Luxury camping in the UK uses either the North American Tipi or the Mongolian Yurt. The Tipi is a canvas covered wooden pole frame. The Yurt is a round, felt covered tent based upon a light wood structure. They are easy to put up at the beginning of the holiday season and take down for the winter. They are large enough to be fitted out with all of the comforts of modern living. Each unit is sited in its own landscaped plot, so that they provide a real experience of ‘getting away from it all’.

**Tipis**

Tipis are truly beautiful living spaces. They offer protection from the elements while allowing you to experience the freshness and joy of living close to nature.

Our 21 foot diameter tipis are surprisingly spacious. Each one is lovingly furnished in an individual style, accommodating a double bed with a proper mattress, organic bedlinen, cushions and a coffee table, sheepskin rugs and a central wood burning ‘chimenea’. We supply you with the wood and kindling you need and the tipi is lit by an abundance of candles in lanterns. There is a 2 ring gas stove for cooking complete with all utensils, crockery and cutlery.

Each tipi has its own washing and toilet unit with a fresh spring water shower and basin situated just a few yards outside.

Outdoor living has never been easier, or more comfortable! By day you can enjoy the light airiness of the tipi and by night nothing beats cuddling up next to a cosy log fire!
Yurts

Nestled down close to the river is our new yurt. While the original yurts come from the steppes of Mongolia this one was made locally by Steve Place near Oswestry. Thanks Steve – it’s lovely!

The yurt is furnished in the same way as the tipis with a comfy double bed, organic bed linen, organic sheepskins and simple but beautiful furniture. Wherever possible our furnishings are from either local, recycled or fair trade sources.

The yurt feels a bit more spacious than the tipis so we often recommend this to families or larger groups, depending on availability.
Introduction

This landscape and visual appraisal has been undertaken to understand and evaluate the effect of the restoration scheme and proposed future use at Churchfield Farm Quarry on the surrounding landscape and visual amenity of local residents and other receptors.

This appraisal has been undertaken by a qualified landscape architect, and involved desk based research and evaluation. The appraisal draws on information contained in the Northamptonshire Environmental Character Strategy suite of documents, OS data and aerial and site photography.

Landscape Character

The site is located within the Rockingham Forest Countryside Character Area and the Limestone Landscapes Limestone Valley Slopes Landscape Character Type (Northamptonshire Current Landscape Character Assessment, 2005). It is also located at the boundary of the Boulder Clay Landscapes Wooded Clay Plateau Landscape Character Type (Northamptonshire Current Landscape Character Assessment, 2005). The landscape of the Limestone Valley Slopes is characterised by

A gently undulating and productive farmland with a predominance of arable land ... Woodland cover is generally sparse, although a pattern of intermittent broadleaved copses and plantation woodlands is evident ... This is generally an open landscape, with long distance views possible, although more enclosed areas can occur where local landform and woodlands contain views.

The Wooded Clay Plateau

Is an elevated area [with] a smooth and gently sloping landform ... comprised of a limited palette of simple characteristics. Despite recent change, the combination of extensive areas of woodland ... has maintained its strength of character ... Variations in woodland and agricultural management ... contribute to a visually rich landscape.

The site displays a number of these key characteristics. It has a gently sloping landform, and is well wooded along its boundaries, which connect to a large area of mixed deciduous woodland (Oundle Wood and Churchfield Coppice) to the south and east. The presence of previous mineral working is evident across the site and the restoration of the site will enhance its landscape character. These elements are illustrated in the photographs.
attached at Appendix A. The proposed future use will provide an opportunity for visitors to enjoy the landscape and its rural qualities.

The site is also located within the Brigstock Country Park – Oundle Local Green Infrastructure Corridor (Green Infrastructure Making the Connection). The Local Green Infrastructure Corridors provide a local level link, which provides doorstep to countryside connections. Within these corridors asset and resource creation (for example, recreation provision or accessible open space) is considered essential to allow a network of multifunctional landscapes to develop. The restoration proposals, in particular the proposed future use of the site for camping, will contribute significantly to the development of a multifunctional landscape within this corridor.

**Visual Amenity**

This site is located within a valley of an undulating, open landscape. The site itself is visually enclosed by boundary vegetation and woodland to the west, south and east. To the north the boundary vegetation is clustered at the entrance to the site and associated with a residential property to the north east. The enclosed nature of the site reduces significantly the extent of any zone of theoretical visibility, and confines it to the site itself and it immediate vicinity.

Visual receptors in the immediate vicinity include residents at Chesterfield Lodge to the north east, motorists on Harley Way, agricultural farm workers in the neighbouring fields, users of Biggin Fish Pond and users of the public right of way west from Harley Way towards Silley Coppice.

Potential changes to the visual amenity of these receptors will arise during both the restoration phase and future use phase of the proposals. The restoration phase will be temporary, and elements that will contribute to a potential change in the visual amenity include the presence of vehicle movements into and out of the site, vehicle activity within the site, and a continual change in the internal landform of the site. During the future use phase elements that will contribute to a potential change in the visual amenity will include the presence of some permanent and some temporary tents, the presence of vehicle movements into and out of the site, and the use of the site by people for recreation and camping.

The change to the visual amenity of the majority of visual receptors in the locality will be negligible because of the visually enclosed nature of the site, and the temporary nature of the majority of the changes. Motorists on Harley Way and users of the public right of way will experience a limited change to the visual amenity as a result of vehicle movement at the entrance to the site. These visual receptors are temporary and transient within the landscape.

Of the visual receptors identified, the residents at Chesterfield Lodge will experience the greatest change to the visual amenity, as a result of their proximity to the site. The dwelling is located perpendicular to the northern boundary of the site, therefore views from second floor windows are limited and oblique.
Mitigation measures have been put in place to ensure that the changes to the visual amenity are limited. Primarily these measures involve the creation of a landscaped and planted bund along the northern boundary of site, and phased restoration from the north east corner to the south. This will ensure that the area of the site closest to the property will be restored first, enhancing immediate views, and the bund will screen the remainder of the restoration work as it proceeds. In addition, the bund will screen the future use of the site, with the more permanent luxury camping located to the south. A cross section (drawing no SRL.43.09) illustrates the relationship of this dwelling to the existing contours and vegetation on the site, and the proposed landscaped bund and screening of restoration activities.

Conclusion

This landscape and visual appraisal has identified the key characteristics of the existing landscape and the visual amenity, and has evaluated the likely effect of the restoration and future use of the site. The restoration of the site and future use will enhance the landscape and will contribute to delivering the objectives of the Green Infrastructure network in the area. Visual receptors have been indentified, however the change to the visual amenity of these receptors is negligible as a result of the visually enclosed nature of site. Mitigation measures have been identified to screen views from the neighbouring Chesterfield Lodge.
Appendix A

View looking north towards Chesterfield Lodge

View towards the access
View towards the southwest

View west along the southern boundary.
NOISE ASSESSMENT

RESTORATION OF STONE QUARRY AT CHURCHFIELD FARM

PGR CONSTRUCTION

MAY 2009
NOISE ASSESSMENT

RESTORATION OF STONE QUARRY AT CHURCHFIELD FARM

PGR CONSTRUCTION

MAY 2009

This report has been prepared using all reasonable skill, care and diligence within the resources and brief agreed with the client. Acoustics Noise and Vibration (ANV) accept no responsibility for matters outside the terms of the brief or for use of this report, wholly or in part, by third parties.
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References

Appendix A: Noise Units

Figures
1. INTRODUCTION

A stone quarry at Churchfield Farm has been worked some years ago for dimension stone but is currently unrestored. The location is shown in Figure 1.

The intention is to restore the site and bring the land back into some form of beneficial use such as on-farm camping.

Inert waste will be imported from PGR Construction’s recycling site located at Oundle Road, Barnwell and from other construction or demolition sites in and around Oundle. Only inert material that is unsuitable for re-use will be used. This will limit the rate of fill to a total volume of 21,000 cube. Working on 240 days per year, over 3 years this would mean an average of less than 3 loads per day. In practice the degree of activity on the site will vary from nothing up to maximum of 15 loads per day.

The inert waste will be brought to the site using road-going HGVs. The inert waste would be managed and the landform constructed using an excavator.

