ENVIRONMENTAL STATEMENT

SUBMISSION FOR REVIEW OF MINERAL PLANNING PERMISSION DA/97/1140C

LAND AT BOUGHTON-PITSFORD-MOULTON, NORTHAMPTONSHIRE

PETER BENNIE LIMITED AND TATA STEEL UK LIMITED

Version 1
Status Final
Prepared by Gill Pawson 30/07/14
Approved by Lucy Booth 30/07/14
## CONTENTS

1 \hspace{1em} INTRODUCTION ................................................................................................................ \hspace{1em} 5
1.1 \hspace{1em} Background ................................................................................................................................... \hspace{1em} 5
1.2 \hspace{1em} Environmental Impact Assessment ................................................................................ \hspace{1em} 5
1.3 \hspace{1em} Scope of Environmental Impact Assessment ........................................................................ \hspace{1em} 5
1.4 \hspace{1em} The Applicant and Landownership ..................................................................................... \hspace{1em} 7
1.5 \hspace{1em} The Assessment Team ........................................................................................................... \hspace{1em} 7
1.6 \hspace{1em} Planning Policy ....................................................................................................................... \hspace{1em} 7
1.7 \hspace{1em} Documentation and Public Comment ...................................................................................... \hspace{1em} 8
2 \hspace{1em} THE SITE AND ITS SETTING .............................................................................................. \hspace{1em} 9
2.1 \hspace{1em} An Overview .................................................................................................................................... \hspace{1em} 9
3 \hspace{1em} METHODOLOGY ............................................................................................................... \hspace{1em} 10
3.1 \hspace{1em} General .......................................................................................................................................... \hspace{1em} 10
3.2 \hspace{1em} Baseline Survey ............................................................................................................................. \hspace{1em} 10
3.3 \hspace{1em} Approach to Assessment ............................................................................................................... \hspace{1em} 10
3.4 \hspace{1em} Cumulative Impacts ....................................................................................................................... \hspace{1em} 10
4 \hspace{1em} DESCRIPTION OF PITSFORD QUARRYING ACTIVITIES ................................................. \hspace{1em} 11
4.1 \hspace{1em} Introduction .................................................................................................................................... \hspace{1em} 11
4.2 \hspace{1em} Working Arrangements .................................................................................................................. \hspace{1em} 11
4.3 \hspace{1em} Public Rights of Way ..................................................................................................................... \hspace{1em} 12
4.4 \hspace{1em} Restoration and Aftercare .............................................................................................................. \hspace{1em} 12
5 \hspace{1em} CONSULTATION .............................................................................................................. \hspace{1em} 13
5.1 \hspace{1em} Introduction .................................................................................................................................... \hspace{1em} 13
6 \hspace{1em} PLANNING HISTORY AND CHANGES TO ROMP PERMISSION ........................................ \hspace{1em} 14
6.1 \hspace{1em} Planning History ............................................................................................................................ \hspace{1em} 14
6.2 \hspace{1em} Proposed Modifications to the Permission .................................................................................... \hspace{1em} 14
7 \hspace{1em} DUST ............................................................................................................................................. \hspace{1em} 16
7.1 \hspace{1em} Introduction .................................................................................................................................... \hspace{1em} 16
7.2 \hspace{1em} Mitigation Measures ....................................................................................................................... \hspace{1em} 16
8 \hspace{1em} CULTURAL HERITAGE ...................................................................................................... \hspace{1em} 18
8.1 \hspace{1em} Introduction .................................................................................................................................... \hspace{1em} 18
8.2 \hspace{1em} Mitigation Measures ....................................................................................................................... \hspace{1em} 18
9 \hspace{1em} ECOLOGY ....................................................................................................................................... \hspace{1em} 19
9.1 \hspace{1em} Introduction .................................................................................................................................... \hspace{1em} 19
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2</td>
<td>Mitigation Measures</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>HYDROLOGY AND FLOOD RISK</td>
<td>21</td>
</tr>
<tr>
<td>10.1</td>
<td>Introduction</td>
<td>21</td>
</tr>
<tr>
<td>10.2</td>
<td>Mitigation Measures</td>
<td>22</td>
</tr>
<tr>
<td>11</td>
<td>HYDROGEOLOGY</td>
<td>23</td>
</tr>
<tr>
<td>11.1</td>
<td>Introduction</td>
<td>23</td>
</tr>
<tr>
<td>11.2</td>
<td>Mitigation Measures</td>
<td>24</td>
</tr>
<tr>
<td>12</td>
<td>NOISE</td>
<td>25</td>
</tr>
<tr>
<td>12.1</td>
<td>Introduction</td>
<td>25</td>
</tr>
<tr>
<td>12.2</td>
<td>Mitigation Measures</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>SOILS</td>
<td>27</td>
</tr>
<tr>
<td>13.1</td>
<td>Introduction</td>
<td>27</td>
</tr>
<tr>
<td>13.2</td>
<td>Mitigation Measures</td>
<td>27</td>
</tr>
<tr>
<td>14</td>
<td>TRAFFIC AND TRANSPORTATION</td>
<td>28</td>
</tr>
<tr>
<td>14.1</td>
<td>Introduction</td>
<td>28</td>
</tr>
<tr>
<td>14.2</td>
<td>Mitigation Measures</td>
<td>28</td>
</tr>
<tr>
<td>15</td>
<td>ALTERNATIVES</td>
<td>29</td>
</tr>
<tr>
<td>16</td>
<td>CUMULATIVE IMPACTS</td>
<td>30</td>
</tr>
<tr>
<td>16.1</td>
<td>Introduction</td>
<td>30</td>
</tr>
<tr>
<td>16.2</td>
<td>Simultaneous Effects</td>
<td>30</td>
</tr>
<tr>
<td>16.3</td>
<td>Successive Effects</td>
<td>30</td>
</tr>
<tr>
<td>16.4</td>
<td>Combined Effects</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>SUMMARY AND CONCLUSIONS</td>
<td>32</td>
</tr>
<tr>
<td>17.1</td>
<td>Summary</td>
<td>32</td>
</tr>
<tr>
<td>17.2</td>
<td>Conclusions</td>
<td>32</td>
</tr>
</tbody>
</table>

APPENDICES

**APPENDIX 1:** Scoping Opinion and Letters

**APPENDIX 2:** Approved and Proposed Restoration and Aftercare Schemes

**APPENDIX 3:** Permission DA/ 97/ 1140C and list of Proposed Conditions

**APPENDIX 4:** Dust Assessment

**APPENDIX 5:** Heritage Assessment

**APPENDIX 6:** Ecological Baseline & Impact Assessment

**APPENDIX 7:** Flood Risk Assessment

**APPENDIX 8:** Hydrogeological Impact Assessment
APPENDIX 9: Noise Assessments
APPENDIX 10: Soil Assessment
APPENDIX 11: Transport Assessment
1 INTRODUCTION

1.1 Background

1.1.1 This Environmental Statement (ES) has been prepared under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. It accompanies the submission for the Review of a Mineral Planning Permission DA/97/1140C (ROMP) to Northamptonshire County Council by GP Planning Ltd on behalf of Peter Bennie Ltd and Tata Steel UK Ltd to continue mineral extraction on land at Boughton-Pitsford-Moulton.

1.1.2 The ES comprises three main parts:
   - Report;
   - Technical Appendices; and
   - A Non-Technical Summary (NTS) of the ES.

1.1.3 The NTS is presented as a separate document.

1.1.4 The ROMP Site lies either side of the A508, Harborough Road. The location of the ROMP Site is shown on Drawing GPP-PB-PR-13-01 and the extent of the site is shown on Drawing GPP-PB-PR-13-02.

