ENVIRONMENT INFORMATION REQUEST – 1308/17

Dear Sir/Madam

Your request for information has now been considered and the information requested is provided below.

Request:

I am writing to you to request information from Rutland County Council under the provisions of the Environmental Information Regulations 2004.

The information I require is in regard to an Interim Development Order to extract minerals from Grange Top Quarry, Ketton; referred to as IDO permission number 82/46.

Condition 4 of that permission refers to a Written Statement for Working, Restoration, Aftercare and Afteruse, Reference C&M/K2 dated the 8th November 1993 and accompanying plans and drawings. Please supply me with a copy of this document along with the accompanying plans and drawings.

Condition 16 requires the developer to submit documents to the Mineral Planning Authority for approval approximately every 5 years. Please supply copies of all of the documents submitted by the developer in respect of this condition.

Condition 16 also refers to three plans, Plan Numbers 832.2C, 832.3D and 832.4D. Please supply copies of all of these plans.

Response:

The Interim Development Order reference 82/46 was superseded by planning reference M/92/0139/9 which was then superseded by the current planning permission reference M/97/0826/9.

The drawings requested under condition 4 of 82/46 are not available on our files and have been superseded. The current approved drawings are attached.

The requirement under Condition 16 of 82/46 has been superseded by new permissions and the aims of that condition are covered by more recent permissions. And conditions. There are no copies of any 5 yearly reports submitted under the 82 IDO held on our files.

Condition 16 plans requested are attached:

2. Plan no 832.2C
3. Plan no 832.3D
4. Plan no 832.4D
5. Plan no 832.88A
6. Plan no 832.115C
7. Plan no 832.100C
8. Plan 832.61a
9. Plans for storage of materials Grange Top Quarry

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If you are dissatisfied with the handling of your request please contact the Head of Corporate Governance, Rutland County Council, Catmose, Oakham, Rutland LE15 6HP
You can also complain to the Information Commissioner at:

The Information Commissioner's Office
Wycliffe House, Water lane
Wilmslow, Cheshire
SK9 5AF
Tel: 01625 545700

Yours faithfully

FOI Administrator
Corporate Support Team, Rutland County Council
Written Statement for Working, Restoration, Aftercare and Afteruse
prepared by Colvin and Moggridge, Filkins, Lechlade, Glos. GL7 3JQ

Ref. C&M/K2    Date: 8 November 1993

Contents:
1. Schedule of drawings
2. The present site
3. Phasing and working programme
4. Overburden and soils
5. Mineral waste deposits and licensed sites
6. Restoration
7. Planting
8. Aftercare
9. Landuse at Phase 3
1. **SCHEDULE OF DRAWINGS**

The following drawings have been prepared in conjunction with the preparation of the Quarry Plan:

<table>
<thead>
<tr>
<th>Title</th>
<th>Number</th>
<th>Scale</th>
</tr>
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<tbody>
<tr>
<td>Site location, ownership and access</td>
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</tr>
<tr>
<td>Study of views of the site</td>
<td>832.5</td>
<td>1:25,000</td>
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<tr>
<td>Footpaths: existing</td>
<td>832.12</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Footpaths: proposed</td>
<td>832.13</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Phase 1: Present Quarry</td>
<td>832.2</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Phase 2: After about 10 years</td>
<td>832.3</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Phase 3: After about 20 years</td>
<td>832.4</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Quarry sections</td>
<td>832.6</td>
<td>1:5000</td>
</tr>
<tr>
<td>Works waste disposal area: location</td>
<td>832.9</td>
<td>1:10,000</td>
</tr>
<tr>
<td>Works waste disposal area</td>
<td>832.7</td>
<td>1:5000</td>
</tr>
</tbody>
</table>
2. THE PRESENT SITE

2.1 Introduction

(a) Location

Refer to drawing 832.11.

(b) Context

Refer to drawing 832.5. This drawing explains the present setting of Grange Top Quarry and the Cement Works.

i Views of Works from the east, including the edge of Stamford and the A1:

These have a powerful psychological impact by recurring frequently and impinging on many people. This could be greatly reduced by planting a tree belt along Steadfold Lane between one field south of Tinwell Lodge Farm and the A6121. Only the top of the works would then show from any point, often no view would impinge. Some local planting close to the A6121 would complete this screening.

ii Views of Works from south:

It is not possible to screen the works from Ketton village; at present they are set above mature trees. These trees are ageing. New planting is desirable to avoid the slow increase of impact of the works on Ketton due to the decline of village tree cover; planting on land owned by the Company should suffice.

iii Views of Quarry from west quadrant:

The quarry is going to become much more visible during the next two decades as it cuts into ground falling to the west. The works will also be made more visible. It would be advantageous to carry out edge planting to ameliorate this impact.