Extraction and infill operations will be carried out during normal working hours: 7.30 to 18.00 Monday to Friday and 7.30 to 13.00 on Saturday, with no working on Sundays or Bank Holidays.

The methodology and criteria used for this assessment are outlined in the following Section. Section 3 contains the results of the baseline noise survey. The principal sources of noise impact are identified and the likely noise levels from them assessed in Section 4. Section 5 discusses the noise mitigation measures to be incorporated into the development. The conclusions of the assessment are given in Section 6.
2. METHODOLOGY AND CRITERIA

2.1 Appropriate Standards

The principal planning guidance on noise is PPG 24 [1]. PPG 24 advises that *Much of the development which is necessary for the creation of jobs and the construction and improvement of essential infrastructure will generate noise. The planning system should not place unjustifiable obstacles in the way of such development. Nevertheless, local planning authorities must ensure that development does not cause an unacceptable degree of disturbance.*

PPG 24 advises that *guidance on the control of noise from surface mineral workings can be found in MPG 11* [2]. MPG 11 was replaced by Annex 2 of Minerals Policy Statement 2 (MPS2) [3] in 2003.

Annex 2 of Minerals Policy Statement 2 (MPS2) contains guidance and advice upon noise from minerals extraction and similar activities. MPS2 draws attention to the World Health Organisation Guidelines’ [4] advice that for daytime noise:

- few people are seriously annoyed by activities with $L_{Aeq}$ levels below 55 dB(A); and
- few people are moderately annoyed by activities with $L_{Aeq}$ levels below 50 dB(A).

With regard to setting limits during normal daytime hours (07:00 – 19:00), Annex 2 of MPS 2 advises setting a noise limit at noise-sensitive properties of not more than 10 dB above the background noise level subject to a maximum of 55 dB $L_{Aeq}$ 1 hour. Annex 2 of MPS 2 recognises that it will be difficult to achieve background + 10 dB in many circumstances without imposing unreasonable burdens on the operator, in which case the limit set should be as near to background + 10 dB as practicable and should not exceed 55 dB $L_{Aeq}$ 1 hour.

MPS 2 advises that virtually all extraction operations will have some particularly noisy short-term activities that cannot meet the limits set for normal operations. Examples are given which include soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of site road construction and maintenance. MPS 2 suggests that increased temporary daytime noise limits of up to 70dB(A) $L_{Aeq}$ 1 hour are appropriate for periods of up to 8 weeks in a year at specified noise-sensitive properties to facilitate essential site preparation and restoration work where it is clear that this will bring longer-term environmental benefits to the site or its environs. Where work is likely to take longer than 8 weeks, a lower limit over a longer period should be considered. In some wholly exceptional cases, where there is no viable alternative, a higher limit for a very limited period may be appropriate in order to attain the environmental benefits. MPS 2 also advises that the party carrying out the works should seek ways of minimising noisier activities and the noise emissions from them when designing the layout and sequencing of temporary operations, and should liaise with local residents prior to such operations taking place.

With regard to night-time noise MPS 2 advises that night-time limits should not exceed 42 dB $L_{Aeq}$. The World Health Organisation Guidelines advise that, in order to achieve appropriate standards of internal noise at night (with windows open) external levels
should not exceed 45 dB $L_{Aeq}$ at the facades of dwellings (equivalent to 42 dB $L_{Aeq}$ ‘free-field’ i.e. away from the reflection effects of facades).

2.2 Calculation Methodology

Noise levels have been calculated on the basis of the methodology described in BS 5228: Part 1 [5], in accordance with the advice given in Annex 2 of MPS 2. Plant noise levels have principally been taken from ANV’s database of plant noise levels which contains results of measurements carried out on many items of equipment during the course of assessments over recent years. Where necessary, additional source terms have been taken from Phase 3 of the DEFRA Update of noise database for the prediction of noise on construction and open sites [6].
3. BASELINE ASSESSMENT

3.1 Potentially Affected Noise-Sensitive Locations

The only potentially affected noise-sensitive receptor is Chesterfield Lodge. This dwelling is around 20 metres from the edge of the existing void.

3.2 Baseline Noise Levels

The measurement location is shown in Figure 1.

A long-term noise monitor (a Rion NL-32 Class 1 Sound Level Analyser) was set up at the edge of the void in a free-field position approximately 50 metres west of Chesterfield Lodge. Noise levels were recorded for contiguous 1 hour periods between Tuesday 21 and Tuesday 28 April 2009. The microphone height was approximately commensurate with the ground floor windows of Churchfield Lodge.

A summary of the weather conditions recorded during the survey is given in Table 3.1.

<table>
<thead>
<tr>
<th>Day</th>
<th>Weather Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday 21 April</td>
<td>Dry with very light winds from the west/northwest</td>
</tr>
<tr>
<td>Wednesday 22 April</td>
<td>Dry with very light winds from the west/northwest</td>
</tr>
<tr>
<td>Thursday 23 April</td>
<td>Dry with light winds from the south</td>
</tr>
<tr>
<td>Friday 24 April</td>
<td>Dry with winds from the south/southeast</td>
</tr>
<tr>
<td>Saturday 25 April</td>
<td>Dry with light wind from the east in the morning and wind from the south in the afternoon</td>
</tr>
<tr>
<td>Sunday 26 April</td>
<td>Dry with very light wind principally from the south</td>
</tr>
<tr>
<td>Monday 27 April</td>
<td>Wind mostly light and from the south, showers from 10 a.m. becoming heavier in the evening</td>
</tr>
<tr>
<td>Tuesday 28 April</td>
<td>Dry with very light and variable wind</td>
</tr>
</tbody>
</table>

Table 3.1 Weather Conditions during the Noise Survey

The full long-term measurement results are shown in Figure 2. A summary of the long-term measurement results is given in Table 3.2.
### Table 3.2 Summary of Long-Term Measurement Results

The daytime $L_{A_{eq}}$ noise levels were principally influenced by a combination of aircraft, birdsong, road traffic and intermittent rural events (bird-scarers, shots and agricultural machinery).

The $L_{A90}$ noise levels were generally principally influenced birdsong and vegetation being rustled by the breeze.

During the proposed operating hours, the average $L_{A90, 1 \text{ hour}}$ was 35 dB(A), the average minimum $L_{A90, 1 \text{ hour}}$ was 32.6 dB(A) and the average maximum $L_{A90, 1 \text{ hour}}$ was 38.6 dB(A).

### 3.3 Appropriate Noise Limits

The restoration works will undoubtedly bring longer-term environmental benefits to the currently unrestored site and its environs. Under these circumstances MPS 2 is clear that a limit of 70 dB $L_{A_{eq}, 1 \text{ hour}}$ can be applied to facilitate the works for periods of up to 8 weeks in a year.

For the remainder of the year, MPS 2 advises setting a noise limit at noise-sensitive properties of not more than 10 dB above the background noise level subject to a maximum of 55 dB $L_{A_{eq}, 1 \text{ hour}}$. However, Annex 2 of MPS 2 recognises that it will be difficult to achieve background + 10 dB in many circumstances without imposing unreasonable burdens on the operator, in which case the limit set should be as near to background + 10 dB as practicable and should not exceed 55 dB $L_{A_{eq}, 1 \text{ hour}}$. This advice
is further qualified in MPS 2 by the quotation of the World Health Organisation Guidelines’ advice that for daytime noise:

- few people are seriously annoyed by activities with $L_{Aeq}$ levels below 55 dB(A);
  and

- few people are moderately annoyed by activities with $L_{Aeq}$ levels below 50 dB(A).

Consequently, although the background noise levels at Chesterfield Lodge are below 40 dB $L_{A90}$, it would be unreasonable to expect the operator to achieve noise limits significantly below 50 - 55 dB $L_{Aeq, 1 hour}$ during routine works.
4. NOISE LEVELS FROM PROPOSED OPERATIONS

4.1 Potential Sources of Impact

Typical noise levels for the activities and indicative items of plant which are currently anticipated are shown in Table 4.1.

Although the proposed activities will average out at only 3 loads per day, the activity will not be evenly distributed throughout the period (being dependent upon the availability of suitable fill). A maximum number of 15 loads per day is currently anticipated.

