
Storefield Lodge Waste Management Park (Rushton Landfill Site)

Application for

- a) Green waste composting and soil bioremediation
- b) Recovery of limestone
- c) Importation of non-hazardous waste

Supporting Statement

16th March 2009

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1. Introduction

1.1. In January 2009, a planning application was submitted to Northamptonshire County Council for:-

- i. **The establishment of green-waste and soil bioremediation facilities on land within and immediately adjacent to the Rushton landfill site.**
- ii. **Recovery of limestone.** To enable the northern most composting/ remediation area to be established (Area C) approximately 105,00 tonnes of limestone is proposed to be extracted, 30% to 50% of which will be processed and used in the establishment and subsequent maintenance of haul roads within the landfill site.
- iii. **Importation of non-hazardous waste.** The third element of the planning application involves the importation of non-hazardous waste in the area to the south of Storefield Brook to infill the additional void created by the limestone extraction and an adjacent area (Area B) where it would appear planning consent was never granted to restore the former quarry workings.

1.2. Prior to formal validation of the application, and to ensure the efficient processing of the application the waste planning authority requested additional information and this Supporting Statement seeks to provide the relevant detail.

1.3. Appendices are attached to this Supporting Statement and these provide the following

App 1. Plans

R14/201 Site Location

R14/202A Site Plan

R14/203 Proposed limestone extraction area

R14/204 Cross Section

R14/205 Drainage arrangements of concrete pads (composting and soil bio-remediation area)

R14/3823/03 Rev C Site restoration contours

App 2. Soil Survey

App 3. Phase 1 Habitat Survey

App 4. Archaeological Assessment

App 5. Plate N^os 1 and 2 (Photographs of bio-remediation pipework)

2. Planning Statement

- 2.1. As part of the company's overall strategic objective to maximise on recyclable materials within Northamptonshire and in accordance with local policy and national advice it proposes to establish a green-waste composting and bio-remediation facility on land within and immediately adjacent to the Rushton landfill site 3 km to the north-west of Kettering. Two areas are proposed for these processes and both are adjacent to the areas permitted for waste recycling operations. The northernmost area (Area C) lies outside of the existing Rushton Landfill site boundary to the west of the recycling Area B whilst the southernmost area (Area D) lies within the confines of the existing landfill site to the northeast of the waste recycling Area A.
- 2.2. The combined composting and bioremediation Area C extends to approximately 2.3 ha with a 10m standoff to the Storefield Brook watercourse to the north with a 20m standoff provided to Oakley Road to the west. Within Area C the green waste composting and bioremediation areas are proposed to be located below ground level immediately west of the sector of the site recently approved for the crushing and screening of concrete and brick hardcore (Area B). Cross-section A-A/B-B details the relative levels compared with the surrounding landform.
- 2.3. In order to establish Area C, approximately 105,000 tonnes of limestone will be recovered along with possibly underlying clay resources. The limestone material will be processed within the sector of the site zoned for recycling aggregates (i.e. Area B) and between 30% to 50% of this processed mineral will be used to maintain haul roads within the landfill site to ensure good access to the active landfill areas throughout the year whilst up to 80,000 tonnes of processed limestone may be sold over a 2 to 3 year period as aggregate subject to the quality of the material. A majority of the processed limestone will be exported from the site on a return-load basis using HGV's that would otherwise leave the site empty.
- 2.4. Any clays encountered will be used either as engineering or cover material within the landfill site subject to suitability. All soil resources will be beneficial re-used in the restoration of the site. Overlying topsoil will form the screening mound T3 and subsoils will either be temporarily stored within the permitted landfill site area or used directly for the restoration of other sections of the site.
- 2.5. Area D extends to approximately 0.8ha and will be screened by the existing landfill site to the north and the tip reprofiling area to the southeast (Consent N°08/00085/WAS). The area is proposed for green-waste composting.

- 2.6. Due to the screening effects of the landform, peripheral mounds and existing permitted landfill site the proposed development within Area D is not clearly visible from surrounding areas or publically accessible viewpoints. Accordingly the operational phase of the development will have little or no significant visual impacts on potential sensitive receivers. (Cross Sections C-C,/D-D, provide the relevant detail in respect of Area D.)
- 2.7. Within the application pro-forma the options for types of waste do not appear to extend to the nature of waste proposed for bio-remediation. For avoidance of doubt it is only proposed that oil or fuel contaminated soils will be brought onto site for bio-remediation treatment.

Hours of Operation

- 2.8. It is proposed to operate the site between 0700 hours to 1800 hours, Monday to Friday and 0700 hours to 1300 hours on Saturday with no working on Sundays or Public/Bank Holidays. These hours are consistent with the current operational hours for the landfilling operations. Activities outside of these hours will be restricted to pumping and emergency repairs.

Lighting

- 2.9. A majority of the site operations will be carried out during daylight hours. However, during the winter months there may be a requirement to have some artificial lighting around the plant site area for health, safety and security requirements. Such lighting will be downward facing to minimise any potential adverse impact upon local communities.

3. Design and Access Statement

3.1. In accordance with the requirements of Circular 01/2006, a design statement has been prepared in connection with the proposed composting and bioremediation operations and subsequent infilling with waste at the Storefield Lodge Waste Management Park (Rushton Landfill Site), Oakley Road, that examines the following design principles:

- site context and use;
- layout and scale; and
- landscaping and appearance.