2.2 Planning Consent

The planning consent boundary is indicated by the red line on drawings 832.11 and 832.5. Other land owned by Castle Cement Ltd is indicated by the blue line on drawings 832.11 and 832.5.

The total extent of land covered by planning consent for mineral extraction is 380 ha.

Land within the consent area with mineral reserves which remain to be worked is 183 ha.
2.3 Access to the site

(a) Vehicular access

Access for vehicles is gained by two routes owned and controlled by Castle Cement Ltd; refer to drawing 832.11.

i via the works with internal check point
ii from Pit Lane

It is not proposed to change this arrangement. Quarried materials used in the cement manufacturing process do not need to leave the site.

(b) Public footpaths

i Existing situation (refer to drawing 832.12)

ii Proposals (refer to drawing 832.13)

In advance of Phase 2 (Phase 2 is after about 10 years): Bridleway E226 requires diverting so that the reserves of stone can be quarried to the north corner and north-west boundary.
Length of bridleway: 1900m existing; 1950m proposed along north-west boundary.

In advance of Phase 3 (Phase 3 is after about 20 years): Footpath E229 (Hereward Way) and Footpath E231 require diverting so that reserves of stone can be quarried up to Empingham Road.

Two alternative routes are identified for footpath E229 and shown on drawings 832.13 and 832.4:-

(1) North option:
Divert the footpath behind the working quarry face across previously restored land to connect with Bw E121, and a new footpath through the disused quarry (the SSSI) to connect back to the original route as it enters Ketton along the route proposed for diverting footpath E231. Bridges over work access routes would be provided.
Length of footpath: 1700m existing; 3000m proposed.

(2) South option:
Divert the footpath to the south-west planning consent boundary to reconnect with the original route as it enters Ketton.
Length of footpath: 1700m existing; 2200m proposed.

The proposed diversion for footpath E231 keeps the route within the disused quarries to connect with Hereward Way on the approach to Ketton Village.
Length of footpath: 850m existing; 1250m proposed.
Future phases:
At final restoration, footpath E229 Hereward Way could be returned to its original line.

2.4 Internal road system

An internal system of hard crushed limestone roads and haul routes is established. The roads are maintained by use of grading plant and dust is minimised by damping as and when necessary.

Crushed stone and clay is transported internally within the site to the Cement Works by means of covered conveyors.

2.5 Nature conservation and geological interest

(a) Existing within the site

Refer to drawing 832.2.

i SSSI (site name): Ketton Quarries, Leicestershire
Notification date: 7 October 1986
Total area: 142.8 ha.

Reason for designation: The site contains nationally important exposures of Jurassic Limestone. The old quarry workings contain some of the largest remaining examples of semi-natural grassland and scrub in Leicestershire.

Retention of SSSI: The old quarry workings contain all the biological interest and White Limestone outcrops. It is planned to retain intact this area, identified on drawing 832.2, during the working life of the quarry. The remainder will be worked as notified under Sections 28(5) and (6) of the Wildlife & Countryside Act 1981 (Consent dated 28 May 1987).

ii SSSI (site name): Shacklewell Hollow
Notification date: 1986 (1983 under 1981 Act)
Total area: 4.0 ha.

Reason for designation: The site contains species rich neutral marshland, alder woodland and a small area of calcareous grassland.

Retention of SSSI: The major part of the SSSI is outside the planning consent boundary. The part within (approx 0.8 ha) will be retained during the working life of the quarry.

(b) Proposed

Refer to Section 6.2(e) for specific objectives on restoration.
2.6 Archaeological features

Leicestershire County Council Sites and Monuments Record Office have identified only two areas of archaeological interest. These are identified on drawing 832.2.

The northern area (name: Blackground) is an enclosure site, the southern area (name: Ketton Quarry) is the site of occupation with burial and pottery.

Castle Cement Ltd will allow archaeological investigation of the areas, as it is intended to quarry both.

