



RESTORATION OF WESTBY LANDFILL SITE

AFTERCARE SCHEME

INCLUDING THE 5 YEAR MANAGEMENT PLAN

For

Planning Permission LCC/2018/0019 Condition 28

MAY 2024

1.0 INTRODUCTION

- 1.1.1 This document relates to Oakbay Design's Restoration Proposals Drawing No. Z311.001 REV3 (appended) and should be read with the information on it and Oakbay Design's Response to Condition 27, Restoration, Parts a, b, c, d and g (appended).
- 1.1.2 This Aftercare scheme has been prepared for Woods Waste Limited and specifies management of habitats of the restored Westby Landfill site for an initial period of 5 years under Planning Permission No /2018/0019 following completion of the restoration of the site.
- 1.1.3 The Local Authority (LPA) has conditioned the restoration subject to the submission of a detailed management response to Condition 28 relating to a scheme and programme of aftercare of the site to promote the agricultural after use to be submitted to the County Planning Authority for approval in writing. The scheme specifies the management treatments to be applied to the habitats within the site in light of monitoring results and objectives of restoration treatments.
- 1.1.4 This document identifies the key features of ecological and landscape interest associated with the site and management of these features. The methods for retaining and enhancing identified features are also detailed.

2.0 DESIGN PRINCIPLES

- 2.1.1 The principal objective of the restoration and management of the site is to increase the site biodiversity and nature conservation value and whilst allowing a large part of the land to be restored back to open pasture land and farmed as a method of management.
- 2.1.2 The site management has been designed to create a high degree of semi natural habitats that will require minimal intervention. Where possible natural colonisation of flora and fauna species will be allowed to occur. Priority will be given to improving existing and creating additional areas of the following habitats and nature conservation.
- Existing and new woodlands and existing hedgerows and additional scrub/thicket planting
 - Species Rich Grasslands/pasture
 - Water bodies (Pond and ditches)
- 2.1.3 Priority will be given to the conservation of any species of nature conservation importance on site and the eradication of noxious weeds with prescriptions for preventing further infestation.
- 2.1.4 Baring in mind that the landfill has received mostly inert materials it is assumed that there will be little or no surface settlement and no action will be required.

3.0 NATURE CONSERVATION INTEREST

- 3.1.1 The total site area for Westby Landfill is 9.30 hectares. Habitats surrounding the site include arable and pasture agricultural land with many mature field hedgerows and copses and extensive broadleaved trees and shrubs.
- 3.1.2 The development is screened from Peel Road to the east by a bank of mature trees and shrubs and screened by dense hedging on the north and west boundaries. More recently as part of the landfilling development a mix of native trees and scrub has been planted on the outer slope to the south of the site which is maturing satisfactorily to screen the working of the site.

4.0 MANAGEMENT OBJECTIVES

4.1 Short Term Management Objectives

- 4.1.1 In the short term, during Years One to Five, the Management objectives for the site comprises the creation and establishment of locally appropriate habitat types. Objectives for individual habitat types and species is defined below along with specifications for the creation and establishment.

4.2 Monitoring

- 4.2.1 Provision has been made for ongoing monitoring of habitats and species are included in Section 6.

5.0 CREATION AND MANAGEMENT OF DISCRETE CHARACTER AREAS

- 5.1 Details of works required for the creation and management of individual character areas (habitat types) and species interests are given below.

