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Review of Old Mineral Permission (ROMP) at Tarring Neville Quarry, Newhaven, East Sussex

Supporting Statement

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PLANS

APPENDICES

1.0 INTRODUCTION

SLR Consulting Ltd (SLR) has been appointed by Artex to prepare and submit a Review of Old Mineral Permissions (ROMP) application for Tarring Neville Quarry near Newhaven in East Sussex.

The Environment Act 1995 requires MPAs to review and update all old mineral planning permissions on a regular basis. The main planning permission at Tarring Neville (LW/81/1340) was first reviewed in 1998 (LW/98/0621) and it is the 1998 conditions that are the subject of this review.

ROMP applications are not a planning application for new development but instead seek to modernise old mineral permissions by replacing the existing conditions attached to these permissions with a set of more conditions which reflect the circumstances and standards of the time.

Chalk and flint extraction has ceased at the quarry and there are no plans to re-commence quarrying it has therefore been agreed with the Mineral Planning Authority (MPA) that the ROMP process will be used to secure a final restoration and aftercare scheme for the application site.

The aim of this ROMP application is therefore to review and revise the conditions attached to permission LW/98/0621 to ensure a modern set of conditions are agreed to secure the restoration and aftercare of the application site.

The existing and proposed conditions are set in Appendix A of this statement.

2.0 THE SITE AND ITS SURROUNDINGS

Tarring Neville Quarry was opened in the 1930s for estate use and was extended in 1947 following the approval of an application by Liberty Lime Company Ltd, reference E/47/28. Subsequent applications to extend the area of extraction were granted in 1961, reference E/61/422 and 1982, reference LW/81/1340. The 1982 permission was granted subject to a condition revoking the previous consents and therefore it was this permission that was first reviewed in 1998 by the Mineral Planning Authority. This first review resulted in the updated conditions for permission LW/98/0621, which is now the subject of this review.

The quarry is located on the east side of the A26 Newhaven to Beddingham Road to the north of the built up area of Newhaven, see Drawing TNQ/4.

The quarry is located within the Sussex Downs Area of Outstanding Natural Beauty and is approximately 150m south east of Tarring Neville village, a designated Conservation Area. Hampden Vale Caravan Centre is to the south of the quarry and the rolling landscape of the Sussex Downs to the east. Two banks of chalk on the western and southern boundaries screen the site from the A26 and the adjacent Caravan Centre.

The site has a total area of 9.2 hectares, which consists of 1.5 hectares which has already been restored and is used for grazing animals; 3.8 hectares of unworked land which will, remain undisturbed and 2.2 hectares of the remaining quarry to be restored, see Drawing TNQ/3. The remainder of the area consists of the chalk banks and vegetation at the front of the site.

3.0 PROPOSED ROMP SUBMISSION

3.1 Introduction

No further mineral extraction is planned at Tarring Neville Quarry and the ROMP submission is therefore designed to address the restoration and aftercare requirements of the site.

The proposed restoration scheme seeks to leave the quarry landform as it is at present and will consist of the following works:

- Removal of any remaining plant or hardstandings;
- Use of on site soils to create an additional area (2.2ha) of agricultural grazing land on the quarry floor and benches;
- Erection of a 2m high security fence; and
- Retention of the chalk banks and vegetation alongside the A26 in situ.

Restoration operations will be limited to 0700 to 1900 hours Monday to Friday and 0800 to 1300 hours on Saturdays. Subject to approval it is intended that the restoration works will be completed this year but it is proposed to allow until May 2014, in case of adverse weather conditions, to complete the works.

Given the temporary and limited nature of the proposed restoration operations it is expected that there will be minimal disturbance to the surrounding area in terms of noise and dust.

The scheme will require no import or export of material so there will be no significant traffic movements.

No additional extraction is proposed so there will be no hydrological impacts from the proposed restoration scheme and only on site materials will be used in the restoration works so there is no risk of pollution.

