be in accordance with Policy 22 of Northamptonshire County Council’s Local Plan (2014).

Ecology

The whole site is currently actively used for industrial related operations. Therefore, there is no ecological interest at the site. No additional landscaping is proposed and there is already significant screening from the existing boundary vegetation.

No vegetation will be removed in order to implement the proposed development. No external lighting will be required as part of this proposal. Therefore, no ecology surveys are considered necessary.

Odour

Policy 22 of Northamptonshire County Council’s Local Plan (2014) is concerned with protecting local amenity. There are no residential dwellings within a 650 metre radius of the Application Site and therefore can be considered to be isolated. The proposed development involves importing inert and dry recyclable waste. These types of waste do not biodegrade or decompose and consequently are not odorous in nature. Consequently, the proposed development is extremely unlikely to cause an odour issue. The site operator will be required to operate the site in accordance with an Environmental Permit, which will control issues such as odour via the environmental management procedure. For the reasons outlined above, it can be concluded that there is no conflict with Policy 22 with regard to odour.

Dust and Litter

All vehicles entering and leaving the site will be sheeted in order to reduce the risk of litter. The proposed new building will further reduce the risk of litter. All vehicles entering and leaving the site will traverse the impermeable surfaced yard. They will therefore not be muddy and cause any dust.

Flood Risk

Policy 22 of Northamptonshire County Council’s Local Plan (2014) is concerned with protecting local amenity. The Site is located in Flood Risk Zone 1 and therefore has a less than 1 in 1000 chance of flooding. The site is not designated as a groundwater protection zone and the closest brook / stream lies to the west of the site.

The proposed development would include an impermeable surface to the site, and surface waters will drain to soakaways, are currently fitted with interceptors.
5 CONCLUSIONS

5.1.1 This Planning Statement has assessed the development proposal at Boddington Road, Byfield, Daventry, Northamptonshire (the Application Site).

5.1.2 The location of the Waste Transfer Station/ Materials Recycling Facility has been considered and it has been concluded that the location of the WTS/MRF on an existing industrial/waste complex with existing permissions and uses is appropriate, due to compliance with Policies 12 and 13 of Northamptonshire County Council’s Waste Local Plan (2014).

5.1.3 The proposed development is sustainable in nature and would make a contribution towards the governments recycling initiatives.

5.1.4 The current Certificate of Lawful Established Use (DA/84/390/EU) which the vehicle dismantling operations operate under does not restrict vehicle movements, tonnages, hours of operation or noise. Consequently, if planning permission was granted for this development, it would bring the site under greater control in terms of restriction of vehicle numbers.

5.1.5 Currently, all of the scrap material is located externally which is not visually appealing. It is proposed to erect an open fronted building which will contain much of the activity within one building. This would provide a visual enhancement to the area, as well as containing the noise of the activities.

5.1.6 The proposed facility will create 8 new jobs, support the jobs of many of the Applicants existing employees and create many indirect jobs through the construction process.

5.1.7 If planning permission is granted, improvements will be made to the access to make it safer to use. A Transport Assessment has been carried out which demonstrates vehicle tracking and adequate visibility splays.

5.1.8 This Planning Statement has assessed the environmental impacts associated with the development against the Development Plan policy requirements and it is concluded that no conflict arises.

5.1.9 In overall conclusion, it is considered that the positive attributes associated with this proposal development clearly outweigh any potential negative impacts and that planning permission should be granted.
### APPENDIX 1: Validation Checklist

<table>
<thead>
<tr>
<th>Item</th>
<th>Included/Not Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Statement</td>
<td>Included</td>
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<tr>
<td>Air Quality Assessment</td>
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</tr>
<tr>
<td>Archaeology</td>
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<tr>
<td>Cumulative Impact</td>
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<td>Daylight/Sunlight Assessment</td>
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</tr>
<tr>
<td>Design Statement</td>
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</tr>
<tr>
<td>Dust, mud and debris on the highway and Litter</td>
<td>Included, see section 4.4</td>
</tr>
<tr>
<td>Environmental Impact Statement</td>
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</tr>
<tr>
<td>Ecology / Protected Species / Biodiversity Survey &amp; Report</td>
<td>Not Included</td>
</tr>
<tr>
<td>Flood Risk Assessment</td>
<td>Not Included</td>
</tr>
<tr>
<td>Foul Sewerage Assessment</td>
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<tr>
<td>Geotechnical Appraisal</td>
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</tr>
<tr>
<td>Health Impacts</td>
<td>Not Included</td>
</tr>
<tr>
<td>Heritage Assessment (including historical features and Scheduled Ancient Monuments) / Conservation Area Appraisal</td>
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</tr>
<tr>
<td>Hydrological and Hydrogeological Assessment</td>
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</tr>
<tr>
<td>Land Contamination Assessment / Contamination Risk Assessment</td>
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</tr>
<tr>
<td>Landscape Assessment</td>
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</tr>
<tr>
<td>Landscaping Details</td>
<td>Not Included</td>
</tr>
<tr>
<td>Lighting Assessment</td>
<td>Not Included</td>
</tr>
<tr>
<td>Minerals Safeguarding</td>
<td>Not Included – no lighting is proposed.</td>
</tr>
<tr>
<td>Noise Impact Assessment</td>
<td>Included, see section 4.4</td>
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<tr>
<td>Odour Impact Assessment</td>
<td>Included, see section 4.4</td>
</tr>
<tr>
<td>Parking &amp; Access Arrangements</td>
<td>Included, see section 4.4</td>
</tr>
<tr>
<td>Phasing / Working Programme</td>
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</tr>
<tr>
<td>Photographs/Photomontages</td>
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<tr>
<td>Planning Obligations</td>
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<tr>
<td>Draft Head(s) of Terms (s.106 Town and Country Planning Act 1990)</td>
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</tr>
<tr>
<td>Playing Fields and Recreational Facilities</td>
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</tr>
<tr>
<td>Public Rights of Way</td>
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<tr>
<td>Renewable Energy and Climate Change</td>
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<tr>
<td>Restoration and Aftercare Statement/Plans</td>
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<td>Statement of Community Involvement</td>
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<tr>
<td>Structural Survey</td>
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<tr>
<td>Survey of Levels</td>
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<tr>
<td>Transport Assessment</td>
<td>Included, see section 4.4</td>
</tr>
<tr>
<td>Travel Plan</td>
<td>Included, see section 4.4</td>
</tr>
<tr>
<td>Tree and Hedgerow Survey/Arboricultural Report</td>
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</tr>
<tr>
<td>Utilities Statement</td>
<td>Not Included</td>
</tr>
<tr>
<td>Vermin and Birds</td>
<td>Not Included</td>
</tr>
<tr>
<td>Waste Audit and Waste Management Facilities Strategy</td>
<td>Not Included</td>
</tr>
</tbody>
</table>
APPENDIX 2: Certificate of Established Use – Vehicle Dismantling
APPLICATION NO. DA/84/0390

TOWN AND COUNTRY PLANNING ACTS,ORDERS AND REGULATIONS.

ESTABLISHED USE CERTIFICATE

Application No. DA/84/0390

Name & Address of Applicant
MR. WALTER ROBERT MUNRO,
MARTON ROAD,
BIRDINGBURY, RUGBY. CV23 8EH

Name & Address of Agent
MESSRS. BRETHERTON TURPIN & PELL,
16 CHURCH STREET,
RUGBY,
WARWICKS.

Date of Application 24/05/84

Location of Development
PART OF P.O.W. CAMP, BODDINGTON ROAD, BYFIELD, NORTHANTS

Description of Development
ESTABLISHED USE CERTIFICATE - USE OF SITE FOR MOTOR VEHICLE DISMANTLING.

Take Notice that the Daventry District Council HEREBY CERTIFY that the USE OF THE LAND shown on the attached plan for the purposes specified above was on the 11/07/84 ESTABLISHED within the meaning of paragraph(a) of Section 94 (1) of the Town and Country Planning Act 1971.

Signed
CHIEF EXECUTIVE OFFICER

Dated 12/07/84

N.B. This certificate is issued for the purposes of Section 94 of the Town and Country Planning Act 1971 only. It certifies that the use of the land for the purpose named is not liable to enforcement action under section 87 of that Act, but it is not a grant of planning permission and does not necessarily entitle the owner or occupier of the land to any consequential statutory rights which may be conferred where planning permission has been granted, under Part III of the Town and Country Planning Act 1971, for a use of land.
DAVENTRY DISTRICT COUNCIL
Town and Country Planning Act 1971
Appeal against refusal of Established Use Certificate at former P.O.W. Camp,
Boddington Rd. Byfield.
D.D.C.ref. DA/82/579
D.O.E.ref. APP/D/83/31

PRWAIGHTS DIPTP.MRTPI.
CHIEF PLANNING OFFICER
DAVENTRY DISTRICT COUNCIL
ABBEY STREET, DAVENTRY

Site of ESTABLISHED USE CERTIFICATE, APPLICATION

PLAN NO. DG 432/2/4
SCALE 1:500(approx)
DATE APRIL '84

This is the plan referred to in an application for existing use Certificate
by Walter Robert Munro dated the 23rd May 1984
APPENDIX 3: Acoustic Barrier
PROPOSED ACOUSTIC SCREEN
Proposed Waste Transfer Station and Materials Recycling Facility
Former POW Site Boddington Road Byfield Northamptonshire NN11 6XU
Scale rts
Djc Associates Planning Advisors Hunters Lodge Fox Covert Drive Roade Northants NN7 2LL
Tel. 01604 864279 Mob. 07929 277783 e-mail: dave.collins@ipopenworld
APPENDIX 4: Transport Statement
PROPOSED WASTE TRANSFER STATION AND MATERIALS RECYCLING FACILITY, 
BODDINGTON ROAD, BYFIELD, NORTHAMPTONSHIRE
REF: 20237/04-15/3956 REV B
TRANSPORT STATEMENT – NOVEMBER 2015

Introduction
This Transport Statement (TS) has been produced in order to support a proposed development of a waste transfer station and materials recycling facility on Boddington Road, Byfield, Northants. The site covers an area of approximately 0.31 hectares and will have the capacity to deal with up to 25,000 tonnes of non-hazardous and inert waste per annum.

The site proposals include the construction of a new building with a floor area of 566sqm that will provide cover and containment for the processing of waste. The proposed development area and adjacent land currently operates as a vehicle dismantlers, which would cease with development of the proposed use. A plan showing the site location is attached in Appendix A with a site layout plan attached in Appendix B.

This TS has been produced to provide further information on the existing highway conditions, potential trip generation and the site access following correspondence with Northamptonshire County Council (NCC).

Following submission of previous Transport Statements to NCC, additional work has been undertaken to address concerns raised by NCC including the following;

- Traffic Count of the Existing Site Access
- Preparation of an Access design showing any improvements required to accommodate HGV movements
- Additional information regarding trip generation

This TS has therefore been prepared to include the additional information detailed above.

Site Location
The proposed site area forms part of larger premises of similar uses to the north of Boddington Road, and is located approximately 1km west of Byfield and approximately 11km south west of Daventry. Access to the site is currently taken via an access road with gates that are set back approximately 12m from the edge of Boddington Road. The access road also lies alongside the entrance to the adjacent field. The site, along with adjacent land to the north and west is enclosed by hedge and trees which restricts view into the site.

Policy
The proposed facility is purposely designed to recycle inert waste and reduce the amount that would previously be sent directly to landfill. The development accords with Northamptonshire County Council’s aims of developing its existing sustainable waste management network and increasing capacity for the recycling of inert waste partly by the re-development of existing sites as stated in Policy 12 and 13 of Northamptonshire County Council’s Adopted Local Plan (2014). In addition, the application site is located in an area where there are no other facilities dealing with the sorting and recycling of similar types of waste.

Northamptonshire’s Adopted Minerals and Waste Local Plan (2014) Policy 22 (Impact of minerals and waste development) states proposals for waste development will only be
permitted where site access and the local highway network can safely accommodate traffic associated with the development. Where it is considered a proposal will generate traffic that has an impact of the local and/or strategic highway network a transport assessment will be required.

**Existing Local Highway Network**
The local highway network in relation to the development site comprises Boddington Road and the A361.

Boddington Road is single carriageway approximately 5m wide with grass verges, trees and vegetation on both sides of the road. No pedestrian footways or street lighting are noted and the road is subject to a 60mph speed limit with the exception of the centre of Byfield where a 30mph limit applies.

The A361 connects the outskirts of Daventry and the M1 to the north east to the M40 and the fringes of Banbury to the south west through the centre of Byfield. The A361 is a single carriageway road, approximately 6.5m wide with a 60mph speed limit in force along the majority of its length excluding residential areas where this is reduced to 30mph.

**Accident Data**
Personal injury accident (PIA) data has been obtained from NCC for most recently available 5 year period (31/01/2009 to 31/01/2014). The following paragraphs provide analysis of the recorded PIAs within the identified study area. Full accident data records are included in Appendix C.