5.2 Existing and new woodland and existing hedgerows and additional scrub/thicket planting

- 5.2.1 Woodland planting will be added to the band of mature trees with gaps infilled to create a screen to Peel Road. Woodland planting will also be planted to add to the existing planting to the south and in the south west corner of the site. Glades within the woodland will be allowed to regenerate naturally. A wide band of thicket will be planted on the northern side of the site to create a block with the existing hedge. Maintenance will focus on weed control and thinning non-native species typical to the local area and of UK provenance.
- 5.2.2 Specifications for planting of locally appropriate native shrub and scrub species are included within the planting schedule. This will provide structural diversity of the habitats and enhance the value for a range of animal species, in particular birds, bats and invertebrate groups including butterflies and moths. The thicket and woodland trees have been designed to include scrub species which will knit together and provide both a visual screen and also a shelter to wildlife. Within the newly planted areas 300 mm around each plant will be cleared of weeds and grasses. to reduce competition. The planting areas will be fenced with stockproof fencing to protect damage from livestock should grazing form part of the overall maintenance of the adjacent grasslands and the plants will each be protected from rabbit attack by providing 600mm plastic rabbit guards with 1.0m canes

for support. It is essential to water the new planting as necessary to maintain a moist soil during the first year to help establish growth. Any dead, dying or diseased trees and shrubs will be replaced with plants of equal size.

- 5.2.3 Coppicing and thinning of the newly planted woodland edge is unlikely to be required within the first 5 years of the Management Plan, although the need for such works will be reviewed at the end of the 5 year maintenance period as part of the review of all management prescriptions for the site.
- 5.2.4 No additional planting of ground flora species is proposed as opening up the canopy will promote the regeneration of woodland species already within the seed-bank.
- 5.2.5 Existing hedges adjacent to Annas Road and to the south western boundary will be maintained as agreed during the maintenance period by trimming to form a hedge no higher than 2.4m high with sides trimmed to allow access along Annas Road. All mature trees within the hedgerow should be retained.

5.3 Species Rich Grassland

- 5.3.1 The species rich grassland will be managed as a permanent pasture as shown on Drawing Z311.001 Rev3. Seeded areas will be allowed to develop with natural and local seed sources and to colonise naturally. It is essential to water the new grassland as necessary to maintain a moist soil during the first year to help establish growth.
- 5.3.2 Preparation shall include removing all litter, debris and stones over 75mm in any one direction from the area to be cut. Mowing of the grass shall be carried out using a tractor mounted grass flail cutter or strimmer and with care reducing the grass height to 60mm in August and letting the cuttings dry to allow seed fall and then raking up the meadow hay and bale unless otherwise agreed during September.
- 5.3.3 A review will be undertaken in August each year to prepare a list required of works to ensure that the habitat is retained as an ecological resource. Tall weed species including stinging nettle, thistle, dock and ragwort will be cut or hand weeded and removed from site. Areas of poor take or poached ground may be cultivated to a depth of 50mm and reseeded. After 5 years or when agreed, grazing will be allowed once the community has been established.

5.4 Water bodies

New Pond

- 5.4.1 Wetland habitats of value to wildlife are incorporated into the scheme. The creation of such habitats will contribute to national and local biodiversity objectives.
 - Conservation of aquatic and marginal plant species of conservation importance
 - Creation of key BAP habitats comprising reed-beds and standing open water/ponds
 - Prevention of excessive siltation of open water habitats
 - Re plant appropriate aquatic macrophyte and emergent vegetation species if considered necessary.

- 5.4.2 The existing pond to the south west of the site shall be cleared of debris, desilted and provide for the removal of overgrown plants to provide open water. The existing banks should then be assessed to review retention of plants. The pond will then be retained to enhance its value to wildlife. To minimise future management requirements supplementary planting if required should include only locally appropriate native non-intrusive species that will not encroach rapidly on the open water habitats. Management should be supported by appropriate maintenance of adjacent terrestrial habitats.

Ditches

- 5.4.3 Existing and new periphery drains will be assessed on a yearly programme to ensure that they are clear of obstructions and silting. It is proposed to enhance the management techniques with alteration of ditch dredging specifications to maximise the potential interest of ditches to wildlife. On the ditch bankings and margins, emergent plant species will provide structural diversity and offer foraging interest to species such as water voles and wetland birds including reed bunting.
- 5.4.4 Using standard methods it may be possible to use a ditch dredging scheme to create a diverse habitat whilst maintaining hydrological flow. Care should be taken during ditch cleaning to conserve emergent vegetation at the fringes of the water line. Cleaning of the ditches will prevent and control run off from the site.