2.7 Planning designations affecting the site
None

2.8 Services crossing site
None

2.9 Surface water drainage and groundwater protection

(a) Quarry Lagoon

Water from a spring, rising in the northwestern corner on the floor of the Limestone Quarry, is guided into a large settlement lagoon as shown on drawing no. 832.2. The water is used during dry spells for spraying quarry haul roads, and in the winter surplus water is pumped in an enclosed pipeline into the Works' drainage system tanks.

(b) Works Lagoon

A large settlement lagoon, situated on the Works at the perimeter of the Quarry as shown on drawing no. 832.2, collects surface water and the run-offs from the large covered Raw Material Storage areas. The water which collects there is pumped with the Works' drainage system.

(c) Surface water (storm conditions)

There is very gradual slope on the Quarry floor from northwest to southeast, in the direction of the Works.

Under heavy storm conditions water can flow off the restored areas and across the Quarry floor taking with it clay and limestone. Substantial Clay Bunds are positioned at strategic points along the route to control the flow of the water. Water held at these points gradually filters through the limestone quarry floor. The silty residue is carted to the Quarry licensed tip as shown on drawing no. 832.7.
3. **PHASING AND WORKING PROGRAMME**

The Quarry plan is phased according to the working programme as follows:

3.1 **Phase 1 : Present Quarry** (refer to drawing 832.2)

This phase will last for approximately 10 years.

The quarry will continue to be worked towards the north and east boundaries. Usable clay reserves will be stripped off the limestone up to Bridle Way E226 which Castle Cement Ltd will be seeking to divert during this phase. Limestone will be worked in a north-easterly direction behind the clay face, and south-easterly to take out the stone in the waste tipping area. Excavations will be no deeper than at present.

Overburden (minerals not required for cement production) from Phase 1 will be spread on the quarry floor as a means to restore land to agricultural use as a continuous programme.

All working methods will be as existing.

All access, circulation and storage arrangements will remain as existing.

A programme of screen planting of hedges, shelterbelts and small woods will commence to reduce the visual effect of the Works and the following quarry phases (refer to drawings 832.5 and 832.3). See Section 7 for detail.

3.2 **Phase 2 : after about 10 years** (refer to drawing 832.3)

This phase will take a further 10 years.

Clay reserves in the northern sector will become exhausted and the stripping operation will start at the southern clay face. Limestone will be excavated into the north corner and then in a south-west direction along the north-west boundary.

Overburden from Phase 2 will be placed against the redundant limestone face, so that the levels in the quarry floor are raised to meet levels at the site boundary.

A geological feature will be created with the quarry floor left to develop naturally at the foot of cliffs.

Castle Cement will seek to divert footpath E229.

All working methods will be as existing.

All access, circulation routes and storage arrangements will remain as existing.

Planting will continue within the quarry as areas become restored by overburden placement, creating field patterns of hedges and woods complimentary with the external landscape. Refer to Section 7 for detail.
3.3 **Phase 3: after about 20 years** (refer to drawing 832.4)

This is a critical point in the quarry's life. Remaining clay reserves will be all but exhausted and new sources are required. Significant limestone reserves remain within the site.

Restoration of the quarry floor by use of overburden remains a continuous process.

There is an opportunity to return footpath E227 back to its original route.

Maintenance and management of the established vegetation will continue.

It is not anticipated to reopen, for stone extraction, the SSSI area of the old quarry workings.

**Note:** Phasing and timing described above are based on current estimates of quantities and qualities required for production. These may vary and the rate of work in the quarry will be adjusted as necessary.

3.4 **Working practices**

(a) Hours of operation are dealt with by condition. It should be noted that although proposed condition 21 permits certain operations to be carried out on a Sunday past practice has shown that it is not necessary to work more than six weekends per year. It is not anticipated that this past level of activity will be exceeded without prior discussion with the Mineral Planning Authority.

(b) Likewise, it is the norm to carry out all blasting before or around noon. It is anticipated that this practice will continue although condition 29 permits blasting until 4 pm Monday to Friday.

3.5 **Review**

This quarry plan will be reviewed every five years unless otherwise agreed.
4. OVERBURDEN AND SOILS

4.1 All topsoil and minerals surplus to production requirements will be accommodated on site for use to restore the workings.

