

CEMEX BURGHFIELD LANDFILL, READING, BERKSHIRE:

May 2017

Application for a Variation of Consented Leachate Treatment Plant Outline Landscape and Visual Impact Assessment

INTRODUCTION

The Leachate Treatment Plant (LTP) Compound was given planning approval in 2012; it is now proposed to set the main tank at ground level rather than below ground. Certain issues regarding the potential landscape and visual impacts of this revision to the Leachate Treatment Plant development may need to be considered as part of the planning application. These issues are set out in the table below, and are addressed by the sections of the report as identified by the paragraph or section reference.

<i>Potential Issue:</i>	<i>Addressed by report / other:</i>
Landscape Character Assessment	Section 5.0
Landscape Visual Impacts	Section 5.0, Plan L/369/LVIA 1, Tables A and B
Designations	Paragraph 2.5 and Section 5.0
Existing Vegetation	Section 2.0
Landscape Enhancements	Submitted Plans P4/369/46, P4/369/47
ZTV	Paragraph 6.2
Features to be retained / removed; timescales	Paragraph 2.1, plan P4/369/46
Protective measures	Paragraph 2.2
Areas of major constraints	Application Plans
Areas to be developed	Application Plans
Contracting working areas, sequencing and site access	Application Plans
Landscape Strategy and Masterplan	Submitted Plan P4/369/46, Application Plans, Paragraphs 7.3-7.8 inclusive

1.0 Setting - Landscape and Topography

- 1.1 The 0.5 hectare application area lies at the northern edge of the former Burghfield Quarry and Landfill; it is located south of Reading in the county of Berkshire.
- 1.2 The wider site is bounded to the west by the Reading – Southampton railway line set upon an embankment, to the east by open restored grassland, to the north by the River Kennet and Kennet and Avon Canal and to the south by the large scale Green Park commercial development. .
- 1.3 Junction 11 of the M4 lies approximately two kilometres to the south-east. Access to the site is via the A33 to the existing access off Island Road, adjacent to the Household Waste and Sewage Treatment Site.
- 1.4 Mineral extraction at the quarry ceased in the 1990's and the site was landfilled and restored to agriculture and grassland; in order to monitor and manage the site under the terms of the environmental permits, there is a retained existing infrastructure including the site access and internal vehicle route, site office and welfare facilities, gas compound, and monitoring wells.
- 1.5 The consented leachate treatment plant site is located east of the gas compound and north of the internal access route, in the north-western sector of the site.
- 1.6 Plan L/369/LVIA 1 sets out the landscape context of the application area.
- 1.7 The development has been implemented through the construction of the site access; the remainder of the application area is currently rank grassland and colonising bare ground (Refer to Photosheet A).
- 1.8 The surrounding landscape is a generally level floodplain area bisected by drainage ditches associated with the River Kennet, with levels in the immediate vicinity to the application area at around 41m AOD, with the land away to the south dominated by the artificial landforms of the restored landfill site (up to a level of 54.0mAOD).

2.0 Vegetation, Landscape Features and Flora and Fauna

- 2.1 The undeveloped parts of the application area consist of rank grassland and colonising bare ground. Tree and shrub vegetation is limited to the surrounding drain lines, outside of the proposed application area. These tree lines predominantly comprise Crack Willow trees to heights of 5.0-10.0m.
- 2.2 No woody vegetation will be removed as part of the LTP proposals, and no stand-offs are proposed.
- 2.3 The wider area contains plantation and regenerating woodlands along the River Kennet, the Kennet and Avon Canal, and around the restored gravel pits to the west and south-west, together with scrub along the railway embankments.
- 2.4 An up-to-date ecological report has been prepared for the site (September 2016). There are no significant statutory designated sites for nature conservation in the immediate vicinity of the site.
- 2.5 The River Kennet and the Kennet and Avon Canal, together with the fields to the north are identified as “Local Wildlife Sites, Local Nature Reserves, and Biodiversity Action Plan Habitat” under the Reading Borough Council Core Strategy Document Adopted January 2008.

3.0 Recreation

- 3.1 Public rights of way nearby are limited to the National Cycle Route 4 south of the River Kennet and the Kennet and Avon Canal, and the footpath connecting to the east.
- 3.2 Land away to the north-east is open space with informal recreational access.