5.5 Noxious Weeds

- 5.5.1 Should there be an issue with noxious weeds on site, then the area will be identified and treated by mowing, removal by hand, spot treated or spraying the area with approved herbicide such as 'Round Up' to manufacturers recommended rates by a selected specialist contractor. 'Round Up' should be applied during the growing season between May to October.

6 MONITORING AND REVIEW OF MANAGEMENT PLAN

Annual Meetings

- 6.1.1 In August following practical completion, the operator shall meet with the Landscape Architect and a representative of the local Authority to prepare a schedule of plants that are dead, dying or not in a thriving condition. A list of replacements shall be prepared and shall replace all the dead and dying stock by the end of the December following the summer inspection with replacements of the same species and of a comparable size to surrounding plants. Also prepare a schedule of works to maintain the Species Rich Grassland as an ecological resource.
- 6.1.2 A programme of monitoring will be undertaken annually over a 5 year period to assess the effectiveness of management prescriptions and habitat creation and enhancement. The following is a summary of the monitoring to be undertaken.
- **Woodland /Thicket:** Annual review of the tree work to include growth rates, woodland floor flora regeneration and the health and success of new planting and replacement of failed plants. All tree guards and canes will be secured and straightened.

- **Hedgerows:** Annual review of maintenance of existing hedgerows.
- **Ditches and pond:** Yearly review to monitor the vegetation and agree maintenance including supplementary work if required and removal of leaves and silt and reforming ditch and pond profiles
- **Grasslands:** Annual review and monitor the success of the grassland management regime and make recommendations/alterations to the regime as appropriate. Identify areas of poor take or poaching for re-cultivation and seeding if considered necessary.
- **Noxious weeds:** Should it be necessary to treat the noxious weeds with herbicide to control the weeds, the site will be monitored every twelve months and further treated as necessary until the weeds are eliminated.

7.0 IMPLEMENTATION

- 7.1.1 The management of the proposals set out in this document will be implemented during each year as detailed in Section 6 above and the 5 year Management and Maintenance Plan and Programme of works attached to this report.
- 7.1.2 The implementation of the strategy will be assured by Woods Waste Limited with the assistance of specialist consultants and contractors.