4.2 Treatment of topsoil

Existing topsoil will be stripped to its full depth from areas to be worked. If not re-used immediately in the programme of restoration, it will be stored on site separately from overburden at the location shown on drawing 832.2.

4.3 Treatment of overburden minerals surplus to cement production requirements

These materials will be spread on the quarry floor as a means to restore land.

4.4 Estimated volume of topsoil, overburden minerals surplus to production requirements which will be accommodated on site for use to restore the workings.

<table>
<thead>
<tr>
<th></th>
<th>North sector</th>
<th>South sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topsoil</td>
<td>126,000</td>
<td>93,000</td>
</tr>
<tr>
<td>Alkaline clay overburden</td>
<td>180,000</td>
<td>210,000</td>
</tr>
<tr>
<td>Silica clay (some used in cement making)</td>
<td>2,260,000</td>
<td>2,980,000</td>
</tr>
</tbody>
</table>

4.5 Disposal of surplus overburden

Any surplus overburden will be used for restoration and will not be removed off site.
5. MINERALS WASTE DEPOSITS AND LICENSED SITES
(refer to drawings 832.7 and 832.9)

5.1 Waste Disposal Licence

A Waste Disposal Licence (ref no 102/2) has been issued to Castle Cement Ltd allowing tipping in Grange Top Quarry north of the Works within the area shown on 832.7. The Licence allows tipping of inert, non-toxic waste materials arising from the cement process including demolition materials and surplus materials from the quarrying operations.

Minerals waste from the works will be placed within the licensed area and consolidated using tracked machines. On top is to be placed approximately 1.0m of clay overburden and topsoil. Once final levels and grade are achieved, the land will be returned to agricultural use and/or be planted to form hedgerows and small woods.

5.2 Choice of site

This site was chosen:

(a) for its proximity to the works
(b) as the deposition of fill would not sterilise viable stone reserves
(c) to fill a void after stone extraction
(d) as it was out of sight of surrounding properties
(e) in order to provide a landform that will merge with the permanent cliffs along the north-east boundary
6. RESTORATION

6.1 Objectives: general

A programme of rolling restoration will be undertaken where and when feasible. Components of the restoration works, once begun, will be undertaken as quickly as possible. The projected working life of conserved minerals in the quarry is approximately 20-30 years at current rates of production.

6.2 Objectives: specific (see also Section 8: Aftercare)

It is intended that the restoration programme should result in the following final restored landforms, but final detail may be resolved in later consultation with the local authority:

(a) Quarry floor central and west:
Ground gently rising toward the north west away from the works until falling gently down to the boundary.

(b) Quarry floor north:
Left as worked out without overburden and topsoil being spread.

(c) Quarry floor east (waste disposal area):
The tip has a 50+ year capacity. During its life, filling will initially be behind the limestone face at the west side. Once all the limestone is removed, filling will commence in the shallow southern corner moving towards the deeper north side. Filling and capping will smoothly raise the levels from the quarry floor to the boundary. At the north side a steepened curving slope will merge the quarry floor and quarry boundary level with the permanent cliff face (see (e) below).

(d) South quarry floor:
At Phase 3, the limestone will be excavated on the assumption that other reserves of clay can be worked. Restoration treatment will depend on future quarry extension.

(e) North boundary (geological feature):
The most striking landscape form proposed is the retention of a permanent cliff face as it is left at final blasting. Blasting will be designed to produce a natural looking limestone outcrop of stable buttresses and headwalls, capped with scrub covered clay slopes. The adjacent quarry floor will be left as worked out; (b) above.
7. **PLANTING**  
(refer to the attached Appendix for detail)

7.1 **Existing vegetation**

Existing trees, shrubs and hedges - screening the site - on land not to be worked - will be retained as shown (see drawing 832.2) including 8.5 ha of woodland plantation.

7.2 **Screen planting**

A scheme of screen planting is to be undertaken and completed by Phase 2 as follows (refer to drawing 832.3):

(a) Offsite field boundary hedgerows/shelterbelts (on land owned by Castle Cement Ltd): 1500m.
(b) Offsite screen planting to highways verges (requires negotiation with Highway Authority when not Castle Cement ownership): 6000m of planting 5-20m wide.
(c) Small woods at strategic locations in close proximity to the works and the Ketton Quarries SSSI: 2.0 ha.
(d) Site boundary - thicker hedgerow: 1000m.