4.0 Land Use, Settlements and Infrastructure

- 4.1 Whilst the extensive Green Park development immediately to the south-east and the settlement of Reading to the north are the main surrounding land uses, the semi-enclosed nature of the river valley landscape together with the backdrop of the restored landforms to the south accommodates both permanent commercial developments (recycling facilities, warehousing, football stadium, offices and retail) as well as remnant parcels of grazing land, and restored mineral workings.
- 4.2 There has been mineral working within the wider area for many decades.

- 4.3 There is some landscape diversity, with the contrast between the enclosed remnant water meadows and pastoral fields to the north, forming a green wedge between Reading and Green Park.
- 4.4 The large town of Reading is the only settlement in the vicinity of the site that could potentially be affected by the proposals.
- 4.5 The main road in the vicinity of the site is the A33, east of the application area which is busy, with 30-40mph speed limits.
- 4.6 The site is therefore set within an urban fringe landscape which continues to be subject to changes in landuse and development.

5.0 Landscape Designations, Landscape Character and Potential Landscape Impact

- 5.1 Neither the application site nor the wider area is covered by any international, national or local landscape designations. It is identified as “Public and Strategic Open Space” and as a “Major Landscape Feature” under the Reading Borough Council Sites and Detailed Policies Document Adopted October 2012.
- 5.2 The site lies within the Thames Valley National Landscape Character Area No. 115; at a more detailed County level the surrounding landscape is identified by the 2003 Berkshire Landscape Character Assessment as *Lower River With Open Water* Landscape Character Area (LCA) **C1 River Kennet**. Paragraphs 5.3 to 5.9 below set out a broad analysis of the wider landscape character area description where this is applicable to the application area.
- 5.3 Of all the *Lower River With Open Water* Landscape Character Areas, the **C1 River Kennet** is the most obviously affected by the gravel extraction industry, with both operational sites, and also restored or disused workings which have developed a strong wet woodland framework. Recreation is an important use.
- 5.4 There are few vestiges of the former agricultural landscape with highly fragmented land holdings which are degraded and largely unmanaged; Reading defines and has a strong influence upon the northern edge of the floodplain.

- 5.5 The extensive mineral extraction areas, combined with the transport corridors have led to a considerable degree of fragmentation and disturbance, and the traditional character of the area has been obliterated; the strength of landscape character is weak to moderate.
- 5.6 The condition of the landscape is highly variable; more mature restored mineral landscapes can create a positive new character, but additional built development and intrusive uses can threaten the condition of the landscape.
- 5.7 Key issues affecting this landscape type of relevance to the application area include:
- The current poor quality areas of landscape, poor quality perception of floodplain landscape and, potentially, lack of a clear vision leading it to be perceived as a “soft target” for development, and
 - Intrusion of the valley floor by additional tall linear features such as pylons and poles.
- 5.8 The overall Landscape Strategy for *Lower River With Open Water* Landscape Character Areas is to strengthen and enhance those areas with the strongest character and best condition, and to create new character in those areas currently suffering from dereliction. This necessitates conserving and enhancing the character of those remnant elements of the traditional farmed landscape and the well restored gravel workings. This new character should be extended into degraded areas.
- 5.9 The Character area guidelines relevant to the application area include:
- Consider possibilities for woodland creation where this could be used to refurbish poor quality landscapes or to screen intrusive features (such as the motorways) without leading to a loss of significant views;
 - Undertake sympathetic screening and landscape integration of new or existing unsightly buildings or features such as the reservoirs.
- 5.10 The combination of topographical features and existing vegetation within the surrounding area outlined in Sections 1.0, 2.0 and 4.0 above suggests that the capacity of the local landscape around the application area to accommodate the development is moderate to high.

