

OXFORDSHIRE COUNTY COUNCIL

REFUSED

DATE: 03/09/2024

APPLICATION No: P21/S3961/CM, (MW.0115/21)



KEDD
L i m i t e d

RESTORATION STRATEGY & LANDSCAPE MANAGEMENT

**Proposed Sand and Gravel Extraction
from Land at White Cross Farm,
off Reading Road, South of Wallingford, Oxfordshire**

September 2021

For

**London Rock Supplies UK Ltd
Unit 5 Delta Court
Manor Way
Borehamwood
Hertfordshire
WD6 1FJ**

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Concept Restoration (KD.WLF.D.010)

Restoration Strategy & Landscape Management

Introduction

- 1.1 The progressive and final Concept Restoration proposals for the site have been influenced by the physical attributes of land and minerals within its boundary, the landowners existing and future requirements for agricultural production, together with a desire to enhance local public amenity and wildlife habitat creation and associated Biodiversity Net Gain (BNG).
- 1.2 The principal of the long-term sustainable development of the land through agricultural management and tenure along with significant increase in wildlife benefit / enhancement being at the heart of the schemes Restoration Strategy.
- 1.3 The Restoration Proposals for the site have been developed upon an understanding of five key aspects.
 1. The site's physical features, most notably:
 - i. The existing landscape structure which includes strong vegetated boundaries to the west, north and south of the site, with the River Thames corridor to the east.
 - ii. General land levels will be lowered through the extraction of mineral from the site but reinstated at similar to existing ground levels utilising both inert fill and current in-situ soils and overburden
 - iii. Areas of proposed mineral extraction are located below ground water level. This will result in some new water bodies being created within the site, for both water management purposes and habitat creation
 - iv. Landscape elements, including hedgerows and individual trees have been lost over the years, possibly as a result of agricultural operations
 - v. There is still a strong landscape structure within the local landscape setting.
 2. Local resident perceptions and aspirations, which have been gained through informal and formal consultation with local residents, including a public exhibition of the original mineral and marina development, together with the Oxfordshire County Councils refusal of the original application, from which the following key issues emerged in relation to restoration:
 - Consideration and strengthening of site boundaries should take place for both reasons of landscape structure and biodiversity
 - An individual large scale water body post restoration is not considered an appropriate element within the local landscape character nor a potential land use of a marina. As such, land levels should be retained to at or similar to current levels, and of a similar landform

- The restoration of all current Best and Most Versatile Agricultural Land capacity should be integral to a scheme
 - Provision should be made for greater public access with the Thames Pathway maintained on its original alignment
 - A site internal ditch should be retained and / or replaced along its original route and enhanced by the planting of individual / small groups of wetland tree species
 - Restoration should be progressive, i.e. land should not be left un-restored during the mineral extraction period
3. Local planning policies and designations, including:
- Consideration of the identified Landscape Character Area within which the site is located and its interconnection with adjoining landscape areas
 - Consideration of the Biodiversity Action Plan for Oxfordshire. To create appropriate habitats and attract and maintain key species in the county
 - The preservation of the Historic Environment and setting of Listed Buildings, including St. John The Baptist (church) and Monument at Carmel College
4. The landowners land management capability/objectives, notably:
- A predominantly rural agricultural landscape with hedges rather than fencing to contain land management units
 - Concentration of good quality soils to maximise potential agricultural productivity
 - Provision for wildlife enhanced planting and management within the overall restoration scheme
 - Consideration of an additional section of permissive PROW to add to the local access network – to connect possible existing routes

Restoration Proposals

- 2.1 The element, features and ambience of the restoration proposals will replicate and reflecting those of the Flat Floodplain Pasture landscape character areas, as defined by the South Oxfordshire District Council. The Concept Restoration Scheme for the whole site is illustrated on Drawing No. KD.WLF.D.010. This drawing shows the location and relative proportional split of final restoration land use. The restored/ site land area will comprise:
- A restoration scheme which concentrates the better-quality on-site soils for land restoration to original land uses
 - Lower lying land / poorer soils to be utilised to help create wildlife habitat
 - Creation of a new section of public right of way to offer an additional and alternative access within the site – connecting existing routes

Surface Treatment Restoration

<u>Restored Land use</u>	<u>Areas- Ha</u>
Agriculture	8.68
Damp Meadow / Marsh Grassland	5.75
Shallow Pools / Ditches	0.94
Reedbeds	0.10
Native Mixed Deciduous Woodland	1.61
Hedgerows	304 linear m
Gravel Face / Surface	0.10
Neutral Grassland to Thames Corridor	0.95
Individual Groups of Native Trees (Black Poplar / Willows)	0.11
Mesotrophic Lake	0.34
Hardstanding / Track	0.39
Total Site	18.97 Ha

- 2.2 Details for the proposed establishment and management of the above land uses are now described.
- 2.3 The restoration proposals can be seen to reflect, replicate and strengthen the original/ current land use structure.