**Figure 1–PIA Location Plan**

In total there have been 4 PIAs recorded within the study area during the most recently available 5 year period. A summary of the number of recorded accidents, split by year and severity is provided below in Table 1.
Table 1: Breakdown of accidents within the study area

<table>
<thead>
<tr>
<th>Year</th>
<th>Slight</th>
<th>Serious</th>
<th>Fatal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/2009</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>2011</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>2012</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>2013</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>01/2014</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1 shows that there have been 0 fatal PIAs, 2 serious PIAs and 2 slight PIAs recorded within the study area during the 5 year assessment period. The two slight accidents occurred at the roundabout within Byfield and were both a result of driver error. The two serious accidents occurred close to the reservoir car park west of the site, along Boddington Road. Both the serious accidents were attributed to excess speeds for the weather conditions therefore, driver error was to blame.

Due to there being a low number of accidents recorded within the vicinity of the site, the accident data does not suggest a particular road safety concern within the study area.

**Sustainability**

There are three bus services that operate within Byfield. Service GA01 provides a link between Woodford Halse and Banbury hourly between 0736 and 1636 with service GA02 linking Woodford Halse with Rugby on an hourly basis between 0720 and 1820. Service 200 operates along High Street six days a week running hourly between the times of 0704 and 1849. This service provides access to Daventry, Woodford Halse and Banbury. The closest bus stops to the site are located in the centre of Byfield on the A361, approximately 1.5km from the site entrance. These stops feature lay-by, shelter and timetable facilities and can be reached via Boddington Road and the A361 High Street although it is to be noted that there are no pedestrian facilities along this route.

As part of the proposals for the new onsite building, covered and secure cycle racks will be provided in order to encourage staff to travel to and from work by sustainable means thus potentially reducing the number of vehicle trips generated by the development.

**Trip Generation and Vehicular Impact**

**Existing Site**

Current operations at the site and on adjoining land already generate trips through the delivery and distribution of scrap vehicles, parts and building materials. It is understood that the majority of these trips use the A361 to approach and exit the site as the road links the two nearest large towns of Banbury and Daventry along with the M40.

In order to provide additional information in relation to existing traffic movements generated by the overall site, a traffic count has been undertaken by a specialist traffic survey company on 18th February 2013. A summary of the results are provided below and a copy of the data recorded is attached in Appendix D. It should be noted that the vehicle movements to and from the site were taken from the west access only, due to the fact that the eastern access was blocked off at the time of the survey.
Table 2: Summary of Traffic Survey Results

<table>
<thead>
<tr>
<th>Time</th>
<th>Car</th>
<th>LGV</th>
<th>OGV1</th>
<th>OGV2</th>
<th>ALL VEHICLES</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>In</td>
<td>Out</td>
<td>In</td>
<td>Out</td>
<td>In</td>
</tr>
<tr>
<td>0700 - 0800</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0800 - 0900</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>0900 - 1000</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1000 - 1100</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1100 - 1200</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
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<td>1200 - 1300</td>
<td>2</td>
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<tr>
<td>1300 - 1400</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1400 - 1500</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1500 - 1600</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
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<td>23</td>
<td>12</td>
<td>12</td>
<td>0</td>
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</table>

Table 2 above shows the existing site generates in the region of 166 daily trips. Of these trips, 58% are undertaken by OGV2 with 28% undertaken by car. No pedal cycle or motorcycle trips were noted during the survey.

The proposed development will replace some existing operations. It is reasonable to assume that some of the trips generated by the proposed use can be offset by those already generated and overhead images of the previous vehicle dismantlers (found in Appendix E) show in excess of 100 vehicles present on site and therefore it is considered the previous use would have generated a number of daily HGV and car movements. Taking this into consideration, the Established Use Certificate (EUC) DA/84/390/EU for vehicle dismantling highlights that the site is unrestricted in terms of vehicle numbers, operating hours and tonnages allowed therefore, there is no current restriction on the site in relation to its operation. It should be noted that the proposed vehicles associated with the development will use a separate access, only to be used for the proposed development.

Proposed Development
Information provided by the applicant states that the average expected load of delivery vehicles to be between 3 and 5 tonnes and therefore, Table 3 below sets out a best and worst case scenario of the potential number of trips to be generated by the delivery of waste to the site. The proposed development will have the facility to store up to 1000 tonnes of sorted waste and therefore, the number of daily distribution trips has the potential to vary depending on the amount of waste stored onsite at any one time. It is to be noted that the vehicles used to distribute sorted waste will be larger than the delivery vehicles with an approximate carrying capacity of 15 tonnes therefore limiting the number of trips generated during the distribution phase.

Table 3: Summary of trip generation for the delivery of waste to the site

<table>
<thead>
<tr>
<th></th>
<th>Worst Case Scenario</th>
<th>Best Case Scenario</th>
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<tbody>
<tr>
<td>Annual Capacity of Site</td>
<td>25000 tonnes</td>
<td></td>
</tr>
<tr>
<td>Assumed Tonnage per HGV Load</td>
<td>3 tonnes</td>
<td>5 tonnes</td>
</tr>
<tr>
<td>HGV’s per year to service site</td>
<td>8333</td>
<td>5000</td>
</tr>
<tr>
<td>Working Year (less 2 weeks for Bank Holidays)</td>
<td>50 weeks</td>
<td>50 weeks</td>
</tr>
<tr>
<td>HGV Deliveries Per Week</td>
<td>167</td>
<td>100</td>
</tr>
<tr>
<td>Working Week</td>
<td>5.5 days</td>
<td>5.5 days</td>
</tr>
<tr>
<td>HGV’S Per Day</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>HGV Movements Per Day</td>
<td>60</td>
<td>36</td>
</tr>
</tbody>
</table>
Approximate No. HGV Movements per hour
(0700 – 1600)

|          | 7 | 4 |

The results of the trip generation table above shows that as a worst case scenario 7 trips per hour could be generated with the best case scenario showing approximately 4 trips per hour. In addition to this the proposed development will have 8 employees (5 full-time and 3 part-time) and therefore, a maximum of 8 additional cars will be present at any one time. It is to be noted that the site will not be open to the public and visitors will be by appointment only and consequently the number of trips generated in this instance will be negligible. The figures in Table 3 above assume traffic movements for the maximum annual allowance (25,000 tonnes) and therefore, may reduce depending on whether the site operates close to its capacity. Furthermore, the proposed development would bring the site under greater restriction in comparison to the Established Use Certificate (EUC) DA/84/390/EU for vehicle dismantling where no restriction is in place, subsequently resulting in a benefit and more control within the highway network.

Notwithstanding the above, it should be noted that the development will not generate trips during the PM peak as the site will close at 1600 to HGV vehicles and therefore the busiest periods for the site will occur outside of the busiest periods for the local highway network (1700 – 1800). Furthermore, the trips generated by the site will be existing trips on the highway network currently taking waste to landfill sites and therefore, the development proposals merely result in the transfer of these existing trips.

It is considered where possible vehicles will be routed to the site along Boddington Road to/from the A361. It is also to be noted that a proportion of traffic will use Boddington Road to the west of the development reducing the impact of the proposed development on the centre of Byfield.

As previously stated, the current certificate of lawful development allows an unrestricted amount of traffic to come into the site through either access. If planning permission is granted for this development, all traffic from this part of the application site will use the eastern access only and there will be a definite restriction in terms of movements from this part of the site. The client would accept a planning condition which restricts vehicle movements to a maximum of 60 per day, and a restriction that the development will only use the eastern access. Overall, at a worse case, the proposed development coupled with the existing development using the western access, would generate a total of 226 two-way vehicle trips (166 via the western access and a restricted 60 via the eastern access). It is stressed that this is a worst case scenario and is likely would not be reached if both developments were in operation.

The proposed development is therefore, considered to accord with Policy 22 of NCC’s Adopted Minerals and Waste Local Plan as the proposals do not cause significant adverse impact on the environment or on local amenity.

**Staff and Parking**

The applicant has stated that once the proposed development is up to full capacity it will employ a total of 8 members of staff, 3 of which will be part time. Currently 4 staff are employed between the vehicle dismantlers and other land uses onsite. It is proposed that a maximum of 8 parking spaces will be provided onsite which is considered more than sufficient to serve the demand for the proposed development and therefore no on-street parking or parking on the adjacent verge will occur.

**Travel Plan**

Due to the nature of the business and that the majority of the trips made to and from the site will be by skip lorry or similar it is considered that a Travel Plan for the site would be ineffectual. However, travelling sustainably to and from the development by staff will be actively encouraged by site management and the provision of cycle racks and the promotion
of car sharing will help to keep the impact the development will have on the local highway network to a minimum.

**Access**

Access to the development will be taken from the existing site entrance road leading on to Boddington Road. The access road is approximately 7 – 7.5m wide with visibility splays of 2.4x 215m - which is more than suitable for the type of vehicles likely to enter and exit the site. The position of the site gates, approximately 12m from the edge of Boddington Road, leaves room for vehicles waiting to enter the site to do so off the highway.

Drawing 20237_03_002b attached in Appendix F shows tracking of an HGV in and out of the site along with the provision of a new section of carriageway construction and kerbline within the highway boundary that will be carried out as part of a Section 278 agreement. Drawing 20237_03_002b also shows the proposed site access with visibility splays identified.

**Mitigation**

In order to mitigate the impact on the local highway network, a number of measures are proposed as summarised below;

- The annual capacity of the site will be limited to 25,000 tonnes.
- Site closure to vehicle trips at 4pm (this will negate any impact on the local highway network during the PM peak period).
- Improvements to the existing access as shown on drawing 20237_03_002b.

**Summary**

It is considered that the proposed waste transfer and recycling centre will not have a detrimental impact on the operation of the local highway network with a maximum predicted number of additional generated trips between 4 and 7 per hour. However, it is to be noted that the land use assessed in this Transport Statement will largely replace an existing permitted site use as a vehicle dismantlers. Whilst it has not been possible to clarify whether any of the recorded vehicle numbers originated at the Application Site, it is reasonable to assume that the trips to be generated by the proposed use can be offset in part against the trips recorded at the western most access. However, for the purposes of ensuring a robust assessment of potential impact a worst case scenario which considers the proposed vehicle generation in addition to the existing recorded trips generated by the whole Boddington Road complex has been assessed.

Access to the site will comprise some minor adjustments including resurfacing and provision of kerbs in order to improve the current site access. The access has excellent visibility in both directions and is of sufficient width to accommodate the vehicles which are likely to access the site. In addition, the access to the site is set back approximately 12m from the edge of the road therefore preventing vehicles waiting to access the site from obstructing the highway.

The proposed development will bring the site under greater restriction in comparison to its currently permitted use subsequently, resulting in a benefit and more control within the highway network. The proposed development is therefore, considered to accord with Policy 22 of NCC’s Adopted Minerals and Waste Local Plan (2014) as no off-site highway improvements are required and the proposals do not cause significant adverse impact on the environment or on local amenity.

Based on the information provided within this TS, there is no reason in highway or transportation terms why the proposed waste transfer station and materials recycling facility at Boddington Road, Byfield, Northamptonshire should not proceed.
Report Prepared By:                              Report Approved By:

[Signature]

Andrew Roberts, BA(Hons) AMCIHT MTPS        Tim Rose, BA(Hons) MCIHT MTPS

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SITE LOCATION PLAN

Project: BODDINGTON ROAD, BYFIELD, NORTHAMPTONSHIRE
File Ref: 20237
O.S. Grid Ref: 450283, 253369
Postcode: NN11 6XU
APPENDIX B
APPENDIX C
Selected map area

Boddington Road Byfield and Surrounds. 5 Years Collision Data up to and including the 31st January 2014.

Northamptonshire County Council

SCALE 1:7870
DATE 21/03/2014
DRAWING No.
DRAWN BY S Barber.
## SUMMARY REPORT

**TRAFFMAP**  
AccsMap - Accident Analysis System

**Police Ref.**  
**Acc Class**  
**Date**  
**Time**  
**Grid References**  
**Casualties Ftl Ser Slt**  
**Causation Factors/ Prob L M D**  
**Ped Light**  
**Weather**  
**Road Surface**  
**Vehicle Types**

<table>
<thead>
<tr>
<th>Police Ref.</th>
<th>Acc Class</th>
<th>Date</th>
<th>Time</th>
<th>Grid References</th>
<th>Casualties Ftl Ser Slt</th>
<th>Causation Factors/ Prob L M D</th>
<th>Ped Light</th>
<th>Weather</th>
<th>Road Surface</th>
<th>Vehicle Types</th>
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<td>Serious</td>
<td>24/08/2010</td>
<td>1014</td>
<td>449868</td>
<td>0 1 0</td>
<td>307V1B 410V1A</td>
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<td>Dry</td>
<td>19</td>
</tr>
<tr>
<td>WD233411</td>
<td>Serious</td>
<td>03/07/2011</td>
<td>1745</td>
<td>449977</td>
<td>0 1 0</td>
<td>307V1A 410V1A</td>
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<td>30/07/2012</td>
<td>1605</td>
<td>451740</td>
<td>0 0 1</td>
<td>407V1A 601V1A</td>
<td>0 0 0</td>
<td>Fine without high winds</td>
<td>Dry</td>
<td>9 1</td>
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<td>WD051213</td>
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<td>08/03/2013</td>
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<td>Raining without high winds</td>
<td>Wet/Damp</td>
<td>9 9 9</td>
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**Notes:**  
Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

**Accidents between dates** 01/02/2009 and 31/01/2014  
(60) months

**Selection:**  
Selected using Pre-defined Query:

**Column Totals**  
0 2 0

**Total number of accidents listed:** 4
TRAFFMAP
AcsMap - Accident Analysis System

Accidents between dates 01/02/2009 and 31/01/2014 (60) months
Selection: Selected using Pre-defined Query:

Notes: Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Polic WD341310 24/08/2010 Easting: 449,868 Northing: 253,313 Tuesday Time: 1014
Vehicles 1 Casualties 1 Severity: Serious Road surface: Dry
Weather: Fine without high winds Light: Daylight; street lights present
Specia
Acc Desc: DRIVER OF V1 FAILS TO NEGOTIATE SLIGHT RHB. DRIVER LOSES CONTROL AND LEAVES THE ROAD TO THE N/S.