<table>
<thead>
<tr>
<th>Source</th>
<th>SEL at 10m</th>
<th>L_{Aeq} at 10m</th>
<th>Number (or Number per hour for intermittent events)</th>
<th>% On-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat 235 Excavator Working</td>
<td>-</td>
<td>74.5</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Cat 235 Excavator Idling</td>
<td>-</td>
<td>65.0</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Truck Tipping Inert Waste</td>
<td>95.4</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>HGV Slow Drive Past</td>
<td>85.0</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 4.1: Source Levels for Restoration Operations

4.2 Estimated Noise Levels at the Potentially Most Affected Receptors

Calculations have been carried out on the basis of the methodology set out in BS 5228: Part 1.

At first, the activities will be in the void and Chesterfield Lodge will be shielded from the noise sources by the void walls. As the void is filled, however, there will be a line of sight from the noise sources to the property. Under these circumstances, the noise level from the restoration operations will decrease with distance as illustrated by Figure 3.

It can be seen from Figure 3 that when operations are taking place:

- At the part of the site closest to Chesterfield Lodge, about 20 metres from the dwelling, noise levels are anticipated to be up to around 66 dB L_{Aeq}, 1 hour;
- More than 75 metres from the property, noise levels are not anticipated to exceed 55 dB L_{Aeq}, 1 hour.

It is recommended therefore that works within 75 metres of the dwellings are carried out under the provisions for temporary works set out in MPS 2 (i.e. for a maximum of 8 weeks in any year and subject to a noise limit of 70 dB L_{Aeq}, 1 hour) and that works on the remainder of the site are subject to a noise limit of 55 dB L_{Aeq}, 1 hour.
5. **MITIGATION**

5.1 **Physical Measures**

Only modern, well-maintained plant (fitted with noise-reduction kits where available) will be used on the site.

Tonal audible warning signals can cause disturbance even though they are unlikely to contribute substantially to the overall noise level. Mobile plant will be fitted with modern reversing safety systems which are much less detectable outside the immediate proximity of the plant. This will greatly reduce the potential adverse effect of this source of noise.

5.2 **Liaison**

The operators will maintain an ongoing dialogue with the occupants of Chesterfield Lodge. This will include:

- advising the occupants in advance of proposals for works within 75 metres of the dwelling;
- providing the occupants with a telephone number which would normally be manned during operating hours; and
- a traceable procedure for expeditiously recording, reacting to and dealing with complaints.

5.3 **Conditions**

The minerals planning authority could ensure that the noise effects of the proposed development are minimised in accordance with the principles set out in MPS 2 through imposition of conditions along the following lines.

**Condition 1**

a) **All plant, equipment and machinery used on site, including vehicles, shall be designed and maintained to reduce noise levels to a minimum and shall be operated in accordance with manufacturers’ instructions.**

b) **All plant, equipment and machinery used on site, including vehicles, capable of being fitted with silencers, baffles, cladding or rubber linings shall be so fitted and maintained.**

c) **The site shall be worked in accordance with the measures set out in Part 1, Section 8 of the British Standard 5228: 2009 “Noise and Vibration Control on Construction and Open Sites”. The free field equivalent sound level (L_{Aeq}), established in accordance with paragraph 2.22 of Annex 2 of MPS 2, over any 1 hour time period, shall not exceed 55 dBA (1hrL_{Aeq}) at Chesterfield Lodge when restoration activities take place 75 metres or more from the dwelling.**
Condition 2

Works within 75 metres of Chesterfield Lodge shall be in accordance with the measures set out in Part 1, Section 8 of the British Standard 5228: 2009 “Noise and Vibration Control on Construction and Open Sites”. The free field equivalent sound level (L_{Aeq}), measured over any 1 hour time period, attributable to these works, established in accordance with paragraph 2.22 of Annex 2 of MPS 2, shall not exceed 70 dBA (1hrL_{Aeq}) at the dwelling. The Minerals Planning Authority shall be informed in writing in advance of works carried out under these provisions. Works carried out within 75 metres of the dwelling shall not exceed a duration of 8 weeks in any one year.

Condition 4

Monitoring of noise from the development shall be undertaken at Chesterfield Lodge following notification of this requirement in writing by the Mineral Planning Authority for a period of 1 hour. The noise level at the dwelling shall be determined in accordance with paragraph 2.22 of Annex 2 of MPS2.

Condition 5

The results of the noise monitoring shall be submitted to the Mineral Planning Authority when required and shall include the following information:

a) The measured L_{Aeq} (free field) level in dB(A)
b) The L_{Aeq}(free-field) attributable to operations on the development site
c) Date and time of measurement
d) Description of site activity
e) Details of measuring equipment
f) Weather conditions, including wind speed and direction

Condition 6

In the event that credible complaints regarding noise are received by the Mineral Planning Authority from any sensitive receptor, and thereafter notified to the operator, an immediate assessment of the complaint shall be undertaken. A report on the findings, with proposals for rectifying and a program for the implementation of remedial measures to be undertaken, shall be submitted to the Mineral Planning Authority no later than 5 working days from the receipt of the complaint.
6. SUMMARY AND CONCLUSIONS

A stone quarry at Churchfield Farm has been worked some years ago for dimension stone but is currently unrestored. The intention is to restore the site and bring the land back into some form of beneficial use such as on-farm camping.

Inert waste will be imported from PGR Construction’s recycling site located at Oundle Road, Barnwell and from other construction or demolition sites in and around Oundle. Only inert material that is unsuitable for re-use will be used. This will limit the rate of fill to a total volume of 21,000 cube. Working on 240 days per year, over 3 years this would mean an average of less than 3 loads per day. In practice the degree of activity on the site will vary from nothing up to maximum of 15 loads per day.

The inert waste will be brought to the site using road-going HGVs. The inert waste would be managed and the landform constructed using an excavator.

Extraction and infill operations will be carried out during normal working hours: 7.30 to 18.00 Monday to Friday and 7.30 to 13.00 on Saturday, with no working on Sundays or Bank Holidays.

There is a single potentially affected noise sensitive receptor, Chesterfield Lodge, which is located around 20 metres from the existing void.

Noise from minerals-related schemes such as this are controlled through the provisions set out in Annex 2 of MPS 2.

The restoration works will undoubtedly bring longer-term environmental benefits to the currently unrestored site and its environs. Under these circumstances MPS 2 is clear that a temporary limit of 70 dB L_{Aeq, 1 hour} can be applied to facilitate the works for periods of up to 8 weeks in a year. At all other times, a 55 dB L_{Aeq} noise limit is normally applied during normal working hours.

When operations are taking place:

- at the part of the site closest to Chesterfield Lodge (i.e. about 20 metres from the dwelling) noise levels are anticipated to be up to around 66 dB L_{Aeq, 1 hour}.
- more than 75 metres from the dwelling, noise levels are not anticipated to exceed 55 dB L_{Aeq, 1 hour}.

Mitigation measures that could be implemented to minimise the adverse noise effects of the restoration works are set out in Section 5 of this report. These include a suggested condition requiring the operators to inform the planning authority in writing prior to any works taking place within 75 metres of the dwelling.

A longterm noise survey has been carried out to evaluate the baseline noise environment at Chesterfield Lodge. Calculations have been carried out to estimate the noise levels that will arise at the from the proposed activities. The calculations suggest that, subject to the mitigation measures identified in Section 5 of this assessment, the noise levels from the proposed activities will be within the appropriate noise limits from current central government guidance, Annex 2 of MPS 2, and no significant adverse noise effects will therefore arise as a result of the proposals.
References


APPENDIX A: NOISE TERMINOLOGY

Decibels (dB)

Noise can be defined as unwanted sound. Sound in air can be considered as the propagation of energy through the air in the form of oscillatory changes in pressure. The size of the pressure changes in acoustic waves is quantified on a logarithmic decibel (dB) scale firstly because the range of audible sound pressures is very great, and secondly because the loudness function of the human auditory system is approximately logarithmic.

The dynamic range of the auditory system is generally taken to be 0 dB to 140 dB. Generally, the addition of noise from two sources producing the same sound pressure level, will lead to an increase in sound pressure level of 3 dB. A 3 dB noise change is generally considered to be just noticeable, a 5 dB change is generally considered to be clearly discernible and a 10 dB change is generally accepted as leading to the subjective impression of a doubling or halving of loudness.