1.1.5 Much of the area within the ROMP Site has been worked for stone since the 1950s, when the original permission was granted for the extraction of ironstone.

1.2 Environmental Impact Assessment

1.2.1 Environmental Impact Assessment is undertaken in accordance with The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 (the EIA Regulations), as amended. These regulations provide an indication of the need for an EIA.

1.2.2 The proposed development qualifies for an Environmental Impact Assessment (EIA) as it falls under Schedule 1 (19)

   Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction where the surface of the site exceeds 150 hectares.

1.2.3 This Environmental Statement (ES) has been prepared under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. The Regulations implement EC Directive No. 85/337 on the assessment of the effects of certain public and private projects on the environment, as amended by Council Directive No 97/111/EC.

1.3 Scope of Environmental Impact Assessment

1.3.1 A Scoping Request was submitted to Northamptonshire County Council in May 2013. Under the EIA Regulations (2011), Northamptonshire Council provided an initial Scoping Opinion on 30 July 2013; a copy is included in Appendix 1. A meeting was held on 7 August 2013 with Planning Officers of the County Council and representatives of GP
Planning Ltd to discuss the scope of assessment. This resulted in a letter from GP Planning Ltd on behalf of the Applicants, dated 26 August 2013, which sought to limit the scope of assessment to the area of Pitsford Quarry access, compound and Phase 1 extraction area, on the understanding that a new condition will be imposed which will limit working to this area only. A copy of the letter is included in Appendix 1. Consequently a revised Scoping Opinion was issued by Northamptonshire County Council on 11 October 2013, a copy of which is included in Appendix 1.

1.3.2 The Scoping Opinion was accompanied by responses from technical consultees; these have been addressed accordingly.

1.3.3 The Scoping Opinion and the EIA Regulations (2011) require that the following items should be included as part of the Environmental Statement:

- Background, Introduction and Context
- The Site and Its Setting
- Methodology
- The Development Proposal
- Planning History
- Consultation
- Dust
- Cultural Heritage
- Ecology
- Hydrology and Flood Risk
- Hydrogeology
- Noise
- Soils
- Traffic and Transportation
- Alternatives
- Cumulative Impacts
- Summary of Impacts

1.3.4 The following topics have been ‘Scoped-out’ of this EIA.

**Ground Conditions and Contamination**

1.3.5 These impacts are of no relevance to mineral extraction, therefore will not be considered in the EIA.

**Landscape and Visual Amenity**

1.3.6 There are no changes being proposed that will have any impact on landscape and visual amenity, therefore this topic will not be included in the EIA.

**Socio-Economic Impacts**

1.3.7 Continuing quarrying operations will have a positive impact through maintaining employment within the operational company. However, this is a small scale impact that does not require a Socio-Economic Assessment as a part of the Environmental Impact Assessment.
1.4 The Applicant and Landownership

1.4.1 Peter Bennie Ltd is a privately owned independent company supplying construction materials and services for over 40 years. It owns the land shown as Phases 1 and 2 on Drawing GPP/PB/PR/13/05, together with the land of the Community Woodland. Tata Steel UK Ltd has retained the mineral rights on the land owned by Moulton College and shown on Drawing GPP/PB/PR/13/05 as Phases 3, 4 and 5. Tata Steel UK Ltd also has the mineral rights on land west of Harborough Road, within the area of Buckton Fields Development Area, shown on Drawing GPP/PB/PR/13/02 ROMP Review Plan.

1.5 The Assessment Team

1.5.1 The following consultants have contributed to the Environmental Impact Assessment and the preparation of this Environmental Statement:

- Hafren Water: Hydrology and Flood Risk; Hydrogeology
- LFA Acoustics: Noise
- DT Transport Planning Limited: Traffic and Transportation
- Lockhart Garrett: Ecology

1.6 Planning Policy

1.6.1 Planning permission exists for the continuation of mineral extraction at the site, expiring in 2042. However, there is relevant planning policy that applies to continued mineral extraction and site restoration. This is set out below.

**National Planning Policy Framework and Technical Guidance 2012**

1.6.2 The NPPF states that ‘Minerals are essential to support sustainable economic growth and our quality of life. However, since minerals are a finite resource, and can only be worked where they are found, it is important to make best use of them to secure their long-term conservation.’

1.6.3 Paragraph 144 of the NPPF sets out the criteria that Local Planning Authorities should use when determining planning applications. All of these criteria have been incorporated into the Northamptonshire Minerals Development Plan documents, as set out below.

1.6.4 The NPPF Technical Guidance sets out how to carry out a Flood Risk Assessment, which has informed the preparation of the FRA that is included in this Environmental Statement. In addition, the Technical Guidance sets out detailed advice on minerals policy, including consideration of noise and dust impacts and restoration and aftercare schemes.

**Northamptonshire Minerals Adopted Development Plan (various dates)**

1.6.5 The Development Plan comprises the following documents:

- Core Strategy
- Locations for Minerals Development
- Control and Management of Development
- Development and Implementation Principles
1.6.6 The main document of relevance to the continued working of minerals at Ptisford is the Development and Implementation Principles. In Box SPD3 the design principles for minerals development are set out. Of particular relevance are the principles relating to environmental protection and enhancement and effective buffers from sensitive receptors. These principles have been taken into account in devising the appropriate mitigation for the various environmental impacts and are detailed in the following chapters.

**Northamptonshire Final Draft Minerals and Waste Local Plan 2013**

1.6.7 This document sets out the latest policies relating to minerals extraction in the county, but it has not yet been formally adopted. The proposed Policy 22 sets out the matters to be addressed in assessing the impact of proposed minerals development. These matters are as follows:

- avoiding and / or minimising potentially adverse impacts to an acceptable level, specifically addressing air emissions (including dust), noise and vibration, land use conflict and cumulative impact,
- impacts on flood risk as well as the flow and quantity of surface and groundwater,
- ensuring access is sustainable, safe and environmentally acceptable, and
- ensuring that local amenity is protected.

1.6.8 The matters set out in Policy 22 are dealt with in this Environmental Statement.

1.7 Documentation and Public Comment

1.7.1 A copy of the ES (main statement only) or the ES (main statement plus technical appendices) can be purchased from GP Planning Ltd for £25 or £50 respectively for printed copies or £5 for a copy on CD. Copies of the Non-Technical Summary are available free of charge.

GP Planning Ltd
The Stables
Long Lane
East Haddon
Northamptonshire
NN6 8DU

Tel: 01604 771123
info@gpplanning.co.uk
2 THE SITE AND ITS SETTING

2.1 An Overview

Site Location

2.1.1 The ROMP Site lies either side of the A508, Harborough Road. The full extent of the area covered by the old mineral planning permission is shown on Drawing GPP/PB/PR/13/02 Romp Review Plan. The location and extent of the site that is the subject of the environmental impact assessment are shown on Drawing GPP-PB-PR-13-01 Site Location Plan and Drawing GPP-PB-PR-13-09 Phase 1 Site Plan.

2.1.2 The ROMP Site is located within the area of Daventry District Council and Northamptonshire County Council.

Sensitive Receptors

2.1.3 There are a number of isolated residential properties included within the area of the old mineral planning permission, some of which are Listed Buildings Grade II. The villages of Pitsford, Moulton and Boughton lie close to the permission boundary.

2.1.4 In 2011, land within Pitsford Quarry was designated by the Wildlife Trust as a Local Wildlife Site, which is a non-statutory designation. Also, within the north-east of the Pitsford Quarry area is a Local Geological Site.