3.2. Details of the proposals are set out within this Supporting Statement and the location and site context are produced on Drg Nos. R14/202A and R14/205. The proposed development is located within and on the eastern periphery of the established Rushton Landfill Site off Oakley Road, Rushton, Northamptonshire, and currently comprises a partially restored landfill site, which in itself sought to restore former mineral workings. In November 2008 consent was granted to enable recycling operations to be undertaken on the site and in 2009, a reprofiling scheme for the southern aspect of the landfill site was approved.

3.3. In respect of the layout and scale, Drg No. R14/202A details the proposed areas, both of which are accessed by existing internal haul routes through the landfill site and the existing access point onto Oakley Road, which provides adequate turning circles and manoeuvring facility of heavy goods vehicles (including articulated vehicles) that will be used in part to deliver suitable material to restore the area. A wheel-cleaning facility is provided on the site to ensure that heavy goods vehicles leaving the area do so in a clean state before exiting onto the public highway.

3.4. With regard to landscaping and appearance, both areas are in screened locations below ground level and therefore will not result in any visual impact. Cross-sections A, B, C and D contained on Drg N° R14/204 provide the requisite details.

Access Statement

3.5. The Access Statement has been prepared in accordance with the guidance set out in the good practice guidance note, and the requirements of Circular 01/2006. The proposed development is for the treatment of green waste and hydrocarbon contaminated waste. Furthermore, the proposals seek to recover a limited volume of limestone whilst additionally optimising on the non-hazardous waste capacity within the existing Rushton Landfill site

restoring an area of former quarry workings that does not appear to have such a requirement. As noted above, the existing site benefits from its own purpose-built access onto the public highway and associated infrastructure, including a weighbridge and wheel-wash facility.

- 3.6. In order that the operations on site can be fully managed, it is envisaged that the existing traffic management system will be retained and modified as appropriate to incorporate the vehicle movements associated with the re-contouring operations. This will involve the partial segregation of HGVs from other vehicles on site. The public will not be allowed to access the area for health and safety reasons.

4. Policy Context

- 4.1. The relevant development plan documents relating to the proposed operations at the Storefield Lodge Waste Management Park are the Northamptonshire Waste Local Plan (adopted March 2006) and the Northamptonshire Minerals Local Plan (adopted May 2006).
- 4.2. The **Waste Local Plan** establishes a land-use strategy for all waste within the county and its primary aim seeks to "*encourage increased waste treatment capacity*" and achieving significantly higher waste treatment levels. Para 1.4 of the document recognizes that even allowing for a significant change in the amount of recycling, re-use and reduction of waste generated "*there will still be a need for new or more integrated site for waste treatment.*"
- 4.3. The fundamental policy principles for waste are set out in the European Waste Framework Directive on Waste and the National Waste Strategy for England 2007 as well as PPS 10. The above documents establish the principles of a hierarchical approach for waste management and waste management without recourse to inter-regional movement of waste. Para 2.4 of the Waste plan states "*the waste hierarchy has waste prevention at its highest level and moves down to re-use recycling and recovery to waste disposal....*". The paragraph goes on to confirm "*Implementing the hierarchical approach decreases the environmental impact of waste and maximizes the beneficial uses from the resources it represents*".
- 4.4. In promoting the green waste composting and the bio-remediation of soils contaminated with hydrocarbons within the existing Rushton landfill complex this effectively moves waste higher up the waste hierarchy and is therefore consistent with European and national waste objectives.
- 4.5. In terms of the sub-regional policy framework the County's Structure Plan Policies (SPP) contains three policies relating to waste (SPP W1, W2 and W3). The proposals for the treatment of green waste and the bioremediation process are again consistent with each of these policies.
- 4.6. In respect of adopted policies within the extant Waste Local Plan, **Policy 2** confirms that the development of waste management facilities (this will include the composting and bioremediation process) will be permitted at "*these sites identified in the plan and shown on the proposals Map as existing Main Sites.*" The existing Rushton site is identified as one such site and therefore the proposals are consistent with this Policy.
- 4.7. Waste **Policy 8** relates to traffic and requires a safe access and an ability for the local highway network to accommodate site traffic. The existing access

point will be utilised and no additional traffic will be generated by the proposal. The transport appraisal detailed within Section 10 of this Supporting Statement confirms there are no adverse highways issues, accordingly no conflict is found to arise with the Policy.

- 4.8. Waste **Policy 9, 10 and 11** relate to the natural historic environment (local and national) and given the benign nature of the areas in question no conflict arises with the policies.
- 4.9. Waste **Policy 12** seeks to protect high quality agricultural land and to ensure there is no permanent loss of such land. The topsoil and subsoils from the agricultural field (Area C) will be stockpiled for beneficial re-use during the ultimate restoration phase to ensure no conflict arises.
- 4.10. Waste **Policy 13** relates to water resources and the flood risk assessment detailed within section 8 of this submission confirms there is no increased risk of flooding. Moreover, prior to commencement of the development (composting, bioremediation or landfilling in the additional area) an Environmental Permit will have to be obtained from the Environmental Agency. The composting and bioremediation areas will have a positive water management system to ensure ground and surface water protection and the additional landfill area will be contained with an engineered liner again to ensure the quality of ground water is maintained.
- 4.11. Waste **Policy 15** seeks to protect local amenity. The areas in question are remote from residential dwellings and are well screened. Issues relating to noise, air quality are discussed in sections 12 and 13 of this submission and are matters that can readily be controlled by suitably worded planning conditions to ensure local amenity is not unduly harmed.
- 4.12. Waste **Policy 16** relates to restoration, after-care and after use. The proposals in part include the restoration of a former quarry working not previously included within the consented Rushton landfill area. These current proposals provide a comprehensive restoration scheme for the northern profile of the landfill site and former quarry workings that would otherwise remain unrestored. A planning condition requires a detailed landscaping scheme for the entire site to be submitted before 2010 and this will provide the requisite detail in respect of any hedgerow and tree planting areas.
- 4.13. In respect of composting, **Policy 18** considers this activity and confirms general support for such activity providing among other issues there is no adverse amenity impact. The proposed locations are remote from any residential dwelling and no adverse impacts are envisaged. Para 6.22 of the WLP refers to current advice from the Environment Agency which states that composting facilities should not be developed within 250m of any residential