- 5.11 The development proposals will have a short term “transitory” or “temporary” (construction phase) effect upon the landscape, and a medium - long term “permanent” phase (operational phase).
- 5.12 Table A combines landscape sensitivity for the application area and its surroundings, with the magnitude of impact upon that landscape character to give the landscape impact significance.
- 5.13 The landscape sensitivity for the application area and its surroundings is *Low* to *Negligible*; *Negligible* due to the dominance of detracting features and *Low* in respect of the level of management which is generally poor within the application area and its immediate surroundings, which together with its fragmented landscape structure, presents a *Lower* sensitivity.
- 5.14 For the constructional life of the site, the magnitude of impact upon the landscape character of the area is *Medium to Low*; the character will be moderately affected by the construction of the Leachate Treatment Plant site, and the inclusion of artificial screen and soil storage mounds, this will be perceptible within the local context, as seen from the north and west, but largely perceptible from within the site boundary only as seen from the south and east.
- 5.15 No mature trees or areas of developing woodland or scrub will be lost as part of the site proposals. The inclusion of an above ground tank to an overall height of 7.9m (including safety rail and surmounted by a small crane to a top level of 50.0m AOD) within the already permitted area is the main modification to the approved plans; this covers 293m², less than 6% of the total application area; the standard of management and visual disturbance from adjacent activities reduces the sensitivity and therefore the overall impact significance.
- 5.16 The overall landscape impact significance of the construction phase is therefore *Minor – Minimal*; with the creation of the greater part of the permitted treatment plant in line with the currently approved layout.
- 5.17 In the medium to long term, there are opportunities to enhance the landscape and biodiversity setting of the site; wet woodland planting will be undertaken to increase the native tree and shrub cover, and reinforce existing boundaries, with an associated increase in the nature conservation value of the site.

- 5.18 There will be a positive alteration in the surrounding landscape character; with a change from unmanaged land through to amenity reclamation as part of the site landscaping package which will also encompass the adjacent gas compound which is currently unscreened.
- 5.19 Planting material will be obtained where possible from local or regional seed sources. Planting will contain a diversity of native woody species which previously occurred on site, or which are found within the locality.
- 5.20 The character of the northern half of the site will become more enclosed, with the establishment of a low screening landform with peripheral planting belts, and planting to reinforce existing vegetation lines to provide a landscape buffer between the site and the Kennet and Avon Canal and Reading.
- 5.21 For the medium to long term operational phase, the magnitude of impact upon the landscape character of the area is *Low*; the character will be slightly affected as the restored site becomes re-integrated, and will only be perceptible within the site boundary. New or replacement features will be in keeping with a river valley landscape. Landscape features and elements will only be slightly affected.
- 5.22 Taking the magnitude of impact of *Low*, and the *Low – Negligible* landscape sensitivity, the overall landscape impact significance of the site development is therefore *Minor to Minimal*.

6.0 Potential Visual Impacts and Views of the Application Area

- 6.1 The proposed plant is set out on plans P4/369/46 and Drawing 10 - Elevations; the proposals include:
- Office and Site facility cabins - temporary buildings 3.0m high,
 - Staff and visitor car parking – 6 spaces,
 - Operational vehicle parking,
 - Ancillary lighting to locations set out on application plans.

6.2 A Zone of Theoretical Visibility (ZTV) has been not been established for the site as the intervisibility would be based on a bare un-vegetated landform which takes no account of existing substantial mature vegetation features (woodlands, hedgerows and gardens) or built development (dwellings, buildings and commercial developments) which would further obscure views.

6.3 In order to establish the possible viewpoints into the application area, site visits have been carried out within the locality to:

- determine views out of the site to identify properties, settlements, highways, public rights of way and other vantage points from which views are possible, and
- identify the extents of view into the site from publicly accessible vantage points.

Plan no. L/369/LVIA 1 attached to this report identifies the photographic viewpoints referred to in the text and the likely viewpoints into the application area. There are likely to be two types of visual effect:

- (i) Views into the construction area (temporary and transient effects); and
- (ii) Changes in landscape character of the vicinity upon completion (permanent effects).

6.4 In order to fully assess the visual effects of the proposed development, and to determine its effects on the surrounding landscape, a visual impact survey has been undertaken to identify the current views into the site and to assess the significance of these views.

6.5 The views assessed are those from which public access is possible and are as follows:

Settlements and Individual properties: These are:

- Reading, including properties on Wensley Road.

Definitive Rights of Way

- National Cycle Route 4;
- Footpath eastwards between National Cycle Route 4 and Island Road.

6.6 Viewpoints that are not accessible to the public, for instance privately owned fields without public footpaths, have not been included in this assessment.