Native Mixed Deciduous Peripheral Woodland Blocks

- 2.4 It is proposed to 'build on' both site original tree and shrub planting blocks around the periphery of the Site.
- 2.5 The general tree and shrub planting mix to achieve broadleaf woodland is to include:

	Canopy /Dominant Species / Common Name	Planting Height cm (Whips)	Bare Root / Container Grown	%
1	Quercus robur (Oak)	30-45	BR	15
2	Acer campestre (Field Maple)	30-45	BR	7.5
3	Tilia cordata (Small-leaved lie)	30-45	BR	.5
	Nurse Species			
4	Betula pendula (Birch)	30-45	BR	7.5
5	Sorbus aucuparia (Rowan)	30-45	BR	7.5
	Shrubs			
6	Prunus spinose (Blackthorn)	30-45	BR	5
7	Rosa canina (Dog Rose)	2 year	BR	5
8	Malus sylvestris (Crab Apple)	30-45	BR	5

9	Ilex aquifolium (Holly)	30-45	CG	5
10	Corylus avellana (Hazel)	45-60	BR	10
12	Acer campestre (Field Maple)	30-45	BR	5
13	Prunus avium (Wild Cherry)	30-45	BR	5
14	Crataegus monogyna (Hawthorn)	30-45	BR	15
				100%

- 2.6 All stock to be planted at 2m centres in single species groups of 5-7 plants. Stock to be supplied between 300 to 600mm in height. Shrub species to be concentrated to the edges of the planting blocks. All stock to be planted in 300 x 300 x 300 pits backfilled with 50% original soil and material and 50% non-peat based tree planting compost incorporated 20 grams of a suitable slow release fertilizer. Stock to be protected by a 600mm tree / shrub shelter secured to 750 x 20mm square softwood stake by 2N° plastic tree ties.

Management

- Trees should be watered during any dry spells in the first growing season;
- Weeding to 1m diameter around the bases of the trees will be required to help combat competing vegetation;
- Tree guards and canes should be inspected to ensure their integrity;
- Once the trees have matured the tree guards must be removed;
- Formative pruning should take place throughout the first 10 years to counter poor structure and development;
- Once established (~10 years) the Hazel should be coppiced. Coppicing should be undertaken in stages with one third of the Hazel coppiced every 5 years;
- Tree thinning (25%) should also be undertaken where necessary;
- Monitoring of the management regime should be undertaken on an annual basis in order to assess the success of the scheme towards achieving the proposals of the restoration strategy and the specific habitat aims and objectives. Based on an assessment of the progress towards these aims, changes to management strategies may be necessary and should be agreed at an annual Aftercare meeting. These will be based on on-site observations and actions agreed with
- Oxfordshire County Council, London Rock and the land-owning farmer.

- 2.7 The proposals will incorporate a total of 300 linear metres of new hedgerow. The hedges being planted as part of restoration to again comprise a diverse range of native species, typical of the local area. This will help ensure that the landscape character and context of the site integrates into the local area, as well as to promote Biodiversity

2.8 The general hedgerow planting mix to comprise:

Hedgerow Species Mix:	Bare Root BR	Height Cm	%
	Container Grown CG		
Crataegus monogyna (Hawthorn)	BR	35-40	50
Corylus avellana (Hazel)	BR	35-40	10
Acer campestre (Field Maple)	BR	35-40	10
Frangula alnus (Alder Buckthorn)	BR	35-40	10
Prunus spinosa (Blackthorn)	BR	35-40	10
Rosa canina (Dog Rose)	BR	35-40	5
Rosa arvensis (Field Rose)	BR	35-40	5
Hedgerow Trees:			
Quercus robur (Pedunculate Oak)	BR	180-250 feathers	30No.
Carpinus betulus (Hornbeam)	BR	180-250 feathers	30No.