2.1.5 Pitsford Water, a Site of Special Scientific Interest (SSSI) and Country Park lies 2km to the north of the site.

2.1.6 Boughton Park, which is Grade II listed on the Register of Historic Parks and Gardens, lies partly within the ROMP permission boundary and extends approximately 400m to the south. Some of the Follies of Boughton Park lie within the ROMP permission boundary and others lie nearby; all are Listed Grade II.

2.1.7 South of the village of Pitsford there is a large area of Community Woodland, planted in 2001, all within the ownership of Peter Bennie Ltd and known as ‘T’s Wood’.

2.1.8 These receptors are shown on the Site Context Plan, Drawing GPP-PB-PR-13-03.

Public Rights of Way

2.1.9 Three public footpaths run through the permission area. These are also shown on the Site Context Plan, Drawing GPP-PB-PR-13-03. Footpath CC2/DK3 runs along the eastern boundary of Phase 1; footpath CC13/DK4 runs to the east of Pitsford Pond and footpath CC4 runs east-west, north of Boughton Quarry.
3 METHODOLOGY

3.1 General

3.1.1 The EIA has been carried out in accordance with the EIA Regulations (2011) and appropriate government guidance.

3.1.2 The specific methodologies for the assessment of the individual environmental topics are presented separately in the technical reports in the appendices of this Statement.

3.2 Baseline Survey

3.2.1 Baseline survey work has been carried out as part of the EIA process. A series of detailed surveys were undertaken to establish the baseline conditions on the Site. These were conducted during 2013 and include the following:

- Topographic Survey – selected areas of the ROMP site and surroundings have been surveyed to provide levels information to enable the detailed design of extraction area and ancillary development.
- Ecological Surveys – an assessment has been made of the biodiversity resource at Pitsford Quarry Phase 1 to establish what species and habitats exist, their numbers and quality. These surveys were carried out in 2013 and 2014 and include surveys for Great Crested Newts, Reptiles, Invertebrates, Badgers, Bats and plant species.
- Traffic Survey – automatic traffic count data was obtained from Northamptonshire County Council for the A508 for a fortnight in September 2013.
- Noise Survey – both attended and unattended surveys were undertaken in 1997 to establish the background noise levels.
- Dust Survey – carried out during the operation of the quarry.
- Surface and groundwater – site visits.

3.3 Approach to Assessment

3.3.1 Independent, suitably qualified consultants working to recognised guidelines, legislation and regulations, have carried out the assessments undertaken for each environmental topic area. They have been carried out in accordance with the Scoping Opinion received from Northamptonshire County Council.

3.3.2 Where technical assessments have identified a need for additional mitigation measures, they are described in detail in the report in technical appendix and summarised in the relevant section of this Statement.

3.3.3 Each assessment has considered the impacts during both the operation and restoration phase and also the cumulative impacts of the proposal.

3.4 Cumulative Impacts

A number of environmental impacts may combine to result in a cumulative impact that is of greater significance than the individual impacts. Where relevant, the technical assessments have taken into consideration any cumulative impact resulting from the proposal.
4 DESCRIPTION OF PITSFORD QUARRYING ACTIVITIES

4.1 Introduction

4.1.1 The remaining Northampton Sand Ironstone reserve of 100,000 tonnes, within the Phase 1 area at Pitsford Quarry will be processed as building stone or crushed aggregate. All operations will be undertaken as previously, before they were shut down in favour of working at Harlestone Quarry. The extraction process will be undertaken in compliance with the 1998 ROMP permission and approved Working Plan, a copy of which is included in Appendix 2.

4.1.2 Planning permission has been granted to use part of the site for recycling, in conjunction with the filling of Pitsford Pond. In the event that this permission is implemented it is expected that up to 30,000 tonnes will be extracted from the quarry floor over the next 2-3 year period, with the remaining reserve of 70,000 tonnes worked during the following 3-5 years. If recycling is not undertaken, then the remaining reserve is likely to be worked during the next 3-5 years, with a maximum annual output of 30,000 tonnes.

4.1.3 The site compound will be brought back into use, in the same arrangement as previously, providing a weighbridge (still in situ), a wheelwash, site cabins as weighbridge office and staff facilities, lorry and staff parking. Details of the compound layout are shown on Drawing GPP-PB-PR-13-04. If necessary, cabins will also be provided for stone choppers, for the processing of the building stone. Alternatively, the material suitable for the production of building stone will be taken for processing elsewhere.

4.1.4 Future phases of working at Pitsford are shown on Drawing GPP-PB-PR-13-05. In the context of this ROMP Review, these phases will be classed as dormant and not worked until full details have been submitted to and approved by the Mineral Planning Authority (see Section 5).

4.2 Working Arrangements

4.2.1 The operations at the quarry involve the extraction of moderately soft sandstone to create building stone and aggregate. Extraction, when it recommences will take place only in Phase 1. Working will proceed in a southerly direction from Pitsford, to remove the top layer of stone and returning in a northerly direction towards Pitsford removing the quarry floor layer.

4.2.2 The remaining reserves in this area are predicted to last for 3-5 years, unless the recycling operations and filling of Pitsford Pond take place, which will extend the period by 3 years.

4.2.3 The sandstone remaining is the lowest strata, which rests on the underlying clay. It is generally at a depth of 3m.

4.2.4 A hydraulic excavator is used to extract the sandstone, which is then broken into a suitable size for the market. A wheeled loading shovel is used to transfer the building stone into the compound for processing or into lorries for transport off site for processing. Sandstone that is unsuitable for the building stone market is loaded into mobile crushing and screening plant on the quarry floor. The crushed aggregate is stored on the quarry
4.2.5 The lorries transport building stone and crushed aggregate from the quarry floor to the site access, which is located along the A508 Northampton to Market Harborough road. The lorries travel along the site haul road, which runs through the now established community woodland. The haul road is surfaced with tarmac and vehicles pass through a passive wheel wash in the site compound before travelling along the access road. The wheel wash comprises a water trough with ramps on either side.

4.2.6 The haul road is swept periodically to prevent the trackout of mud and debris onto the public highway. A road sweeper is used in the event that mud is tracked out onto the public highway during wet conditions.

4.3 Public Rights of Way

4.3.1 Currently, footpath CC2/DK3 runs north-south along the eastern boundary of Phase 1; see Drawing GPP/PB/PR/13/03 Site Context Plan. For the safety of users of this route, the footpath has been protected by the construction of a large bund between the path and the active extraction area. This bund, comprising stored soils, will remain in place until the site is restored.

4.4 Restoration and Aftercare

4.4.1 Under the terms of the original ROMP permission, the area of mineral extraction was due to be restored to agriculture, in accordance with the approved Restoration and Aftercare Scheme, a copy of which is included in Appendix 2. To provide appropriate ecological mitigation, a significant amount of biodiversity enhancement has been incorporated into the final restoration, as explained in Section 9. Therefore, a revised Restoration Plan and Scheme have been prepared. The Restoration Plan is Drawing GPP/PB/PR/14/08 and the revised Restoration and Aftercare Scheme is included in Appendix 2.