- 6.7 Topography, vegetation and public access to vantage-points limit potential views of the site. Depending on the proximity, elevation and extent to which views are restricted and interrupted, it is possible to categorise the views as major, intermediate or minor significance, as follows:
- A major view is one that is open, close and extensive with little or no interruption of the view by intervening vegetation or other screening; it will also be effective over the greater part of the project timescale.
 - An intermediate view is one that is obscured due to intervening changes in landform, vegetation or other development; it will also be effective over a significant part of the project timescale
 - A minor view is one that is minimal or glimpsed due to better screening, or a distant view, which may merge into the wider landscape; it will also be effective over a lesser part of the project timescale.
- 6.8 Mature, dense vegetation such as an outgrown hedge will afford lesser views into a site than a less well-maintained hedge that allows filtered views.
- 6.9 Table B attached to this report is the matrix which combines receptor sensitivity for each type of viewpoint with the magnitude of visual impact to give the visual impact significance for each viewpoint type. Table C attached to this report identifies and describes the individual standpoints from which views are possible into the application area, their sensitivity, sources of impact and impact significance with and without proposed mitigation.
- 6.10 The paragraphs below identify and describe the individual standpoints from which views are possible into the application area, their sensitivity, sources of impact and impact significance with and without proposed mitigation.
- 6.11 There are no views into the application area of **major** significance.
- 6.12 Semi-filtered and direct views are possible from a short 160m length of the footpath, situated 110m north-east of the application boundary with views south-westwards towards the ancillary parking and office areas (refer to Photosheet 6). These views are limited and of **intermediate** significance. More filtered views are possible from adjacent stretches, where these are further obscured by mature tree belts.

- 6.13 More distant midground and glimpsed views are possible from the National Cycle Route 4, 300m north of the application boundary (refer to Photosheet 7). These views are more limited and of **intermediate** significance.
- 6.14 Views of the application area are possible from the upper floors of properties at the western extents of Wensley Road, 900m from the application boundary (refer to Photosheet A). These views are direct, but distant and filtered by maturing boundary tree plantations and are of **minor** significance.
- 6.15 All other potential sources of visual impact are largely perceptible within the site boundary only.

7.0 LANDSCAPE MITIGATION MEASURES

- 7.1 In order to minimise the landscape impact of the development, mitigation measures are suggested below.

Site Planning

- 7.2 The majority of the development will be as originally consented.

Landscaping Proposals

- 7.3 Plan P4/369/46 outlines a suggested enhanced landscaping scheme for the site; the screen mound to the north will be 3.0m high, and areas to the north-west and north-east will be planted with native tree and shrub planting complementary to the River Kennet Valley landscape to create a wider buffer zone to those boundaries and the more sensitive viewpoints identified in Section 6.0 above.
- 7.4 Where possible, any built elements within the application area will utilise materials sympathetic to the local area.
- 7.5 The revised landscaping plan for the Leachate Treatment Plant and wider former quarry area will have significant positive benefits for landscape, nature conservation, recreation and amenity.

- 7.6 Sections Plan P4/369/47 illustrates the effectiveness of the revised screening and landscaping proposals as seen from the more sensitive viewpoints identified in Section 6.0 above; from the outset of the site development, the screen soil mound will obscure the lower parts of the main tank and plant area; after five years, the additional screen planting should filter views of the upper parts of the development.
- 7.7 Tree and shrub species for any new or replacement planting will be identical to those already chosen for the site, and will be carefully selected to provide:
- Appropriate mature tree lines in keeping with the *Lower River With Open Water* Landscape Character Area (LCA) **C1 River Kennet** – Willow and Alder
 - Attractive Autumn colour – Field Maple, Silver Birch
 - Native shrub scrub, comprising a palette of locally occurring species to:
 - form thickets for habitat diversity;
 - enhance the proposed footpath users' experience of the site;
 - limit access to more sensitive parts of the site.
 - Species capable of supporting a wide range of other species – eg invertebrates – Oak and Willow species