FIVE YEAR MANAGEMENT AND MAINTENANCE PLAN AND PROGRAMME OF WORKS

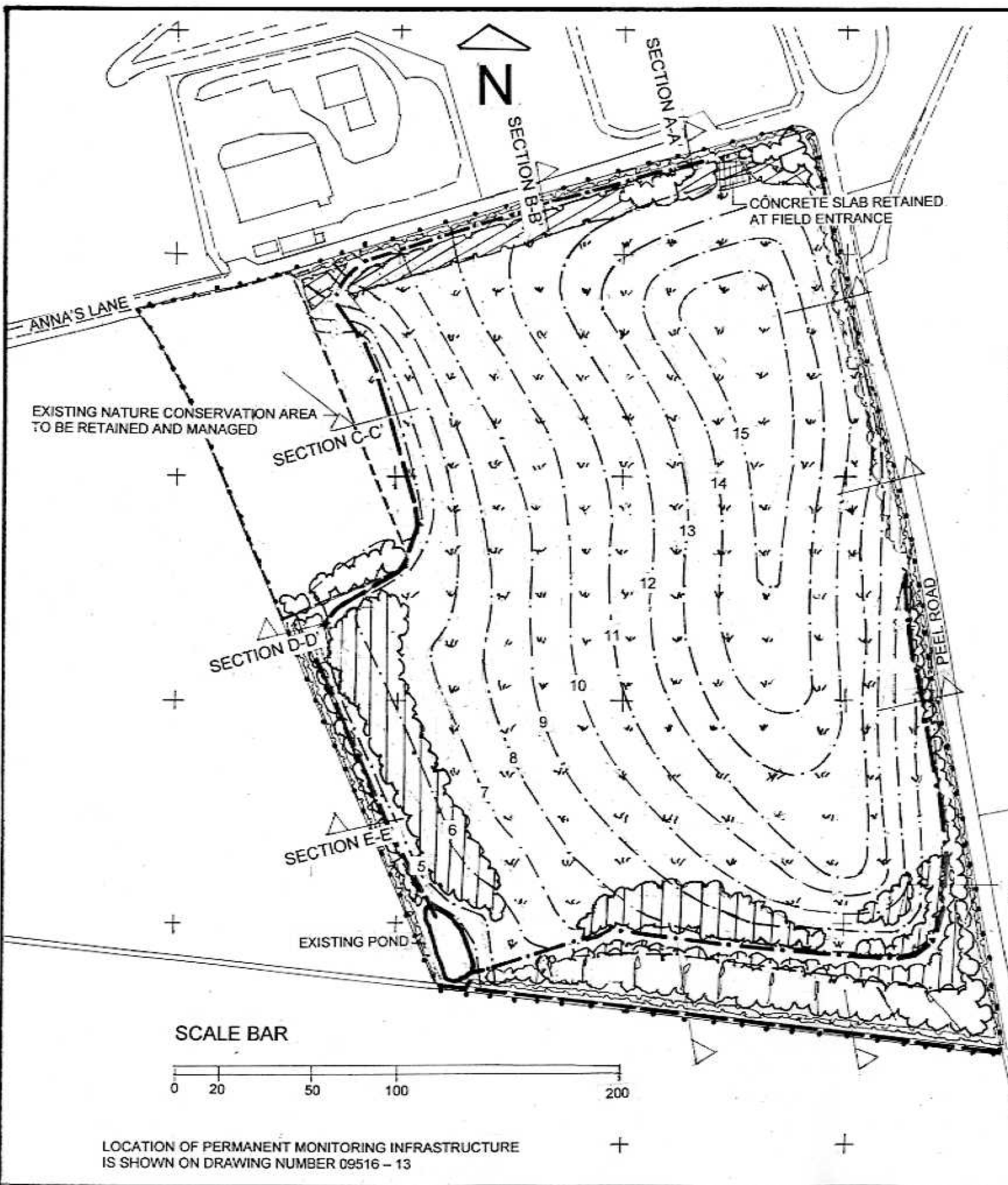
May 2024

APPENDED:

Appendix A – Landscaping Plan showing final restoration contours. Drawing No Z331.001 Rev 3.
October 2019.

Appendix B – Landscape Specification in response to Condition 27, May 2019, and letter from Arley Consulting with further information dated 11 October 2019 containing further information.

APPENDIX A



SCRUB/THICKET PLANTING (All plants to be BS 3936 and planted @ 1.5 m centres)

NO	Species	Common name	Size Cm	Remarks
375	Betula pendula	Birch	40-60	1+1 bare root
200	Corylus avellana	Hazel	40-60	1+1 bare root
875	Crataegus monogyna	Hawthorn	40-60	1+1 bare root
100	Ilex aquifolium	Holly	20-30	2 litre pot
125	Prunus avium	Cherry	60-90	1+1 bare root
375	Prunus spinosa	Blackthorn	40-60	1+1 bare root
375	Salix caprea	Willow	30-40	1 yr bare root
125	Viburnum opulus	Guelder Rose	40-66	1+1 bare root

WOODLAND PLANTING (All plants to be BS 3936 and planted @ 2.0m centres)

NO	Species	Common name	Size Cm	Remarks
150	Alnus glutinosa	Alder	40-60	1+1 bare root
300	Betula pendula	Birch	40-60	1+1 bare root
450	Crataegus monogyna	Hawthorn	40-60	1+1 bare root
150	Prunus avium	Cherry	40-60	1+1 bare root
225	Quercus petraea	Oak	40-60	1+1 bare root
225	Salix caprea	Willow	30-40	1 yr bare root