4.4.2 The main elements of the revised restoration are as follows:

- Restoration to grassland rather than arable land, of the main area of Phase 1.
- Retention of the mineral face along part of the western boundary, for the benefit of the nesting sand martins.
- Retention of part of the soil bund above the mineral face on the western boundary, to protect a badger sett.
- Retention of a large pond and 'pond containment' area.
- Restoration of the compound area to provide a mosaic habitat compensation area.
- Creation of shallow ponds near the RIGS ponds.
- Management of the Community Woodland for its ecological value.
- Additional tree planting in the southeast field corner.
5 CONSULTATION

5.1 Introduction

5.1.1 Consultation has been carried out regularly since the quarry became operational, through the Liaison Committee meetings organised, chaired and minuted by staff of Northamptonshire County Council Planning Department. Meetings are usually held twice a year and invitations are sent out to the following:
- The operator
- Pitsford, Boughton, Church and Chapel Brampton and Moulton Parish Councils
- Environment Agency
- Daventry District Councillors
- Northamptonshire County Councillor
- Local residents at Spectacle Lodge, Fox Covert Hall, West View Farm
- Moulton College

5.1.2 Although the quarry has not been operational for a number of years, issues relating to the site have been discussed at meetings held also to discuss Boughton Quarry.

5.1.3 During 2013, the site was the subject of wide-ranging consultation with local residents and statutory consultees during the preparation and consideration of the planning application for the infilling of Pitsford Pond and associated inert waste recycling activities within the area of Phase 1 of Pitsford Quarry.

5.1.4 The issues raised during consideration of the recent planning application and responses received by the County Council during its consultation period have influenced the preparation of the Environmental Statement for the ROMP. In particular, the value of the site for its wildlife habitats has been identified and the consideration of impacts on ecology form a major part of the assessment.
6 PLANNING HISTORY AND CHANGES TO ROMP PERMISSION

6.1 Planning History

6.1.1 The Old Mineral Planning Permission for Ironstone extraction was granted in 1953 and was updated in 1998 with the issuing of modern conditions under the requirements of the Environment Act 1995 for the extraction of Northampton Sand Ironstone and overlying minerals. A copy of the Permission DA/97/1140C is attached at Appendix 3.

6.1.2 Subsequently, three further permissions were granted by Northamptonshire County Council, for the following:
- Construction of compound in connection with the adjacent mineral extraction site - DA/00/1153C, 29 November 2001
- Use of mobile plant in association with adjacent mineral extraction - DA/01/140C, 29 November 2001
- Variation of Condition 42 (soil stripping) - DA/03/744C, 28 July 2003

6.1.3 Since the issuing of the modern conditions in 1998, quarrying commenced in Phase 1 in 2001, following the construction of a new access onto the A508 and the establishment of the site compound. The quarry was actively worked in the early 2000’s, as extraction of stone took place in Phase 1. When the main depth of stone was worked out (leaving the quarry floor in situ), working progressed to Phase 2. Only a small reserve of stone was found in the north-east corner, the remainder of the field was found to contain only sand. Therefore, once the stone was worked out, the hole was backfilled with mineral waste and the field returned to agricultural use.

6.1.4 Excavations were then carried out in the northern part of Phase 3, but no stone was found. Subsequent trial pits in the remainder of Phase 3 demonstrated that the reserve is only of sand. Working reverted to Phase 1, where the quarry floor was gradually worked for building stone, until such time as the decline in the construction industry reduced the demand, so the quarry was closed temporarily in 2004.

6.1.5 Northamptonshire County Council granted inert recycling within the quarry and landfill of Pitsford Pond on 23 December 2013 (reference 13/0001/WASFUL). Impacts from these activities have been assessed, as they relate to the potential for cumulative impact.

6.2 Proposed Modifications to the Permission

6.2.1 The Applicants are only interested in two areas of land within the large area covered by the Old Mineral Planning Permission. The extent of the ROMP permission and these two areas (Future Phases of Working) are shown on the Review Plan, Drawing GPP-PB-PR-13-02, as Phase 1 Working and Whitehills Minerals.

6.2.2 Large areas within the ROMP permission boundary do not need to be considered in this review for the following reasons:
- Land previously worked and restored
6.2.3 Tata Steel UK Ltd is prepared to surrender its interest in the minerals underlying the land east of Spectacle Lane, therefore this area also does not need to be considered.

6.2.4 Other landowners appear not to be promoting the minerals underlying large areas of land within the ROMP permission; these are shown as ‘Minerals Permission to be revoked’ on the Review Plan, Drawing GPP-PB-PR-13-02. The Applicants have no interest in these minerals, therefore they have not been considered. As a result, Northamptonshire County Council could issue a Prohibition Notice to remove these areas from the Old Mineral Planning Permission area.

6.2.5 In addition to the modern conditions as set out in DA/97/1140C, the following condition is proposed, to limit the working to the Phase 1 area only:

*No mineral working shall take place outside the boundary of Phase 1 until such time as a detailed assessment of the environmental impacts has been carried out in accordance with a scope previously agreed by the County Planning Authority and submitted to the County Planning Authority for approval.*

6.2.6 This new condition will have the effect of retaining the right to work the minerals under the control of the two applicants, but no minerals beyond the boundary of the area of Phase 1 could be worked until such time as a further assessment of the environmental impacts is carried out for the next area of working.

6.2.7 In Appendix 3 is included an update version of the conditions in DA/97/1140C, to take account of changes to plan numbers and other necessary amendments. This list of conditions includes the proposed change as set out above.
7 DUST

7.1 Introduction

7.1.1 A copy of the dust assessment can be found in Appendix 4. The conclusions of this assessment are as follows:

This assessment has reviewed the relevant matters affecting the probable incidence of airborne dust emissions due to continued mineral working at Pitsford Quarry. Dust deposition monitoring at the quarry indicated that the previous operations did not cause an adverse impact due to dust emissions. Provided that the future operations are carried out in a similar manner as before, adverse impacts due to dust are very unlikely.

There are few sensitive residential receptors within the vicinity of the quarry, with the closest being 65m from the haul road and the next closest 150m from the northern site boundary. With adequate mitigation, working is unlikely to result in adverse dust impacts.

The local wildlife site is not at risk of adverse impacts, as the dust is the same chemical composition as the soil, thus there will be no change to the existing conditions.

7.2 Mitigation Measures

7.2.1 To minimise the potential impacts of dust, future mineral extraction will be operated in accordance with best practice, to control dust emissions by effective site management. Monitoring will continue in accordance with the approved Monitoring Scheme.

7.2.2 The measures for the management and control of dust at the quarry are set out below and are those that were proposed for the operation of the quarry, inert waste recycling and the infilling of Pitsford Pond during consideration of the planning application for these uses.

7.2.3 Daily visual inspections of the site will be carried out by the Quarry Manager, at the start of operations and subsequently as necessary, particularly during dry windy weather, to ensure that all potential or actual dust sources are identified and treated promptly.

7.2.4 As an over-riding requirement, if any operations are identified as causing or likely to cause visible dust emissions across the boundary of the application site, those operations will be modified, reduced or suspended until effective remedial action can be taken or the conditions given rises to the emissions have moderated.

7.2.5 General matters and the management of the site can affect the likelihood of significant dust emissions. These include:
- Use of clean water for dust suppression, to avoid re-circulating fine material;
- High standards of house-keeping to minimise track-out and windblown dust;
- A preventative maintenance programme, including readily available spares, to ensure the efficient operation of dust suppression equipment; and
• Effective staff training in respect of the causes and prevention of dust.

7.2.6 Soil stripping, stockpiling and restoration is generally a short-term seasonal activity and, given the low volumes to be handled, there is considerable flexibility as to its timing. Soils handling will be suspended near the site boundaries when the wind conditions are likely to result in visible dust being carried off-site, particularly across any footpaths. Soil stripping will be programmed sufficiently in advance of extraction to avoid possible conflicts with other operations. Areas of stripped ground and other loose bare surfaces will be watered or treated with a proprietary stabiliser as necessary to minimise the potential for windblown dust.