Management Proposals

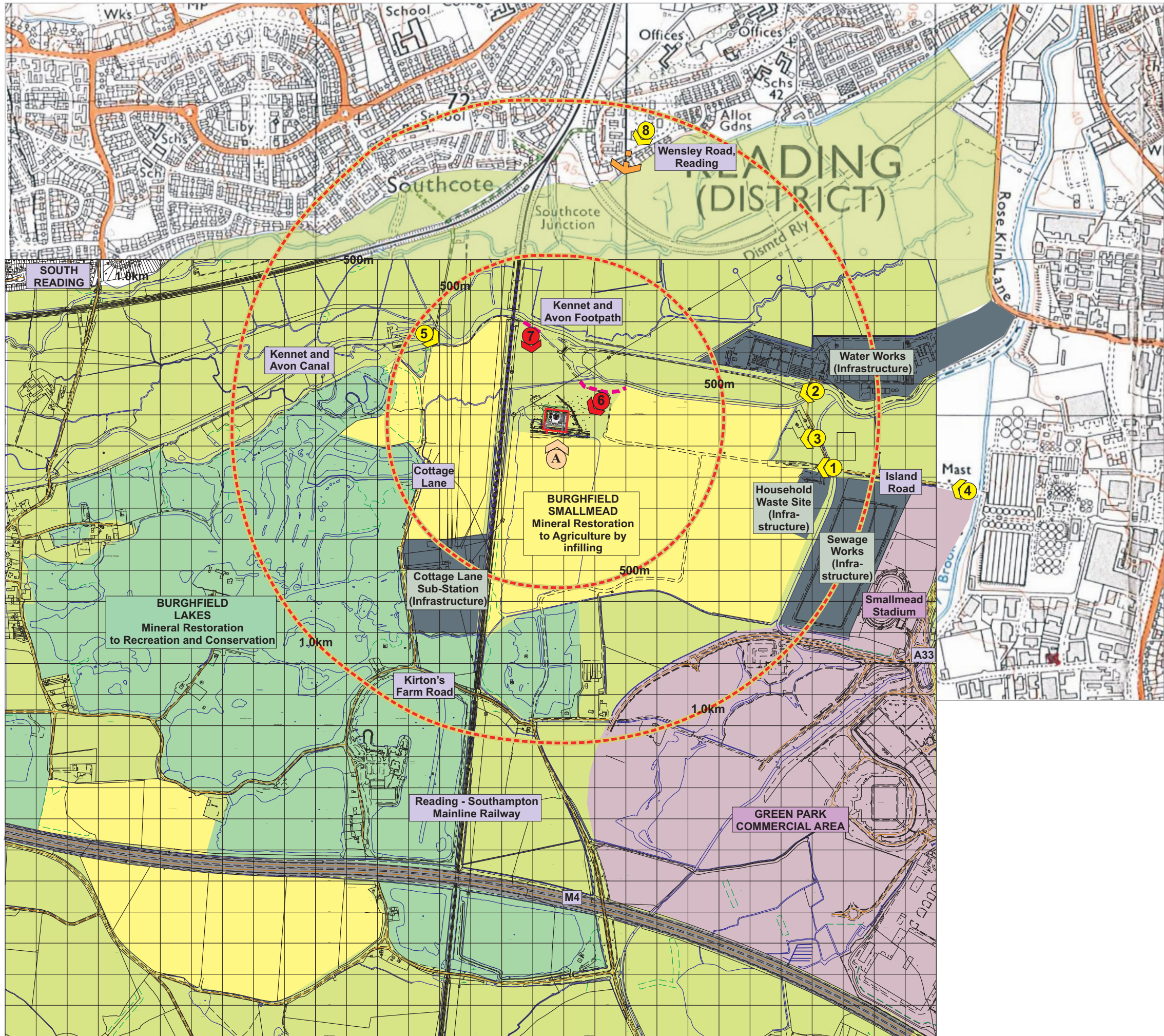
- 7.8 The existing woodland areas will be subject to a programme of ongoing management to ensure that they form the best screen possible; for screening vegetation features, future management operations may include:
- Removal of tree shelters from mature planting
 - Removal of dead or dying trees, with creation of some habitat piles with suitable material
 - Selected thinning
 - Under-planting with shrubs or new woodland planting to replace previous failures.

8.0 CONCLUSIONS

- 8.1 The permitted and implemented Leachate Treatment Plant has been set within a former extraction and landfill site, at the edge of a semi-enclosed lowland river floor landscape, within a dynamic urban fringe landscape.
- 8.2 The majority of the existing wider restored quarry and landfill site and its residual operations are well screened. The consented area is small scale and not visually prominent within the surrounding area; its current predicted landscape and visual impact upon the surrounding area is minimal.
- 8.3 The site is very well screened by both mature vegetation features (riverside and boundary plantations) and existing landforms (restored landfill and railway embankment).
- 8.4 There are no viewpoints with major views into the application area; the most open viewpoints into the site of **intermediate** significance are from short lengths of Public Rights of Way to the north-east (a minimum of 110m from the application area) and north-west (a minimum of 300m from the application area).
- 8.5 The capacity of the local landscape around the application area to accommodate the development is moderate to high, and once the additional landscaping measures for the application area and its wider setting are undertaken, the revised proposal for the Leachate Treatment Plant can proceed without further detriment to the local area.