property; the closest property to Area C is Storefield Lodge, which is in excess of 400m away whilst The Bungalow is a similar distance from Area D.

- 4.14. With regard to landfilling (or extensions to existing sites) **Policy 22** is relevant although the additional void space generated by this proposal is estimated to be some 70,000 m³, 30% of which will restore the former quarry workings and the remainder to restore one of the areas where it is proposed to undertake composting and bioremediation activities below ground level. Compared with the total landfill void space capacity within the County the additional volume is diminimus. Notwithstanding that point, the Rushton site represents the best practicable environmental option for the waste streams concerned and is broadly consistent with the proximity principle and regional self sufficiency.
- 4.15. With regards to the limestone extraction, the **Northamptonshire Mineral Local Plan** is the relevant development plan document to consider the proposals against although the recovery of a limited volume of limestone (58,000 m³) should be considered as a windfall site as it is an ancillary activity. Moreover between 30 and 50% of the limestone produced will be employed in maintaining good quality access roads within the landfill to ensure all year working within the site providing a beneficial and sustainable use of the mineral.
- 4.16. (Minerals) **Policy 12** is relevant as the development lies outwith a permitted or allocated to the boundary of the former limestone quarry and current landfill site. However, the removal of the mineral will enable composting and soil remediation activities to beneficially take place below ground level. Moreover, the area in question is remote from residential areas and recovery of this material can be undertaken without resulting in material harm. The mineral will be processed in a sector of the existing landfill site where the crushing and screening of brick and concrete was approved in (November 2008 -Consent N^o 08/00069/WAS)
- 4.17. (Minerals) **Policy 14** refers to reclamation and this is discussed at para 4.12 when considering (Waste) Policy 16. (Mineral) **Policy 15** refers to Buffer Zones and no conflict arises given the remote nature of the activities whilst (Minerals) **Policy 18** relates to traffic and access and the comments made in respect of (Waste) Policy 8 are equally relevant to this minerals policy. The same is true for (Minerals) **Policy 23** relating to Best and Most Versatile Land (See (Waste) Policy 12). Equally so Minerals **Policies 26 and 27** (Water resources and flood risk) are not ones where conflict has been identified.
- 4.18. (Minerals) **Policy 20** relates to local amenity. The recovery of the limestone will not result in any demonstrable harm and in any event can be controlled by appropriately worded condition.

- 4.19. Finally (Minerals) **Policy 30** relates to cumulative impact of mineral workings. Given the limited nature of the proposed activities and no individual policy conflict identified along with the fact the mineral will be extracted to enable a more integrated and sustainable waste processing to be undertaken within the lifespan of the Rushton landfill site, no impact from cumulative activities is predicted.
- 4.20. In summary, the relevant policies contained within the extant Minerals and Waste Local Plans have been reviewed and no policy conflict is found to arise from the proposals. Indeed policy support exists for the composting and soil bioremediation operations which effectively moves material higher up the waste hierarchy consistent with adopted local policies, National objectives and European Directives and the restoration of former mineral workings (i.e. Area B) is wholly consistent with sustainable development aims.

5. Limestone Extraction

- 5.1. In order to establish the northern bioremediation and composting area below ground level (Area C) approximately 58,000m³ of limestone could be extracted. Using a conversion factor of 1.8 tonnes per m³ this equates to approximately 105,000 tonnes of material although the quality of the material is unknown at this stage.
- 5.2. The area is overlain by soils and overburden which will have to be removed and either stockpiled or used for restoration elsewhere within the existing site. The topsoils are between 25 to 30cm in depth and will be stockpiled within the 3m high soil screening mound T3 to the north of the working area. The area consists of Grade 3a and 3b land and the soils from these areas will be stored separately within the mound segregated by a geo-textile membrane if so required. Approximately 3,500m³ of topsoil can be accommodated within the mound. The quality of the land in question was identified in a soil resource survey undertaken in 2008 on Area C and the large agricultural field to the north. A copy of the survey is contained in Appendix 2.
- 5.3. The subsoils and overburden will be used in the final restoration of either the southern or eastern most sectors of the Rushton landfill site. If required, some of the Grade 3a subsoil could be established along the western boundary of Area C (parallel with Oakley Road) in a mound up to 5m high. This is not shown on the submitted plans as such a mound is not required for screening but details can be required by way of a planning condition if considered necessary.
- 5.4. Once exposed, the limestone will be extracted using a hydraulic excavator working generally east to west. Previous experience confirms that the limestone in the area can be extracted without use of explosives and only in exceptional cases will a hydraulic breaker be required. The extracted material will be transported to Area B where it will be stockpiled and processed using a mobile crushing unit and screens. Planning permission was granted in November 2008 for recycling operations (Consent N^o 08/00069/WAS) and this permitted crushing operations within Area B. Condition N^o 7 of that consent restricted noise levels to not exceed 55dB(A)Leq 1hr free field at the nearest noise sensitive properties. The extraction of the limestone and subsequent processing will not exceed this level imposed to protect local amenity.