Visually there will be no change from existing and unworked areas of the quarry will be left undisturbed so there will be no landscape, ecology or heritage impacts on these areas as a result of the proposed restoration scheme.

It is therefore concluded that no significant effects are likely as a result of the proposed restoration scheme.

3.2 Restoration Scheme

Drawing TNQ/1 illustrates the restoration plan for the quarry.

In summary, this restoration scheme proposes to retain most of the existing quarried and unworked landforms and utilise the available stored soil resources within the site to achieve an agricultural restoration, based on open grassland cover. The existing vegetation, screening banks and exposed chalk faces will be retained in place, as will the existing unworked and restored areas of agricultural grassland and belt of vegetation running north to south.

The East Sussex County Landscape Assessment[1] (2004) identifies that the application site is situated within the Downs in the sub-area of the "*Firle & Bishopstone Downs*". This area is characterised by simple sculptural form and rolling arable dipslope with winding dry valleys, with few trees and woodlands.

As the chalk extraction has not progressed to its maximum permitted extent due to the closure of the quarry, the restoration works will now be carried out to completion in one operation. It is envisaged that restoration works will commence at the earliest opportunity following approval of the scheme and suitable weather/ground conditions.

3.2.1 Restoration Landform

The prevalent topography and natural characteristics surrounding the application site can be summarised as follows:

- To the north-west, west and south-west, the land is virtually flat over a distance of 1.2km with elevations around 2m AOD were it meets the river Ouse, before rising sharply;
- To the south-east, the land drops sharply to a level of 6m AOD and remains virtually flat for over 200m before it rises to 50m AOD over a distance of 350m, and
- To the north, north-east and east, the land strongly undulates with gradients varying between 1:1.5 and 1:10 and elevations ranging between 20m AOD to 160m over a distance of 1.8km.

The proposed restoration landform can be summarised as follows:

- The spreading of the on-site soil resource over the existing quarry benches, slopes and within the floor base to slopes varying between 1:5 and flat and elevations between 7m AOD and 24m AOD;
- The existing restored quarry base remains untouched with slopes varying between 1:6 and 1:30 and elevation between 7m AOD and 18m AOD;
- The established chalk banks adjacent to the A26 will be retained in place, and
- The un-worked land to the north will be left undisturbed, with slopes varying between 1:2 and 1:20 and elevations between 5m AOD and 39.5m AOD.

The proposed restoration scheme is principally based on the latest site survey with further 3D computer terrain modelling to ensure that as far as possible there is an overall balance between materials arising and those needed to create the restoration profiles.

3.2.2 Restoration Profiles

The site has been surveyed by a soil scientist Dr. Stuart McRae who has identified that the existing unworked land has shallow soils with topsoil depths typically no more than 0.2m with no subsoil horizon, i.e. the soil profiles consist of topsoil directly over fragmented chalk. The already restored paddock on site has a similar soil profile of topsoil directly over chalk.

It is recommended that the restored soil profile should be as similar as possible to the pre-working profile, as has been followed in the restored paddock, with topsoil at a depth of 0.2m.

[1]East Sussex County Council, (1998), The East Sussex County landscape assessment, Lewes, East Sussex

The existing topsoil bunds contain approximately 4,500m^3 which if spread over the disturbed area of 22,000m^2 to an even thickness will result in a topsoil layer with an average depth of 0.2m.

This is similar to that found on the undisturbed land and consequently there will not be a requirement to bring in any additional materials to the site.

3.2.3 Restoration Techniques

The existing quarry faces and banks will be surveyed by competent Geologists / Geotechnical Engineers to establish their overall condition. In particular, the survey will attempt to identify any loose / unstable areas of the face that may be liable to collapse during the works, or in the longer term. If any such areas are indentified which may endanger subsequent operations then further investigation works will be carried out to establish an appropriate response.