Causation

<table>
<thead>
<tr>
<th>Factor</th>
<th>Participant</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st: Travelling too fast for conditions</td>
<td>Vehicle 1</td>
<td>Possible</td>
</tr>
<tr>
<td>2nd: Loss of control</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
</tr>
<tr>
<td>3rd:</td>
<td></td>
<td></td>
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<tr>
<td>4th:</td>
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<tr>
<td>6th:</td>
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Occurred on C55, BODDINGTON ROAD, BYFIELD. AT THE ENTRANCE TO THE RESERVOIR CAR PARK.

Vehicl 1 Goods <= 3.5 tonnes mgw Skidded Going ahead right hand bend
Not in restricted lane Front Age 0 34 Breast Not provide
First point of impact: Vehicle direction: NE to NW Driver Postcode: WV21HR
FRV Not foreign registered vehicle Journey: Journey as part of work

Casualty Reference: 1 Age: 34 Male Driver/rider Severity: Serious

Polic WD233411 03/07/2011 Easting: 449,977 Northing: 253,315 Sunday Time: 1745
Vehicles 1 Casualties 1 Severity: Serious Road surface: Dry
Weather: Fine without high winds Light: Daylight; street lights present
Specia
Acc Desc: V1 TRAVELLING E ALONG UPPER BODDINGTON ROAD WHEN RIDER LOSES CONTROL OF BIKE ON DECLINE AND FALLS FROM BIKE.

Causation

<table>
<thead>
<tr>
<th>Factor</th>
<th>Participant</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st: Travelling too fast for conditions</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
</tr>
<tr>
<td>2nd: Loss of control</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
</tr>
<tr>
<td>3rd: Impaired by alcohol</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
</tr>
<tr>
<td>4th: Careless/Reckless/In a hurry</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
</tr>
<tr>
<td>5th: Inexperienced or learner driver/rider</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
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<tr>
<td>6th:</td>
<td></td>
<td></td>
</tr>
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Occurred on C55, UPPER BODDINGTON ROAD, BYFIELD. 980M W OF THE U6111, THE TWISTLE.

Registered to NCC-MGWSP
TRAFFMAP

AccsMap - Accident Analysis System

Accidents between dates 01/02/2009 and 31/01/2014

Selection: Selected using Pre-defined Query:

Vehicle 1 Motorcycle over 500cc
Not in restricted lane
First point of impact: Front
Vehicle direction: W to E
FRV Not foreign registered vehicle

Casualty Reference: 1 Age: 26 Male

Notes: Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Going ahead
No skidding, jack-knifing or overturning
Age 26 Male
Driver Postcode: OX173QH
Journey: Other/Not known

Selection: and Accidents between dates 31/01/2014 01/02/2009

Started using Pre-defined Query:

Vehicle 1 Motorcycle over 500cc
Not in restricted lane
First point of impact: Nearside
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Casualty Reference: 1 Age: 17 Male

Notes: Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Going ahead
No skidding, jack-knifing or overturning
Age 17 Male
Driver Postcode: NN113QT
Journey: Commuting to/from work

Acc Desc: V1 COLLIDES WITH V2 WHILST OVERTAKING

Causation

Factor:
1st: Passing too close to cyclist, horse rider or pedestrian
2nd: Aggressive driving
3rd: Failed to look properly
4th: Dangerous action in carriageway
5th:
6th:

Participant:
Vehicle 1 Very Likely
Vehicle 1 Very Likely
Vehicle 1 Possible
Vehicle 1 Possible

Confidence:

Occurred on A361 BYFIELD N/E FROM ROUNDABOUT WITH C55 WOODFORD RD

Vehicle 1 Car
Not in restricted lane
First point of impact: Offside
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Vehicle 2 Pedal cycle
Not in restricted lane
First point of impact: Nearest
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Casualty Reference: 1 Age: 17 Male

Notes: Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Going ahead
No skidding, jack-knifing or overturning
Age 76 Male
Driver Postcode: NN113YT
Journey: Other/Not known

Selection: and Accidents between dates 31/01/2014 01/02/2009

Started using Pre-defined Query:

Vehicle 1 Motorcycle over 500cc
Not in restricted lane
First point of impact: Nearest
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Casualty Reference: 1 Age: 17 Male

Notes: Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Going ahead
No skidding, jack-knifing or overturning
Age 17 Male
Driver Postcode: NN113QT
Journey: Commuting to/from work

Acc Desc: ALL V'S N/B ON A361. V3 STOPS FOR RAB, V2 STOPS, V1 COLLIDES WITH R OF V2 WHICH COLLIDES WITH R OF V3.
TRAFFMAP
AccsMap - Accident Analysis System

Accidents between dates 01/02/2009 and 31/01/2014 (60) months

Selection:
Selected using Pre-defined Query:

Notes:
Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

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<th>Factor</th>
<th>Participant</th>
<th>Confidence</th>
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<tr>
<td>1st: Slippy road (due to weather)</td>
<td>Vehicle 1</td>
<td>Very Likely</td>
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<tr>
<td>2nd: Sudden braking</td>
<td>Vehicle 1</td>
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<tr>
<td>3rd: Distraction in vehicle</td>
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<tr>
<td>4th: Careless/Reckless/In a hurry</td>
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<td>Possible</td>
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<tr>
<td>5th:</td>
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<td></td>
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<td>6th:</td>
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CAUSATION
Occurred on AT RAB OF A361 AND C55 BODDINGTON RD, BYFIELD

Vehicle 1
Car
Not in restricted lane
First point of impact: Front
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Vehicle 2
Car
Not in restricted lane
First point of impact: Back
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Vehicle 3
Car
Not in restricted lane
First point of impact: Back
Vehicle direction: SW to NE
FRV Not foreign registered vehicle

Participant:

<table>
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<tr>
<th>Participant</th>
<th>Confidence</th>
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</thead>
<tbody>
<tr>
<td>Vehicle 1</td>
<td>Very Likely</td>
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<tr>
<td>Vehicle 1</td>
<td>Possible</td>
</tr>
<tr>
<td>Vehicle 1</td>
<td>Possible</td>
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Participant:

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<th>Confidence</th>
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<tr>
<td>Vehicle 1</td>
<td>Possible</td>
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<tr>
<td>Vehicle 1</td>
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</table>

Casualty Reference: 1 Age: 25 Female Driver/rider Severity: Slight

Participant:

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<tbody>
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<td>Vehicle 1</td>
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Participant:

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<td>Vehicle 1</td>
<td>Possible</td>
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</table>

Casualty Reference: 1 Age: 25 Female Driver/rider Severity: Slight

Participant:

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<th>Participant</th>
<th>Confidence</th>
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Participant:

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Casualty Reference: 1 Age: 25 Female Driver/rider Severity: Slight
Accidents between dates: 01/02/2009 and 31/01/2014

Selection:
Selected using Pre-defined Query:

Notes:
Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

Accidents involving:

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<td>Pedal cycles</td>
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<td>1</td>
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<tr>
<td>Horses &amp; other</td>
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<tr>
<td>Total</td>
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Casualties:

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<th>Total</th>
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<td>1</td>
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<td>Passenger</td>
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<td>Cyclist</td>
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<tr>
<td>Total</td>
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<td>2</td>
<td>2</td>
<td>4</td>
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Accidents between dates 01/02/2009 and 31/01/2014 (60) months

**Selection:**
Selected using Pre-defined Query:
Boddington road Byfield and Surrounds. 5 years collision data up to and including the 31st January 2014

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<th>Police Ref.</th>
<th>Date</th>
<th>Cas.</th>
<th>Sev.</th>
<th>Cys</th>
<th>Peds</th>
<th>Ch</th>
<th>OAPs</th>
<th>Vis.</th>
<th>Manv.</th>
<th>Road Cond.</th>
<th>Time</th>
<th>Location</th>
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<tr>
<td>WD341310</td>
<td>24/08/2010</td>
<td>1</td>
<td>Serious</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Light</td>
<td>No turn</td>
<td>Dry</td>
<td>1014</td>
<td>C55, BODDINGTON ROAD, BYFIELD. AT THE ENTRANCE TO TH</td>
</tr>
<tr>
<td>WD233411</td>
<td>03/07/2011</td>
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<td>Light</td>
<td>No turn</td>
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<td>1745</td>
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<td>Light</td>
<td>No turn</td>
<td>Dry</td>
<td>1605</td>
<td>A361 BYFIELD N/E FROM ROUNDABOUT WITH C55 WOODFORD RD</td>
</tr>
<tr>
<td>WD051213</td>
<td>08/03/2013</td>
<td>1</td>
<td>Slight</td>
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<td>Light</td>
<td>No turn</td>
<td>Wet/Damp</td>
<td>1540</td>
<td>AT RAB OF A361 AND C55 BODDINGTON RD, BYFIELD</td>
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**Column Totals**
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**No. of Accidents**
4

Total number of accidents listed: 4
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<th>M/CYCLE</th>
<th>CAR</th>
<th>LGV</th>
<th>OGV1</th>
<th>OGV2</th>
<th>BUS</th>
<th>TOTAL</th>
<th>P/CYCLE</th>
<th>M/CYCLE</th>
<th>CAR</th>
<th>LGV</th>
<th>OGV1</th>
<th>OGV2</th>
<th>BUS</th>
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<td>0730 - 0745</td>
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**Byfield - Manual Traffic Survey, Monday 18th February 2013**

**Produced by Road Data Services Ltd**

**Approach: Site Access**
Overhead Image of Previous Vehicle Dismantlers Use at the Site

Source – Google Maps Dated May 2007
APPENDIX 5: Catchment Area Plan
Intended Catchment Area

14 kilometre radius
APPENDIX 6: Noise Assessment
BS4142:1997 Environmental Noise Survey and Impact Assessment

FIG 1 - View from south on west side entry to site on Boddington Road (Google Maps)

Waste Transfer Site Development
Eco Baughans 2000 Ltd, Boddington Road, Byfield, Daventry

August 2012

Prepared by:
Encon Associates Limited
Kestrel Business Centre
Colwick
Nottingham
NG4 2JR
Summary

At the request of Daventry District Council (DDC) and for inclusion as part of a planning application Encon Associates have completed an environmental noise survey and impact assessment at Boddington Road, Byfield, Nr. Daventry.

The survey has been completed to assess the environmental impact of noise levels as may be produced at the surrounding environment by the operation of a proposed Waste Transfer facility at an existing fabrication works and concrete crushing plant operated by Eco Baughans 2000 Ltd., Boddington Road, Byfield, Daventry.

Note that the survey and impact assessment is not relevant to construction works but to the planned operation of the newly proposed Waste Transfer plant and machinery.

The survey has been commissioned by DJC Associates on behalf of Eco Baughns 2000 Ltd.

In the absence of proposed plant item details with respect to exact locations, exact type of plant and any specific acoustic data it has been agreed with Karen Pell, senior environmental protection officer with DDC, that the measured environmental noise levels will be utilised to calculate limiting sound pressure levels in order that DDC BS4142:1997 preferred day time assessment level of 0dB is met.

The proposed plant items are intended to operate day time only and so the assessment has been completed with reference today time periods and criteria.

Based on the noise survey results and calculations here in we can offer the following conclusions and recommendations:

1. The nearest and most sensitive receiver with respect to possible noise emissions from the proposed Waste Transfer facility was identified as the first house at the Twistle, Westhorp (adjacent to Byfield). This location is just adjacent to Boddington Road.

2. A day time LA90,15min lowest background noise level of 31dB(A) was recorded between 07:00 to 12:16hrs.

3. Site potential noise sources have been considered as 2 groups, 1 group is representative of external yard activities and operations; the 2nd group is representative of internal activities and operations within the proposed new building and noise level breakout through the building shell.

4. Based on a local authority BS4142:1997 criteria of assessment level = 0dB (Rating level = 31dB(A)) then a limit of 54dB(A) has been set at the proposed site eastern boundary based on site external yard activities and operations.

5. Based on a local authority BS4142:1997 criteria of assessment level = 0dB (Rating level = 31 dB(A)) then a limit of 60dB(A) has been set at 1m around the proposed new building with respect to breakout only across the building walls and roof.