A-Weighting

The bandwidth of the frequency response of the ear is usually taken to be from about 18 Hz to 18,000 Hz. The auditory system is not equally sensitive throughout this frequency range. This is taken into account when making acoustic measurements by the use of A-weighting, a filter circuit which has a frequency response similar to the human auditory system. All the measurement results referred to in this report are A-weighted.

Units Used to Describe Time-Varying Noise Sources (L_{Aeq}, L_{A10}, L_{A90} and L_{Amax})

Instantaneous A-weighted sound pressure level is not generally considered as an adequate indicator of subjective response to noise because levels of noise usually vary with time.

For many types of noise the Equivalent Continuous A-Weighted Sound Pressure Level (L_{Aeq,T}) is used as the basis of determining community response. The L_{Aeq,T} is defined as the A-weighted sound pressure level of the steady sound which contains the same acoustic energy as the noise being assessed over a specific time period, T.

The Single Event Level (SEL) is the equivalent A-weighted sound pressure level of a sound of 1 second duration which contains the same acoustic energy as the intermittent noise event being assessed. It is used to calculate the L_{Aeq,T} due to a number of intermittent noise events.

The L_{A10} is the noise level exceeded for 10% of the measurement period. It has been used in the UK for the assessment of road traffic noise.

The L_{A90} is the noise level exceeded for 90% of the measurement period. It is generally used to quantify the background noise level, the underlying level of noise which is present even during the quietest part of the measurement period.

The L_{Amax} is the maximum value that the A-weighted sound pressure level reaches during a measurement period. L_{Amax F}, or Fast, is averaged over 0.125 of a second and L_{Amax S}, or Slow, is averaged over 1 second. All L_{Amax} values referred to in this report are Fast.
FIGURES
Figure 1: Location Plan
Figure 2: Baseline Noise Survey Results
Figure 3: Noise Level vs. Distance from Restoration Operations

Distance from Restoration Operations (m)

LAeq Noise Level

0 20 40 60 80 100 120 140 160 180 200

0 30 40 50 60 70
Planning application

For

importation of inert waste, largely in the form of soils, to restore the old quarry to facilitate informal recreational use (camping) and biodiversity

Churchfield Farm Quarry
Harley Way
Oundle
Northamptonshire

By

Mr and Mrs M Berridge

PLANNING STATEMENT

Including Flood Risk Assessment
CONTENTS

PLANNING APPLICATION FORMS

PLANS
- Site location Plan No GPP/PGR/CQR/09/01;
- Site Plan GPP/PGR/CQR/09/02;
- Existing site levels Plan SRL.41.09;
- Proposed finished levels, landscaping and drainage no Plan 01;
- Isopachyte contours Plan SRL.42.09;
- Cross sections Plan SRL.43.09a;
- Proposed access improvements GPP/PGR/CQR/09/03.

SUPPORTING STATEMENT

1 Introduction
2 Site Description
3 Planning History
4 The Proposal
5 Compliance with Planning Policy
6 Environmental Impacts
7 Conclusions

Appendices
- Appendix 1 – Soil placement method statement using a bulldozer and dump truck
- Appendix 2 – Luxury camping
- Appendix 3 - Hydrogeological Risk Assessment
- Appendix 4 – Flood Risk Assessment
- Appendix 5 – Transport Statement
- Appendix 6 – Noise Assessment
- Appendix 7 – Ecological Assessment
- Appendix 8 – Landscape and Visual Appraisal
- Appendix 9 - Restoration and aftercare
1 Introduction

1.1 The site that is the subject of this application is known as Churchfield Farm Quarry; it was worked for minerals historically and during the last 20 years, with extraction finishing in 2002. The operator Spanhoe Stone went bankrupt, consequently, the site has been left unrestored. Recently, the site owner has tidied up the site by removing the stockpiled stone and spreading the mineral waste across the quarry floor. There is no material on site suitable for creating a restored surface, therefore a scheme has been drawn up to replace the previously agreed scheme. The proposal is to utilise imported inert waste and soils to create a surface suitable for landscaping so that it can be used for informal recreation, in the form of camping, with enhanced biodiversity habitats.

2 Site Description

2.1 The site is bounded by hedgerows and vegetation on three sides, with the fourth side open to the stream, which runs along the southern boundary. Access to the site is via a track which runs along the northern boundary of the field adjacent to the west, constructed to serve the mineral extraction operations. To the north of the site there is an isolated residential property, Chesterfield Lodge, which is 20m from the site boundary. In total the application area is 2.5 hectares, but filling will affect only 1.9 hectares. The access route and the area of the proposed lake make up the balance.

The site is illustrated in the extract below from Google Earth (image dated June 2005).
3 Planning History

3.1 Planning permission was granted in 1990 for a continuation of quarrying at the site. In March 1995 this permission was modified to allow aggregate to be crushed and to extend the area and depth of working and to extend the life of the site. The planning permission for extraction expired on 31 January 2006, by which time work had already ceased.

3.2 A number of conditions of the permission requiring restoration of the site have not been complied with because the operator went bankrupt, leaving the landowner with the liability of the restoration work. The landowner at the time of the grant of permission in 1995 was Mrs Channell; in 2003 the site was transferred to the current owner Mr M Berridge. The current owner has not benefited from any income from the mineral extraction, therefore to enable the restoration to be completed and a beneficial afteruse established, he needs a source of income from the site.

3.3 In 2001, the site was registered as one of Regionally Important Geology. The reason for the site’s significance is that “the geological section exposes Blisworth Limestone bioparite, typical of the Oundle area, now rarely exposed. The junction with the overlying Blisworth clay is geologically important and well exposed here, otherwise not seen in this area”.

4 The Proposal

4.1 The landowner has appointed PGR Construction Ltd to undertake the quarry restoration work, in the event that planning permission is granted. The company has set up a recycling operation at The Potato Store at Oundle Road, Barnwell, run by PGR Recycling Ltd. The combined operations of the two companies will provide all of the material to the site, place and shape it and provide the topsoil finished surface. The landowner will landscape and maintain the site thereafter and will run the proposed camping site.

4.2 It is proposed that inert waste, principally subsoil and topsoil, be used to effect a full restoration of this site. The work would be carried out over a period of up to three years, depending upon the availability of suitable fill material.

4.3 The maximum depth of the fill required is 5m, reducing to existing levels across parts of the site. In some places material will have to be moved to facilitate the proposed contours. In total the proposed involves a volume of 29,900m³, of which 8,800m³ is already on site. Therefore, there is a need to import 21,100m³, which is approximately 36,000 tonnes of inert waste. This would be imported to the site at an average rate of less than 3 loads per day over a period of three years, although on some days in might be necessary to import up to 15 loads per day.

4.4 It is proposed to use the existing access but it will be improved to facilitate easy access by heavy goods vehicles. Details are shown on Plan GPP/PGR/CQR/09/03.
4.5 Filling would start in the northern third of the field and proceed in three phases, working southwards with filling taking place in an eastwards direction over an advancing face. The top 1m of the site will comprise subsoil to a depth of 750mm, which will be covered with a topsoil layer of about 250mm. Prior to the replacement of the topsoil, the subsoil layer will be ripped, to ensure that any compaction is removed. Details of the soil handling are described in Appendix 1.

4.6 Once the landscaping works are complete and the vegetation has become established, the site will be managed for camping. The northern part of the site is proposed for occasional use for camping by organised groups such as the Boy Scouts or Girl Guides or for tourists with their own tents. The southern part of the site is proposed for Luxury camping, with tents provided by the landowner. Details of examples of this type of camping are included in Appendix 2.

4.6 The exposed mineral face that is of geological interest will be retained where it is adjacent to the access in to the site; for this length it is bounded by established woodland above it, which will deter access from the north. The length alongside the garden boundary of Chesterfield Lodge is to be covered, to remove the risk that anyone choosing to climb over the boundary fence will fall down the sheer face. In addition, block stone from the quarry floor, which is rich in fossils, will be extracted and left in a heap near the access, to provide students with the opportunity to inspect the stone while visiting the exposed mineral face.

5 Compliance with Planning Policy

5.1 The relevant policies relating to this proposal are contained in the Adopted Northamptonshire Waste Local Plan.

5.2 Paragraph 6.56 of this Plan clearly states that "the use of material to landfill or landraise as part of an agricultural improvement scheme or as engineering works should not be unduly restricted".