May 2017

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KEY :

- APPLICATION AREA
- Pastoral / Grassland
- Mineral extraction area restored to agriculture / grassland
- Mineral extraction area restored to conservation / amenity lakes and wetland
- Infrastructure Development
- Commercial Development
- MAJOR VIEW (from property)
- INTERMEDIATE VIEW (from property)
- MINOR VIEW (from property)
- MAJOR VIEW (from public right of way or transport route)
- INTERMEDIATE VIEW (from public right of way or transport route)
- MINOR VIEW (from public right of way or transport route)
- 2012 PHOTOGRAPHIC VIEWPOINT (For reference - view no longer significant or possible)
- 2016 PHOTOGRAPHIC VIEWPOINT (Publicly Accessible with Existing View of Application Area)
- 2016 PHOTOGRAPHIC VIEWPOINT (For Reference - Not Publicly Accessible)

Revisions				
Based on the Ordnance Survey Map with the permission of Her Majesty's Stationery Office, 119 Crown Copyright. Licence No.100018131				
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			Telephone 01932 568833 Facsimile 01932 568933	
Drawn By	A W	Company	CEMEX UK Operations Limited	
Date	Oct 2016	Site	BURGHFIELD - ISLAND ROAD	
Scale(s)	1 : 12,500	Project	Leachate Treatment Plant	
Chkd		Title	LANDSCAPE CONTEXT AND VISUAL ANALYSIS	
Site Ref.		Drawing No.	L / 369 / LVIA 1	

LVIA TABLE A: LANDSCAPE ASSESSMENT:

LANDSCAPE SENSITIVITY, MAGNITUDE OF IMPACT AND IMPACT SIGNIFICANCE

Long term, permanent significance	Partial Influence	DEFINING FACTORS:	- Character extremely affected - Perceptible at district level - Features or elements completely removed and not replaced as part of the restoration scheme	- Character moderately affected - Perceptible in local context - Features or elements completely removed yet replaced later as part of the restoration scheme - Features or elements only partly affected	- Character slightly affected - Perceptible within site boundary only - Features or elements only slightly affected	- Effect on character may be unnoticeable - Feature or element not physically affected, only their setting
Main Influence	Short term, temporary significance – site construction					
		MAGNITUDE OF IMPACT:	HIGH:	MEDIUM	LOW	NEGLECTIBLE
DEFINING FACTORS	LANDSCAPE SENSITIVITY	Notes:		During site construction, the landscape character will be temporarily affected by mobilization of plant, construction of buildings, structures, fencing and soil screen mound	Five years post construction, with the establishment of vegetation screen belts, the character will remain semi-open, with reinforcement of landscape framework	
High Standard of management Strong Structure – balanced landform, land cover, unified with fabric intact Few or no detracting features Within a Nationally Designated Landscape	HIGH		MAJOR	MAJOR	INTERMEDIATE	MINOR
Moderate Standard of management Recognisable Structure, with basic framework intact Some detracting features Within a Locally Designated Landscape	MEDIUM		MAJOR	INTERMEDIATE	MINOR	MINOR
Poor Standard of management Fragmented Structure Frequent detracting features Within a locally valued landscape	LOW	There are few remnant features within the floodplain landscape; the landscape setting is dominated by the commercial areas to the south-east; the landholding landscape fabric is poorly cultivated and managed; the Kennet and Avon Canal provides a recreational and landscape focus	INTERMEDIATE	MINOR	MINOR	MINIMAL
Lack of management Structure not apparent Detracting features dominate Within a landscape identified for improvement	NEGLECTIBLE	Pylons, Railway, Green Park, M4 motorway	MINOR	MINOR	MINIMAL	MINIMAL