Consideration will be given to new planting within Ketton village to provide a constant succession of tree cover.

7.3 **Restoration planting**

Restoration planting will be carried out and completed by Phase 3 as follows (refer to drawing 832.4):

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<thead>
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<th>Next phase</th>
<th>Subsequent phase</th>
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<tbody>
<tr>
<td>Woodland</td>
<td>4.2ha</td>
<td>7.5ha</td>
<td>11.7ha</td>
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<tr>
<td>Hedgerows</td>
<td>-</td>
<td>7500m</td>
<td>7500m</td>
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<tr>
<td>Natural regeneration</td>
<td>-</td>
<td>50.0ha</td>
<td>50.0ha</td>
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7.4 **Proposed plant species**

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<thead>
<tr>
<th>Proposed species include:</th>
<th>Hedges</th>
<th>Shelterbelts/ screens</th>
<th>Woods</th>
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</thead>
<tbody>
<tr>
<td>Trees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Alder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downy Birch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crab Apple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Maple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Cherry (Gean)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hedges</td>
<td>Shelterbelts/ screens</td>
<td>Woods</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------</td>
<td>------------------------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Nurse trees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larch</td>
<td>-</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Corsican Pine</td>
<td>-</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Small trees and shrubs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackthorn</td>
<td>/</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Dogwood</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Elder</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Guelder Rose</td>
<td>/</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Hawthorn</td>
<td>/</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Hazel</td>
<td>-</td>
<td>/</td>
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</tr>
<tr>
<td>Holly</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Wild privet</td>
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<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Dog/Field Rose</td>
<td>/</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Spindle</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Willows</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
</tbody>
</table>

**7.5 Planting techniques**

Planting of trees and shrubs will be by pit planting as appropriate, at forestry spacing of 2m for trees and 1.5m for shrubs.
Hedge plants will be planted in staggered double rows 500mm apart at 4 plants per m run.
Transplants will be protected by spiral rabbit guards or tree tubes supported by bamboos.
Transplant blocks will be protected by stock and rabbit proof fencing.
Areas to be seeded will be cultivated and topsoiled and seeded with an agricultural/ecologically approved grass (and herb) mix.
8. AFTERCARE

8.1 Proposals for aftercare

Proposals for aftercare are listed below, but detail may be finalised at a later stage in consultation with the planning authority.

(a) The access roads will be maintained for the working life of the quarry.
(b) Public footpaths will be maintained clear of obstruction while the land remains in the ownership of the company.
(c) Fencing will be maintained stockproof during the life of the quarry while the land remains in the ownership of the company.

8.2 Planting: hedging

Existing and new hedging will be maintained (stockproof) during the life of the quarry while the land remains in the ownership of the company. Hedges will be trimmed to shape if necessary once per year between October and March.

8.3 Planting: new woodland, hedging and shrubs

New planting will be maintained for 3 years after planting to a maintenance schedule (to be agreed with the local authority) including the following actions:

(a) site inspection at quarterly intervals
(b) removal of rubbish
(c) application of approved slow-release fertiliser at base of plants in May
(d) maintenance of 1m diameter weed-free at each planting station
(e) firming of plants after winter
(f) beating up of losses at end of first and second growing seasons

8.4 Planting: existing

Existing planting will be checked annually and dead, dying or diseased trees and shrubs treated as necessary, during the life of the quarry while land remains in the ownership of the company.

8.5 Planting: woodland management

Existing and new woodland planting, unless required to be left as thicket, will be managed while the land remains in the ownership of the company according to accepted forestry practices, e.g. brashing and thinning at appropriate intervals.

8.6 Planting: grassland/pasture

While the land remains in the ownership of the company, pastureland will be grazed and/or cut for hay/silage to prevent invasion by coarse weeds and regeneration of shrubs.
8.7 Planting: natural grassland

Where a grazing regime is inappropriate, while the land remains in the ownership of the company, accessible re-established natural grassland will be maintained free of invading coarse weeds and shrub species by an approved annual or biennial programme of cutting or eradication.
9. LANDUSE AT PHASE 3

9.1 Afteruse

The proposed afteruses for the quarry site are as follows:

- Return to agriculture: 97.0 ha
- New woodland: 12.7 ha
- Geology and limestone flora: 50.0 ha

Existing woodland retained:
- (a) SSSIs within site: 17.0 ha
- (b) Plantation: 4.5 ha
Castle Cement Ltd
Grange Top Quarry
KETTON
Stamford
Lincolnshire
PE9 3SX

IDO PERMISSION REGISTRATION NUMBER M/92/0139/9

Appendix to the Written Statement

Planting Schedule (draft)

prepared by Colvin and Moggridge, Filkins, Lechlade, Glos.