Planting of New Hedgerows / 'Beat up' Stock

- Generally, all planting will be undertaken in a double-staggered row (set 0.5m apart) with plants distributed 300mm apart along each row (6 plants per linear metre);
- Stock of 30-45cm 1+1 transplants will be used, except for Oak and Hornbeam hedgerow trees, where 1800-2500cm high stock will be used;
- Planting will take place between end October and end March;
- All plants will be protected from stock and rabbit grazing, either by individual guards or by protective fencing, depending upon the length and location of the hedge to be protected. All plants will be planted using notch-planting techniques.

Management

- Following the 1st growing season, each winter, a failed 'beating up' inspection will take place to ensure a 85% overall stocking density by years 3, 5 and 10;
- This will include replacement of dead / diseased or dying plant stock replacement / straightening of tree guards and stakes, removal of herbaceous vegetation from tree guard as necessary to ensure successful establishment;
- To control weeds and allow proper growth and prevent unwanted succession by invasive species, each spring, one application of an approved glyphosate will be applied to margins and / or additional spot spraying of any unwanted vegetation. If necessary and depending on the severity or amount of vegetation, encroaching vegetation will be strimmed or hand weeded (March, May and September);
- During years 1 to 3, three maintenance visits will be made per annum (March, May and September);

- During years 4 to 5, two maintenance visits will be made per annum (May and September);
- During years 5 to 10, one maintenance visit will be made per annum (May);
- During May and September visits, any dead, dying or diseased species are to be taken out and removed off site and replaced during the following planting season (December to April) to ensure an 85% overall stock density by years 5 and 10;
- In years 5, 7 and 10 (if plants have grown to a suitable level) then the hedgerow will be laid to encourage longevity and maintain density;
- All protective tree / shrub guards to be removed during the winter of year 5 unless agreed otherwise;
- Existing hedgerows and new hedges are to be cut yearly, establish bulk and shape between beginning September and end February, but preferably in winter after most of the potential berries have gone.

2.9 Please note that on average hedgerow trees will be planted 1No pro-rata every 10m of hedge, in groups of 1, 3 and 5's.

Agricultural Land

2.10 Agricultural Land will form a key part of the restoration of the whole site. Land will be restored with a full soil profile consisting of a minimum of 300mm topsoil, 300mm subsoil over 600mm of overburden material. This 1.2m soil profile is designed to ensure the agricultural land is restored to Best and Most Versatile quality (grades 2/3a). An agricultural grass ley mix will then be established to stabilise the new soil profile and allow mowing or grazing by young stock in the first few years before potential conversion to arable production.

2.11 The restored agricultural land/landform will be monitored in respect of surface water movement, ground compaction and standing water. If required land drains will be installed and connected to the existing irrigation/land drainage system which will be retained in-situ around the undisturbed periphery of the undisturbed site.

Initial Agricultural Seeding

2.12 After placement of the topsoil to restore land to an agricultural afteruse, the surface will be cultivated to produce a fine, firm seedbed and sown with a medium-term grass ley (species as below or similar). The land will be then established and managed in accordance with an Outline Aftercare Strategy and Detailed Annual Management programme (to be produced in accordance with any relevant planning conditions to be attached to this application). In subsequent years the land might be cropped with cereals or vegetables.

Proposed Initial Agricultural Seed Mix

35%	Hybrid Ryegrass
28%	Intermediate Perennial Ryegrass
32%	Late Perennial Ryegrass
5%	White Clover

Marshy Ground/ Lake Margins

- 2.13 In view of the soil type, hydrological conditions and management constraints, it is likely that the plant cover which will develop on this site will be similar in character to the 'MG10' community. The approach to be taken to establish plant cover within this landuse type will be a combination of natural regeneration and direct planting.
- 2.14 The following table lists the grass species that will be established by sowing:

Species	%	Species	%
Holcus lannatus	20	Poa pratensis	5
Agrostis stolonifera	20	Anthoxanthum odoratum	5
Poa trivialis	20	Cynosurus cristatus	5
Lolium perenne	10	Festuca pratensis	5
Festuca rubra communatata	5	Dactylis glomerata	5

*These grasses are to be sown over 40% of the restored marshy grassland area, at a rate of 3gms/m².

- 2.15 Most of the non- grass plant species in the community are ready colonists. For instance, amongst the most abundant elements are soft rush, creeping buttercup, meadow buttercup, sorrel and common mouse-ear, and supplemented by sowing these species over 5% of the restored marshy grassland area at a rate of 3gms/m².
- 2.16 A number of species occur less frequently in the sward and are mostly those which require permanently moist conditions. These include angelica, cuckoo-flower, silverweed, iris, meadowsweet, greater birds-foot trefoil and marsh marigold. These species will be sown on 5% of the marshy grassland site area. These species will then naturally colonise throughout the damper parts of the restored site.