LVIA TABLE B: VISUAL ASSESSMENT: RECEPTOR SENSITIVITY, MAGNITUDE OF IMPACT AND IMPACT SIGNIFICANCE

		DEFINING FACTORS:	• Major change in view • Proximate - foreground • Substantial part of the view • Lack of significant natural screening • Will not benefit from advance screen planting • Direct – impacts on main focus of view • Impacts of view for more than 75% of project timescale	• Moderate change in view • Mid-ground • Lesser part of the view • Some natural screening • Advance screen planting / mitigation will be of some benefit • Oblique – impacts on main focus of view • Impacts of view for more than 50% but less than 75% of project timescale	• Minor change in view • Distance reduces effect - background • Small part of the view • Good natural screening • Advance screen planting / mitigation will be of substantial benefit • Indirect – not main focus of view • Impacts on view for less than 50% but more than 25% of project timescale	• Very minor change in view • Distance makes change virtually indistinguishable • Very small part of the view • Very good natural screening • Advance planting / mitigation will screen development • Feature or change may go unnoticed • Impacts on view for less than 25% of project timescale
DEFINING FACTORS	RECEPTOR SENSITIVITY	MAGNITUDE OF IMPACT:	<u>HIGH:</u>	<u>MEDIUM</u>	<u>LOW</u>	<u>NEGLIGIBLE</u>
• Residential Property • Pedestrian users of recreational paths • Outdoor Recreational Establishments • Within a Nationally Designated Landscape	<u>HIGH</u>		MAJOR	MAJOR	INTERMEDIATE	MINOR
• Road Users (slow roads, 30mph or less) • Occupiers of Commercial Property • Within a Locally Designated Landscape	<u>MEDIUM</u>		MAJOR	INTERMEDIATE	MINOR	MINOR
• Road users (faster roads, 30-50mph) • Within a locally valued landscape	<u>LOW</u>		INTERMEDIATE	MINOR	MINOR	MINIMAL
• Road users (50mph+ and motorways) • Within a landscape identified for improvement	<u>NEGLIGIBLE</u>		MINOR	MINOR	MINIMAL	MINIMAL

LVIA TABLE C: VISUAL ASSESSMENT: Burghfield Landfill Leachate Treatment Plant, Reading, Berkshire

Visual Receptor / Property	Location in relation to application area	Receptor Visual Sensitivity	Distance from Application Boundary	Description	Potential Sources of Impact & Approximate Timescale	Magnitude of Visual Impact	Mitigation Measures where possible	Impact Significance with Mitigation	Impact Significance without mitigation
Properties on western length of Wensley Road, Reading	North	High	900m minimum	High -Rise flats set at 48.0mAOD with direct but filtered distant views of the application area from upper storeys only; views restricted by intervening hedgerows and tree lines along the River Kennet, The Kennet and Avon Canal, and drainage ditches	Above Ground Tank	Negligible	Retain, manage and supplement where necessary boundary vegetation; Provision of soil Screen mound (to be planted)	Minimal	Minor
Recreational Users, National Cycle Route 4 (Kennet and Avon Canal towpath) – NCR 4	North	High	300m minimum	Glimpsed and very filtered mid-ground views of the application area are possible from a short 50m length.	Above Ground Tank	Low	Retain, manage and supplement where necessary boundary vegetation; Provision of soil Screen mound (to be planted)	Minor	Intermediate
Recreational Users, Footpath between NCR 4 and Island Road	North-east	High	110m minimum	Footpath with filtered proximate views into application area from a 160 metre length; views obscured by maturing plantation along site boundary.	Above Ground Tank	Low	Retain, manage and supplement where necessary boundary vegetation. Provision of soil Screen mound (to be planted)	Minor	Intermediate



VIEWPOINT : A

LOCATION : Restored landfill area - south of application area

DATE : 27 September 2016

WEATHER CONDITIONS : Clear, Overcast

DESCRIPTION : Direct, open and proximate view northwards, over application area.