It is important that the final surface of any chalk substrate is sufficiently broken up to allow roots to penetrate. Simply spreading topsoil over a compacted, sealed chalk surface will not be acceptable. Also, the natural chalk soils of the South Downs are notorious for their erosion risk, especially when under arable cropping during which the soil surface is directly exposed to the elements. The same will apply to restored land until a vegetation cover had become fully established. Such an erosion risk will be exacerbated on the proposed restored land at Tarring Neville unless a good “key” between the topsoil and the underlying chalk substrate is achieved.

It is anticipated that the requisite loosening operations will be carried out with a machine mounted set of tines or other subsoiling/loosening equipment as described in Sheet 17 Loosening with Drawn Tines of the MAFF Good Practice Guide for Handling Soils (2000).

Alternatively it may be carried out on a smaller scale, by loosening each area of chalk surface before topsoil is spread by means of a toothed bucket on an excavator arm according to the procedure outlined in Sheet 16 Loosening with Excavator Bucket of the MAFF Good Practice Guide for Handling Soils (2000).

All rip-lines will run across the slopes rather than up and down them, in order to avoid exacerbating erosion.

When the topsoil is delivered and spread, re-compaction of the loosened chalk surface (for example by the passage of wheeled vehicles delivering the topsoil) will be avoided. In the event that delivery routes over the chalk surface are used, as is implied by the procedures described in the MAFF Good Practice Guide for Handling Soils (2000), the loosened surface of the chalk will become re-compacted. It will need to be re-loosened before the topsoil is spread. In such cases a toothed bucket can provide adequate decompaction for localised areas.

Alternatively, a procedure known as the edge-bund or peninsula method could be employed whereby, contrary to previously received wisdom, any earthmoving machinery runs on the topsoil and not on the loosened chalk substrate. The reasoning is that (a) the topsoil is more resistant to compaction and (b) any compaction is at the surface and can be seen and dealt with whereas compaction at the topsoil/chalk interface becomes hidden.

In practice the methodology is to restore the site in small areas. A temporary bund of topsoil is then built up on the edge of or down the centre of the area by vehicles running over the topsoil itself or at least over an area of chalk surface which will subsequently be loosed before topsoil is applied. The delivered topsoil is then spread out to the required thickness of

0.2m either by excavator bucket or by light tracked bulldozer, with both machines again working on the topsoil layer itself. The procedure is a slight adaptation of that described in Sheet 15 Soil Replacement with Bulldozers and Dump Trucks of the MAFF Good Practice Guide for Handling Soils (2000).

The levels of the final replaced soils will marry in with the existing adjoining land.

All undesirable material brought to the surface including stones and clay balls larger than 0.1m in any dimension, roots, tufts of grass and foreign matter will then be removed prior to achieving the required topsoil grading.

The surface will be raked with a chain harrow or similar normal agricultural equipment to form a true, even surface, and suitable for subsequent access for maintenance by mechanical blade trimming.

All restored areas will be grass seeded immediately following restoration in calm weather, preferably during September, spread evenly according to the grass seed mixtures and rates specified below. All areas will be rolled after seeding using a Cambridge roller or similar agricultural equipment to ensure good contact between soil and seed.

Mineral Fertilisers or slurry will be applied as deemed appropriate.

3.2.4 Grass seeding

Drawing TNQ/1 indicates the area which will require grass seeding to a medium/long term grazing ley. A typical ley grassland is created by sowing agricultural strains of grasses, particularly rye grass, often together with clover.

A medium/long term grazing ley mixture suitable for sheep grazing will be seeded to a rate of 30 kg/ha using the following species or suitable equivalents:

- Perennial ryegrass (18 kg/ha);
- Meadow fescue (4kg/ha);
- Cocksfoot (4kg/ha);
- White Clover (4kg/ha).

3.3 Aftercare Scheme

The following section relating to outline aftercare management of the site is based on the advice contained within the former Minerals Planning Guidance Note 7 ‘Reclamation of Mineral Workings’ (MPG 7), which is still considered to be a source of good practice. MPG 7 stated that:

‘The ultimate aim of aftercare treatments is to bring restored land into a condition which does not need to be treated differently from undisturbed land in the same use’.