Ref C&M/K2 Date ..................
ESTABLISHMENT OF NEW PLANTING

1. GENERAL AIMS

The aim during the establishment phase of screenbelts and woods is to achieve a weed suppressing canopy of healthy young native trees and shrubs as soon as possible, appropriately distributed across the plantation block, and at a minimum stocking success of 90%.

2. PREPARATION

Planting stations and hedgerow lines should be cleared of weeds with a minimum weedfree area of 1.0m diameter.

3. PROTECTION

All plantations are to be protected with a stock/rabbit proof post and wire fence with maintenance gates and/or stiles.

All hedgerows forming boundaries to pasture are to have stockproof post and wire fences with gates and/or stiles for access, footpaths and bridleways. Protection from rabbit damage by spiral guards or tree shelters.

4. PLANTING

4.1 Timing

All planting (and replacement planting) will be carried out between November and March generally using bare root or cell grown roottrainer stock (except where identified as container grown (CG) in the schedule).

4.2 Plant supply and handling

Plants will be obtained from an approved source. Lifting, bundling, packing, storage and transportation to the site will be in accordance with the Plant Handling Code produced by the Horticultural Trades Association.

Bare root plants not planted on the day of delivery to the site will be heeled into prepared trenches, covered with soil and kept watered.

4.3 Spacing

Plants will be spaced at 2.0m centres (main woodlands) or 1.5m centres (edge planting) in individual species groups 3-11 depending on location and block size, or in a double row with 4-5 plants per metre for hedgerows.

4.4 Planting

Planting is to be in prepared pits of not less than 300mm diameter and depth. Slow release fertiliser (low nitrogen) will be incorporated in the backfill.
4.5 Maintenance (for 2 years minimum after planting): Maintenance operations (2 treatments per year minimum) are to include spot killing 1.0m diameter around each plant with a translocated herbicide, clearance of fencelines and checking stock and rabbit proofing, pruning and firming windblown and damaged plants, and securing or replacing damaged or missing tree shelters and rabbit guards.

4.6 Beating up: Plant replacement operations are to be carried out from November to March and are to follow establishment specification.

5. SCHEDULE OF PLANTING

5.1 Screen planting to be undertaken during Phase 2 (refer to drawing 832.3):

(a) Offsite field boundary hedgerows/shelterbelts (on land owned by Castle Cement Ltd)

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 700m</td>
</tr>
<tr>
<td>H3 650m</td>
</tr>
<tr>
<td>S7 400m</td>
</tr>
</tbody>
</table>

(b) Offsite screen planting 5-20m wide to highways verges (requires negotiation with Highway Authority when not Castle Cement Ltd owned):

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 1150m</td>
</tr>
<tr>
<td>S2 1000m</td>
</tr>
<tr>
<td>S3 750m</td>
</tr>
<tr>
<td>S4 1250m</td>
</tr>
<tr>
<td>S5 500m</td>
</tr>
<tr>
<td>S6 750m</td>
</tr>
<tr>
<td>H4 400m</td>
</tr>
</tbody>
</table>

(c) Small woods at strategic locations in close proximity to the works and the Ketton Quarries SSSI:

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>W5 7000m²</td>
</tr>
<tr>
<td>W6 12000m²</td>
</tr>
</tbody>
</table>

(d) Site boundary - thicker hedgerow:

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 1000m</td>
</tr>
</tbody>
</table>

5.2 Restoration planting to be undertaken during Phase 2 (refer to drawing 832.3):

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 2000m²</td>
</tr>
<tr>
<td>W2 20000m²</td>
</tr>
<tr>
<td>W3 12000m²</td>
</tr>
<tr>
<td>W4 8000m²</td>
</tr>
</tbody>
</table>
5.3 Restoration planting will be carried out during Phase 3 as follows (refer to drawing 832.4):