SPECIES RICH MEADOW At a rate of 25g per m2 on unimproved ground lightly cultivated

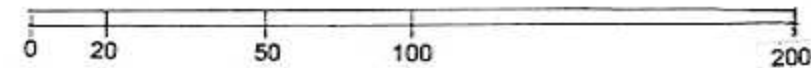
%	Species	Common name
30%	Agrostis capillaris	Bentgrass
5%	Anthoxanthum odoratum	Sweet vernal
10%	Arrhenatherum elatius	False oat grass
10%	Festuca rubra commutata	Chewings fescue
15%	Festuca rubra rubra	Red fescue
20%	Holcus lanatus	Yorkshire fog
5%	Poa annua	Meadow grass
5%	Poa pratensis	Kentucky Blue Grass

- SITE BOUNDARY
- BOUNDARY OF NATURE CONSERVATION AREA
- PROPOSED CONTOURS
- EXISTING HEDGEROWS
- EXISTING WOODLAND PLANTING
- EXISTING DRAINAGE
- PROPOSED DRAINAGE

SCREEN MOUNDING AND PLANTING TO REMAIN AND TO INTEGRATE INTO FINAL LANDFORM

FOR SECTIONS SEE DRAWING NO Z311.002

SCALE BAR



LOCATION OF PERMANENT MONITORING INFRASTRUCTURE IS SHOWN ON DRAWING NUMBER 09516 - 13

Job Title	WESTBY LANDFILL SITE WESTBY BLACKPOOL FY4 5JX		<p>29 Bradford Road Eccles Manchester M30 9FF Tel: 07966 470 358 info@oakbaydesign.com</p>
Drawing Title	LANDSCAPING PLAN SHOWING FINAL RESTORATION CONTOURS		
Scale	1 : 2000 @ A3	Date	OCTOBER 2019
Drawing No.	Z311.001	Rev.	3

APPENDIX B



PLANNING PERMISSION APPLICATION NO LCC/2018/0019
Response to Condition 27 Restoration, Parts a, b, c, d, and g.

at Westby Landfill Site, Westby, Blackpool, FY4 5JX

14th May 2019

Condition 27

Within six months of the date of this permission, a scheme and programme for the final restoration of the site shall be submitted to the County Planning Authority for approval in writing. The scheme and programme shall contain details of the following.

Attached is Drawing No Z311.001 which outlines the landform including contours and also the components to the final landscape restoration scheme. The end use of the site is for agricultural usage and will be restored in phases as each landfill cell is completed. Significant planting of hedgerows and woodland planting has taken place along the boundaries of the site in line with the original Restoration Proposals dated November 1992.

The implementation of the scheme will be to BS 4428:1989 Code of Practice for General Landscaping Operations and gives recommendations for the following landscape operations: drainage, grading and cultivation, seeding of grassed areas amenity tree planting, woodland planting and planting shrubs, herbaceous plants and bulbs. The code of practice takes account of current techniques, equipment and materials, and are restricted to general landscape operations.

The planting will be to BS 3936 Part 1:1992. Specification for nursery stock Part 1 Trees and Shrubs and BS 3936 Part 4:1984, Specification for nursery stock Part 4 Forest Trees.

Condition 27a)

Details of the spreading of soil over restored areas of the site including types and depths of soils to be placed.

It is proposed to utilise 10mm recycled topsoil to BS 3882:2015 multipurpose quality standard from the recycling activities on site. This material is screened and processed to remove any large stones, roots and other materials and is chemically tested for its appropriate end usage and landscaping purpose.

Prior to soiling, the ground should be graded and cross graded in accordance with the approved landscape drawing to achieve the earthworks profile. Any compacted areas should be broken up by ripping to a depth of 200 mm to achieve free drainage of the ground. Objects larger than 200 mm in any dimension should be broken up or removed.