All restored areas within the site boundary (as illustrated by Drawing TNQ/1) will be subject to aftercare management. The restored areas will be managed to ensure the establishment of a medium/long term grazing ley.

Additional plans, specifications, site records or analyses required for approval by the Local Planning Authority will be prepared as necessary and in accordance with the intervals and programme specified below.

The outline strategy broadly describes the steps to be carried out in the 5 year aftercare period and their timing within the overall programme. All restored areas will be closely monitored throughout the aftercare period so that the most suitable management regime can be defined.

It is proposed to commence aftercare of the restored areas immediately following the completion of restoration.

Table 3-1
Timings of Main Annual Management Operations

Timings	Standard Operations, to be carried out as required
WINTER	• Assessment of drainage requirements • Complete record of previous year's operations • Stability and erosion inspection and report
SPRING	• Visual inspection of vegetation • Replacement seeding • Weed control • Stability and erosion inspection and report
SUMMER	• Grassland cut, grazing • Weed control • Stability and erosion inspection and report
AUTUMN	• Replacement seeding • Weed control • Stability and erosion inspection and report

3.3.1 Secondary Treatments

The requirements for secondary treatments will be reviewed on an annual basis, in order to identify and remedy any localised problems including:

- Stone-picking - Assessed by visual inspection and any stones lying on the surface that are larger than 100 mm diameter (i.e. they will not pass through a wire screen mesh of 100mm spacing), together with other objects likely to obstruct future cultivation, will be removed from the site;
- Compaction - Assessed by excavating inspection pits or recording areas of standing water in winter, with possible remedy to be mechanical means;
- Vegetation Failure - Assessed by visual inspection, with possible remedy to be cultivation and re-seeding. Vegetation failure may indicate other conditions, and
- Settlement – In the event of differential settlement, the affected areas will be rectified using appropriate materials, to ensure continuity of the final restoration soil profile.

An assessment of geotechnical risks will also be undertaken to assess the condition of the banks and slopes and to allow appropriate mitigation measures to be identified to reduce the risk associated with any potential hazards which may be left.

3.3.2 Drainage

All ditches and watercourses will be maintained so that they remain clear and convey water.

The restoration landform will allow natural drainage of the site and given the nature of the soils and chalk substrate drainage provisions are not anticipated. Therefore, a detailed surface water management scheme has not been prepared as part of this scheme.

3.3.3 Management of Ley Grassland

The ley grassland will be managed by either grass cutting or grazing. The final regime will be agreed with the Mineral Planning Authority. If grass cutting is undertaken, cutting should start at the centre of the field and work outwards, driving grassland birds and mammals towards the edges of the fields where they have a chance of escaping the mower's blades. Two or three crops of silage can be produced from the same fast-growing ley, with the first being cut as early as May.

Monitoring of the grassland on an annual basis will determine the most appropriate management regime for the coming season.

3.3.4 Replacements

All seeding failures (including where seeding is removed, dies or becomes seriously damaged or diseased) will be replaced on an annual basis, during the first two years of aftercare, to ensure 100% maintenance of the agreed densities/land cover.

All replacements will use plants of the same species or other such species as may be agreed with the Local Planning Authority. If abnormal plant failures persist then investigations and proposals for the remedying of site conditions will be prepared and agreed with the Local Planning Authority.

3.3.5 Irrigation/watering

Requirements for irrigation/watering will be assessed on an annual basis, in particular any new areas of seeding and during the drier, summer months.