7.2.7 Loading and tipping heights will be minimised. Wherever possible, loading and tipping operations will take place in sheltered locations within the quarry void, or in the lee of existing mounds and stockpiles.

7.2.8 Standard good practice for site haulage will include:
• The avoidance of abrupt changes in horizontal and vertical alignment by maintenance of the haul road;
• Regular grading and compaction to maintain smooth well-drained surfaces;
• Fitting site vehicles and plant with upswept exhausts and radiator fan shields; and
• Evenly loading vehicles to avoid spillages.

7.2.9 The stone cropping process will take place within a shed at all times to contain any emissions. Should persistent visible emissions result, the process will be carried out under water sprays.

7.2.10 All departing lorries will be inspected, and will be cleaned as necessary, to ensure that track-out is not carried towards the site entrance. All departing lorries will be required to pass through a wheelwash, if they have mud on their wheels.

7.2.11 A speed limit of 10mph has been set on the access road and signage to this effect has been erected at the site entrance.

7.2.12 The surface of the access road will be damped down and will be maintained as necessary to ensure effective dust control. In the event of track-out being carried onto the public highway, a road sweeper will be deployed to remedy the matter.

7.2.13 A water bowser, fitted with a spray bar or spinner and water gun, will be kept on site and will be deployed as necessary to treat any dry surfaces of the access road, haul road, stockpiles and other areas of loose bare ground. Provision will be made for the rapid filling of the bowser so that it can be used as necessary under all weather conditions.

7.2.14 Should visible dust be blown from any storage mounds or restoration area, the relevant surfaces will be treated with water or a proprietary stabiliser. Final restoration surfaces will be seeded at the earliest opportunity.

7.2.15 The mobile crushing and screening plant will continue to be operated in accordance with the conditions attached to the LAPPC permits and the guidance provided in PGN 3/16 (04).
8 CULTURAL HERITAGE

8.1 Introduction

8.1.1 A copy of the assessment of the potential for impacts on heritage assets is included in Appendix 5. The conclusions of this assessment are as follows:

This assessment has considered the impact of continued mineral working at Pitsford Quarry on the setting of the cultural heritage of the locality.

There are no ongoing issues relating to archaeology from the completion of mineral extraction in Phase 1.

This assessment has considered the risk of adverse impacts on the setting of the heritage assets i.e. three listed buildings, an ancient monument, two conservation areas and a designated historic park. All of these features will not be affected provided that no working takes place beyond the boundaries of Phase 1.

8.2 Mitigation Measures

8.2.1 Impacts are minimised due to the fact that the future mineral extraction will take place below ground level and only within the area screened by established soil screening bunds around the margins of the extraction area.

8.2.2 Following the completion of mineral extraction, mineral waste will be used to create the base for the spreading of the soils from the bunds, to achieve the proposed restoration of the site.
9 ECOLOGY

9.1 Introduction

9.1.1 Two consultants have been involved in the preparation of the Ecological Impact Assessment. Initially and connected with the work carried out for the Pitsford Pond planning application, Conservation Constructions prepared a report, dated January 2014. Unfortunately, this company was unable to complete the work, therefore further work has been carried out by Lockhart-Garrett. A copy of the technical reports on the potential for impacts on ecology are included in Appendix 6.

9.2 Mitigation Measures

**Habitat Retention and Protection**

9.2.1 Habitat retention during active quarrying involves not clearing, excavating or damaging by inadvertent ‘creep’ or storing of materials in these areas.

9.2.2 It is proposed that the eastern boundary hedge and sections of the western bund with its vertical banks and recorded use by an assemblage of invertebrate, nesting sand martins, foraging bats and badgers is retained during construction and as part of the restoration of the Site.

9.2.3 Therefore these features must be protected during active working of the quarry through a combination of measures to include training of site operatives and visitors, physical demarcation and barriers to restrict access and condition monitoring to ensure the protection put in place is effective.

9.2.4 Habitats outside the working area should also be protected using the same methods, particularly to eliminate ‘creep’ of the working area.

9.2.5 Habitat retention and protection as detailed in previous sections will mitigate impacts on specified ecological receptor and will also retain biodiversity value in a wider sense, e.g. the potential for colonisation of the site by previously unrecorded species.

**Habitat Creation**

9.2.6 Habitat creation during the working of the quarry and as part of the final restoration stage will offset habitat loss and provide suitable replacement habitat required by protected and priority species identified as ecological receptors.

9.2.7 The habitat creation is specified in a way that maximises efficiency of effort. For example, the creation of shallow pond and wetland mosaic habitat to the north of the working area will provide habitat for amphibians, a receptor site for amphibians, a suitable important habitat for invertebrates and act as compensation for habitat loss relevant to both the T’s Wood LWs and open mosaic habitat as a habitat ecological receptor.

9.2.8 Habitat creation often takes place in the areas most suitable for wildlife and to ensure damage is not done during the creation of habitats with the aim of enhancing wildlife all activity should be guided by a suitably qualified and experienced ecologist acting as a clerk of works.
9.2.9 Where habitat creation is for the purpose of recreating similar habitat due to be lost as part of quarrying, vegetation and soils should be translocated (in part) to the newly created habitats to speed establishment of vegetation and species populations (particularly invertebrates and lower plants).

**Species Protection Measures**

9.2.10 Protection measures include amphibian fencing to segregate working areas from habitats suitable for amphibians. These habitats include areas into which amphibians have been translocated.

9.2.11 Segregation fencing is proposed along the northern boundary of the working area. To the north of this line will be suitable amphibian habitat including newly created ponds and existing ponds. South of this fencing will be the largely bare ground, active quarry working area.

9.2.12 Fencing will be maintained as an effective barrier and vegetation along the fence line (where applicable) will be kept from growing over the fence through cutting or herbicide treatment.

9.2.13 Applicable to amphibians specifically but also other wildlife, where habitats are due to be lost as part of the quarrying activities they should be first cleared of protected, priority and notable species through appropriate trapping and clearance by suitably qualified and experienced ecologists.

9.2.14 Amphibian trapping should follow guidance for great crested newts published in the Great Crested Newt Mitigation Guidelines (English Nature, 2001) and always incorporate the safety measures of continuation of trapping until at least 5 days of no captures are made after the completion of the specified trapping period. This compensates for any inaccuracy in the population assessment determined through survey.

**Monitoring and Re-surveys**

9.2.15 As quarrying activities can often take place in multiple phases over a number of years it is vital that mitigation proposals are relevant to the status of species and habitats on site at the time at which they are required.

9.2.16 All mitigation should be based on habitat and species survey information that is no more than three years old (following current guidance for planning applications and protected species licensing).

9.2.17 Where monitoring is specified as mitigation (post completion in most cases) the efficiency of monitoring multiple receptors (habitats and species) during individual visits should be exploited. For example, multiple visits for invertebrate surveys could be combined with bat activity monitoring surveys.

9.2.18 Post habitat creation and restoration (including post completion) monitoring will be used to inform management of habitats. Monitoring survey records will also be submitted to Northamptonshire Biological Records Centre.
10 HYDROLOGY AND FLOOD RISK

10.1 Introduction

10.1.1 A copy of the assessment of the potential for impacts of hydrology and flood risk is included in Appendix 7. The summary and conclusions of this assessment are as follows:

A Review of Old Mineral Permission is being carried out for Phase 1 of Pitsford Quarry, an ironstone working near Northampton. The Application Area is a total of 9.0 Ha and includes the access track from the A508, the plant yard and the existing Phase 1 quarry void. Under the National Planning Policy Framework, a Flood Risk Assessment is required for this development as it is greater than 1 Ha in extent.