6. These figures represent lower levels than a 62dB(A) boundary level measured at a similar site.

7. If the similar site is representative of likely plant and operations at the proposed Waste Facility then achieving the site boundary level may be difficult unless consideration is given to an acoustic barrier at the eastern boundary. This expected to be around 3.5m H to achieve a further 5 to 8dB(A) noise reduction at receiver R1", effectively allowing a further 5 to 8dB(A) on the site boundary limit which, considering a facade correction could rise to 62/65 dB(A) on the source side.

8. It is suggested that the proposed new building incorporates acoustic insulation specifications to ensure that the limiting breakout level is achieved. This is expected to be realistically achievable without particularly onerous treatments.

9. Acoustic design procedure should be completed with respect to an acoustic barrier and building sound insulation once full plant locations and acoustic details are known.

10. Providing that the recommendations here in are taken up then the apparent conclusion of these investigations is that planning permission should not be refused on the grounds of environmental noise levels.

Final decisions rest with Daventry District Council planning and environmental protection officers.
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2.0 Brief 5
3.0 Survey Details 6
4.0 Quality Assurance 16
5.0 Measured Results 16
6.0 Calculated Noise Levels 18
7.0 Analysis of Results/Assessments 18
8.0 Discussions & Recommendations 20
9.0 Conclusions 21

Appendices

Appendix A Standards and Guidance
Appendix B Glossary of Terms

Attachments

Table 2 - All Pass Noise Levels
Table 3 - 1/3 Octave Band Levels
Table 5 - Calculation procedures
Noise report
1.0 Introduction

In conjunction with a planning application reference 12/00049/WASFUL Encon Associates have been commissioned by DJC Associates to complete an environmental noise survey and impact assessment with respect to the proposed development of a new Waste Transfer facility at Eco Baughans 2000 Ltd. existing fabrication workshop and concrete reclamation yard on Boddington Road, Byfield, Daventry, Northamptonshire.

The submitted planning application has been rejected on the grounds of there being insufficient information with regard to the environmental impact of potential noise emissions from operational activities at the proposed ‘Waste Transfer’ facility.

This noise survey and impact assessment are intended to address previous shortfalls and provide a more informative assessment, it has been requested by Daventry District Council to ensure protection of amenity to residential dwellings in the location of the proposed ‘Waste Transfer’ facility.

This report details the results of the environmental noise survey and impact assessment with respect to the nearest and/or most sensitive of these residential properties.

2.0 Brief

The environmental noise survey and impact assessment will be completed with reference to BS4142:1997; ‘Method for rating industrial noise in mixed residential and industrial areas’, additionally reference is made to the World Health Organisation (WHO) guidelines for community noise-1999

With reference to likely operation times of the proposed Waste Transfer facility the survey will measure existing environmental ambient noise levels at the nearest and/or most sensitive locations over a period representative of the most sensitive environmental conditions, i.e. when ambient noise levels are likely to be at their lowest.

These measured ambient noise levels will yield background noise levels which are then used in a BS4142:1997 assessment for gauging the likely hood of a neighbourhood noise nuisance due to any specific noise levels from the operations at the proposed new waste transfer facility.

Where there are potentially noisy operations, in the form of specific industrial plant, site vehicle movements or other site operations already underway as part of the proposed development then every attempt is made to measure existing noise levels due to these items/operations. Specific noise levels at the nearest and/or most sensitive residential location/s are then based on measured results.

Where these potentially noisy operations are not yet in existence then all references to specific noise levels at the nearest and/or most sensitive residential location/s are then based on manufacturer’s or historic data and desk top calculations

Alternatively where acoustic data is not available for proposed noise sources (specific noise sources) then the noise survey results and methodology outlined in BS4142:1997 will be employed to set maximum acoustic properties (either limiting sound power levels or limiting sound pressure levels at proposed site boundaries) based on measured environmental background noise levels at the nearest and/or most sensitive residential dwellings and achieving a specified BS4142:1997 assessment level.

The goal is to protect the amenity of the local community using best current impact assessment criteria.

Note that survey period, assessment method and initial BS4142:1997 assessment criteria are as agreed with Mz. Karen Pell senior environmental protection officer with Daventry District Council.

Reference will also be made to WHO Guidelines for community noise (Geneva 2000), other national/international criteria may be referred to as relevant.
3.0. Survey details

3.1. Date/Time of Survey

Wednesday 25th July 2012. 7:00hrs onwards.

3.2. Development Site

Eco Baughans 2000 Ltd., Boddington Road, Byfield

3.3. Survey Location

Nearest residential dwellings at The Twistle, Westhorp/Byfield

3.4. Survey carried out by

Mr. Dave Ball M.I.O.A. – Acoustic Consultant, dB Acoustic Services.

3.5. Survey Attended by

The consultant only

3.6. Site Description

The site lies in a rural setting between the small villages of Westhorp and Byfield at 1.2 to 1.7Km east and Little Boddington at 1.9Km West

The nearest major town is Northampton some 25Km North Easterly, Daventry lies some 11Km to the North East.

There are no major trunk roads in the immediate vicinity, the M1 lies 15Km North East and the M40 10Km South West, there are no rail transport network in the immediate or surrounding areas.

Consequently the village setting is a quiet rural environment.

The application is for a Waste Transfer Site at Eco Baughans 2000 Ltd existing site. This existing site is to the rear of a motor trader at the ‘Old POW Camp’ on Boddington Road.

The existing site is given to a fabrication workshop producing waste transfer fabricated products such as screening plant, additionally to the rear of site is a concrete crushing operation that reclaims concrete demolition waste into hard core materials.

The planning application is for a new building at the rear area that will contain waste transfer plant mainly given to sorting different waste products into skips for re-cycling, external areas will involve a number of HGV vehicle movements.

R1 and R2, as indicated at Figs 3 and 4 are considered as representative of the nearest and/or most sensitive neighbouring residential properties, Both are on ‘The Twistle’ and whilst R1 is closer to site an examination of R2 was felt necessary as its background noise levels may be lower due to it being further from the main through road.

A touring caravan site exists on Boddington Road between the sensitive receivers and the proposed development site; this is temporary residential (28days maximum in any 1 year for any individual caravan) and is not regarded as a critical sensitive location with regard to this BS4142:1997 noise survey and impact assessment.

R1 is the first house on the Twistle, R2 it at ‘Fairfield’ further down the Twistle, sensitive receiver positions at 1m from façade at these selected sensitive locations will be referred to as R1’ and R2’
Intervening land appears to be relatively flat with just a very slight rise when travelling to site from ‘The Twistle’; it is in the main open fields with low lying hedgerows and scattered trees. Although at low level direct line of site may be restricted the intervening vegetation will afford little or no excess attenuation of atmospheric airborne noise when considering receivers R1 and R2.

Under the planning application the proposed operating hours are 7am to 6pm Monday to Friday, 8am to 1pm Saturday closed Sundays and Bank holidays.

Fig 1 at the front cover shows the side entrance leading down to site, this is to the North side of Boddington Road and to the west side of site. The new Waste Transfer facility will be accessed via an existing access road to the east side of site.

Figs 2 to 6 (Fig 6 being a copy of drawing No.10.56.10A by DJC Associates) further outline the site and surrounding areas. Fig 7 additionally gives some site dimensions.
FIG 3 - Study area and nearest sensitive receivers (Courtesy of Google maps)

FIG 4 - Sensitive receiver locations R1 and R2 (Courtesy Google Maps.)
3.7. Instrumentation

Noise measurements were obtained using precision grade Type 1 instrumentation, with current laboratory calibration certificates. See Table 1 below. Before and after the survey the measurement apparatus was check calibrated to an accuracy of ±0.3 dB using the Sound Level Calibrator. The Calibrator produces a sound pressure level of 114dB re 2 x 10⁻⁵ Pa at a frequency of 1 kHz.

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*Table 1 - UKAS Calibrated Instrumentation*

Plus a Kestrel 3000 pocket weather station
FIG 6 - DJC associates drawing No. 10.56.10A
3.8. Noise Measurements and Reference Positions

For BS4142:1997 the usual assessment periods are day time as 0700-2300hrs (16hrs), and/or night time 2300-0700hrs (8hrs), although these can be varied slightly dependant on local circumstances. WHO figures and BS8233:1997 refer similarly to the same day time or night time periods.

The proposed new Waste Transfer facility will be day time operation only, 5 days per week only.

The noise survey concentrates on existing environmental ambient noise level measurements representative of R1 and R2 locations during a day time sampling period regarded as being representative of the most sensitive weekday period with respect to background noise level components within the existing ambient noise levels.

This was agreed with Ms. Karen Pell, Daventry District Council environmental protection officer, to be from 07:00hrs onwards to cover a morning period.

P1A and P2 were selected to represent positions 1m from the sensitive residential facades, R1’ and R2’ at R1 and R2.

Note that P1 was initially chosen as measurement position because access was not possible to the first dwelling on The Twistle (early morning), however after a short period the resident was available, access was granted and the monitoring then continued at P1A.
There was no access to Fairfield for P2 measurements, however a timber fence at an adjacent open land was regarded as an equivalent façade location for the purpose of ambient noise level monitoring at R2 receiver.

Figs 7 to 11 illustrate microphone monitoring positions.

These positions represent environmental ambient/background noise measurements in the vicinity of the nearest and/or most sensitive residential receivers R1 and R2, distances from the proposed new plant location to R1 and R2 are shown at Fig 3 and for assessment purposes can be regarded as locating receiver positions R1’ and R2’ 1m from a residential facades at R1 and R2.

Existing Environmental ambient noise level measurements were taken with the sound level meter analyser tripod mounted at 1.45m above ground and at 1m from a reflective façade to represent receiver positions R1’ and R2’

Ambient noise levels for day time assessments were recorded at the 3 positions generally between 07:00 and 12:15hrs for day time they were sampled and recorded every 15 minutes over 1 hour periods at each of positions P1/P1A and P2.

Measured environmental noise parameters for BS4142:1997 and WHO assessments included $L_{Aeq(T)}$, $L_{AF\text{Max}}$ and statistical $L_{A90(T)}$ where $T = \text{measurement period} = 15 \text{ minutes in this case}$.
FIG 7 - Ambient noise survey monitoring positions P1 and P1A

FIG 8 - Illustrating NOR140 tripod mounted at P1 (Receiver R1)
FIG 9 - Illustrating NOR140 tri-pod mounted at P1A (Receiver R1')

FIG 10 - Ambient noise survey monitoring position P2
3.9. **Existing Environmental Ambient Noise Sources - subjective observations**

Early morning to midday main noise sources contributing to environmental ambient at sensitive receivers R1 and R2 were, as a subjective observation, low density traffic to Boddington Road and even less on The Twistle. About 6 vehicles/min at Boddington Road prior to 09:00hrs, after this dropped as low as 2 to 3 vehicles/min. The Twistle, vehicles always rarer, 1 to 2/min (or long periods of 0 road traffic).

Only very loud vehicles on Boddington Road were audible at receiver R2

Frequent although irregular, overhead aircraft; at times quite loud although any passing traffic would mask this.

NOTE absolutely NO discernible audible contribution from any industrial type noise sources certainly no discernible noise due to existing fabrication works and there were no concrete crushing operations underway at the existing site.

The measured background noise levels can be regarded as the most sensitive likely to exist during operational periods of the proposed Waste Transfer facility.
3.10. Proposed Specific Noise Sources

The specific noise sources under investigation are those associated with sorting varied waste products into skips for re-cycling. These are believed to be carried out under cover of the proposed new building, external to this will be HGV movements and the POSSIBLE movement of large steel skips.

Details are not available with respect to the exact plant items that may be in the proposed building, neither is there any information available with respect to potential vehicle movements at the proposed ‘Waste Transfer’ facility.

The clients, DJC Associates has however made available a noise survey report completed by AB Acoustics for E.A. Barnes & Sons Ltd. with respect to a noise survey to measure the impact of the installation of a Waste Separating Plant at Vulcan Road, Litchfield. This however does not help identify noise levels due to specific plant items. –See Attached ‘Noise Report’

The noise levels there in are specific to that site and of no use as an estimating tool for the Boddington road site unless we have detailed information of buildings, plant equipment and its locations and operational characteristics for each site in order to make comparative acoustic estimations.

In view of the lack of information with regard to specific noise sources it has been agreed with Karen Pell, senior Environmental Protection Officer with Daventry District Council, that the noise survey results and methodology outlined in BS4142:1997 will be employed to set maximum sound pressure levels at proposed site boundaries based on measured environmental background noise levels at the nearest and/or most sensitive residential dwellings and achieving a specified BS4142:1997 assessment level.

Daventry District Council policy on BS4142:1997 day time assessment level has been advised as a requirement of 0dB

Outdoor sound propagation formulae with respect to industrial noise sources will be utilised to evaluate a limiting boundary noise level that will be applicable to the eastern boundary as being the most sensitive with reference to sensitive receivers at R1’ and R2’.

3.11. Weather Conditions

Measurements of wind speed, humidity and temperature were made at the start, mid way and at the end of the survey.