3.3.6 Weeds

Under the provisions of the Weeds Act 1959 it is the responsibility of all occupiers of land whether used for agriculture or not, to control injurious weeds, so that they do not spread. Furthermore, as part of the habitat management, where an individual plant species dominates an area, it may be beneficial to remove a proportion to allow other species to colonise or be introduced and increase species diversity. The Environment Agency has identified the following particularly invasive non-native plants:

- Giant Hogweed (*Heracleum mantegazzanium*) - poses a public health hazard because its sap will cause a skin rash in the presence of sunlight;
- Japanese Knotweed (*Fallopia japonica var japonica*) - forms dense thickets displacing native plants;
- Himalayan Balsam (*Impatiens glandulifera*) - spreads by seeds explosively propelled from ripened pods;
- Australian Swamp Stonecrop (*Crassula helmsii*) - quickly out-competes all native vegetation and maintains dominance through very rapid growth and uptake of almost all available nutrients;

- Parrot's Feather (*Myriophyllum aquaticum*) – propagates by growth from small fragments that are easily spread when the brittle stems break; and
- Floating Pennywort (*Hydrocotyle ranunculoides*) – forms dense interwoven mats that quickly cover water surfaces.

All areas of the site will be monitored for these plant species on an annual basis, during the growing season. Where these plants are identified appropriate measures, specific to the plant species will be taken to control and/or eradicate them, such as described by the Environment Agency leaflet '*Guidance for the control of invasive plants in or near fresh water*'. The Environment Agency identifies the following basic methods of controlling invasive plants:

- Mechanical – cultivation, hoeing, pulling, cutting, raking, dredging or other machinery to uproot or cut plants;
- Chemical – herbicides to kill plants;
- Natural – specific pests and diseases to weaken the target plant; and
- Environmental – alteration of the environment to make it less suitable for plant growth.

Where weeds are to be controlled by the application of herbicides this will be carried out by a certified competent person, according to manufacturer's instructions. Herbicides will not be used within 10m of ponds, ditches or streams. It is also acknowledged that:

- The Food and Environment Protection Act 1985 requires approval from the Environment Agency before using herbicides in or near water;
- A waste license is required to remove Japanese Knotweed to a waste disposal facility, and
- All waste materials, including weeds, are subject to the Duty of Care and must only be transferred to, and carried by, registered waste carriers.

Common, less invasive weeds can be controlled in the sward by cultural methods such as chain harrowing in the Spring or regular topping through the growing season. New leys can be topped before grazing to control annual weeds. Perennial weeds need to be controlled throughout the rotation, starting with intensive cultivations prior to the establishment of the ley, prevention of the setting seeds by timely topping, by composting farm yard manure and by aeration of slurry and by rotovation at the end of the ley phase.

3.3.7 Aftercare Report

An annual aftercare monitoring report will be submitted to the Local Planning Authority for written approval between 1 October and 31 December of each year preceding the aftercare period. This detailed report will cover all of the topics outlined in this strategy and will include:

- A record of aftercare operations carried out on the land during the previous 12 months;
- A review of performance;
- Aftercare steps for the following 12 months; and
- Confirmation of any modifications to the original proposals set out in this aftercare scheme e.g. due to differences between actual and anticipated site conditions will also be detailed.

3.3.8 Aftercare Meeting

A site meeting will be held between the Local Planning Authority, the site operator and the landowner at the commencement of each growing season to consider the aftercare

management for the following year. This will include a review of progress and performance during the preceding aftercare period.

Meetings will be held for the first five full growing seasons following the completion of restoration.

4.0 REVIEW OF EXISTING CONDITIONS

The existing conditions attached to permission LW/98/0621 have been reviewed and updated to reflect the fact that no further mineral extraction is planned at the site.

The proposed conditions therefore reflect that only restoration and aftercare operations will be carried out at the site.

The existing and proposed conditions are set in Appendix A to this report.

5.0 SUMMARY AND CONCLUSIONS

No further mineral extraction is planned at Tarring Neville Quarry.

It has therefore been agreed with the MPA that the restoration and aftercare of the site will be secured through the ROMP process.

A low key restoration scheme is proposed for the site which will leave the quarry landform as it is at present and utilises on site materials to restore the quarry to agricultural grazing land.

No significant traffic, noise, dust, water, ecology, landscape or heritage impacts have been identified as a result of the proposed restoration scheme.

The proposed new conditions at Appendix A will secure the restoration of the site by May 2014 at the latest followed by 5 years of aftercare in accordance with the detailed schemes contained in this report.

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