5.3 Policy 23 on Agricultural Improvement and Engineering Works states that "Proposals for development by landfill or landraising for the purposes of agricultural improvement or engineering works will only be permitted where it can be shown that:
- there is no significant loss of amenity caused by the operations and traffic movements;
- there is an agricultural, engineering, landscape or recreation amenity justification for the proposed works;
- It does not divert significant quantities of material away from the restoration of mineral workings;
- the materials used are inert or are soil improvers;
- other operations and alternatives have been considered by an appropriate assessment and report and that proposal is in accordance with the Best Practicable Environmental Option and other criteria and policies of the development plan".

5.4 The supporting text to Policy 23 requires the following:
"Proposals for agricultural improvement or other engineering operations should
contain additional relevant information as necessary, such as:
1. evidence that the site is land in use for agriculture as defined within Section 336 of the Town and Country Planning Act 1990;
2. evidence as to the nature of the agricultural holding and why the land comprised within the application site needs to be improved;
3. a full statement of physical characteristics as well as the documentary evidence as to the current physical condition of the application site;
4. evidence as to how the proposed method will improve the land;
5. evidence as to why no other available method of land improvement is appropriate and the reasons why
6. details of soil stripping, timing, movement, storage, and re-spreading of soils;
7. a comprehensive scheme of land restoration/improvement (including drainage);
8. an evaluation of the potential for materials recovery and reuse together with, where appropriate, details of a plan for implementation of recovery of inert waste materials from the site for reuse or recycling;
9. a scheme of quality control of the materials proposed to be deposited on the land which ensures uniformity of quality and type in accordance with the description of materials as set out in the planning application.

5.5 In this case the proposal is for engineering works to effect the restoration of an old quarry for amenity, biodiversity and informal recreation. As the proposal does not affect a field and does not involved restoration to an agricultural end use, items 1, 2 and 6 do not apply.

5.6 Once the restoration operation is concluded, the surface will be planted with trees or laid to grassland; the planting specification is shown on Plan 01.

Materials recycling
5.7 All loads delivered to the site will have been selected at source to ensure that material suitable for recycling is not included. Any loads containing material suitable for recycling will be directed to the Potato Store, Oundle Road, Barnwell, where the operator has a recycling operation.

Quality control
5.8 The operator is experienced in the handling of inert waste. Only material from the operator’s site clearance and engineering operations or from the recycling facility will be brought to the site; the operator will have full control over all inputs as the site will not be open to third parties to use.

Significant loss of amenity
5.9 All potential environmental impacts have been identified and measures proposed to ensure that the operations do not cause a nuisance to the neighbouring property. The details are set out in Section 6.

5.10 All deliveries will be restricted to the hours of 07.30 to 17.00 Monday to Friday with no operations taking place on Saturdays, Sundays or Bank Holidays, which is in accordance with the previous hours of operation at the quarry.
5.11 All work to level the imported fill and to place the soils will be carried out between 09.00 and 17.00 on weekdays.

Volume
5.12 The volume of imported material (21,100 m³) required to restore the site to the proposed contours is small, therefore it will not result in material being diverted from the restoration of active mineral workings in the county. This site will only be used by the operator for material arising from work in and around Oundle and will not be made available to third parties.

Restoration
5.13 The quarry will be restored to grassland and woodland, which will be the subject of a 5-year aftercare programme, details of which are included in Appendix 8.

Inert materials
5.14 All material to be used in this work will be clean inert, principally arising from local site clearance projects and in accordance with the limitations imposed by the relevant exemption from the Waste Management Licensing Regulations.

Other operations and alternatives
5.15 The proposed development provides a beneficial use for locally arising inert waste. There is no economic alternative means of effecting restoration of the old quarry to a beneficial end use.

6 Environmental Impacts

Surface and groundwater impacts
6.1 A detailed hydrogeological risk assessment has been carried out by Hafren Water. This describes the setting of the site, the landform, hydrology, geology and hydrogeology. The full report is included in Appendix 3. The report concludes that:
• The site is located on the Blisworth Limestone Formation, a Minor Aquifer, as designated by the Environment Agency. The site was not dewatered in order to extract the mineral and the base of the site is above the rest watertable.
• It is concluded that the site complies with the Environment Agency location policy as set out in their Landfill Directive Regulatory Guidance Note 3 (RGN3) as, although on a Minor Aquifer, the proposed landfill is not within a Source Protection Zone and will comprise strictly inert wastes only.
• Waste brought into the site will undergo a strict waste acceptance procedure. Processing and recycling of material waste before it is brought onto the site will afford pre-treatment which, will help ensure its strict inertness.
• Due to the inert nature of the waste and the technical precautions proposed it is considered that the site will not pose a risk to groundwater or surface water resources, hence the site is considered compliant with respect to the Groundwater Regulations (1998).
Flood Risk Assessment

6.2 A detailed Flood Risk Assessment is included in Appendix 4, which describes the measures needed to control surface water run-off. The proposed development complies with the requirements of the sequential test and is therefore considered appropriate for this site.

6.3 The only source of potential flooding is from surface water run-off from the development. At present, the surface water from the site drains into Lyvedon Brook as run-off coming directly off the un-restored subsoil surface. Because the site has exposed subsoil with no vegetation, runoff rates will be very high. Using the MAFF report 345 ADAS method for calculating the rate of run-off for the existing site, flows for a 1 year return period are expected to be 21.0 l/s.

6.4 The proposed development will see the site restored to a combination of woodland and grassland yielding relatively low rates of surface water run-off. The ADAS method shows a run-off rate of 16.8 l/s. This means that there will be an overall reduction of 20% in run-off from the site, therefore surface water attenuation is not considered necessary. This proposed reduction in run-off meets with the EA's aspirations for a reduced run-off from previously developed sites.

6.5 Suitable management of surface water run-off during construction will ensure that the site will be free from flood risk and there will be no adverse impact off site.

Traffic impacts

6.6 A detailed Transport Statement has been prepared and is included in Appendix 5. It states that the restoration proposal would take around three years to complete, and would generate approximately six heavy goods vehicle trips per day and two car trips associated with the one member of staff.

6.7 An analysis of accident data has shown that there are no safety concerns associated with the adjacent road network. A number of passing places are available on Harley Way to enable vehicles to pass and further improvements are proposed. Improvements will also be made to the site access junction. These measures will provide an improved situation for all vehicles using Harley Way.

6.8 It can be concluded that the proposal will generate a very small number of vehicles and will not have a noticeable impact on the adjacent road network. There should therefore be no reason why the application should not be supported on highway and traffic grounds.

Noise impacts

6.9 Background noise monitoring has been carried out and an assessment undertaken of the likelihood of the proposed activities causing unacceptable levels of noise at the nearest residential property, Chesterfield Lodge. The results are set out in the report included in Appendix 6. The conclusions are as follows:
6.10 The restoration works will undoubtedly bring longer-term environmental benefits to the currently unrestored site and its environs. Under these circumstances MPS 2 is clear that a temporary limit of 70 dB LAeq, 1 hour can be applied to facilitate the works for periods of up to 8 weeks in a year. At all other times, a 55 dB LAeq noise limit is normally applied during normal working hours.

6.11 When operations are taking place:

- at the part of the site closest to Chesterfield Lodge (i.e. about 20 metres from the dwelling) noise levels are anticipated to be up to around 66 dB LAeq, 1 hour,
- more than 75 metres from the dwelling, noise levels are not anticipated to exceed 55 dB LAeq, 1 hour.

6.12 Mitigation measures that could be implemented to minimise the adverse noise effects of the restoration works are set out in Section 5 of the report. These include a suggested condition requiring the operators to inform the planning authority in writing prior to any works taking place within 75 metres of the dwelling.

6.13 A longterm noise survey has been carried out to evaluate the baseline noise environment at Chesterfield Lodge. Calculations have been carried out to estimate the noise levels that will arise at from the proposed activities. The calculations suggest that, subject to the mitigation measures identified in Section 5, the noise levels from the proposed activities will be within the appropriate noise limits from current central government guidance, Annex 2 of MPS 2, and no significant adverse noise effects will therefore arise as a result of the proposals.

Features of ecological interest.