4. Quality Assurance

Dave Ball M.I.O.A., is, and has been for 35 years, accredited as a full corporate member of the Institute of Acoustics (M.I.O.A.) membership No. 40712. This membership indicates experience in the field of acoustics and that the members’ skills and work record have been scrutinised by the membership committee.

5. Measured Results for Environmental Ambient Noise Levels

Measured results are given in attached Tables 2 and 3, showing all pass and spectral levels together with relevant comments on the main environmental noise sources contributing to the measured noise levels.

The spectral results have no bearing on the impact assessment but can sometimes serve to support or otherwise what are thought to be the main contributors to the environmental noise levels by highlighting tonal effects.

5.1. All Pass Noise Levels

For the purposes of a BS4142 assessment the all pass broad band measurements are the pertinent parameters. The results at P1 are not considered appropriate and it is the 1m from façade results at P1A and P2 that are most appropriate.

With respect to L_{A90} background noise level it is very similar at both positions with only a 0.3dB difference between them, i.e. from Table 2 the most critical (lowest) background noise levels for BS4142:1997 day time assessment purposes are:-

\[ L_{A90, 15\text{min}} = 31.4\text{dB}(A) \text{ at P1A(R1')} \]

And

\[ L_{A90, 15\text{min}} = 31.7\text{dB}(A) \text{ at P2(R2)} \]
P1A result, relative to R1’ will provide the most critical assessment as it is nearer to site and hence receives less attenuation to air borne noise propagation when considering specific noise levels due to any noise sources at the proposed Waste Transfer facility.

Deliberations on setting a site boundary noise level limit will be based on the day time background noise levels at R1’ i.e. a rounded result of

\[ L_{A90,15} = 31 \text{dB(A)} \text{ at P1A(R1')} \]

The distance from centre of site to R1’,1m from receiver facade at the first property on The Twistle, will be taken as 750m (see Fig 3), the distance from centre of site to site boundary will be taken as

This will sufficed when considering external point source evaluations, when considering breakout noise from the proposed building then we shall take the distance from the proposed building to receiver R1’ as 750m and the distance from the proposed building east side to the east site boundary as

5.2. Spectral noise levels

![Spectral noise levels](image)

**FIG 12 - Existing Ambient 1/3rd Octave Band Levels.**

The spectrum shape illustrated at FIG 12 at first does not appear to illustrate a typical road traffic noise spectrum. Typically a spectral shape for road traffic noise will exhibit highs at low frequency due to heavy vehicle road rumble and/or exhaust noise with a drop off at mid frequencies and then some further rises at higher frequencies due to aerodynamic noise and road surface interaction.

However on closer study we can see that we have a higher low frequency end with some rise at high frequencies, particularly at P1 day time. The reason for the shallow dip or even levelling out towards high frequency ends at P1A day time spectra may be down to ground absorption and possible partial screening by intervening thick hedge (north garden boundary between P1A and Boddington road at first house on the Twistle’) and traffic not moving as fast as it may do on a main trunk road. High frequency ends of road traffic noise are generally attributable to aerodynamic noise and tyre noise from high speed traffic.

Basically the spectral results give no concern as to any unusual ambient noise sources that may not be representative of receiver R1 locations.

There appears to be no evidence of any marked tonal effects that might be expected from industrial noise sources.

With the above comments in mind it is fair to say that Fig 11 supports local traffic noise as being the main contributor to the environmental ambient that was prevalent at the time of the survey.
5.3. Weather
Table 4 indicates the measured weather conditions.

<table>
<thead>
<tr>
<th>Line Ref.</th>
<th>Start of survey period</th>
<th>End of survey period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Temperature/ °C</td>
<td>19.8</td>
<td>28.6</td>
</tr>
<tr>
<td>2 Relative Humidity/%</td>
<td>91</td>
<td>63</td>
</tr>
<tr>
<td>3 Average wind speed/m. Per sec</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>4 Max wind speed/m per sec</td>
<td>1.7</td>
<td>0.7</td>
</tr>
<tr>
<td>5 Precipitation</td>
<td>NONE</td>
<td>NONE</td>
</tr>
</tbody>
</table>

**TABLE 4 - Weather measurements**

The weather conditions were not detrimental to noise measurements.

6. Calculated Source Noise Levels - Boundary Limits

6.1. Noise Sources
Specific details of proposed plant items together with their acoustic properties have not been available at this stage.

For comparative analysis a part report section completed for a similar Waste Transfer operations at E.A. Barnes and Sons Ltd. Litchfield has been supplied, this is separately attached.

It is not possible to use the results of this report to complete a specific BS4142:1997 noise impact assessment, this would require knowledge off every proposed plant item and their location for the Litchfield site and this site so that direct comparisons can be made.

The approach agreed with Karen Pell (Environmental protection officer) of Daventry District Council was to work 'backwards' in effect and set limiting noise emissions from the proposed Waste Transfer site based on the measured ambient/background noise levels and a specified BS4142:1997 assessment and rating level.

The resultant limits will then be viewed in comparison to those of the attached noise report and commented upon as to their feasibility.

7. Analysis of Results / Assessments

7.1. Local Authority Criteria
After telephone discussions between Mr. Dave Ball, Encon, and Mz. Karen Pell, Daventry District Council Environmental protection officer, the methodology employed for the survey was agreed. With respect to BS4142:1997 it was advised that the local authority have a preferred BS4142:1997 day time assessment level of 0dB, i.e. a rating level equal to the LA90 background noise level.

With the intent of offering a full consultation service the implications of the WHO Guidelines on community noise will be briefly commented on with respect to the proposed Bio Mass boiler and drying kilns.

7.2. Calculated Results
Attached Table 5 shows all calculation steps.

Calculations have been completed using the guidance in ISO 9613-2,1996- Attenuation of sound during propagation outdoors Part 2 general method of calculation

Noise limits calculated refer to LAeq 1hr minimum for BS4142:1997 day time assessment, i.e. it is assumed that plant items run constantly for at least 1hr, with this in mind there has been no penalty for intermittent or irregular operations.

Furthermore it is assumed that the proposed plant items will have no distinct tonal content and NO penalty has been allowed for in this respect.
7.3. BS4142 Assessment (See Appendix A and attached Table 5)

From attached Table 5 calculations the following noise level limits have been determined in order to achieve a BS4142:1997 assessment level of 0dB at sensitive receiver R1’

- Maximum LAeq,1hr noise level at east side site boundary during ‘normal day time external yard operations only = 54dB(A)
- Maximum LAeq,1hr noise level at 1m around the proposed Waste Transfer building during normal day time internal operations and due to breakout noise from the proposed building only = 60dB(A)

The previous site in Litchfield gave a measured site boundary level of 62dB(A) under ‘typical’ operating conditions.

If the site in Litchfield is indeed similar then achieving a site boundary level of 54dB(A) may be difficult, achieving a level of 60dB(A) around the proposed building will be dependent on internal equipment and the sound insulation of the building. It is doubtful that a simple single skin sheet steel building would suffice, a more realistic construction would be a combination of heavy masonry blocks with any sheet steel sections being acoustically insulated; acoustic absorption treatment to internal surfaces would offer advantages.

The whole building is likely to require an Rw (single figure weighted sound reduction index) of around 40dB if internal noise levels are to be in excess of 90dB(A)

It is not the intention of this report to offer acoustic design for the proposed building; rather we can say that achieving the 60dB(A) limit at 1m around should not be difficult providing attention is paid to acoustic insulation and construction materials.

An acoustic barrier at the eastern site boundary of some 3m high would afford a 5 to 8m dB(A) noise reduction at receiver R1’ and would afford an increase to site boundary level, before the barrier of 59 to 62 dB(A) in fact allowing +3dB reflection of the barrier would allow a measurement of 62 to 65dB(A) at such barriers.

7.4. Examination of WHO Guidelines Assessment (See Appendix A)

The criteria for the BS4142:1997 day time assessment are so low that in meeting such via the set limits then referring to day time criteria under WHO, (Appendix A.2.) it can be seen that these guidelines for community noise are comfortably met.

The BS4142:1997 assessment criteria are by far the most critical and will form the basis of discussions and recommendations.

If the limits based on BS4142:1997 are met then we have a predicted free field level at R1 of 28dB(A) maximum and a façade level at R1’ of maximum 31dB(A).

Taking the WHO external criteria for day time amenity of 50dB(A) then we are well inside this with the free field level of 28dB(A)

Taking the best day time criteria inside a living room window of 35dB(A) which based on an open window giving 15dB(A) noise reduction across, then the day time criteria 1m outside a living room is 50dB(A) and the façade level limit of 31dB(A) is well within this figure.

The limiting noise levels based on BS4142:1997 will ensure that WHO day time criteria are comfortably met.
8. Discussions and Recommendations

8.1. BS4142 Assessments

The previous site in Litchfield gave a measured site boundary level of 62dB(A) under ‘typical’ operating conditions.

If the site in Litchfield is indeed similar then achieving a site boundary level of 54dB(A) may be difficult, achieving a level of 60dB(A) around the proposed building will be dependant on internal equipment and the sound insulation of the building.

It is doubtful that a simple single skin sheet steel building would suffice, a more realistic construction would be a combination of heavy masonry blocks with any sheet steel sections, including the roof, being acoustically insulated; acoustic absorption treatment to internal surfaces would offer advantages.

The whole building is likely to require an Rw (single figure weighted sound reduction index) of around 40dB if internal noise levels are to be in excess of 90dB(A)

It is not the intention of this report to offer acoustic design for the proposed building, rather we can say that achieving the 60dB(A) limit at 1m around should not be difficult providing attention is paid to acoustic insulation and construction materials. Achieving Rw 40dB is certainly not unrealistic.

An acoustic barrier at the eastern site boundary of some 3.5m high would afford a 5 to 8dB(A) noise reduction at receiver R1’ and would afford an increase to site boundary level, before the barrier, of 59 to 62 dB(A)- in fact allowing +3dB reflection of the barrier would allow a measurement of 62 to 65dB(A) at such barriers.

Acoustic barrier performance may be enhanced when considering that the site is slightly elevated above the receivers at R1 and R2.

With attention to acoustic design then it is felt that the set limits are not too onerous and there is a reasonable chance of achieving such limits

8.2. Other Considerations

The site has been operating concrete crushing operations for some 20 years now.

Whilst noise levels from such operations have had no bearing on these assessments, ambient/background noise levels were measured in the absence of such operations, it is interesting to note that during the past 20 years there have been no serious complaints of noise nuisance as far as the writer is aware.

The writer has had experience of measuring noise levels from concrete crushing machines and they can be said to be fairly noisy, one would expect the concrete crushing to be somewhat noisier than the proposed Waste Transfer facility in the main.

Note that the acoustic treatments with reference to the proposed building and a boundary acoustic barrier are something that should be studied and designed in more detail once the location and acoustic properties of the individually proposed plant items are known.

8.3. Adopting a Balanced View

The comments above perhaps ought to be considered with respect to planning permission and any environmental noise issues, it would seem to be the case that the Waste Transfer facility will not give rise to any worsening of environmental noise levels providing the recommendations here in are adhered to.

Considering a balanced view with respect to the planned Waste Transfer facility and making a condition of planning that these limits are met, with acoustic treatments a may prove necessary, would seem to be a balanced and fair conclusion to the planning application in respect of environmental noise issues.

Final decisions will always rest with the local authority environmental protection and planning officers.
9. Conclusions

At the request of Daventry District Council (DDC) and for inclusion as part of a planning application Encon Associates have completed an environmental noise survey and impact assessment at Boddington Road, Byfield, Nr. Daventry.

The survey has been completed to assess the environmental impact of noise levels as may be produced at the surrounding environment by the operation of a proposed Waste Transfer facility at an existing fabrication works and concrete crushing plant operated by Eco Baughans 2000 Ltd., Boddington Road, Byfield, Daventry.

Note that the survey and impact assessment is not relevant to construction works but to the planned operation of the newly proposed Waste Transfer plant and machinery.

The survey has been commissioned by DJC Associates on behalf of Eco Baughns 2000 Ltd.

In the absence of proposed plant item details with respect to exact locations, exact type of plant and any specific acoustic data it has been agreed with Karen Pell, senior environmental protection officer with DDC, that the measured environmental noise levels will be utilised to calculate limiting sound pressure levels in order that DDC BS4142:1997 preferred day time assessment level of 0dB is met.

The proposed plant items are intended to operate day time only and so the assessment has been completed with reference today time periods and criteria.

Based on the noise survey results and calculations here in we can offer the following conclusions and recommendations:-

9.1. The nearest and most sensitive receiver with respect to possible noise emissions from the proposed Waste Transfer facility was identified as the first house at the Twistle, Westhorp (adjacent to Byfield) This location is just adjacent to Boddington Road.

9.2. A day time LA90,15min lowest background noise level of 31dB(A) was recorded between 07:00 to 12:16hrs.

9.3. Site potential noise sources have been considered as 2 groups, 1 group is representative of external yard activities and operations; the 2nd group is representative of internal activities and operations within the proposed new building and noise level breakout through the building shell.