(a) Woodland

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>W7</td>
<td>40000m²</td>
</tr>
<tr>
<td>W8</td>
<td>19000m²</td>
</tr>
<tr>
<td>W9</td>
<td>15000m²</td>
</tr>
</tbody>
</table>

(b) Hedgerows

Total length 7500m

5.4 Proposed species: numbers are percentage per length/area

<table>
<thead>
<tr>
<th>Proposed species</th>
<th>Hedges</th>
<th>Shelterbelts/ screens</th>
<th>Woods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Alder</td>
<td>-</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Ash</td>
<td>50</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Beech</td>
<td>-</td>
<td>-</td>
<td>/</td>
</tr>
<tr>
<td>Downy Birch</td>
<td>-</td>
<td>/</td>
<td>40%</td>
</tr>
<tr>
<td>Crab Apple</td>
<td>10</td>
<td>/</td>
<td>overall</td>
</tr>
<tr>
<td>Field Maple</td>
<td>15</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Wild Cherry (Gean)</td>
<td>-</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Oak</td>
<td>25</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Willows</td>
<td>-</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Nurse trees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larch</td>
<td>-</td>
<td>/</td>
<td>20%</td>
</tr>
<tr>
<td>Corsican Pine</td>
<td>-</td>
<td>/</td>
<td>overall</td>
</tr>
<tr>
<td><strong>Small trees and shrubs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackthorn</td>
<td>20</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Dogwood</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Elder</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Guelder Rose</td>
<td>&lt; 5</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Hawthorn</td>
<td>70</td>
<td>/</td>
<td>40%</td>
</tr>
<tr>
<td>Hazel</td>
<td>&lt; 5</td>
<td>/</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Holly</td>
<td>&lt; 5</td>
<td>/</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Wild privet</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Dog/Field Rose</td>
<td>&lt; 5</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Spindle</td>
<td>-</td>
<td>/</td>
<td>-</td>
</tr>
<tr>
<td>Willows</td>
<td>-</td>
<td>/</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>
Key (clarified June 2002)

CONSENTED QUARRY Working Areas C1 - C6

- **C1**: Approved Phase 1 restoration scheme; substantial completion by 2002
- **C2**: Phase 2 and 3 of restoration for substantial completion by 2013
- **C3**: Area for storage of soils during working of proposed extension
- **C4**: Field 10 to be worked intermittently in tandem with proposed extension
- **C5**: Field 11 to be worked and then restored after Area 1 of extension
- **C6**: PROPOSED EXTENSION Working Area 1 - 6 in order of working

**Opening phases of proposed extension to be worked or prepared before consented area is restored in 2013**

**Subsequent areas of proposed extension to be worked and restored in sequence**

**Easterly area of proposed extension to be worked last after substantial growth of east side screen planting**

**New permanent bat flight hedgerows**
Dear Carolyn

Grange Top Quarry, Ketton APP/A2470/A/02/1081518

On behalf of Heidelberg Cement Group, we seek to discharge Condition 13 of the Appeal Decision. This requires approval of a scheme for storage of mixed and silica clay within the existing quarry prior to extraction of clay from the quarry extension.

We therefore enclose drawings:-

832.511 Volume stockpiles, September 2009
832.512A Formation of restoration mounds from stockpiles
832.513 Clay storage within Grange Top Quarry

For cross reference with the approved restoration scheme for Areas C2 + C3, we also enclose drawings:-

832.115C
832.100C

We shall be grateful to receive written approval of the proposed scheme.

Yours sincerely

Michael Ibbotson

cc Clifford Daly, Ketton
James Hulme, Tower Surveys
KEY

- Castle Cement Ltd. Ownership
- Limestone face
- Restored land - limestone grassland
- Tree and hedge planting
- Restored land - calcareous/neutral grassland
- Restored land - pasture
- Restored land - arable
- Restored land - woodland planting
- Recently planted woodland (IDO Phase 1)
- Shackleton Hollow Spinney

IDO Phase 1 Boundary
Restoration contours
Existing footpath
New/diverted footpath

PLANNING SUPPORT

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CASTLE CEMENT
Grange Top Quarry

Restoration Plan for area C2 in Grange Top Quarry

Information

1:1250 (A1)
April 17
M1/1

832.115C

Colvin & Mogridge

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e: filkins@colvinmog.co.uk  www.colvinmog.co.uk