6.14 A walkover field survey and desk based assessment was carried out by Lockhart Garratt on March 2009; the report is included in Appendix 7. It concludes that

- Generally the site has low ecological value in its current state. The proposed activity on site (luxury camping site with woodland, wetland and grassland creation, see Appendix V) will greatly increase the ecological value of the site through grassland, woodland and wetland creation.
- The site is dominated by compacted bareground of low ecological value. However, the site does support boundary features that are of intermediate value. These include the section of broadleaved plantation, stream to the west and stream bounding the site to the south.
- The woodland supports a few Ancient Woodland Indicators and several trees which may be potential bat roosts. The streams on site provide suitable habitat for at least one protected species (otter) and conditions advantageous to several other mammals including fox and deer.

6.15 The report recommends that to negate the impacts of the proposed works on the existing ecology and boundary features to be retained the following should be carried out during the operational period:
• Reptiles – Ecological Supervision: The risk of reptile/amphibian species on site is considered to be low. However, as a precautionary approach clearance of debris (e.g. wood and concrete slabs) from the area around the disused weighbridge and adjacent areas should be sensitively cleared under ecological supervision by a suitable qualified Ecological Clerk of Works (ECoW). Supervision will help to ensure that any animals (potentially protected species) that could be sheltering beneath are safeguarded and that in the unlikely event of a protected species being encountered immediate advice is available.

• Breeding Birds – Timing of Works: Ideally site clearance works affecting dense scrub and trees should be scheduled outside of the main bird breeding season (i.e. March to August inclusive) or specialist advice should be sought with regard to bird breeding status at the site ahead of works commencing during such a time.

• Otter – Pre-Works Check: The presence of otter is considered to be low given the habitats on site. However, as a precautionary approach ahead of any works (e.g. vegetation removal, bank profiling, pond creation) on the streams located on the south and western boundaries, these channels should be checked by the ECoW for signs of protected species to ensure no features of interest have developed in the interim (e.g. otter holts).

• Invasive Weeds – Control and Eradication: The Japanese knotweed, giant hogweed, ragwort and hemlock located in various locations around the site (TN2, Appendix III) will need treatment prior to future soil disturbance and as part of ongoing management works. Herbicide (e.g. glyphosate) application near the watercourses to the south and west may require Environment Agency authorisation.

• Retained Habitats – The landscaping scheme indicates retained habitats on the western (plantation woodland and stream) and southern (tall ruderal and stream bank) boundaries of the site. Adequate protection measures must be installed ahead of works commencing e.g. fencing, to ensure that the retained habitats are not unnecessarily damaged during the works.

6.16 The report recommends that the biodiversity of the locality be enhanced by the following:

• Broadleaf woodland planting – Where possible the species selected for planting along the northern boundary of the site (labelled broadleaf woodland on Plan 200/P/A) should be in keeping with the existing groundflora and woody species in these areas and local landscape which is consistent with the W8 ash-field mapledogs mercury community. Woody species besides those listed above include hazel Corylus avellana, English oak Quercus robur, wild cherry Prunus avium, dogwood Cornus sanguinea, hawthorn, wild privet Ligustrum vulgare and spindle Euonymus europaeus. The precise composition of the planting mix is likely to be determined at a later stage, but integration of one or several of the species listed above would be beneficial from an ecological perspective.

• Grasslands – the proposed grassland areas should aim to achieve species-rich
glades within the proposed woodlands. These areas should be managed using a varied mowing regime to achieve a range of sward lengths including rough verges, short grassland areas and intermediate sections.

- Wetlands – two pond features are proposed and it is considered that these are optimal areas to create ponds. Marginal vegetation present upstream should allow for successful natural colonisation of new ponds of desirable wetland plants. Small scrapes could also be created along the south-eastern boundary where natural depressions appear to occasionally hold water. This could be undertaken relatively easily by deepening existing depressions with an aim to create seasonal standing water within the rougher vegetation.

The above details will be incorporated into the working of the site and its final restoration.

**Dust impacts**

6.17 The site will be managed to ensure that fugitive dust does not escape beyond the site boundaries, in particular to the residential property to the north. The following measures will be taken:

- the speed of vehicles operating on the site during dry conditions will be limited to 10 mph.
- water bowsers and road sweepers will be employed to lay dust or clean roadways. A water bowser will be kept on site and will be deployed during dry weather to keep tracks and working areas damp. During wet weather a road sweeper will be employed to keep the access track and the highway clear of mud, if it proves necessary.
- operations will be monitored for dust during particularly dry and windy weather conditions that could carry the dust towards Churchfield Lodge, i.e. when the wind is from the southwest or south; in the event that the dust control measures are proving to be ineffective then the operations will cease.

**Landscape and Visual Appraisal**

6.18 The effect of the proposed operations and final restoration scheme on the surrounding landscape and visual amenity of local residents and other receptors has been considered. The report is included in Appendix 8.

6.19 The landscape and visual appraisal has identified the key characteristics of the existing landscape and the visual amenity, and has evaluated the likely effect of the restoration and future use of the site. The restoration of the site and future use will enhance the landscape and will contribute to delivering the objectives of the Green Infrastructure network in the area. Visual receptors have been indentified, however the change to the visual amenity of these receptors is negligible as a result of the visually enclosed nature of site. Mitigation measures have been identified to screen views from the neighbouring Chesterfield Lodge.

**Restoration and Aftercare**

6.20 A detailed restoration and aftercare scheme is included in Appendix 9.
Regionally Important Geological Site

6.21 Measures to protect the RIGS are set out in paragraph 4.6.

7 Conclusions

7.1 This proposal stems from the need by the landowner to restore the quarry to a beneficial use by importing inert waste mostly in the form of soils, to create a contoured site suitable for woodland landscaping and its future use for camping.

7.2 It fully complies with Policy 23 of the Waste Local Plan and there will be no unacceptable risks to the environment or to the neighbours, therefore permission should be granted.
Soil placement method statement using a bulldozer and dump truck.

The area to be restored will be protected from in-flow of water, ponding etc. and drained in advance if necessary. Before the operation starts the basal layer will be level and clean.

Prior to commencing operations a Meteorological Office forecast will be obtained which gives reasonable confidence of soil replacement proceeding without interruptions from rainfall events. If significant rainfall occurs during operations, the replacement will be suspended, and where the soil profile has been started it will be replaced to topsoil level. Replacement will not restart unless the weather forecast is expected to be dry for at least a full day.

The operation will follow a detailed replacement plan showing soil units to be replaced and haul routes. The soil units will be defined on the site with information to distinguish types and layers, and thickness. Detailed daily records will be kept of operations undertaken (including the removal of stones and other damaging materials, and the results of any assessment of the need for additional decompaction and effectiveness of decompaction work undertaken), and site and soil conditions.

The bulldozer and dump truck will only stand, work and travel on the basal/formation layer.

The soil layers above the base/formation layer will be replaced in sequential strips with the subsoil layer(s) replaced first, followed by the topsoil layer; each layer being replaced to the specified thickness. The next strip is not to be started until the profile in the current strip is completed. This is often referred to as the 'bed or strip system'. The system involves the progressive sequential laying of the materials in strips across the area to be restored.

The initial strip width and axis is to be demarcated.

The dump truck will be reversed up to edge of the current strip and tip the lowest layer (subsoil) soil, without the wheels riding onto the strip. The dump truck will not drive away until all the soil is deposited within the strip without spillage over the basal layer; this may require assistance from the excavator to 'dig away' some of the tipped soil. The excavator will spread the tipped soil to full thickness by digging, and the pushing and pulling action of bucket. Each load of soil will be spread following tipping, before another is tipped. Decompaction by ripping will be undertaken once the strip is complete. Decompaction work will be completed before the next soil layer is placed.

Level boards and soil pits will be used to verify soil thickness in each strip and overall levels. Allowances (ie. a bulking factor) will be made for any settlement that may take place of the replaced loose soil.

Stones are to be removed as part of the replacement process. These operations will be
completed before the next soil layer is placed.

On completion of the subsoil layer, the process will be repeated, spreading the topsoil layer. The soil will be tipped by reversing to the outer edge of strip/soil previously laid, but without the truck wheels riding onto the already placed layer. The soil is to be spread by the bulldozer to full thickness by the pushing and pulling action of its bucket described above, and undertaking any necessary decompaction work and removal of stones. The process will be repeated progressively (left to right) along the strip and removal of stones and/or decompaction will be carried out. Level boards will be used to verify soil thickness in the strip and overall levels.