9.4. Based on a local authority BS4142:1997 criteria of assessment level = 0dB (Rating level = 31dB(A)) then a limit of 54dB(A) has been set at the proposed site eastern boundary based on site external yard activities and operations.

9.5. Based on a local authority BS4142:1997 criteria of assessment level = 0dB (Rating level = 31 dB(A)) then a limit of 60dB(A) has been set at 1m around the proposed new building with respect to breakout only across the building walls and roof.

9.6. These figures represent lower levels than a 62dB(A) boundary level measured at a similar site.

9.7. If the similar site is representative of likely plant and operations at the proposed Waste Facility then achieving the site boundary level may be difficult unless consideration is given to an acoustic barrier at the eastern boundary. This expected to be around 3.5m H to achieve a further 5 to 8dB(A) noise reduction at receiver R1’, effectively allowing a further 5 to 8dB(A) on the site boundary limit which, considering a facade correction could rise to 62/65 dB(A) on the source side.

9.8. It is suggested that the proposed new building incorporates acoustic insulation specifications to ensure that the limiting breakout level is achieved. This is expected to be realistically achievable without particularly onerous treatments.

9.9. Acoustic design procedure should be completed with respect to an acoustic barrier and building sound insulation once full plant locations and acoustic details are known.

9.10. Providing that the recommendations here in are taken up then the apparent conclusion of these investigations is that planning permission should not be refused on the ground of environmental noise levels.

Final decisions rest with Daventry District Council planning and environmental protection officers
Appendix A  Standards and Guidance


A.1.1  Scope

In general, the expected amount of community complaints rises as a function of increasing noise, if the noise level goes up, the volume of complaints will increase. BS4142:1997 enables an assessment of potential noise nuisance and likelihood of complaints by comparing a specific noise level due to the industrial plant or equipment with assessed or measured daytime and/or night-time background noise levels at sensitive positions. Whilst it is allied to planning requirements it is also a useful tool for assessing existing plant or equipment that may be the subject of noise nuisance complaint. (For definitions of terms see attached Glossary)

Note that BS4142 is not suitable for assessing the noise measured inside buildings or when background and rating noise level are very low, a rating level below about 35dB(A) and a background level below about 30dB(A) are considered very low.

A.1.2  Rating Method

The difference between a specific noise level and the background level (re BS4142 definitions for daytime or night-time assessments) corrected for tonal, intermittent, irregular or impact effects is referred to as the assessment level, and BS4142:1997 gives the following guidelines on assessing the likelihood of noise nuisance complaints.

1. An assessment level greater than +5dB(A) begins to make it very likely that complaints will occur
2. An assessment level of +5dB (A) is of marginal significance.
3. An assessment level below 5dB(A), the lower the value the less likelihood there is that complaints will occur
4. An assessment level of -10dB or less is a positive indication that complaints are unlikely.

Note that the day is usually divided between day time 0700-2300(16hrs) and night 2300-0700. (8hrs), this can vary dependant on social and environmental conditions.
Appendix A  Standards and Guidance (Cont.)


A.2.1 To evaluate outdoor noise the World Health Organisation, WHO stipulates that to protect the majority of the people from being seriously annoyed during the day time, the sound pressure levels on balconies, terraces and outdoor living areas should not exceed 55 $L_{Aeq}$ for steady continuous noise. At night, sound pressure levels at the outside facades of living spaces should not exceed 45 db $L_{Aeq}$, to allow people to sleep with a bedroom window open. The day is divided between 0700-2300 and night 2300-0700.

A.2.2 Guidelines values for community noise in specific environments.

<table>
<thead>
<tr>
<th>Specific environment</th>
<th>Critical Health effect(s)</th>
<th>$L_{Aeq}$ (dB)</th>
<th>Time base hrs</th>
<th>$L_{Amax,(fast)}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor living area</td>
<td>Serious annoyance, daytime and evening</td>
<td>55</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Moderate annoyance, daytime and evening</td>
<td>50</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Dwelling, indoors</td>
<td>Speech intelligibility and moderate annoyance, daytime and evening</td>
<td>35</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Inside bedrooms</td>
<td>Sleep disturbance, night-time</td>
<td>30</td>
<td>8</td>
<td>45</td>
</tr>
<tr>
<td>Outside bedrooms</td>
<td>Sleep disturbance, window open (outdoor values)-night time</td>
<td>45</td>
<td>8</td>
<td>60</td>
</tr>
</tbody>
</table>

Table B.1  WHO Guidelines for community noise

Sound ordinances which define acceptable noise level criteria are there to create and maintain a relaxing environment to live in, the main purpose of this is that levels must be kept low enough to avoid complains from the community. In general, the expected amount of community complaints rise in response with the function of noise levels, if the noise level goes up, the volume of complaints will increase.
Appendix B  - Glossary of Terms re Environmental Noise Assessments

Lw:- Sound power level re 2 x 10^-12 Watts
Lp :-  Sound Pressure level re 2 x 10^-5 Pascals
dB:- Abbreviation for decibel – a scale used in sound measurement. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.

dB(A): A value used for “A-weighted” sound pressure levels. “A” frequency weighting is an adjustment to sound-level to approximate the response of the human ear.

L_{A90} : The A-weighted sound pressure level that is exceeded for 90% of the time over which a given sound is measured. This is considered to represent the background noise for the purposes of BS4142:1997

L_{A10} : The A-weighted sound pressure level that is exceeded for 10% of the time over which a given sound is measured.

L_{Aeq} : (equivalent continuous noise level). The level of noise equivalent to the energy average of noise levels occurring over a defined measurement period.

L_{Amax} : The A-weighted sound pressure level that represents the maximum noise level measured over the time that a given sound is measured.

Receiver: The person or point at which the noise level is heard or measured.

Ambient Noise Level: The all-encompassing noise within a given environment. It is the composite of sounds from many sources, both near and far. Including any specific noise source This is described using the \( L_{Aeq} \) descriptor for the purposes of BS4142:1997

Residual Noise Level: The A-weighted equivalent sound pressure level remaining at a given position in a given situation when the specific noise source is suppressed to a degree such that it does not contribute to the ambient noise. This is described using the \( L_{Aeq} \) descriptor for the purposes of BS4142:1997

Specific Noise Source: Specific plant or equipment giving rise to receiver specific noise levels at 1m from a sensitive facade.

Specific Noise Level \( L_{Aeq(Tr)} \): The A-weighted equivalent sound pressure level that represents the noise level of a specific noise source at 1m from the nearest sensitive facade for Tr reference time period as defined in BS4142 where Tr = 1 hour daytime and Tr=5 mins night time. It is a logarithmic subtraction of ambient noise minus residual noise. This is described using the \( L_{Aeq} \) descriptor for the purposes of BS4142:1997.

Background noise level: The underlying A weighted sound pressure level of noise present in the ambient noise, excluding the Specific noise source under investigation. This is described using the \( L_{A90} \) descriptor for the purposes of BS4142

Rating Level: Specific Noise level adjusted for tonal, intermittent or impulsive characteristics as required for BS4142:1997.

Assessment Level: As defined in BS4142:18997, an arithmetic subtraction of Rating Level – Background level.

Community annoyance: Includes noise annoyance due to: - characteristics of the noise (e.g. sound pressure level, tonality, impulsiveness, low-frequency content), - characteristics of the environment (e.g. very quiet suburban, suburban, urban, near industry), - miscellaneous circumstances (e.g. noise avoidance possibilities, cognitive noise, unpleasant associations), - human activity being interrupted (e.g. sleep, communicating, reading, working, listening to radio/TV, recreation).

Sound Pressure Level, in decibels sound pressure level is given by the formula

\[ L_p = 10 \log \left( \frac{p}{p_o} \right)^2 \]

Where

\( p \) is the root mean square sound pressure, in pascals (Pa).

\( p_o \) is the reference sound pressure (20 μPa)

Equivalent continuous sound pressure level, in decibels. Value of the sound pressure level of a continuous, steady sound that, within a special time interval \( T \), has the same mean square sound pressure as a sound under consideration whose level varies with time, given by the formula
Environmental Noise Assessment

\[
L_{eq,T} = 10 \log \left( \frac{1}{t_2 - t_1} \int_{t_1}^{t_2} \frac{p(t)^2}{p_o^2} \, dt \right)
\]

Where

\( L_{eq,T} \) is the equivalent continuous sound pressure level, in decibels, determined over a time interval \( T \) starting at \( t_1 \) and ending at \( t_2 \);

\( p_o \) is the reference sound pressure (20 μPa);

\( p(t) \) is the instantaneous sound pressure of the sound signal.

* Equivalent continuous A-weighted sound pressure level during time interval \( T \) is called time interval average sound level, \( L_{A,T} \), in decibels, with the averaging time interval usually indicated in the format, for example one-hour average sound level, \( L_{A,1h} \).

**Sleep disturbance.** Awakenings and disturbance to sleep stages.

**Tonality.** Noise containing a prominent frequency and characterised by a definite pitch. Often defined as being 5dB or more above neighbouring octave or 1/3\(^{rd}\) octaves.
ATTACHMENTS
### TABLE 2-ALL PASS AMBIENT NOISE SURVEY LEVELS

<table>
<thead>
<tr>
<th>Line Ref.</th>
<th>M.ment Posn.</th>
<th>Date</th>
<th>Duration</th>
<th>Comments/Observations</th>
<th>LAeq</th>
<th>LAF(max)</th>
<th>LAF,90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P1</td>
<td>(2012/07/25 07:00:47.00)</td>
<td>(0:15:0.0)</td>
<td>P1A was the best position available initially, access was not possible to the first house on 'The Twistle' even less on 'The Twistle'. About 6 vehicles/min at Boddington Road prior to 09:00hrs, after this dropped as low as 2 to 3 vehicles/min. 'The Twistle', vehicles always rarer, 1 to 2 vehicles/min (or long periods of 0 road traffic. Frequent although irregular, overhead aircraft-at times quite loud), although any passing traffic would mask. NOTE absolutely NO discernable audible contribution from industrial type noise sources. Resident came out eventually and agreed access to his premises for monitoring at 1m from façade. These measurements can be regarded as VOID.</td>
<td>57.8</td>
<td>83.6</td>
<td>36.2</td>
</tr>
<tr>
<td>2</td>
<td>P1</td>
<td>(2012/07/25 07:15:50.00)</td>
<td>(0:15:0.0)</td>
<td>53.9</td>
<td>72.6</td>
<td>34.4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>P1</td>
<td>(2012/07/25 07:30:52.00)</td>
<td>(0:0:5.0)</td>
<td>39.3</td>
<td>44.5</td>
<td>35.4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P1</td>
<td>(2012/07/25 07:54:25.00)</td>
<td>(0:15:0.0)</td>
<td>53.6</td>
<td>70.9</td>
<td>33.5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>P1A</td>
<td>(2012/07/25 08:09:27.00)</td>
<td>(0:15:0.0)</td>
<td>51.2</td>
<td>69.2</td>
<td>32.7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>P1A</td>
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<td>(0:15:0.0)</td>
<td>49.1</td>
<td>64.1</td>
<td>35.8</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>P1A</td>
<td>(2012/07/25 08:39:32.00)</td>
<td>(0:15:0.0)</td>
<td>47.7</td>
<td>68.2</td>
<td>31.4</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>P1A</td>
<td>(2012/07/25 08:54:34.00)</td>
<td>(0:15:0.0)</td>
<td>51.1</td>
<td>72.5</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>P1A</td>
<td>(2012/07/25 09:09:37.00)</td>
<td>(0:12:50.0)</td>
<td>56.1</td>
<td>79.9</td>
<td>34.5</td>
<td></td>
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<td>10</td>
<td>P1A</td>
<td>(2012/07/25 09:46:39.00)</td>
<td>(0:15:0.0)</td>
<td>49.1</td>
<td>63.9</td>
<td>36.3</td>
<td></td>
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<tr>
<td>11</td>
<td>P1A</td>
<td>(2012/07/25 10:01:41.00)</td>
<td>(0:15:0.0)</td>
<td>48.2</td>
<td>67.3</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>P1A</td>
<td>(2012/07/25 10:16:44.00)</td>
<td>(0:15:0.0)</td>
<td>49.3</td>
<td>68.9</td>
<td>32.3</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>P1A</td>
<td>(2012/07/25 10:31:46.00)</td>
<td>(0:15:0.0)</td>
<td>49.4</td>
<td>65.7</td>
<td>34.6</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>P1A</td>
<td>(2012/07/25 10:46:48.00)</td>
<td>(0:15:0.0)</td>
<td>51.3</td>
<td>71.3</td>
<td>33.4</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>P2</td>
<td>(2012/07/25 11:15:58.00)</td>
<td>(0:15:0.0)</td>
<td>51.7</td>
<td>70.1</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>P2</td>
<td>(2012/07/25 11:31:01.00)</td>
<td>(0:15:0.0)</td>
<td>40.1</td>
<td>56.1</td>
<td>31.7</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>P2</td>
<td>(2012/07/25 11:46:03.00)</td>
<td>(0:15:0.0)</td>
<td>43.7</td>
<td>59.1</td>
<td>33.8</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>P2</td>
<td>(2012/07/25 12:01:05.00)</td>
<td>(0:15:0.0)</td>
<td>41.8</td>
<td>62.9</td>
<td>33.8</td>
<td></td>
</tr>
</tbody>
</table>

### MONITORING EXISTING AMBIENT NOISE LEVELS

**Contributing noise sources:**
- Low density traffic to Boddington Road, even less on 'The Twistle'. About 6 vehicles/min at Boddington Road prior to 09:00hrs, after which it dropped as low as 2 to 3 vehicles/min. 'The Twistle', vehicles always rarer, 1 to 2 vehicles/min (or long periods of 0 road traffic. Frequent although irregular, overhead aircraft-at times quite loud, although any passing traffic would mask. NOTE absolutely NO discernable audible contribution from industrial type noise sources.