Additional Public Areas

- 2.17 The landowner and London Rock are promoting and increase in local amenity benefits with the establishment of ~400 linear metres of new permissive Public Rights of Way (PROW). This new PROW will allow an "off the road" east to west connection from the Thames Path to a roadside pathway adjacent to the Reading Road, which connects land into Wallingford.

Shallow Ponds / Ditches

- 2.18 To both manage surface water movement and to help promote Biodiversity ditches, standing water, shallow ponds have been designed into the scheme. These will both connect into existing water / ditch courses and create a matrix of channels and ponds within the lower eastern half of the site. The ditches / channels and ponds will be created with varying bank profiles / gradients to promote varying habitat.
- 2.19 To avoid standing water, a natural discharge point will be created to allow natural connectivity with ground water / water in the River Thames. This is to be achieved by the restoration of an in-situ gravel face / sand and gravel area. This material being permeable to allow the flow of water. Ponds and ditches will be managed to ensure the clear flow of water is maintained. This is to take place in spring and autumn on an annual basis
- 2.20 The sites proposed silt lagoon will be established / naturally colonised by aquatic marginals, including reed.

Thames Pathways Corridor

- 2.21 The scheme proposes both the retention (no physical disturbance) of the Thames Path, set within a 30m corridor to the east of the site. Within this corridor, it is proposed to enhance the existing grazing land to Neutral Grassland, with the provision of signage which will describe both the amenity setting of the site and the wildlife habitat and Biodiversity Net Gain to be achieved by the progressive and final restorations scheme.
- 2.22 This area will be re-seeding with a Neutral Grassland mix to include:

Species

Knautia arvensis – Field Scabious

Ranunculus acris – Meadow Buttercup

Silene dioica – Red Campion

Agrostis capillaris – Common Bent

Poa pratensis – Smooth Stalked Meadow Grass

*Sowing rate of 5gms/m²

Individual / Small Groups of Damp Tree Species

- 2.23 It is proposed to enhance the flood meadow character of the restored site by including wetland individual and small groups of tree planting. The species to comprise:

Species	Bare Root BR / Container Grown CG	Height Cm
Populus nigra - Black Poplar	BR	60-120
Salix caprea - Goat Willow	BR	60-120
Salix fragilis - Crack Willow	BR	60-120

Planting Specification

- 2.24 Stock to be planted as individual plants and in small groups of 3's and 5, adjacent to the north to south internal ditch and associated small water bodies.
- 2.25 Stock to be supplied between 60 and 120cm in height as a rooted pole. The poles to be notch planted direct into the restored soil horizon Stock to be protected by 120cm tree / shrub shelters, secured to 750x200mm square softwood stakes by 2No. plastic tree ties.

Management

- 2.26 The health of the stock to be checked twice a year, when the hand removal of any weeds / grasses should take place in an around the stock / tree shelters. Stakes and ties to be checked to ensure they are not broken. Any required actions to be picked up during an Aftercare visit.

Progressive Restoration

- 3.1 It is important to note that the whole site will not be worked/ disturbed at the same time. Soil stripping, mineral extraction and the importation of inert material for restoration purposes will be carried out in a sequence of progressive phases. The integrated nature of the proposal is illustrated on Drawing Numbers:

KD.WLF.D.002	Current Situation
KD.WLF.D.004	Phase A
KD.WLF.D.005	Phase 1
KD.WLF.D.006	Phase 2
KD.WLF.D.007	Phase 3
KD.WLF.D.008	Phase 4
KD.WLF.D.009	Final Restoration Works

- 3.2 The detailed proposals relating to progressive working and restoration are described on these drawings and within the Environmental Statement.
- 3.3 Progressive restoration will include designed interventions to mitigate potential adverse effect and enhance agricultural, public amenity and environmental assets.

3.4 These include:

- The retention and strengthening of native woodland blocks around the western and northern site peripheries. Both containing the site visually and strengthening local landscape character. These will be enhanced by further additional native planting and linked and connected via both new species rich hedgerows and agricultural wildlife buffer strips. Creating new wildlife corridors and habitats.
- Where possible utilising soils and overburden stripped to expose mineral in a direct single movement to restore previously exposed and extracted land. This will minimise the area of land disturbed/ required for mineral operations at any one period of time.