The proposal involves resumption of mineral extraction in the quarry void, processing the aggregate mineral in the quarry void and building stone in the adjoining plant yard. On completion of extraction operations, it is proposed to restore the site to agriculture using reserved mineral waste and soils, but retaining ground levels lower than the pre-existing surface.

Due to its topographical position, the site is entirely within Flood Zone 1, where the probability of fluvial flooding in any one year is less than or equal to 0.1%. Consequently, the risk of fluvial flooding to the proposed operational site is not considered to be significant.

The existing site receives surface water runoff and groundwater emergence from source areas north of the site. These flows have previously been dealt with by storage on the quarry floor, with a drainage channel taking outflows away downslope to join a nearby ditch. Re-infiltration of the flow also occurs within the channel. It is anticipated that flooding of the proposed operations can be prevented using the same or similar arrangement, subject to the clearance of a silted-up culvert in the receiving ditch. Consequently, the risk of pluvial and groundwater flooding to the operational site is not considered to be significant.

No sewers are known to pass near to the site. However, a 21-inch water main runs adjacent to the site’s eastern boundary. There is a bund between the site and the route of this water main, which will prevent any flooding of the operational site in the event of leakage. Consequently, the flood risk posed to the operational site by the water main is not considered to be significant.

As noted above, the operational quarry will not be affected by flooding from fluvial, pluvial, groundwater or man-made sources. In connection with this, the flood risk assessment has also found that neither the working quarry nor the restored site will affect or modify the flows between such flood sources and any external receptors.

Consequently, flood risk from the site to any external receptors has not been found to be significant.
As an agricultural area, the restored site will be categorised as ‘less vulnerable’ to flooding by the National Planning Policy Framework (NPPF). It will be an agricultural hill-slope and pond constructed of mineral waste outside the indicative floodplain, and will not include any buildings. These facts lead to the conclusion that there will be no significant flood risk to the restored site.

Significant flood risks to the proposed development have not been identified. Nor has the development been found to increase any flood risk to external receptors. Therefore, it has not been necessary to consider any flood risk mitigation measures in connection with the development, with the exception that the culvert in the ditch to the east of the site should be cleared of silt.

In light of the above, the proposed development is considered to satisfy the flood risk requirements of the NPPF and associated technical guidance.

10.2 Mitigation Measures

10.2.1 Some surface water and groundwater may enter the proposed working areas from sources upslope of the site, as well as from within the site itself. This water can be dealt with by arrangement of the quarry floor to guide runoff into areas convenient for the maintenance of operations. Outflow from these storage areas will run to the southeast corner of the site where it will join the existing drainage pathway running south towards the Moulton Arm. The run-off may also re-infiltrate into the ground at the southeastern corner of the site.

10.2.2 Site inspection has found that southward drainage along the valley feature east of the site passes under an access track, via a 450 mm concrete culvert. This culvert was found to be almost completely full of silt, although its remaining capacity was sufficient to convey the small flows observed during the site visit.

10.2.3 In the interest of preventing the bypassing of this culvert during high-intensity events, it is recommended to remove the silt and perform periodical clearance to maintain its transmission capacity. This mitigation measure will be sufficient to reduce any ponding of water in the site’s southeast corner, and will also reduce the incidence of any overland flow in the fields downslope of the culvert.
11 HYDROGEOLOGY

11.1 Introduction

11.1.1 A copy of the assessment of the potential for impacts on hydrogeology is included in Appendix 8. The summary and conclusions of this assessment are as follows:

- **Pitsford Quarry Phase 1** is located on the south eastern edge of an area of former, and now restored, ironstone workings.

- It is intended to restore the area to agricultural use using mineral waste and retained soils.

- The site lies in the catchment of the Brampton Branch, a tributary of the River Nene. A small watercourse, the Moulton Arm, flows from west to east to the south of the site, joining the Brampton Branch 2.4 km to the west of the site.

- The site is located on the Northampton Sand Formation, classified by the Environment Agency as a Secondary A aquifer. Groundwater levels recorded between 1996 and 2004 show groundwater flow to the southwest.

- There are no licensed groundwater abstractions within 2 km of the site. One private water supply is recorded from a spring to the west of the site at Fox Covert Farm. The spring is not directly down-gradient of the site.

- Groundwater passing through the site discharges to the surface water system to its south and southeast where the base of the Northampton Sand Formation crops out against the underlying Whitby Mudstone Formation.

- There are no surface water abstractions within 2 km of the site.

- It is proposed to extract the remaining ironstone reserves in Phase 1. These lie between restored workings to the north and partially restored workings to the south. It is not considered that extracting this material will result in any significant changes to the current groundwater and surface water regime around the site.

- It is considered likely that works to improve the drainage in the quarry undertaken between 2005 and 2009 have resulted in the diversion of some groundwater flow away from the spring at Grotto Spinney and towards the shallow valley south east of Phase 1. One consequence appears to have been the emergence of a new spring in the middle of the field to the south.

- It is considered that removing the remaining ironstone reserves in Phase 1 will have minimal impact on the surrounding current water environment. However, some modification of the current passive drainage in the quarry has been suggested in order to mitigate against impacts caused by past activities which may have resulted in reduced spring flows at Grotto Spinney and the emergence of a new spring.
• Restoration will be undertaken using materials already on site. Therefore the risks of changes to ground and surface water quality are considered to be minimal.

• The proposed restoration contours will promote the flow of surface water runoff to a pond on the west of the site and subsequent infiltration into the aquifer comprising unworked Northampton Sand.

• Some mitigation measures have been suggested to ensure that the groundwater flow through the restored site is, as far as possible, in a general northeast to southwest direction in order to ensure an adequate groundwater discharge at Grotto Spinney.

11.2 Mitigation Measures

During mineral working

11.2.1 Currently the passive drainage from the site is directed to the south east and is thought to be causing poor ground conditions in the south east as well as directing flow to a ‘new’ spring (S3) in the field to the south. There is also thought to be some diversion of flow from the Grotto Spinney spring as a result.

11.2.2 To mitigate this impact it is proposed that a new channel is cut in the quarry backfill from the areas of ponded groundwater towards the southwest. This may encourage a return to the general northeast-southwest groundwater flow direction. If this is implemented, it is suggested that there is periodic monitoring of the springs at S2 and S3 to assess if there have been any changes in flow.

Post restoration

11.2.3 The proposed restoration contours show that most of the surface water drainage would be to the west and infiltrate to groundwater, while a smaller proportion would drain to the southeast into an existing watercourse.

11.2.4 The restoration material placed in the base of the quarry should be sufficiently permeable to allow groundwater to flow from the north east to the spring discharges to the south. Most of the surface water runoff in the restored sited will be directed to a pond on the western side of the site from where it will infiltrate into the unworked Northampton Sand Formation. Together with the new channel in the quarry floor (above), this should increase groundwater flow to the west of the quarry. The result should be increased discharge from the spring at Grotto Spinney and reduced flow at spring S3.

11.2.5 It is suggested that spring flows at Grotto Spinney are monitored for a period during and after restoration to establish if there is an improvement in discharge. However, it should be noted that the springs rely on fissure flow in the Northampton Sand Formation and as such their flows can be unpredictable, as can the position from which they emerge.
12 NOISE

12.1 Introduction

12.1.1 A copy of the assessment of the potential for impacts of noise carried out by LFAcoustics is included in Appendix 9. It should be noted that this report was prepared assuming that the quarrying would be accompanied by inert recycling and the infilling of Pitsford Pond. In the event that only quarrying takes place, the extraction will be completed within 3-5 years and not the longer period referred to in Section 6 of the report.