**Comments/Observations:**
- P1A was the best position available initially, access was not possible to the first house on 'The Twistle'.
- Resident came out eventually and agreed access to his premises for monitoring at 1m from façade. These measurements can be regarded as VOID.
- Constant monitoring now begins.
- Minimum monitoring of existing environmental ambient noise levels begins. 08:09hrs to 10:46hrs in 15 minute repeat periods. Note that the shortened period, 12min 50secs, at line 9 was due to batteries out and thus changed.
- Measurements in total over m'ent period-- this will be sufficient to determine critical background noise level.
- Subjectively observed as a very quiet area.

**MONITORING POSITION P1A re RECEIVER R1 (R1')**

| Logarithmic mean lines 4 to 14 = existing ambient LAeq noise level at Receiver R1 8am to 11am | 48.8 | 79.9  | 34.6  |

**MONITORING POSITION P2 re RECEIVER R2 (R2')**

| Logarithmic mean lines 15 to 18 = existing ambient LAeq noise level at Receiver R2 11.15am to 12.15pm | 40.2 | 67.7  | 31.7  |

**CALCULATIONS RELATIVE TO EXISTING AMBIENT NOISE LEVELS**

It can be seen that the LA90% existing environmental background noise levels are almost identical at R1 and R2, consequently as R1 is the closest to the proposed site for the Waste Transfer facility it is R1 (R1') results that will be used to complete a BS4142:1997 noise impact assessment.
TABLE 3 - 1/3RD OCTAVE BAND AMBIENT NOISE LEVELS

<table>
<thead>
<tr>
<th>Line Ref</th>
<th>Method</th>
<th>Date</th>
<th>Comment/Observation</th>
<th>LAeq (dB) at 1/3rd octave centre frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P1A</td>
<td>2012/07/25 07:00-07:04</td>
<td>0.015</td>
<td>48.6 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0</td>
</tr>
<tr>
<td>2</td>
<td>P2A</td>
<td>2012/07/25 07:00-07:04</td>
<td>0.015</td>
<td>48.6 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0</td>
</tr>
<tr>
<td>3</td>
<td>P3A</td>
<td>2012/07/25 07:00-07:04</td>
<td>0.015</td>
<td>48.6 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0</td>
</tr>
</tbody>
</table>

It can be seen that the LAeq's existing environmental background noise levels are almost identical at R1 and R2, consequently as R1 is the closest to the proposed site for the Waste Transfer facility it is R1 (P1) results that will be used to complete a BS4142:1997 noise impact assessment.
Daventry district Council have set a BS4142:1997 assessment level criteria of 0dB, i.e a rating level of 31dB(A) assuming continuous day time running for at least 1 hour and No.
nontal content to the proposed noise sources. However due to differing radiating characteristics the site potential noise sources will be split into:- Radiation from individual noise sources in external yard area, for the large distance to the nearest sensitive receiver, R1’ we can regard all yard noise sources as equivalent to a single’ point source’ Radiation from proposed building shell (noise breakout)-the size of the building will have some effect on noise level radiation. So the assessment level at receiver R1’ must be set at 31 - 3 = 28dB(A) maximum to allow for addition of two noise paths under worse case conditions. Furthermore as our limiting site boundary level will be free field whereas receiver level at R1’ is 1m form facade then the rating level must be corrected to free field, nominally -3dB.

**BS4142:1997 RATING LEVEL AT SENSITIVE RECEIVER R1’ IS SET AT 25dB(A) RE CONSIDERATION OF NOISE RADITION VIA 2 POSSIBLE NOISE SOURCE GROUPS**

**GROUP 1**
External yard noise sources (regard as point source re HGV and any yard located plant)

The east boundary sound pressure level will be designated as Lp1 for the point sources. Distance from the east boundary is taken from Fig 8 at the yard centre and is approximately 45m. If the sound pressure level at sensitive receiver R1; is Lp2, then for a point source Lp2 = Lp1 -20Log(d2/d1) , i.e. Lp1=Lp2 + 20Log (d2/d1), where d1 is the distance to site boundary (45m) and d2 is the distance to sensitive receiver R1’ (750m)-we know the required sound pressure level at sensitive receiver R1’,i.e. the required BS4142 :1997 RATING LEVEL level is 28dB(A) = Lp2  

<table>
<thead>
<tr>
<th>d1/m</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>d2/m</td>
<td>750</td>
</tr>
<tr>
<td>Lp1</td>
<td>25</td>
</tr>
</tbody>
</table>

Correction Lp2 to Lp1 = 26.6

thus limiting Lp1 = 51.6

**GROUP 2**

Proposed building internal noise sources -breakout through building shell.

When studying breakout noise sources then Lp1 is the sound pressure level just inside the building shell and Lp2 is that just outside at about 1m.-Lp3 will be taken as the rating level at sensitive receiver R1’ For a position just around the building Lp2 is given by Lp2 = Lp1 - Rav -6dB where Raven is the composite average sound reduction index of the building shell/wall-

considering Lp3, at receiver R1’; then the shape of the building becomes important and the following formulae applies Lp3 = Lp1 - Rav + 10LogSp - 20Logr - 14 dB where...... Rav is the composite average sound reduction index of the building shell/wall-

...........................Sp/m2 is the surface area of the radiating facade or building = 1936/m2 in this case re the total surface area of the proposed building shell.

...........................r is the distance source to receiver = 750m in this case

\[
a) \quad \text{Lp2 at 1m around the proposed building is given by Lp2 = Lp1-Rav-6dB} \\
\text{So Lp2 = Lp1-Rav-6} \\
\text{.................................................................} \quad 1
\]

\[
b) \quad \text{Lp3 at receiver R1’ given by Lp3 = Lp1 - Rav + 10Log Sp - 20Logr - 14 dB} \\
\text{.................................................................} \quad 2
\]
### TABLE 5 - CALCULATION PROCEDURES

<table>
<thead>
<tr>
<th>Sp/m²</th>
<th>1934</th>
</tr>
</thead>
<tbody>
<tr>
<td>r/m</td>
<td>720</td>
</tr>
</tbody>
</table>

Alternatively equation 2 can be re-written as:

\[ L_{p1} = L_{p3} + \text{Rav} - 10 \log Sp + 20 \log r + 14 \] ………………………………………………………………………………………………….. 3

\( r = m \) = distance from façade to source

We know the required rating level at receiver R1 i.e. \( L_{p3} = 25 \text{dB(A)} \), Rav cancels out, other data is known hence we can calculate \( L_{p3} \)

<table>
<thead>
<tr>
<th>Sp/m²</th>
<th>1934</th>
</tr>
</thead>
<tbody>
<tr>
<td>( L_{p3}/\text{dB} )</td>
<td>25</td>
</tr>
<tr>
<td>r/m</td>
<td>720</td>
</tr>
</tbody>
</table>

Thus via equation 4 limiting noise level, \( L_{p2} 1 \text{m around the proposed building shell when considering breakout through the building shell/wall is} \)

\( L_{p2}/\text{dB(A)} \) \( 25 \) \( 57.2821 \)

Thus limiting \( L_{p2} \) \( 57.6 \)

**EXCESS ATTENUATION** - the following terms are normally frequency dependant, however without knowledge of source frequency spectra we must approximate to dB(A)

**Atm**

Atmospheric absorption approximates to \( -0.003 \text{dB/m}, \text{over 750m is} / \text{dB} \)

\( i.e. \text{Atm}/\text{dB} = 2.25 \)

**Agrd**

Grd effect for a dB(A) calculation the following equation 10 from ISO 9613-2 applies i.e.

\[ \Lambda_{gr} = 4.8 - \left( \frac{2h_m}{d} \right) \left[ 17 + \left( \frac{300}{d} \right) \right] \approx 0 \text{ dB} \] ………………………………………………………………………………………………….. 5

\( h_m = \text{mean height of propagation path between source and receiver} = 3.25 \)

\( d = \text{distance source to receiver} = 750 \)

Approximated ground effect for dB(A) calculations \( -4.9508 \)

In accordance with ISO 9613-2 negative numbers are regarded as 0

\( i.e. \text{Agrd}/\text{dB} = 0 \)

When equation 10 from ISO 9613-2 (equation 4 above) is used then we must make a correction for directivity via equation 11 from ISO 9613-2, i.e.

\[ D_{d2} = 10 \log \left\{ 1 + \left( \frac{d_P^2 + (h_s - h_r)^2}{d_P^2 + (h_s + h_r)^2} \right) \right\} \] dB ………………………………………………………………………………………………….. 6

\( h_s \) and \( h_r \) are the respective heights of source and receiver

\( H_s/m \) and \( H_r/m \) are the respective heights of source and receiver
### Table 5 - Calculation Procedures

<table>
<thead>
<tr>
<th>dp</th>
<th>distance source to receiver projected to ground plane—in this case same as distance source to receiver /m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs/m</td>
<td>5</td>
</tr>
<tr>
<td>Hr</td>
<td>1.5</td>
</tr>
<tr>
<td>dp</td>
<td>750</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>dp²</th>
<th>562500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs-Hr</td>
<td>3.5</td>
</tr>
<tr>
<td>(Hs-Hr)²</td>
<td>12.25</td>
</tr>
<tr>
<td>Hs + Hr</td>
<td>6.5</td>
</tr>
<tr>
<td>(Hs+Hr)²</td>
<td>42.25</td>
</tr>
</tbody>
</table>

So DQ  = -0.00022  NEGLIGABLE

### Attenuation

- **Abar**: Attenuation by intervening acoustic barrier - 0 in this case.
- **Ar**: i.e. reflections—we have already allowed for façade reflection at the receiver—in the main there will be no further reflections and this term can be ignored.
- **Atm**: Atmospheric conditions. The calculations here are for general engineering use referring to a downwind sound pressure levels at normal temperature and pressure, or equivalent to conditions as may occur on a warm summer night—any special corrections for atmospheric conditions can be ignored.
- **Amisc**: Attenuation due to intervening vegetation - negligible unless we have deep mass of vegetation - around 20m deep.

**Total Excess Attenuation Between Source and Receiver is A NAD** = 2.25 dB(A)

The limiting values of Lp for point and building breakout noise sources can in effect be increased by 2.15dB(A)—Thus

<table>
<thead>
<tr>
<th></th>
<th>FINAL RESULTS - ROUNDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limiting LAeq,1hr sound pressure level at eastern site boundary due to noise sources in external yard = 51.6 + 2.15 =</td>
<td>54dB(A)</td>
</tr>
<tr>
<td>Limiting LAeq,1hr breakout sound pressure level 1m around proposed building perimeter due to noise sources in building = 57.6 + 2.15 = (rounded)</td>
<td>60dB(A)</td>
</tr>
</tbody>
</table>
Introduction

AB Acoustics were commissioned by E A Barnes & Sons Ltd to undertake an environmental noise survey to measure the impact of the installation of a waste separating plant at their site at Vulcan Road Lichfield.

This report should be read in conjunction with our earlier report dated 18 February 2008.

Once the plant had been installed there is a requirement that the noise level at the site boundary be monitored to determine the actual level once the plant is operative and compare this with the requirement of the Grant Notice of the Planning Permission.

This states:

*Site attributable noise shall not exceed 65 dBA L_Aeq(1 hour – Freefield) measured at the site boundary i.e. not to any noise sensitive property, or 68 dBA L_Aeq (1 hour Façade) measured in front of the offices adjacent to the north – western boundary overlooking the Site.*

This report details the noise measurements undertaken at the site with the installed plant operative – at the time the measurements were undertaken the Trommel was being loaded with a 360° backactor - there were two JCB shovels operating in the yard (clearing the waste dropped by the delivery skips onto the concrete floor – and all so loading gravel from stockpile into skips for delivery off site) – during the period of the test 13 vehicle movements were made at the site by skip lorries and two by small ‘transit’ type lorries.

The site is located on the Trent Valley Trading Estate at the end of Vulcan Road – the site has a noise level restriction as part of the overall Environmental Protection statement.

Noise Assessment Criteria

See Introduction.
Equipment Used and Measurement Method

The noise levels were measured using a:

*Brue & Kjaer Type 2238 Mediator Integrating Sound Level Meter*

Calibration was carried out prior to the measurements — and checked afterwards using a:

*Norsonic Acoustic Calibrator.*

The measurements were carried out at the locations described at a height of 2500mm above the ground and away from reflecting surfaces.