Restoration / Material Audit

- 4.1 The restoration of landform and associated topographical levels is to be achieved utilising on-site “in Situ” soils and overburden material combined with silt generated through the processing of sand and gravel, and the importation of inert materials to help achieve final restoration levels and soil profiles.
- 4.2 A summary of the current overall in-situ soil and overburden material which will require stripping to release mineral is provided below with proposed block phasing and a material summary illustrated on Drawing No. KD.WLF.D.003.
- 4.3 Please note, all figures are estimates based upon soil surveys and available borehole information and geological survey / investigation and assessment of rock quality.

Future Soil Stripping and Restoration Material

- 4.4 A detailed soils resources and agricultural survey was carried out by Rodney Burton – Soil Scientist.
- 4.5 The soil resource of the River Terrace being a combination of the Badsey Series:

	<i>Average Thickness (cm)</i>
Topsoil	25cm
Upper Subsoil	35cm
Lower Subsoil	60cm

....and the Ludford Series:

	<i>Average Thickness (cm)</i>
Topsoil	27cm
Upper Subsoil	28cm
Lower Subsoil	65cm

4.6 The soil resource of the Floodplain Thames Series being:

	<i>Average Thickness (cm)</i>
Topsoil	7cm
Upper Subsoil	36cm
Lower Subsoil	77cm

4.7 Table A below illustrates the quantity of topsoil, subsoil and overburden to be stripped along with processing waste generated which combined with the volume of imported inert material required, provide the overall restoration materials.

Restoration Soil Material / Resources

**Table A – Soils and Overburden / Imported Inert Material
to be utilised for restoration of the site**

Site / Phase	Area (Ha)	Soils / Overburden (m³)	Release of Mineral (tonnes)	Imported Inert Materials (m³)
Undisturbed Land	3.43			
Plant Site (Phase A)	2.65	46,000	152,000	87,000
Phase 1	3.51	78,000	117,000	67,000
Phase 2	2.07	43,000	56,000	32,000
Phase 3	5.24	83,000	177,000	101,000
Phase 4	2.07	33,000	126,000	72,000
TOTAL	15.54	283,000	628,000	359,000

*All figures are estimates based upon trial pit and borehole information and subsequent geological models, together with Rodney Burton's on-site soil survey.

Soil Stripping Movement, Storage and or Placement for Restoration

4.8 Soil resources can be damaged by being stripped or moved when wet. Consequently, stripping should only take place in the drier parts of the year and avoided during or just after heavy

rainfall. Soils should be stripped using the excavator and dumper method as described by Sheet 1 in the MAFF Good Practice Guide for Handling Soils.

- 4.9 The resources should be stripped to and stored separately in low bunds (no more than 3 m high for topsoil). Topsoil should be stripped from areas designated for storing subsoil. The bunds should be constructed either by excavator or bulldozer (Sheets 2 and 14 in the MAFF Good Practice Guide) avoiding over-compaction. They should be sown with grass to help maintain biological activity and prevent water erosion if in situ for greater than six months.

Handling conditions

- 4.10 Soil handling should cease during rain, sleet or snow. Where rainfall occurs during operations, the disturbed soil profile being worked on should be removed to base level before stopping works. The following criteria should be applied:
- In light drizzle soil handling may continue unless soils become plastic (soil field test applied after 4 hours to verify).
 - In light rain soil handling must cease after 30 minutes.
 - In heavy rain and intense showers, handling should cease immediately.
 - After rain has ceased, soil field tests should be applied to determine when handling may restart.
- 4.11 No soil handling should take place when there are pools of water on the land surface.

Field tests

- 4.12 Field tests should be applied prior to soil handling to assess the suitability of soil conditions. The tests include visual examinations of the soil and a physical assessment of soil consistency and are applied to representative samples of each soil layer to be handled.

Visual Examination Test:

- If the soil is wet, films of water are visible on the surface of particles or aggregates (e.g. clods or peds) and/or when a clod or ped is squeezed in the hand it readily deforms into a cohesive 'ball' – No Handling should take place when the soil is in this condition.
- If the sample is moist (i.e. there is a slight dampness when squeezed in the hand) but it does not significantly change colour (darken) on further wetting, and clods break up/ crumble readily when squeezed in the hand rather than forming into a ball – Handling OK.

- If the sample is dry, it looks dry and changes (darkens) if water is added, and it is brittle – Handling OK.