On completion of the topsoil layer the processes outlined above will be repeated for the next strips until the area to be restored is completed. Before the operation starts the basal layer will be level and clean and if it shows any significant signs of compaction, will be ripped before the soils are placed on top.

At the end of each day the current strip will be completed if rain is forecast. If during a day it is evident that a full strip cannot be completed, then only part of a strip will be started; this too will be completed.

At the end of each day, or during the day if interrupted by rain, provisions will be made to protect the base of the restored strip from ponding/runoff by sumps and grips, and the basal layer will be cleaned and leveled. At the start of each day any ponding in the current strip or operating areas will be removed and the basal layer will be leveled with no ruts.
Figure 15.2 Soil replacement by bulldozers and dump trucks: Sub soil layer

Figure 15.3 Soil replacement by bulldozers and dump trucks: Top soil layer
Appendix 2

Luxury camping
Appendix 3

Hydrogeological Risk Assessment
Appendix 4

Flood Risk Assessment
Appendix 5

Transport Statement
Appendix 6

Noise Assessment
Appendix 7

Ecological Assessment
Appendix 8

Landscape and visual impact
Appendix 9

Restoration and Aftercare
1.0 INTRODUCTION

The objective of the aftercare scheme is to ensure that after the initial restoration of the site the land is suitably managed for a period of five years to bring it to a satisfactory and acceptable standard.

The area will be restored to a mixture of grassland and woodland.

Restored land will be resurveyed annually in order to determine the need for and the kind of further remedial works necessary in order to achieve the overall objectives of the scheme. This could include the implementation of any soil loosening programme and the addition of fertilisers and soil conditioners.

It is clearly recognised that good aftercare is in the long term interest of the land and this should ensure that the agricultural and woodland practices of the operator and landowner are sympathetic to the special needs of restored land.

2.0 RESTORATION

2.1 Objectives

The aim of the design will be to provide a grassland and woodland habitat that will encourage wildlife diversification. The planting will be carried out to reflect the character of the semi-natural woodland in the vicinity.

The method of soil placement practised in the restoration should result in an adequately fissured, restored soils profile. The method of handling the soil is set out in a separate document, submitted with the planning application for the restoration. The main objectives of the aftercare programme are to encourage stabilisation of the existing fissures, to encourage the development of smaller stable structural units especially in the upper rooting zone of the soil profile and to ensure that the land drains to a standard which will allow woodland establishment. These objectives will be achieved by the encouragement of the regeneration of biological activity, appropriate cropping, appropriate under-drainage and good management.

2.2 Ground Preparation

The land will be finished with one metre of clean subsoil and topsoil. This will be ripped in one direction to a depth of 0.4m at 0.6m spacings with a wing tined sub-soiler. It
will be stone picked where the area is to be seeded for grassland establishment; it is not necessary for areas of woodland planting.

A fescue based amenity grass seed mix will be sown prior to planting to provide green cover over the site to remove excess moisture and to assist in the prevention of the incursion of noxious weeds.

2.3 Plants and planting

Detailed species mixes for the woodland planting are shown on the Restoration Scheme Plan 01. Plants will be bare rooted 45-60cm 1+1 or 1+2 transplants with a minimum diameter at root collar of 7mm. All plants to be pit planted. Planting pits to be 0.3m x 0.3m x 0.3m.

2.4 Protection

Trees will be individually protected with 60cm Tubex sleeves with 90cm canes. Woody shrubs will be protected by Tubex tree shelters with 90cm wooden stakes. It is not thought that there is a major vermin problem on the site. The site will not be fenced as deer are not known to be a problem.

2.5 Grassland maintenance

Once established grasslands would be maintained through grazing with principally sheep. All grazing areas with be suitably stock fenced and watered as required.

2.6 Site Drainage

The subsoil will be left uncompacted to aid free drainage. In addition the ripping mentioned above will loosen the soil. The contours have been designed to ensure free drainage towards the streams to the west and south of the site. The effectiveness of the site drainage will be evaluated regularly during the aftercare period.

2.7 Fertilisation

A nutrient check will be undertaken each year. Fertilisation will then be carried out remedially to ensure adequate tree growth and good grassland establishment.

2.8 Maintenance

Herbicide application after tree planting will be carried out to ensure a minimum of 1m² weed free at each plant site, using Kerb or other agreed treatment. This will be followed up in the summer using a herbicide application such as Glyphosate or other agreed treatment. Weeding will be continued until trees are adequately established, for a minimum of three years using herbicide together with strimming and hand weeding if required to maintain the 1m² weed free area around each plant.

Replacement of losses will be carried out annually to ensure adequate stocking at the end of the aftercare period.
3.0 DETAILED ANNUAL PROGRAMME

Within the structure of the general strategy outlined in 2.0 above, detailed proposals for each year will be submitted previous to and agreed at an annual site meeting with the MPA. Such meetings to be convened at the convenience of the MPA usually in April.

The first detailed programme is set out below.

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<td>Completion of restoration in accordance with section two above followed by a meeting with MPA and their advisors.</td>
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<td>Autumn</td>
<td>Cultivation and sowing of amenity grass seed mix.</td>
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<td>Winter</td>
<td>Plant trees and treat each plant site with residual herbicide.</td>
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<td>April</td>
<td>Meeting with MPA.</td>
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<td>Summer</td>
<td>Herbicide treatment. And strimming where necessary.</td>
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<td>Year 2 Autumn</td>
<td>Detailed site assessment to be made to identify any serious drainage problems. Remedial proposals to be agreed with MPA.</td>
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<td>Winter</td>
<td>Beat up losses to 100%. Assess adequacy of protection. Treat with residual herbicide.</td>
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<td>January</td>
<td>Soil nutrient level check. Followed by treatment with necessary fertilisers to correct imbalances if any.</td>
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<td>February</td>
<td>Submission of Annual Programme to MPA.</td>
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<td>April</td>
<td>Meeting with MPA to discuss programme.</td>
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PGR Construction
Churchfield Farm, Harley Way, Oundle
Northamptonshire

Quarry Restoration Scheme
Transport Statement
April 2009
QUALITY CONTROL

## Project Details

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## CONTENTS

1.0 Introduction
2.0 Existing Conditions
3.0 The Proposed Development
4.0 Transport Impact
5.0 Summary and Conclusions

## APPENDICES

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<td>A</td>
<td>Accident Data</td>
</tr>
<tr>
<td>B</td>
<td>Proposed Site Layout Plan</td>
</tr>
<tr>
<td>C</td>
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</tr>
</tbody>
</table>
1.0 INTRODUCTION

1.1 DT Transport Planning Limited has been appointed by PGR Construction to prepare a Transport Statement in support of an application to restore a worked out quarry at Churchfield Farm, to the west of Oundle in Northamptonshire, see Figure 1 below. The site has an existing priority junction access from Harley Way which is shown in Figure 2.

Figure 1 – Site location plan
1.2 This Transport Statement summarises existing activities at the site, considers the existing transport conditions in the area of the site, the proposed development, trip generation and lorry routing, and the transport implications of the proposal.
2.0 EXISTING CONDITIONS

2.1 The quarry is located on the south eastern side of Harley Way, around 1.5 km from the centre of Oundle in Northamptonshire. The access road to the quarry is generally 3.2 metres wide and meets Harley Way at a priority junction. The site access is currently 6.3 metres wide at this location.

2.2 Harley Way is a variable width single two-way carriageway road that is generally around 4.6 metres wide in the vicinity of the site. Harley Way links the A427 to the north, with the A6116 to the south. It is a very lightly trafficked road, serving the main Churchfield Farm buildings to the south, and a small number of residential properties. There are a number of passing places along Harley Way.

2.3 Harley Way meets the A427 around 500 metres north of the site at a simple priority junction. The A427 provides a link between Oundle and the A605 to the east, and Weldon, the A43 and the A427 to the west.

2.4 Harley Way continues south of the site until it meets the A6116 at a ghost island priority junction. The A6116 links the A14 trunk road to the south east with the A43 and A427 to the west. The site can therefore be considered to be well connected to the national road network.