6. Composting Area and Soil Bioremediation

6.1. It is proposed that the green waste composting and soil bioremediation facilities will be provided to deal with hydrocarbon contaminated soils and any vegetation and trees that may be brought onto site and part of the resultant composted material could be employed in the beneficial restoration of the site. The proposed development will include the construction of concrete pads that provide a suitable hard base for the water collection, storage and recirculation system. The pad construction will include suitable drainage gullies to direct surface water to an adjacent, collection sump. (Details are contained on Drg N° R14/205).

Green waste composting

6.2. All incoming green waste loads will be checked visually on arrival at the incoming weighbridge for excessive contamination with non-complying materials such as plastic bags. Any unacceptable loads will be rejected and redirected for disposal within the existing landfill site. As per normal working practice, records will be kept of all incoming vehicles, including the carriers' registration number, source and weight of waste.

6.3. Vehicles will be directed via the internal roadway to the composting facility and green wastes will be tipped within the designated reception area of the concrete pad. The composting process is entirely natural relying on aeration and microorganisms to break down the material. As a result, the process produces no significant, unpleasant or offensive odours providing the facility is managed correctly and that the aerobic conditions are maintained. Such odours only generally occur when conditions become anaerobic due to inadequate turning or the introduction of anaerobic materials. In any event the two areas identified for composting are remote from any residential dwelling being in excess of 400m from the nearest occupied house.

6.4. The windrow composting process minimises the risk of mal-odour production, as all of the material is readily accessible (and hence sections are easily removed if necessary) and open to the optimal contact with air to maintain the appropriate conditions for efficient and effective compost generation. The use of a windrow turner significantly enhances aerobic conditions within the windrows whilst reducing airborne particles.

Bioremediation

6.5. Bioremediation is an environmentally acceptable process of treating hydrocarbon contaminated soils that would otherwise be disposed of within a landfill site. Bioremediation is a cost effective method of moving waste up

the waste hierarchy by treating contaminated soils using micro-organisms and accelerating the process by use of chemicals as nutrients and the addition of oxygen producing aerobic conditions for remediation. The process will degrade and detoxify organic compounds to harmless products such as carbon dioxide and water.

- 6.6. Pipework will be established on the paved area with granular material placed over the slotted pipework prior to the contaminated material being placed. The pipework will be established typically at 1 to 2 metre centres and the waste stockpiled to a height between 2.5m and 3m. A microbial accelerant such as manure will be added to the contaminated material to be treated and air is then drawn through the stockpiled material to accelerate the treatment process. Material would typically be remediated within a 12 to 14 week period and as air is drawn through the material the likelihood of odour being created is greatly reduced. Photographs contained within Appendix 5 show the typical pipework layout.
- 6.7. The soil remediation area would be located on the suitable hard base with a positive water collection and management system in place. The material will normally be placed in windrows and subject to its chemical composition be subject to the appropriate remediation process prior to placement within the non-hazardous waste cell.
- 6.8. Drg N° R14/201 and R14/202A identify the location of the proposed composting and soils bioremediation areas, which as noted previously are both situated adjacent to areas approved for recycling operations and in screened locations. Drg N° R14/205 provides details of indicative concrete pad layouts with drainage details. Area D lies within the permitted Rushton landfill site whereas Area C lies to the northwest of the site. Both the composting and soil bioremediation process will fall under the provisions of the Environmental Permitting regime administered by the Environment Agency.
- 6.9. The Environment Agency published a Position Statement in October 2007 (Policy Ref N° 405 07) in respect of composting and potential effects from bioaerosols and this confirms that a site specific bioaerosol risk assessment is only required if a sensitive location is situated within 250 metres of the composting area. As no such sensitive locations exist within the specified distance then no risk based assessment is required.

7. Ecology

- 7.1. A Phase 1 Habitat survey was undertaken in 2009 of Area C and the agricultural land to the north of the site and a copy is contained with Appendix 3 of this Supporting Statement. The survey confirmed the undisturbed field was considered to be semi-improved grassland dominated by false oat-grass with occasional Yorkshire fog. Locally frequent herb species including rosebay, broadleaved dock and creeping thistle were identified. Towards the south-west of this field common couch, bristly oxtongue, common vetch, birdsfoot trefoil, common fleabane and Oxford ragwort were more frequent.
- 7.2. Storefield Brook was described within the survey as a ditch primarily dry despite recent rain prior to the survey except for a small area where there was less than 10 cm of water and no flow. The emergent species in this section included hard rush, soft rush, brooklime, floating sweet-grass and meadowsweet.
- 7.3. Upon restoration, the existing agricultural field will be reinstated to an identical use with similar gradients and the watercourse would remain undisturbed.
- 7.4. No habitats of value will be lost and no species protected by statute will be effected by the development proposals and no conflict with extant development plan policies arise.