Consistency Test:

First Test – attempt to mould soil sample into a ball by hand:

- Impossible because soil is too dry and hard – Handling OK.
- Impossible because the soil is too loose and dry – Handling OK.
- Impossible because the soil is too loose and wet – No Handling.
- Possible – Go to next test.

Second Test – attempt to roll ball into a 3mm diameter thread using the flat of the hand on a plate glass square or the back of a spade:

- Impossible because soil crumbles or collapses – Handling OK.
- Possible – No Handling.

Restoration

- 4.13 The soils should be removed from storage and replaced by excavator during the summer using the loose-tipping technique (Sheet 4 in MAFF Good Practice Guide), which avoids traffic on the restored surfaces and reduces the risk of compaction damage. Compacted subsoils should be ripped using a tine prior to topsoil emplacement. A low ground pressure bulldozer will be used to shape the surface of the store to a convex shape to shed surface water and lightly consolidate the soil to protect against soil erosion.
- 4.14 All restored land to be established and managed to develop the land uses illustrated on the Concept Restoration Drawing No. KD.WLF.D.010.

Phase	Soil Type	Total Soil Volume (m3)	Placement of Topsoil	Placed Volume (m3)
Phase A Plant Site	<u>Topsoil</u> Best and Most Versatile	7,000	Bund 2	4,000
			Bund 3	1,000
			Bund 1a	2,000
	<u>Subsoil</u> Best and Most Versatile	11,000	Bund 1b	11,000
As Raised Stockpile Soils (Phase 3&4)	<u>Topsoil</u> Best and Most Versatile	2,000	Bund 1a	2,000
	<u>Subsoil</u> Best and Most Versatile	3,000	Bund 1b	3,000
Phase 1	Topsoil	2,000	Bund 4	2,000
	Subsoil	4,000	Bund 5	4,000
	Topsoil	7,000	Phase 1 Direct Placement	9,000
	Subsoil	10,000	Phase 1 Direct Placement	14,000
Phase 2	Topsoil	5,000	Phase 2 Direct Placement	5,000
	Subsoil	9,000	Phase 2 Direct Placement	9,000
Southern Drainage Ditch Creation	Soils	500	Bund 1b (SW Plant Site Subsoil)	500
Phase 3	<u>Topsoil</u> Best and Most Versatile	13,000	Phase 3 Direct Placement	13,000
	<u>Subsoil</u> Best and Most Versatile	21,000	Phase 3 Direct Placement	21,000
Phase 4	<u>Topsoil</u> Best and Most Versatile	3,000	Phase 4 Direct Placement	3,000
	<u>Subsoil</u> Best and Most Versatile	5,000	Phase 4 Direct Placement	5,000

- 4.15 **Please note that at Final Restoration** all land of Best and Most Versatile Land Characteristics will have been restored to appropriate restoration soil profiles. A Biodiversity Net Gain Calculation has been carried out which compares the existing current situation with the proposed habitat creation at final restoration. The proposed development scheme resulting in an overall 11 % Biodiversity Net Gain within the site.

APPENDIX A



This drawing illustrates the proposed Site development in sequential phases (stages) of access, plant site establishment, screening and stocking along with progressive soil stripping, mineral extraction and subsequent restoration utilising both in-situ soils and overburden and imported inert materials.

It should be noted that all land within the Site will not be disturbed at any one point in time. Progressive restoration will take place concurrently as land becomes available once mineral has been extracted.

Drawing N° KD.WLF.D.004 to 008 illustrate and describe the sequence of the proposed scheme.

Materials Audit

The table below summarises the release of soils / overburden and mineral on a phase by phase basis, together with the volume of required imported inert material to help restore the Site back to near original ground levels.

Site / Phase	Area (Ha)	Soils / Overburden (m³)	Release of Mineral (tonnes)	Imported Inert Materials (m³)
Undisturbed Land	3.43			
Plant Site (Phase A)	2.65	46,000	152,000	87,000
Phase 1	3.51	78,000	117,000	67,000
Phase 2	2.07	43,000	56,000	32,000
Phase 3	5.24	83,000	177,000	101,000
Phase 4	2.07	33,000	126,000	72,000
TOTAL	15.54	283,000	628,000	359,000



PROJECT:
White Cross Farm, Wallingford

TITLE:
Block Phasing Plan

REF NO:
KD.WLF.D.003

DATE:
September 2021

SCALE:
1:2,500 @ A3

STATUS:
FINAL

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