Topsoil will be spread over the restored and graded land. It shall be selected from stockpiles to provide a minimum of 300mm clean free draining topsoil for the grassed areas and 500mm for the planting areas. The soil will be carefully graded with a low pressure dozer so as to avoid compaction,

Condition 27 b)

Details of the treatment of soils following the placement including removal of stones and other rubble and waste material and cultivation of the soils to produce a graded surface suitable for seeding.

The surface of the soil shall at all times be of an open texture allowing the free passage of water through it. All depressions, humps and ruts shall be removed by hand working or by approved mechanical equipment to achieve an even surface.

Liming shall be allowed in the cultivation process to achieve a soil pH between 6.5 and 7.5. The operator shall test the soil and incorporate appropriate lime or lime products to achieve acceptable acidity levels if necessary.

The soil shall be cultivated to an average depth of 50 mm. Compacted areas and large lumps of soil shall be broken up.

The surface of the soil shall then be lightly raked to achieve an even profile and all large stones and other debris over 50 mm in size removed from the soil surface.

Condition 27 c)

Details for the seeding of the site including seed mixes to be used and rates of application.

Details for the seeding, seed mixes and rates of application are shown on Drawing No Z311.001

Condition 27 d)

Details of any tree and shrub planting to be undertaken including layout of planting areas, numbers, types and species of plants, spacings, planting methods and protection measures.

Details associated with the planting are shown on Drawing No Z311.001.

Plants shall be delivered from the nursery of an approved supplier free from pests and disease in a pristine condition. Torn or lacerated roots shall be pruned before dispatch. Roots shall at no stage be subjected to adverse conditions, such as exposure to drying winds, frost, water-logging or bright sunlight. Plant roots shall be protected in plastic bags during periods out of the soil.

All plants shall be packaged so as to reach their destination undamaged and with moist live roots. Each individual specimen or bundle shall be identified by a sound, durable label bearing its Latin name, origin and reference details.

Bare Root Stock (BR) - Bare root stock shall be protected with damp hessian or other suitable material during transit. Packing around roots with moist clean vegetable matter and sheeting of the vehicle shall be carried out prior to dispatch.

Container Grown (CG): A plant grown for one year in a weed-free pot or other suitable container. The plant shall have a well-developed root system extending up to 90% of the container volume and be fully hardened off. The size of the container shall be in proportion to the plant and to the minimum specified volume in litres

For tree and shrub planting areas a pit 25x25x25cm shall be dug for each plant and the soil broken up and the plant shall be planted at the same level as planted at the nursery

Each tree and shrub will be protected during the first five years with a plastic tree guard secured with a 1 metre high cane.

Condition 27 g)

Details of the control of water run off including the design of any ditches and ponds.

Significant drainage ditches exist along the western side of the site which flow into an existing settlement pond in the south west of the site as shown on Drawing Z300.001. Surface water then flows to the drain on the southern boundary of the site. It is proposed that when levels are increased to the north that an extension drain of similar shape and size will link into the existing western drain.

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Our Ref: CG/09561/191011-lcc

11 October 2019

Mr Rob Jones
Lancashire County Council
Development Management Group
PO Box 100
County Hall
Preston
PR1 0LD

Dear Rob

**Discharge of Condition 27 of Permission LCC/2018/0019/1
Westby Landfill Site, Fylde, Lancashire**

Please find our response below following your landscape comments dated 17 September 2019 to our submission to discharge condition 27.

Section 1.1.2 Comments/Observations

Condition 27a)

Can the applicant confirm use of stockpiled site soils, and whether any soil amelioration is necessary for these soils as they have presumably been stockpiled for a considerable length of time?

Yes stockpiled soils will be used. They will be tested before reuse and ameliorated if required to meet the BS for topsoil.

The applicant should submit soil analysis sheets to the planning authority prior to scheme commencement, to ensure compliance to BS 3882:2015² for the proposed recycled topsoil? The applicant should also confirm the final volume proposed to be used, currently listed as to a depth of '10mm'?

