

**CUADRILLA RESOURCES
LIMITED**



APPENDIX - G

SITE RESTORATION PLAN

Cuadrilla Resources Limited
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Beaconsall Hydrocarbon Exploration Site
Planning Application [July 2010].
Prepared by Phil Mason

Cuadrilla Resources Limited
BBD House
Stowe Court
Stowe Street
Lichfield
WS13 6AQ

REINSTATEMENT OPERATIONS TO FORMER USAGE

When the decision is made to restore the site to its former usage the well(s) will be plugged, hydrostatically tested, and abandoned with an agreed programme or method approved by the Health & Safety Executive and the Department of Energy and Climate Change.

Pre-Restoration Site Clearance

The wellhead and Xmas-tree will be removed and the well casing cut off not less than 1.83 metres (6 feet) below the finished ground level, a metal plate welded on top, and a concrete slab placed on top of the plate.

All plant, equipment, buildings, security fencing, and surface installations, will be dismantled and removed from the site, either to a re-location or to storage.

The site ditches, sump(s), cellar(s), and cess tank(s), will be drained and any contaminated materials removed from the site, such wastes will be disposed of at approved locations, in accordance with the prevailing legislation of the time.

All pipes, cables, ducting, and items above the impermeable lining will be disconnected, excavated, and removed from the site for disposal.

If weather conditions permit:

All uncontaminated hardcore and stone will be removed, with a flat bladed grader or bucket, for re-use or disposal. Concrete installations will be broken up and removed, the geotextile membrane (Terram), sand, and impermeable linings will then be removed, with disposal to an approved location.

Any installations, cables, and pipes, below the linings level will then be excavated and removed from the site.

The cellar, sump and ditching voids will be infilled with any sub-soil stored on site, in layers of not more than 200 mm thickness, ready for the site area to be then re-graded to the original contour levels.

Any header drains installed will be rodded to check their integrity prior to their retention as part of the reinstatement scheme.

Sub-Soil Cultivation.

Any weed growth on any subsoil stockpiles will be eliminated by non-persistent, contact weedkiller such as "Roundup", prior to the re-grading of the sub-soil to reform the falls and gradients which existed prior to occupation of the site and to the original site contours, the sub-soil will be deep tine cultivated, using a crawler or four wheel driven tractor, drawing a winged, deep tine cultivator to a depth of 600 mm at 1000 mm centres, so as to achieve a good heave across the full width of the site.

Work will be carried out in dry conditions, and as far as practical at right angles to the field drainage system. Any extraneous material brought to the surface will be removed to a tip with stones picked to approximately 75mm. Works for the replacement and spreading of the topsoil to an even depth, will be carried out following the fine grading of subsoil.

Replacement and Cultivation of Topsoil

Any weed growth on the topsoil stockpiles will be eliminated by non-persistent, contact weedkiller such as "Roundup". Topsoil will then be spread from the stockpile, using agricultural machinery, crawler or four-wheel driven tractors. Topsoil will be spread to give a uniform depth over the whole site, to avoid the formation of depressions which could hold water, and to grade to the original levels.

All operations will be carried out when both the ground and topsoil are dry and crumbly as far as practicable.

All topsoil areas within the site, including areas not affected by construction operation will be ploughed and cultivated to ensure that all stones, rubble, vegetation and other extraneous material larger than 75mm in any direction are removed from site to a suitable tip.

The topsoil will be worked to a fine tilth by rotovator or harrowing to not less than 100 mm depth.

If it should prove necessary to import topsoil into the site, disease and pest free material as near as practicable to that on site will be used.

Removal of Site Boundary Fencing

The boundary fencing will only be dismantled and removed if it is not required to protect the restoration area from stock animals.

Reinstatement of Fences & Gates

Any fences and gates removed during the use of the site will be replaced with new materials which match as closely as practicable those previously existing on site.

Any hawthorn hedge removed will be replanted with container grown "quick's" spaced in a double row of plants 9 inches apart. A tannalised timber post and four rail fence with livestock and rabbit proof netting will be constructed on either side of the newly planted hedge.

Any fence to protect a hedgerow planting will be maintained for a period of two years.

New Field Drainage

If necessary, a scheme of field drainage in the site area will be prepared and agreed with the Landowner and for works to be carried out by a specialist land drainage contractor in year two, or earlier if appropriate.

Any construction header drains installed to intercept the field drains will be retained, these will be rodded to check their integrity prior to their incorporation as part of the drainage reinstatement scheme.

Perforated plastic pipe of minimum diameter, 110 mm, will be laid at the bottom of the trench surrounded by and backfilled with clean washed 10 to 20 mm pea-gravel [depending on drainage machine to be used], and will be backfilled to within 225 mm of surface allowing for settlement for the gravel. Drains will be laid to the maximum available falls and, at depths not less than 600 mm cover.

Any outfall of the drainage system will consist of 2m lengths of frost resistant plastic pipe set into a suitable headwall (concrete or gabion) with a splash plate, discharging at water level into the ditches.

If it is not possible to lay drains at a depth of at least 600 mm of cover, Cuadrilla Resources Limited will consult with the Landowner and his written approval will be sought to an amended specification.

MANAGEMENT AND AFTER CARE

The whole former operation site will be returned to agriculture after completion of the works, subject to the Landowner's agreement. Annual inspections will be made in August/September of each year, for a period of three years, with the Landowner or his Agent, to review the progress and crop productivity of the restoration area.

Subsequent Management.

A If, subject to Grass Planting.

- Year 1
1. Initial treatment will be carried out as described above.
 2. The site will be rolled with a light, grassland roller and spread with a compound fertiliser as recommended by soil sample analysis.
 3. The grass will be cut for Silage or hay in May/June and subsequently grazed.
 4. Any weeds will be sprayed with an appropriate weedkiller.
 5. All stock/cattle will be removed in adverse weather conditions to prevent poaching.

- Year 2
1. Annual inspection (if required).
 2. Carry out additional restoration and compensate the owner or the land user for any loss.

- Year 3 Repeat steps 1 and 2 above (if required).

B If subject to Arable Planting.

- Year 1
1. Initial treatment will be carried out as described above.
 2. The crop will be assessed prior to harvest with regard to production levels and compared to production levels from adjoining undisturbed land.

- Year 2
1. If required, further subsoiling or comprehensive field drainage scheme will be considered at the annual inspection.
 2. Compensate the owner or land user for any loss or disturbance if required.

- Years 3
1. Compensate the owner or land user for any loss or disturbance if required.

SITE PREPERATION/RESTORATION LOADS TRANSPOT LOADS

Site construction

20ton Trailer

Truck 1	Site Preparation Equipment delivery
Truck 2	Site Preparation Equipment delivery
Truck 3	Geo Membrane delivery

10ton Vehicle

Truck 4	Cellar concrete rings delivery
Truck 5	Fencing delivery

Cement Mixer Lorry

Truck 6	Concrete delivery
Truck 7	Concrete delivery
Truck 8	Concrete delivery

20ton Tipper Lorry

160 loads of base stone (based on 0.25m - 0.3m thick). Average loads per day = 6.

20ton Trailer

Truck 1	Removal of site preparation machinery
Truck 2	Removal of site preparation machinery

Car/light van movements will be 2 per day plus occasional visitors which would be 1/2 per week.

Restoration

Restoration is a reverse of the construction traffic/loads except where sections of the upgraded track to the sewerage works would be seen as an improvement and could remain subject to planning approval.