8. Flood Risk Assessment

INTRODUCTION

General

- 8.1. The permitted development originally granted planning permission included a land-raising scheme using non-hazardous waste material. (Consent No KE/89/714C). This current planning application to Northamptonshire County Council is for the extraction of 58,000m³ of limestone from Area C and the subsequent infilling of Areas B and C with non-hazardous waste. A third part of the application relates to green-waste composting and soil bioremediation activities below ground level.
- 8.2. The proposed works within Areas B, C and D identified on Drg N° R14/202A lie within Flood Zone 1 (low probability of flooding), but occupy an area of more than 1 hectare. The Environment Agency's standing advice confirms that a Flood Risk Assessment is required (Environment Agency, 2005). This document aims to provide a Flood Risk Assessment (FRA) in line with the requirements of PPS25. The FRA follows the format recommended in Appendix C of the guide and the following sections are consistent with the general advice within that document.

Location and Description of Proposed Development

Type of Development and Location

- 8.3. Rushton Quarry lies between Corby and Kettering, Northamptonshire at NGR SP 854 837. The extent of the development area is shown in Drawing No. R14/202A, a copy of which is provided in Appendix 1. The current proposals are to extract limestone from Area C and reinstate to similar contours using imported waste and on-site soil resources. The re-contouring works will include the placing of approximately 70,000 m³ of waste material, contained within an engineered liner which will be capped and then covered by subsoil and topsoil and the area returned to agricultural use.

Vulnerability

- 8.4. Table D2 of PPS25 categorizes the vulnerability of various types of development. 'Landfill and sites used for waste management facilities for hazardous waste', are included amongst the types of development defined as, 'more vulnerable'. In the sections that follow, the most conservative interpretation has been adopted (i.e. that the proposed works at Rushton landfill site have a flood risk vulnerability classification of, 'more vulnerable').

Local Development Documents

- 8.5. The proposed development will take place at a location that is within or immediately adjacent to an area listed as an, 'existing (landfill) main site', within the Northamptonshire Waste Local Plan (Northamptonshire County Council, 2006). Development of waste management facilities at the site is permitted by Paragraph 4.7 of the local plan and the Local Planning Authority can confirm that the type of development at this site is appropriate within the guidelines of the Strategic Flood Risk Assessment (SFRA) that applies to this location (Kettering Borough Council and Borough Council of Wellingborough, 2005).

Sequential or Exception Test

- 8.6. This is a, 'more vulnerable', type of development in Flood Zone 1 and Table D.3 of PPS25 indicates that the proposed development is appropriate for this location. The proposed development meets the requirements of the Sequential Test and the Exception Test.

DEFINITION OF THE FLOOD HAZARD

Sources of Flooding

- 8.7. Drawing No. R14/3823/03c shows that the proposed development lies on the north side of the valley of the River Ise and generally lies at an elevation of 104m to 114m above Ordnance Datum. This is well above the flood plain of the River Ise which is at a level of 80m AOD in this area. The site is clearly not at risk of flooding from the river.
- 8.8. The restored landform lies at elevations of up to 122m AOD. Storefield Brook runs along the northern boundary of the site, at a level of 106/105m AOD but it is separated from the Area B limestone extraction area by a minimum 10m Standoff with a 3m high mound between. Thus, any out-of-banks flows from this watercourse cannot threaten the proposed works.
- 8.9. The proposed works are not vulnerable to flooding from any other rivers, streams, canals or other watercourses. Neither are the works vulnerable to tidal or groundwater flooding.
- 8.10. Some surface runoff will flow down slope from the nature restored surface of the Rushton landfill site and it will pass over the surface of the proposed works, but will be limited to greenfield rates because of the proposed restoration (i.e. the provision of a vegetated topsoil cover).

Description of Flooding

Not applicable.

Existing Surface Water Drainage Arrangements

8.11. There are presently no arrangements for surface drainage in the proposed works area. Area C is an agricultural field draining in a general northerly direction to Storefield brook whilst Area B being an unrestored section of the former quarry lies below ground level.

PROBABILITY

Flood Zones

8.12. The proposed works are wholly confined within Flood Zone 1 (i.e. having less than a 1 in 1000 probability of river or sea flooding in any one year).

Strategic Flood Risk Assessment

8.13. A Strategic Flood Risk Assessment has been prepared (Kettering Borough Council and Borough Council of Wellingborough, 2005) but, although the Environment Agency's flood zone limits have been refined in some places, the area of the proposed works remains wholly within Flood Zone 1.

Probability of Flooding

8.14. The Environment Agency flood zone maps, the SFRA and the existing drainage indicate that the site is at less than 1 in 1000 probability of flooding in any one year.

Runoff

8.15. Area C of the proposed works is currently in agricultural use and generates runoff at greenfield rates. The area will be returned to agricultural use on completion of the proposed works and will once again generate runoff at greenfield rates. During the operational phase, the re-contoured area will be covered with sub and topsoil material, which will be highly permeable, thus producing runoff rates that are no greater than those of their greenfield state.

8.16. On completion of the re-contouring works, the area will be restored to similar gradients that currently exist and surface flow velocities and the catchment response time will be unchanged. Consequently, the peak intensity of all runoff events will remain unaltered.

8.17. It is estimated that the greenfield runoff rate for a 1%AEP (1 in 100 year) event is 11 l/s/ha using the method given in the Institute of Hydrology (IoH) Report No. 124 (Natural Environment Research Council, 1994).