This is not the depth but the particle size to which the recycled topsoil is produced ie. not greater than 10 mm. The volume will be as follows:

The area of new planting is 12,600m². Soil @ 0.45m deep requires 5,670m³ of soil

The area of agricultural grassland is 72,000m². Soil @0.3m deep requires 21,600m³ of soil

Total volume of soil required 27,270m³



Can the applicant check and confirm the stated topsoil depths for grassland and planting areas, as these are deeper than recommended in Design Manual for Roads and Bridges, Volume 10, Section 1, Part 2, New Roads: Planting, Vegetation and Soils and BS3882:2015 Specification for topsoil? In reassessing the required topsoil depth, the applicant should also provide subsoil levels to help explain the total soil formation depth. The depth of soil should also take into account slope gradient, to ensure that it is sufficiently stable on placement.

The DMRB guidance does not address landfill restoration. Landfill restoration is regulated by the permit. The EA generally allow 1 m depth of restoration soil. Included in this is a maximum depth of 450 mm topsoil. The proposed 300 mm for grassland is within this specification and the 500 mm proposed for shrubs and trees will be reduced to 450 mm.

Condition 27d)

For woodland some further clarification is required in terms of groupings and positions within the plot. i.e. larger tree species and shrub species.

Woodland:

Shrub species (Hawthorn, Willow) will be positioned to the fore of the planting bed with tree species (Alder, Cherry, Birch, Oak) forming a core in the centre. Planting will be in groupings of 5, 7 and 9.

Scrub/Thicket:

Species will be randomly planted in groups of 5, 7 and 9.

Further clarification is also required for the tree protection which is currently listed as a 'plastic tree guard secured with a 1 metre high cane'. Further specification information is needed to understand the proposed type of tubular guard to be used and the dimension size. Correspondingly, the height and thickness of the stake should be stated, including the number of ties to attach to the guard and that the wood is to be obtained from a Forestry Stewardship Council (FSC) approved source

Trees will be small whips with a maximum height of 600 mm, as detailed on drawing Z311.001. Staking will not be required, this is generally undertaken for trees above 1 m high. Plastic spiral rabbit guards will be applied, supported by a bamboo cane. The cane acts as a support to secure the rabbit guard. The guards are polypropylene, 600 mm high and expand from 3 to 15 cm in diameter.

Condition 27e)

Should any permanent monitoring infrastructure be found to be required, the applicant should include this on Drawing No. Z311.001 or if shown on a separate drawing, refer to this drawing as a note.

Permanent infrastructure would include leachate and gas wells capped off at ground level. The location of these are shown on Drawing No 09516-13C however this will be added to as the landfill site progresses, particularly with the addition of in waste gas monitoring boreholes. The exact location of these will be determined post infilling in accordance with



environmental permit requirements. The final drawing will be determined post closure and will be submitted to LCC at this point.

Condition 27f)

For further clarity, it would be useful for a drawing specific for Condition 27f, to show the hardstand and operational infrastructure to be removed, including the position of the 'flare and leachate storage tank'.

The restoration masterplan drawing already shows this to be removed.

Some written details for the removal of the water lagoon and water storage area (visible on the 'Concrete Plan') should also be provided.

The lagoon and water storage area will be drained back to clay for progression of the landfill engineering operations as this area will be progressively infilled.

Section 1.1.3 Earthworks

To fully understand the proposals, sections across the site should be provided, including details of the final slope gradients and proposed planting areas.

Please see enclosed cross sections drawing, Oakbay Z311.002.

The applicant should also note on the drawing the future access arrangements to the site from Anna's road and whether any hard stand at the entrance is proposed.

An area of hardstanding will be retained inside the access gates as shown on the revised landscaping plan.

Section 1.1.4 Timescale

You may or not wish to respond to the comments in this section.

We do not wish to comment further on this as it was covered in the application and understood by all parties.

Yours sincerely

Claire Gettinby
Environmental Consultant

Enclosed:

Oakbay Design Drawing Z311.001 Rev 3

Oakbay Design Drawing Z311.002