The measurements were undertaken at the times stated in the results.

The weather was dry with a light breeze of 0.0 to 1.1 m/sec.

Results and Discussion

Below is the plot of the noise level — both L_Aeq and L_Amax over a 1 hour period during the morning of Monday 09 June 2008 together with a table showing the L_Aeq as measured over a block of 5 minute periods within the 1 hour measurements.
As can be seen from the above graph the noise level is reasonably constant over the 1 hour measurement period – Site attributable noise was recorded at 61.7 dBA rounded in accordance with BS 4142 to 62 dBA LAeq(1 hour – Freefield) measured at the site boundary.

As can be seen this measured level is within the requirements of the Grant Notice of the Planning Permission.

The measurement location is shown below:

Roger Leach
AMICA
SURFACE WATER DRAINAGE STRATEGY

FOR PROPOSED

WASTE TRANSFER STATION

&

MATERIALS RECYCLING FACILITY

AT

BODDINGTON ROAD

BYFIELD

NORTHAMPTONSHIRE

30th April 2016
First Issue
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<td>3</td>
</tr>
<tr>
<td>3.0 Surface Water Disposal Options</td>
<td>4</td>
</tr>
<tr>
<td>4.0 Proposed Surface Water Drainage Scheme</td>
<td>6</td>
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<td>5.0 Conclusions</td>
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</table>

<table>
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<td>Proposed Site Layout Plan</td>
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<td>Appendix 3</td>
<td>Geological Data</td>
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<tr>
<td>Appendix 4</td>
<td>Proposed Surface Water Drainage Plan</td>
</tr>
<tr>
<td>Appendix 5</td>
<td>Calculations</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>Revisions</th>
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</thead>
<tbody>
<tr>
<td>Rev.</td>
<td>Date</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>-</td>
<td>30/4/16</td>
</tr>
</tbody>
</table>

Boddington Road, Byfield – Drainage Strategy Report First Issue
1.0 Introduction

1.1 Abington Consulting Engineers have been appointed by Baughans Ltd. to produce a drainage strategy report in support of a planning application for a waste transfer station and materials recycling facility at Boddington Road, Byfield in Northamptonshire. A location plan is presented below.

1.2 The site was formally a POW complex and is now an established commercial area with several similar operations, all of which in planning use terms should be considered to be B2 General Industrial or Sui Generis (waste). Other uses on the complex include waste a collection and recycling centre and industrial and commercial units and yard.

1.3 The application site is located within the industrial complex and has an area of approximately 0.34 hectares and slopes from east to west. This area is generally used for storage of reclaimed waste items. The ground coverage includes areas of concrete and hard core which has been sealed with waste over the years. A copy of the topographical survey is presented in Appendix 1.

1.4 It is proposed that a new industrial building will be constructed on site and the yard area will be re-constructed in concrete for storage of inert waste, car parking and manoeuvring of waste handling vehicles. A copy of the proposed site layout plan in presented in Appendix 2.
2.0 Existing Surface Water Drainage

2.1 Although parts of the application site are made of hard core, this has effectively sealed over time with mud and waste products. Coupled with the existing concreted areas, the site effectively discharges 100% run-off.

2.2 There is little in the way of existing drainage features on site. An existing interceptor is on site, but no positive drainage appears to feed it and there is little knowledge of its capacity and effectiveness.

2.3 On the western boundary is a drainage channel which has an outfall leading to the existing highway ditch on Boddington Road. Only some of the run-off is captured by this feature with the remainder of the run-off from the site finding its way to a gully to the north west of the application site within the industrial complex. This discharges to a drain on the western boundary of the complex which eventually finds its way into the nearby reservoir.
3.0 Surface Water Disposal Options

3.1 Table 1 below is an extract from ‘SUDS a Practical Guide published by the Environment Agency Thames Region (2006). It sets out the Sustainable Drainage Systems (SUDS) hierarchy in terms of the most to least sustainable solutions. This has been generally adopted by Lead Local Flood Authorities although they give greater preference to infiltration techniques to accord with the Building Regulations hierarchy in Approved Document H3.

<table>
<thead>
<tr>
<th>Most Sustainable</th>
<th>SUDS technique</th>
<th>Flood Reduction</th>
<th>Pollution Reduction</th>
<th>Landscape &amp; Wildlife Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living roofs</td>
<td><strong>✓</strong></td>
<td><strong>✓</strong></td>
<td><strong>✓</strong></td>
<td></td>
</tr>
<tr>
<td>Basins and ponds</td>
<td>- Constructed wetlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Balancing ponds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Detention basins</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Retention ponds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filter strips and</td>
<td><strong>✓</strong></td>
<td><strong>✓</strong></td>
<td><strong>✓</strong></td>
<td></td>
</tr>
<tr>
<td>swales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infiltration</td>
<td>- soakaways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>devices</td>
<td>- infiltration trenches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and basins</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permeable surfaces</td>
<td><strong>✓</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and filter drains</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- gravelled areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- solid paving blocks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- porous paviors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanked systems</td>
<td><strong>✓</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- over-sized pipes/tanks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- storms cells</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 – SUDS Hierarchy

3.2 The most appropriate surface water disposal techniques should be selected from this table once site constraints and disposal options have been established. Where appropriate, more than one design solution should be chosen.

3.3 Living Roofs

3.3.1 Whilst living roofs are placed at the top of the SUDS Hierarchy, broader consideration of the appropriateness of this technique for dealing with surface water run-off needs to be given in the context of the proposed modest scale of the extended development.

3.3.2 The flood reduction credentials of living roofs are generally confined to a 1 in 2 year return period. For return periods in excess of this such as the 1 in 100 year return period (required by Defra/EA report W5-074/A/TR/1 Rev.C ‘Preliminary rainfall runoff management for developments’) and the substantial allowances for climate change (required in the NPPF), the ability of living roofs to attenuate water is much diminished. This is because they become saturated and sheet run-off occurs in the same way as any impermeable area.

3.3.3 A living roof is shown as in Table 1 as providing pollution prevention. However, on an industrial unit it will only accept rainwater which is uncontaminated. Some dust/silt that might occasionally be carried by rainwater may be removed, but this would be minimal.

3.3.4 Living roofs can be beneficial for sites which need reduced landscape impact. However, this site is not considered to be particularly sensitive in landscape terms, nor would it be in keeping with the urban location of the site, it context or setting in design terms.

3.3.5 As such, for the above noted reasons, a living roof has been discounted for use on this site.
3.4 Basins and Ponds

3.4.1 These features are ideally suited to larger developments which are of sufficient size where they can be accommodated. In this modest development area, there is very little space and layout makes it extremely difficult to accommodate any ponds or basins successfully into the design without it being an unduly prominent.

3.5 Filter Strips and Swales

3.5.1 The layout of the site and the proposed usage does not lend itself to the use of filter strips and swales. It would be difficult to accommodate such features and there is a high probability that they would fail due to tipping of waste and lack of maintenance.

3.6 Infiltration Devices

3.6.1 The British Geological Survey web viewer results presented in Appendix 3 shows that the site is underlain with mudstone and there are no superficial deposits. Therefore the permeability of the geology will be poor and infiltration will not be possible.

3.7 Permeable Surfaces and Filter Drains

3.7.1 Due to the handling of inert waste material on site, permeable surfacing would quickly become clogged and ineffective.

3.8 Tanked Systems

3.8.1 There is no intention of increasing impermeable area to the site. However, at the insistence of the Lead Local Flood Authority, underground attenuation will be provided.
4.0 Proposed Surface Water Drainage Scheme

4.1 The proposed surface water drainage scheme is presented in Appendix 4. This will consist of the existing drainage channel which will be cleaned out and recommissioned which will be connected to a new class 1 bypass interceptor to assist with the removal of pollutants and silt. The interceptor will be connected to an attenuation tank with flow controlled using a 150mm diameter throttle pipe. Surface water will be directed via a carrier drain to the existing outfall to the north west of the proposed development.

4.2 Calculations presented in Appendix 5 show that surface water flow from site generates a flow of 47.6 l/s for a 1 year return period.

4.3 At present the existing run-off from the site discharges through the outfall into the highway ditch and also through the outfall to the north west. Calculations presented in Appendix 5 show that surface water flow from site through the two outfalls generates a flow of 45.3 l/s.

4.4 It is proposed that the existing run-off will be reduced by 20% as a planning gain and therefore the limited discharge for the attenuation system will be 36.3 l/s.

4.5 Based on a 100 year return period and a 20% allowance for climate change in accordance with NPPF requirements, the proposed attenuation system will have a volume of 76.1m³.
5.0 Conclusions

5.1 Surface water discharge from the site will be reduced by 20% and flows attenuated as a planning gain.

5.2 A new interceptor will be provided to reduce the risk of contamination to the receiving watercourse.

5.3 Overall, drainage from the site will be managed whereas at present flows are unregulated and pollution risk is uncontrolled.

30th April 2016

Ian Brazier BEng (Hons) CEng MICE
On Behalf of Abington Consulting Engineers Limited
APPENDIX 1 – Topographical Survey
APPENDIX 2 – Proposed Site Layout Plan
LOCATION PLAN - LAYOUT PLAN
Proposed Waste Transfer Station and Materials Recycling Facility
Former PW Site Boddington Road Byfield Northamptonshire NN11 6XU
Scale 1:2500 and 1:500
Drg. no. 10.56.10A

DJC Associates
Planning Advisors
Hunters Lodge Fox Covert Drive Rowrafton NN7 2JL
Tel. 01536 507399
Mob. 07920 277783
w.mal - danecollins77@aol.com
APPENDIX 3 – Geological Data
Geology of Britain viewer

Bedrock geology

1:50 000 scale bedrock geology description:

Devonian Formation - Silurian and Ordovician, interbedded, Sedimentary Bedrock formed approximately 183 to 190 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

Setting: shallow seas. These rocks were formed in shallow seas with mainly siliciclastic sediments (comprising of fragments or clasts of silicate minerals) deposited as mud, silt, sand and gravel.

Further details: What is Bedrock Geology?

To purchase detailed geological reports for this area, for our GeoReports service.
APPENDIX 4 – Proposed Surface Water Drainage Plan
APPENDIX 5 - Calculation
BAUGHANS, BYFIELD – DRAINAGE CALCULATIONS

Existing Run-off From Site:

Impermeable area = 0.3430 ha

Using Modified Rational Method:

\[ Q = \frac{3430 \times 50}{60 \times 60} = 47.6 \text{ l/s} \]

Existing Discharge From Site:

Existing outfall to highway ditch:

- size: 150mm dia
- gradient: 1 in 100
- capacity: 17.7 l/s

Existing outfall to field:

- size: 150mm dia
- gradient: 1 in 42
- capacity: 27.6 l/s

Total discharge  \[ Q = 17.7 + 27.6 = 45.3 \text{ l/s} \]

Proposed Discharge From Site:

Existing discharge less 20% reduction = 45.3 x 0.8 = 36.3 l/s

Equivalent throttle pipe:

- size: 150mm dia
- gradient: 1 in 110
- surcharge head 0.8m
- capacity: 36.3 l/s

Surface Water Attenuation Design:

Site area = 0.3430 ha
Limited discharge = 36.3 l/s
Return Period = 100 years
Climate Change Allowance = 20%

Attenuation Volume = 76.1m³ (refer to Micro Drainage calculations)
## Summary of Results for 100 year Return Period (+20%)

<table>
<thead>
<tr>
<th>Storm Event</th>
<th>Max Level (m)</th>
<th>Max Depth (m)</th>
<th>Max Control (l/s)</th>
<th>Max Volume (m³)</th>
<th>Status</th>
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<tbody>
<tr>
<td>15 min Summer</td>
<td>0.604</td>
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### Rainfall Details

- **Rainfall Model**: FSR
- **Winter Storms**: Yes
- **Return Period (years)**: 100
- **Cv (Summer)**: 0.750
- **Region**: England and Wales
- **Cv (Winter)**: 0.840
- **M5-60 (mm)**: 20.100
- **Shortest Storm (mins)**: 15
- **Ratio R**: 0.448
- **Longest Storm (mins)**: 10080
- **Summer Storms**: Yes
- **Climate Change %**: +20

### Time / Area Diagram

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<tr>
<th>Time (mins)</th>
<th>Area (ha)</th>
<th>Time (mins)</th>
<th>Area (ha)</th>
<th>Time (mins)</th>
<th>Area (ha)</th>
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Model Details

Storage is Online Cover Level (m) 1.500

Tank or Pond Structure

Invert Level (m) 0.000

<table>
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<tr>
<th>Depth (m)</th>
<th>Area (m²)</th>
<th>Depth (m)</th>
<th>Area (m²)</th>
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<td>0.800</td>
<td>96.0</td>
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</table>

Pipe Outflow Control

Diameter (m) 0.150  Entry Loss Coefficient 0.500
Slope (1:X) 110.0  Coefficient of Contraction 0.600
Length (m) 10.000  Upstream Invert Level (m) 0.000
Roughness k (mm) 0.600
Event: 30 min Winter

Flow (l/s)

Inflow

Outflow

Volume (m³)

Depth (m)

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