CLIMATE CHANGE

8.18. The SFRA examines flood risk taking into account the possible impacts of climate change. The estimated probability of flooding of the site is therefore less than 1 in 1000 in any one year, even accounting for the possible impact of climate change.

DETAILED DEVELOPMENT PROPOSALS

Details

8.19. Details of the development proposals are contained within Sections 2, 5, 6 of this Supporting Statement and essentially involve 3 activities:

- i. The establishment of green-waste and soil bioremediation facilities on land within and immediately adjacent to the Rushton landfill site.
- ii. Limestone Extraction
- iii. The third element of the planning application involves the importation of non-hazardous waste in the area to the south of Storefield Brook to infill the additional void created by the limestone extraction and an adjacent area (Area B) where it would appear planning consent was never granted to restore the former quarry workings.

Land Use Sensitivity

8.20. Not applicable.

FLOOD RISK MANAGEMENT

8.21. There will be no measures to protect the site from flooding as no flooding is predicted.

OFF-SITE IMPACTS

Prevention of Increased Flood Risk Elsewhere

8.22. There will be no works to protect the site from flooding that might increase flood risk elsewhere.

Impact of Completed Development

8.23. The project area will be returned to agricultural use on completion of the re-contouring works. Land gradients will be similar to these at present and there will be no increase in either the volume or rate of runoff from the site.

RESIDUAL RISKS

8.24. There are no residential risks.

CONCLUSIONS

8.25. The proposed mineral extraction and subsequent works at Rushton landfill site lie within Flood Zone 1, and are not at significant risk of flooding from fluvial or any other sources. The area will be returned to agricultural use. During mineral extraction, the area will not be at risk from flooding and the operations will not add to flood flows. There will be no increased risk of flooding elsewhere.

REFERENCES

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Northamptonshire County Council (2006), 'Northamptonshire Waste Local Plan 2003 – 2016'. Northamptonshire County Council, March.

9. Archaeology

- 9.1. In October 2008, Archaeological Solutions Ltd conducted an archaeological evaluation on land to the north of the Rushton landfill site, Northamptonshire (NGR SP 855 842). The desk-based assessment revealed a potential for multi-period remains to be found on the site with possible Bronze Age and Iron Age remains have been recorded nearby. Roman settlements evidence has also been found locally and possible Roman/Saxon secondary burials surrounding a Bronze Age round barrow may indicate associated activity in the area. The two medieval settlements of Rushton were indentified approximately 1km south west of the site. The desk based archaeological appraisal indicates the area surrounding the landfill site was probably agricultural land in this period, and in the subsequent post-medieval period.
- 9.2. The fieldwalking and metal detector survey of the large agricultural field to the north of Area C produced scant evidence of prehistoric activity with one struck flint flake present. Despite the potential for moderate Iron Age, Roman and Saxon remains only one shred of abraded Roman pottery was present in the ploughsoil. The majority of artefacts were from medieval, post medieval and modern periods. They were even spread across the site, and likely deposited through manuring. A slightly higher concentration of artefacts from these periods was present south of Storefield Lodge that may relate to rubbish pits associated with the dwelling that have been disturbed by the plough.
- 9.3. A copy of the Archaeological Desk Based Assessment and Archaeological Evaluation (fieldwalking and metal detector survey) is contained within Appendix 4.

10. Traffic including a Transport Statement

- 10.1. The site at Rushton was consented in 1991 to permit the importation of non-hazardous waste material into the former quarry workings. The consent did not limit HGV numbers using the local road network although the S.106 Agreement restricted access through the village of Rushton to the south-west of the site.
- 10.2. The site has been fully operational for over fifteen years and in August 2008 Mick George Ltd (MGL) acquired an operational interest in the site. Since August 2008 MGL has improved the site infrastructure by installing a more efficient wheel cleaning facility and is now seeking consent to undertake green-waste composting and soil bioremediation pads in addition to the recovery of limestone (to establish the northernmost composting and bioremediation areas) and subsequent importation of waste. The limestone will be stockpiled in Area B before being crushed and screened.
- 10.3. When a previous planning application (Nº 08/00069/WAS) was being considered at the Rushton landfill site a Transport Statement was produced in October 2008 and this confirmed waste materials are brought onto site in a variety of vehicles ranging from small skips up to articulated vehicles and this will continue. It was confirmed that on a typical day 150 loads could be delivered to the site (equating to 300 vehicle movements) and moreover the existing access point onto Oakley Road would continue to be used.
- 10.4. In respect limestone extraction, a significant proportion of the processed material will be used for haul road maintenance within the landfill scheme. The remaining processed limestone will be removed from this site on a return load basis so no significant additional HGV movements would result. The green-waste material would have been brought onto site in any event (although it would not have been composted).
- 10.5. Vehicles accessing the site will travel from the A6003 (Rockingham Road) either along Oakley Road (in a south-west direction) or Newton Road (in a westerly direction towards Rushton) and then north-east along Oakley Road. Both of these roads are typical rural distributor roads averaging 6 to 6.5m in width with grass verges. The roads are unlit and subject to the mandatory national speed limit of 60mph. In general, horizontal and vertical alignment is good although a sharp bend is present at the intersection of Newton Road and Oakley Road (to the south-west of the site).
- 10.6. In respect of the mobile crusher (to be employed in Area B), this will be brought onto site by low-loader when sufficient material is available to process. This could happen between 6 to 8 times per annum. The crusher is

approximately 3m wide and 14.5m long when being transported on the low loader.