2.5 When the restoration is completed, there are proposals to extend the quarry to the east of the existing site, using an upgraded access road. This proposal will generate around six HGV loads per day.
2.6 The main Chuchfield Farm buildings are located just south of the quarry on the eastern side of Harley Way. There is currently a farmhouse, a grain store and a number of outbuildings at the site. It is proposed to introduce a stone processing plant at the grain store, which is no longer used. It is anticipated that this plant will generate around 5 HGV trips, 10 trips by van or truck, and 12 car trips per day. It is not intended to use any of the stone from the nearby quarry at this stone processing plant.

2.7 Personal injury accident data has been obtained for the A427 junction with Harley Way and for Harley Way as far as the access to Churchfield Farm. Data was provided for the five year period between February 2004 and January 2009.

2.8 Over this period, two accidents were recorded. One was on the A427, adjacent to the entrance to the golf club. This was a single vehicle accident, whereby the driver collided with the verge at a bend, and slid into the hedge. Slight injury was recorded. The second accident occurred on Harley Way. A vehicle was parked in a gateway on the side of the road. A vehicle travelling along the road collided with the parked vehicle resulting in serious injury. Given the very low number of accidents that have occurred over the past five year period, there does not appear to be a safety issue on the network. Appendix A contains the Accident Data.
3.0 THE PROPOSED DEVELOPMENT

3.1 It is proposed to restore a worked out quarry at Churchfield Farm and to provide a camping or similar outdoor leisure facility at the site. It is anticipated that the restoration would take around three years to complete.

3.2 The existing access from Harley Way would be retained, although the junction will be upgraded to provide better bellmouth radii and a realigned access to allow a 90 degree approach, rather than the current u-turn arrangement. Appendix B contains the proposed site access arrangements and an extract is included below for ease of reference;

Figure 3 – Proposed amended site access geometry
Appendix C shows the swept path of an 8 wheel rigid goods vehicle at the Quarry access junction. It is also proposed to provide an improvement to the existing passing places along Harley Way. These improvements were developed following consultation with Northamptonshire County Council Highways Department and will be introduced as part of the restoration proposals. The improvement scheme is also shown in Appendix C. It should be noted that the passing bay assessment has been undertaken on a worst case basis using the articulated vehicles likely to be associated with some deliveries to the proposed Stone Processing Plant at Churchfield Farm.
4.0 TRANSPORT IMPACT

4.1 The quarry restoration would require the import of 21,100 m$^3$ of inert materials, in 10 m$^3$ loads, resulting in a total of 2,110 loads or 4220 HGV trips. The process will be undertaken over a three year period. Assuming 240 working days per year, this would result in an average of around 3 hgv loads, or 6 movements (two-way) generated by the site per day (4220/3/240).

4.2 However, whilst the average level of movement would be 6 movements per day (two-way), the client has advised that movement levels could peak at around 15 loads per day (30 movements (two way)) as they will be dependent on the availability of material from PGR Constructions contracts. The Client advises that the fill material will be sourced as locally as possible and is likely to come from Oundle and the surrounding area due to the cost implications of importing material from a larger area.

4.3 In the Transport Statement for the Stone Processing plant it was stated that the Stone Processing operations could generate 2 loads per week of waste stone. PGR Construction has identified that the vehicles collecting waste stone from Churchfield Farm could first be used to deliver fill material to the Quarry site. Whilst this is not a significant number of movements, and hasn’t been taken into account in this Transport Statement, the commercial nature of PGR Construction’s business is such that backloading will be adopted as much as possible, given that it reduces operational costs. This will reduce the vehicular impact of the proposed site operations.

4.4 Table 1summarises the average and maximum HGV trips likely to be generated by the quarry restoration scheme. In addition to the HGV movements, there is likely to be one member of staff on site at any time, generating at most two car movements per day.
### Table 1  HGV Trips Generated by import of inert Materials to the site

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<th>Average No. of Loads</th>
<th>Average No. of Trips</th>
<th>Peak No. of Trips</th>
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</tr>
<tr>
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All of the traffic generated by the site would travel to the site via the A427 to the north of the site, no traffic would travel south along Harley Way to the A6116. The A427 provides a link to Oundle and the A605 to the east, and the A43 and A6116 to the west.

With the exception of a small amount of traffic that might travel along the A427 to Corby, it is likely that the remainder of the trips would turn east onto the A427 towards Oundle, avoiding the western section of the A427. The A427 to the east can be used to travel to Thrapston and the A14 to the south, Peterborough and the A1(M) to the east.

The very small number of trips generated by the proposal will not have any noticeable impact on the operation of the site access, Harley Way or the A427/Harley Way junction. Harley Way already has a number of passing bays so that large vehicles can pass each other. The improved passing bays along Harley Way, shown in Appendix C, will provide an improvement that will benefit all traffic using Harley Way.
5.0 SUMMARY AND CONCLUSIONS

5.1 DT Transport Planning Limited has been appointed by PGR Construction to prepare a Transport Statement in support of an application to restore a worked out quarry at Churchfield Farm, near Oundle, to provide a camping site or similar outdoor leisure activity.

5.2 The restoration proposal would take around three years to complete, and would generate approximately six heavy goods vehicle trips per day and two car trips associated with the one member of staff.

5.3 An analysis of accident data has shown that there are no safety concerns associated with the adjacent road network. A number of passing places are available on Harley Way to enable vehicles to pass and further improvements are proposed. Improvements will also be made to the site access junction. These measures will provide an improved situation for all vehicles using Harley Way.

5.4 It can be concluded that the proposal will generate a very small number of vehicles and will not have a noticeable impact on the adjacent road network. There should therefore be no reason why the application should not be supported on highway and traffic grounds.

Ref:
Vehicles 1  Casualties 1  Severity: Slight  Road surface: Wet/Damp
Weather: Fine without high winds  Light: Darkness: no street lighting
Special Conditions  Road Type:
Acc Desc: veh1 trav n/w on a427 benefield rd from oundle ,near the golf course.veh1 collides with verge on grntle right hand bend.travel approx 15m sideways across verge ending in hedge.no other vehicle involved

Causation

Factor:  Participant:  Confidence:
1st:  
2nd:  
3rd:  
4th:  
5th:  
6th:  

Occurred on  A0427 OUNDLE TO BENEFIELD NR GOLF COURSE 23M SE D3132 HARLEYWAY / CHURCHFIELD/
Vehicle 1  Car  Going ahead right hand bend
Reference: Not in restricted lane  No skidding, jack-knifing or overturning
First point of impact: Nearside  Age of 30  Breath Not requested
Driver:  Driver Postcode: PE85AN
Vehicle direction: SE to NW  Journey: Other/Not known
FRV

Casualty Reference: 1  Age: 30  Female  Driver/rider  Severity: Slight


Ref:
Vehicles 2  Casualties 2  Severity: Serious  Road surface: Dry
Weather: Fine without high winds  Light: Daylight: no street lighting
Special Conditions  Road Type: Single carriageway
Acc Desc: V2 parked partly in gateway on Lyvenden Rd. V1 travelling s/w towards Brigstock failed to see V2, brakes and skidded into rear of V2.

Causation

Factor:  Participant:  Confidence:
1st:  Failed to look properly  Vehicle 001  Very Likely
2nd:  
3rd:  
4th:  
5th:  
6th:  

Occurred on  D3132 LYVEDEN RD OUNDLE TO BRIGSTOCK 0488M SW 6-GATEWAY TO GOLF CLUB--A427
Vehicle 1  Car  Going ahead
Reference: Skidded  Age of 20  Breath Negative
Driver:  Driver Postcode: PE84EQ
Vehicle direction: NE to SW  Journey: Other/Not known
FRV  Not foreign registered vehicle

Casualty Reference: 1  Age: 20  Female  Driver/rider  Severity: Serious
Vehicle 2  Car  Parked
Reference:

First point of impact: Back
Vehicle direction: Park to Parked
FRV Not foreign registered vehicle

Casualty Reference: 2 Age: 34 Male Driver/rider Severity: Slight

No skidding, jack-knifing or overturning
Age of 34
Breath test Negative
Driver Postcode: PE39OU
Journey: Other/Not known

Accidents involving:

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Casualties:

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APPENDIX B
APPENDIX C