12.1.2 Two reports that consider the cumulative impact of quarrying, inert waste recycling and infilling of Pitsford Pond were prepared by NVC as part of the documentation that accompanied the planning application for these activities. These reports are also included in Appendix 9.

12.1.3 The summary and conclusions of the assessment by LFAcoustics are as follows:

- A previous review of the old conditions was carried out in 1997 and a new planning permission granted by Northamptonshire County Council (Application Ref: DA/97/1140C), subject to conditions. It is necessary to review the conditions periodically to ensure that they reflect the requirements of current Policy and guidance.

- At present the quarry is dormant which has allowed further baseline noise monitoring to be undertaken to ensure that the noise limits defined previously remain acceptable. The monitoring exercise concluded that there has been no change in the surrounding noise environment and the current noise limits are considered acceptable and meet the requirements of the NPPF, which contains the current minerals planning guidance.

- Calculations of the proposed future working of the Phase 1 area have been made, that demonstrates that with appropriate controls, which would continue to include the requirement for periodic noise monitoring, noise levels at surrounding noise sensitive receptors would remain below the noise limits.

- It is recommended that the previous conditions relating to noise, which remain valid in light of the recent NPPF guidance, are attached to the new consent for the working of Phase 1. These measures seek to ensure that potential disturbance associated with the working of the quarry is minimised.

12.1.4 The assessment by NVC of the use of the haul road to the Pond by HGVs and of the fixed and mobile plant within the quarry found that at every sensitive receptor, the predicted noise levels would be below the levels set in the ROMP Planning Permission DA/97/1140C.

12.2 Mitigation Measures

12.2.1 Measures are already in place to mitigate the impacts of noise on the nearest noise sensitive properties, in the form of soil bunds around the margins of the extraction area. In addition, the following measures will be undertaken, as recommended by NVC:
• The HGV’s enter and exit the site from the existing entrance off Harborough Road.
• All mobile plant used on site to have ‘broadband’ type reverse alarms (i.e. no tonal ‘beeper type). Where practicable, HGV’s within the control of the site operator to have similar reverse type alarms fitted or the use of a banksman to reduce the need for alarms. Where HGV’s are sub-contractor vehicles they should be encouraged to use this type of alarm or provide appropriate turning circles to avoid the need to reverse.
• Proposed operating hours to be restricted to those described in the planning permission.
• Stockpiles around the crusher plant would be best placed on the northern and western side of the plant to provide maximum screening to receptors in this direction. Orientation of crusher to have quietest elevation facing north.
• Orientation of the screen with the quietest elevation pointing northwards should be considered (i.e. output conveyor end facing north).
• In the event of infilling of Pitsford Pond, an additional earth mound screen placed south of Pitsford Pond to provide further attenuation in the direction of Bunkers Hill Farm receptor. The reduction for this feature is not included in the noise prediction calculations.

12.2.2 The following site management measures are also recommended by NVC:

In order to follow best practice without placing unreasonable burden on the mineral operator, working methods and guidance and advice has been considered, which is provided within BS5228-1: 2009 and includes the following:

a) Drivers of HGVs or mobile plant should be instructed to avoid leaving engines running unnecessarily or excessive revving of engines;
b) Maintain speed limits on the site access road and avoid the use of speed ‘humps’;
c) Retain and maintain the existing earth mounds located around the quarry area to their existing or constructed height;
d) Ensure the haul road between the recycling area and Pitsford Pond is well maintained, minimum gradient, as smooth as practicable and gradual turns;
e) Any small generators or pumps to be used at site to be placed as far as practicable from Noise Sensitive Premises (NSPs);
f) Location of site elements that generate noise to be located with due regard to proximity of NSPs including haul roads;

12.2.3 No additional mitigation is required for the restoration work, which will be carried out in compliance with the requirements of the National Planning Policy Guidance: Minerals for temporary activities (Paragraph: 022 Reference ID: 27-022-20140306). This advises Local Planning Authorities to allow increased temporary daytime noise limits of up to 70dB(A) LAeq 1h (free field) for periods of up to eight weeks in a year at specified noise-sensitive properties to facilitate essential restoration work where it is clear that this will bring longer-term environmental benefits to the site or its environs.
13 SOILS

13.1 Introduction

13.1.1 A copy of the assessment of the potential for impacts on soils is included in Appendix 10. The summary and conclusions of this assessment are as follows:

The quarry operations have already completed the stripping and storage of ALC Grade 3b land. By following best practice for restoring mineral sites and maintaining the quantity of soil resources, it is possible to restore agricultural land to productivity (i.e. post successful restoration and aftercare). Once restored the agricultural land would be farmed for grassland, in accordance with ecological requirements.

13.2 Mitigation Measures

13.2.1 The main mitigation measures to minimise the impacts on the soil at the Site are based on following best practice for soil stripping, storage and re-placement, as set out in the Best Practice Guidelines published by MAFF.

13.2.2 For land restored to grassland, revised Restoration and Aftercare Schemes have been prepared and are included in Appendix 2 of the Environmental Statement. They are based on the approved Schemes, which were drawn up when the approved restoration was to arable agriculture. The change to grassland has required revisions to the approved Schemes.
14 TRAFFIC AND TRANSPORTATION

14.1 Introduction

14.1.1 A copy of the assessment of the potential for impacts of traffic is included in Appendix 11. The conclusions of this assessment are as follows:

Mineral extraction of the remaining reserve of 100,000 tonnes will continue in the area of Phase 1 at Pitsford Quarry, at a maximum rate of 30,000 tonnes, over about 3 years. However, if the proposal to import inert materials to the Pitsford Quarry site is permitted, some will be recycled and taken off site for sale, while the remainder will be used to restore Pitsford Pond to agricultural use. The mineral extraction is likely to take up to eight years, depending upon market demand.

The site is accessed off the A508Harborough Road and has good links to the strategic road network. A new haul route will be provided within the site to transfer materials from Pitsford Quarry to Pitsford Pond for the restoration activities.

Continued mineral extraction will generate an average of 12 vehicle movements per day. Together with the proposal for recycling operations and restoration of Pitsford Pond, it is anticipated that around 46 vehicle movements per day will be generated. This compares with around 48 movements associated with the former quarrying uses at the site. This will result in an increase in trips on the A508 of less than 0.4%. This level of increase in vehicle trips is well within the daily variation in traffic flows on the A508 and will not have a material impact on the operation of the local road network.

14.1.2 It should be noted that the assessment and its conclusions are based on the annual average vehicle movements. However, they may be periods when exports of mineral may generate more than 12 vehicle movements per day. The maximum that the operations are likely to generate is 48 vehicle movements per day, which is the same as when the quarry was fully operational ten to twelve years ago.

14.2 Mitigation Measures

14.2.1 The main mitigation measures to minimise the impact of traffic from the quarrying operations were carried out when the new access to the site was constructed, prior to the commencement of operations in 2001. The access onto the A508 will continue to be used until quarrying ceases and the site is restored.

14.2.2 Lorries delivering stone will use the A508 to access Northampton to the south and the A14 to the north. No lorries will travel through the villages of Boughton or Pitsford, other than for the delivery of materials to sites within these villages, as both of these villages have weight limits restricting access by vehicles over 7.5 tonnes.
15 ALTERNATIVES

15.1.1 It is a requirement of the EIA Regulations 2011 that consideration is given to appropriate alternatives. In this case, with quarrying already having started under a valid planning permission, which remains in force until 2014, the alternatives are very limited.