- 10.7. It is envisaged the low loader would travel to the site along Newton Road, turning right onto Oakley Road and then right into the site. To exit the site, the low loader would turn right onto Oakley Road and then travel in a north-easterly direction before joining the A6003 at the existing roundabout.
- 10.8. In summary, the Transport Statement prepared in respect of a planning application (relating to recycling operations) at the Rushton Landfill Site in October 2008 found no adverse highway safety or highway capacity issues. No additional HGV's are proposed above the original average daily figure of 150 loads (i.e. 300 HGV movements) and therefore no additional impact in respect of highway safety or capacity issues will arise from the proposals.

11. Landscaping and Relationship Between Site Levels

11.1. The entire Rushton landfill site will be fully restored primarily to agricultural use upon completion of the landfilling operations and planning conditions exist requiring a comprehensive landscaping scheme for the entire site to be submitted for approval to the waste planning authority by early 2010. The additional areas included within this application are Areas B and C. Area B is a former quarry working, although appears to have no restoration requirement under extant planning permission. Area C is currently an agricultural field consisting of improved grassland and upon restoration this will be reinstated to a similar use. The landscaping scheme when prepared will in part be governed by the nature of the underlying waste material and the thickness of the cap and or inert waste which could limit hedgerow and tree planting.

11.2. Cross Sections A/A, B/B, C/C and D/D provide details of the relationship of the proposed activities with the surrounding landform. The restoration contours have been added to indicate how the site integrates into the surroundings.

12. Noise

- 12.1. Relevant current planning advice on the control of noise generation and impact was issued by the Government in 2005. Mineral Policy Statement 2 (MPS2) provides advice on how both planning controls and good environmental practice can be used to keep noise emissions to environmentally acceptable levels. If appropriate mitigation is not provided the presence of fixed and mobile plant and equipment on sites can lead to an increase in local neighbourhood noise levels. The degree of increase at any given point varies considerably during the life of the site depending upon the nature of the operation being undertaken, the proximity of the operations to noise sensitive properties and the mitigating measures instigated.
- 12.2. The proposed mineral extraction area (Area C), mineral processing area (Area B) and the areas for waste importation (Areas B and C) are remote from any sensitive receiver (430m from Storefield Lodge to the north-east and 650m from the Bungalow to the south west). The composting and soil bioremediation processes are relatively quiet and are situated below ground level in any event. When a previous application for the crushing of recycled materials was being considered a noise impact assessment was prepared by independent acoustic consultants (RPS) and this confirmed that a noise level of 55 dBA LAeq would be appropriate to impose at any noise sensitive property. One of the noisiest activities considered within the acoustic report was the crusher unit (working in Area B) and as the identical item of plant would be used to process the limestone (compared with construction and demolition waste) there is no difference in the predicted highest noise level.
- 12.3. The provisions of MPS2 allow dispensation for temporary operations permitting levels of 70 dBA for up to 8 weeks per annum such as soil stripping operations, but given the remote nature of the activities it is not considered that such a dispensation would be required for removing the soils from Area C and subsequently reinstating them.

13. Air Quality

- 13.1. Dust is defined as particulate matter in the size range 1-75 micrometres (μm) in diameter and is produced through the action of crushing and abrasive forces on materials. Unless properly controlled dust may be generated at mineral and waste sites during a range of site preparation, excavation, transportation and processing operations. Wind has the potential to lift dust from surfaces where the mineral is processed or waste deposited, depending on the speed of the wind. This potential nuisance can be substantially reduced where surface wetting occurs, for example by the use of motorised dust suppression units (water bowsers).
- 13.2. In addition to processing the mineral the greatest risk of dust generation would generally occur during soil stripping and replacement operations but with considerate site management and implementation of a management plan the risk can be controlled to within acceptable levels. In any event soil handling operations are transitory and only likely to occur for a matter of a few weeks in any one year.
- 13.3. The generation of dust from quarrying and landfilling activities and its consequent dispersal through the atmosphere is dependent not only on the type and level of site activity, but also on prevailing meteorological conditions. Notwithstanding the periods when adverse weather conditions are likely to occur, it is proposed to implement a Dust Action Plan, which will ensure that extra vigilance is undertaken.
- 13.4. In the absence of any agreed standards or guidelines for operational dust levels and their potential to generate a nuisance, the governmental advice document - MPS2 ("Controlling and Mitigating the Environmental Effects of Minerals Extraction in England") published in March 2005 confirms "*that the emphasis in the regulation and control of dust should be the adoption and promotion of best practices on site*". Careful consideration is given to the relationship of activities within the site to sensitive areas outside the site. Where possible, all potential dust generating activities are located away from dust sensitive land uses and receptors, but in any event consistent with MPS2 guidance the Company are promoting a Dust Action Plan which provides a pro-active approach to dust control. The potential for the emission of dust especially during soil stripping and replacement operations can be high, although mitigation techniques substantially reduce the potential.
- 13.5. Dust-generating activities are located away from residential properties and dust management issues are broadly reflected within the site design. The distance between sensitive uses and dust-generating activities have been

maximised and other factors that have been taken into account in the layout of a site to reduce dust impacts are:

- placing dust-generating activities where maximum protection can be obtained from topography or other features;
- locating dust-generating activities where prevailing winds will blow dust away from residential properties/sensitive premises/users; and
- minimising the need to transport and handle materials by placing adequate storage facilities close to processing areas.