15.1.2 The principle alternative that has evolved during the process of reviewing the conditions of the Planning Permission DA/97/1140C is that the permission will in the future, following the issuing of new conditions, be limited to the working and restoration of Phase 1, with its associated haul road and site compound. This alternative recognises that in the foreseeable future the only stone that it is economic to extract is that which remains within Phase 1. However, it protects for the longer term all of the unworked minerals within the boundary of the ROMP Permission.

15.1.3 During preparation of the detailed proposals for the recycling of inert waste and the infilling of Pitsford Pond, it became apparent that a greater extent of habitat replacement and creation would be required, to meet the requirements of the Conservation of Habitats and Species Regulations 2010. This, together with the ecological assessment that has been carried out in connection with the review of the mineral planning permission, has resulted in an alternative restoration plan for the area of Phase 1.

15.1.4 The proposed restoration is now based on grassland within the main field, with a large pond. The site compound is to be cleared for the creation of open mosaic habitat compensation. The Community Woodland is to be managed for its ecological value and habitats for Great Crested Newts, badger setts and Sand Martin nest are all to be retained.
16 CUMULATIVE IMPACTS

16.1 Introduction

16.1.1 This section of the Environmental Statement (ES) assesses the potential cumulative impact(s) of the proposed development. An assessment is made of both incremental impact, as well as the combined effect of different types of impact on identified sensitive receptors.

16.1.2 The assessment of cumulative impact is required as part of an ES under Schedule 4 of the Environmental Impact Assessment (EIA) Regulations 2011.

16.1.3 The cumulative impacts of the proposal are assessed by the following:
   - Simultaneous effects; when one type of impact from a development occurs at the same time as another impact from a separate development.
   - Successive effects; impact of succeeding permitted extraction on the local area.
   - Combined effects; multiple impact from the individual technical assessments.

16.2 Simultaneous Effects

16.2.1 There are no other permitted mineral sites within a 5km search radius, therefore there are no simultaneous effects. However, there is permission for the infilling of Pitsford Pond and the recycling of inert waste within the area of Pitsford Quarry Phase 1. The impacts of dust, noise, ecology and traffic have been assessed to establish whether continued quarry working, alongside these other activities will result in significant cumulative impacts.

16.2.2 None of the assessments have resulted in the risk of significant cumulative impacts, provided that the proposed mitigation measures are taken into account.

16.3 Successive Effects

16.3.1 Phase 1 is situated within a large site, much of which as been worked in the past and the land restored to agriculture. This has resulted in some permanent changes to the landscape, for example the raised landform at Boughton Quarry and the reduced landform alongside the west side of the A508. However, these sites are over 500m away and are not seen when viewing the area of Phase 1. Therefore, although there will be a cumulative impact on the landscape from the restoration of the field at a low level, it will be minor both in terms of visual amenity and landscape character.

16.3.2 It is considered that the development is acceptable in cumulative impact terms.

16.4 Combined Effects

16.4.1 The table below sets out the considered cumulative impact for the individual technical assessments.
16.4.2 Table 16.1 Combined Cumulative Impacts

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>POTENTIAL IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust</td>
<td>Residential properties, historic assets and a Local Wildlife Site lie within 250m of the workings, but the impact is assessed as low, therefore there are no impacts that could combine to result in a cumulative impact.</td>
</tr>
<tr>
<td>Ecology</td>
<td>No significant cumulative impacts have been identified and mineral working will avoid direct impacts on protected species in the locality and mitigation will provide a net beneficial gain, therefore it does not contribute to a cumulative impact.</td>
</tr>
<tr>
<td>Hydrology</td>
<td>The impact of working on surface water is low, therefore it does not contribute to a cumulative impact.</td>
</tr>
<tr>
<td>Hydrogeology</td>
<td>The impact of working on groundwater is generally low and with mitigation measures to direct water to the SW any impact on Grotto Spinney will be minimised, therefore it does not contribute to a cumulative impact.</td>
</tr>
<tr>
<td>Noise</td>
<td>Working can take place in compliance with previously set noise levels at the nearest sensitive properties; therefore it does not contribute to a cumulative impact.</td>
</tr>
<tr>
<td>Soils</td>
<td>No soils will be affected by continued working and reserved soils will be used in the restoration, therefore there are no impacts that could combine to result in a cumulative impact.</td>
</tr>
<tr>
<td>Transport</td>
<td>Transport impacts associated with the proposal due to the use of the purpose-designed access are low, therefore it does not contribute to a cumulative impact.</td>
</tr>
</tbody>
</table>

16.4.3 It is considered that the combined effect of the technical assessment is not significant.
17 SUMMARY AND CONCLUSIONS

17.1 Summary

17.1.1 The following table summarises the impacts of continued quarrying and the possible operation of an inert waste recycling plant, together with the infilling of Pitsford Pond.

Table 17.1 Summary of Impacts

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>POTENTIAL IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust</td>
<td>Residential properties, historic assets and a Local Wildlife Site lie within 250m of the workings. With adequate mitigation, working is unlikely to result in adverse dust impacts. The local wildlife site is not at risk of adverse impacts, as the dust is the same chemical composition as the soil, thus there will be no change to the existing conditions.</td>
</tr>
<tr>
<td>Ecology</td>
<td>No significant cumulative impacts have been identified and mineral working will avoid direct impacts on protected species in the locality and mitigation will provide a net beneficial gain during extraction and following restoration.</td>
</tr>
<tr>
<td>Hydrology</td>
<td>Significant flood risks to the proposed development have not been identified. Nor has the development been found to increase any flood risk to external receptors. Therefore, the impact is low.</td>
</tr>
<tr>
<td>Hydrogeology</td>
<td>It is considered that removing the remaining ironstone reserves in Phase 1 will have minimal impact on the surrounding current water environment. However, some modification of the current passive drainage in the quarry is necessary in order to mitigate against impacts caused by past activities which may have resulted in reduced spring flows at Grotto Spinney and the emergence of a new spring.</td>
</tr>
<tr>
<td>Noise</td>
<td>Calculations of the proposed future working of the Phase 1 area have been made, that demonstrates that with appropriate controls, which would continue to include the requirement for periodic noise monitoring, noise levels at surrounding noise sensitive receptors would remain below the noise limits.</td>
</tr>
<tr>
<td>Soils</td>
<td>No soils will be affected by continued working and reserved soils will be used in the restoration and by following best practice, conditions can be created for the beneficial restoration to grassland.</td>
</tr>
<tr>
<td>Transport</td>
<td>If vehicle movements are similar to those prevailing when the quarry was previously operational, the transport impacts associated with the use of the purpose-designed access are low.</td>
</tr>
</tbody>
</table>

17.2 Conclusions

17.2.1 Quarrying is to continue at Pitsford, but the workings and restoration are to be confined to the area of Phase 1 and the associated haul road and compound area. Working will comply with the modern conditions as issued in 1998, with the exception of the addition of one new condition limiting working in other phases without prior approval of environmental assessment information.

17.2.2 The main conclusions of the assessment of the environmental impacts of the ongoing quarrying operations are that there are no adverse impacts provided that the various mitigation measures are implemented.
APPENDIX 1: Scoping Opinion and Letters
APPENDIX 2: Approved and Proposed Restoration and Aftercare Schemes
APPENDIX 3: Permission DA/ 97/ 1140C and list of Proposed Conditions
APPENDIX 4: Dust Assessment
APPENDIX 5: Heritage Assessment
APPENDIX 6: Ecological Baseline & Impact Assessment
APPENDIX 7: Flood Risk Assessment
APPENDIX 8: Hydrogeological Impact Assessment
APPENDIX 9: Noise Assessments
APPENDIX 10: Soil Assessment
APPENDIX 11: Transport Assessment