13.6. Appendix 1B of MPS2 provides a useful summary of site operations and possible methods of controlling dust, and relevant sections of this are repeated below.

Activity	Possible Dust Control Methods
Soil handling and storage	<ul style="list-style-type: none"> • Restrict the duration of the activity. Seal and seed storage mound surfaces as soon as is practicable. • Protect surfaces from winds until disturbed areas are sealed and stable.
Loading/Unloading activities	<ul style="list-style-type: none"> • Reduce drop heights wherever practicable. • Protect activities from wind.
Material Storage	<ul style="list-style-type: none"> • Dampen material. • Protect from wind and store under cover. • Screen material to remove dusty fractions prior to external storage.
Transport by vehicle within and off site	<ul style="list-style-type: none"> • Restrict vehicle speed. • Water unsurfaced roads and paved roads. • Wheel or body wash at an appropriate distance from site entrance. • Load and unload in areas protected from wind. • Minimise drop heights. • Sheet or cover loaded vehicles. • Use water sprays to moisten material. • Sweep/wash paved roads. • Use paved roads where practicable.

- 13.7. The soil mound, (i.e. Mound T3), will be seeded at the earliest opportunity to bind the surface and minimise the effects of wind blow. The effects of wind blow across stripped surfaces and bare ground will be minimised by ensuring that loosened soils and other materials are not left untreated on the ground. During dry conditions, water will be applied as necessary to stabilise any loose bare surfaces. Impacts during mineral extraction, which are unlikely to be significant, will be controlled by minimising the drop heights of material from excavators to dump trucks and loading shovels. Care will be taken in respect of site haulage to control the occurrence of dust emissions, particularly during the restoration phase of the proposed development, when fill materials are being imported to the area and during soils haulage.
- 13.8. All site traffic will keep to designated haul routes to reduce entrainment of fine material into the atmosphere. A water bowser and road sweeper will be made available during the site operations, to spray water to the existing paved site access road and to clean any deposits from the road as and when necessary. The site access road will be inspected by the Quarry Manager on a daily basis, to determine the need for maintenance, cleaning and dust suppression.
- 13.9. All vehicles loaded with imported fill materials or processed mineral will be sheeted in order to minimise spillages or wind whipping of loose material. All departing road transport will be inspected for cleanliness, and will pass through the existing wheel wash facility, located along the site access road. The mitigation of fine particulates emissions will primarily be achieved by means of the standard mitigation measures for general dust outlined above.
- 13.10. The foregoing standard good working practices and additional mitigation measures are generally accepted by the government and the surface minerals industry as providing effective control against the impact of airborne dust. With the implementation of these measures, the risk of a dust-related impact at the closest residential dwellings will be negligible.

14. Waste Management Facilities Strategy

- 14.1. Applications for all relevant developments within Northamptonshire are required to address site waste management and County's development and Implementation Principle Supplementary Planning Document provides relevant guidance. The Supplementary Planning Document (SPD) was adopted by Northamptonshire County Council as a Local Development Document in March 2007 and was written in the context of and is linked to specific policies within the saved Minerals and Waste Local Plans. This SPD forms part of the Northamptonshire Minerals and Waste Development framework (MWDF), however it is a non-statutory document and does not form part of the statutory Development Plan. It, supplements and seeks to strengthen the effectiveness of implementation of specific policies within the Development Plan Document. The document is intended to be a practical tool to assist planners and developers alike with regards to waste minimisation and management, as well as the design and restoration of minerals and waste developments. The SPD is to be regarded as an important material consideration in the planning decision making process.
- 14.2. The SPD requires applications for all developments to address the integration and provision of waste facilities and design of site specific waste management facilities and measures to be implemented. Developers must take all reasonable and practicable measures to ensure the integration and provision of waste management facilities and sustainable waste management design and the proposals at Rushton are consistent with these objectives
- 14.3. In terms of Waste Management Facilities Strategy (WMFS) this primarily relates to built development and does not readily relate to operational landfill sites. Notwithstanding this point, this Supporting Statement provides
- a) Description of development
 - b) Estimation of the nature of waste to be handled
 - c) Identification of the waste management facilities (i.e. green waste composting and soil bio-remediation and
 - d) Site layout plans.
- 14.4. These are specific issues to be addressed within any WMFS and the proposals are consistent with the strategy's objectives. Furthermore details are provided on the identification of mitigation and waste management measures whilst Section 4 of this Supporting Statement provides the policy background to the development and therefore addresses point (f) of the Waste Management Facilities Strategy.

14.5. It is recognised within the SPD that sustainable waste management is essential in the move towards developing sustainable communities. The proposals at Storefield Lodge are wholly consistent with extant development plan policies, the waste hierarchy and proximity principle. The proposals effectively move waste materials up the waste hierarchy with minimal impact on local amenity.

Appendix 1

Plans

R14/201 Site Location Plan

R14/202A Site Plan

R14/203 Proposed limestone extraction area

R14/204 Cross Sections

R14/205 Drainage arrangements of concrete pads
(Composting and soil bio-remediation area)

R14/3823/03Rev C Site restoration contours

Appendix 2

Agricultural use and quality and soil resources report (Land Research Associates)

Appendix 3

Phase 1 Habitat Survey (FPCR)

Appendix 4

Archaeological Desk Based Assessment & Archaeological Evaluation

(Archaeological Solutions)

Appendix 5

Plate N°'s 1 and 2

(Photographs of bio-remediation
pipework)