Landscape:

*Very minor undulating topography - river floodplain, contrasts with landfill domed landform to the south:
Semi-enclosed by tree belts; former mineral use; Poor degree of management; proximity to M4, Railway, High Voltage Power Lines and Green Park - all major acoustic and visual detractors*

Significance of View:

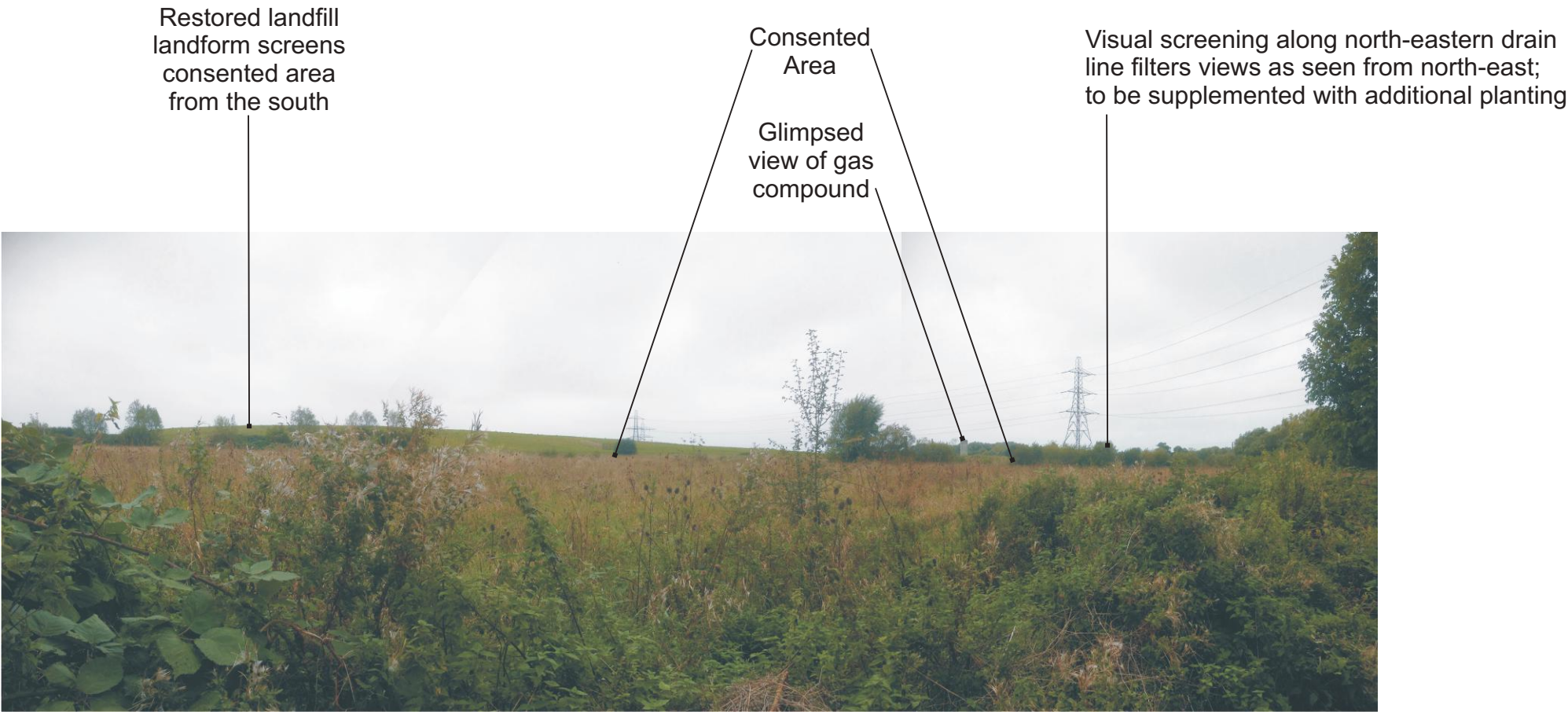
NOT PUBLICLY ACCESSIBLE

MITIGATING FACTORS :

! Mid autumn view; winter views may be more open

LANDSCAPE AND VISUAL MITIGATION MEASURES PROPOSED :

- ! The restoration landform to be undertaken north of the operational area will provide some additional screening
- ! Existing planting and boundary vegetation will be managed to maximise its screening potential
- ! Additional planting proposed along drain lines to north-west and north-east



VIEWPOINT : 6

LOCATION : Public footpath - north-east of application area

DATE : 27 September 2016

WEATHER CONDITIONS : Clear, Overcast

DESCRIPTION : Direct, partial and mid-ground view south-westwards, over application area, 135m from consented boundary
Landscape:
Very minor undulating topography - river floodplain, contrasts with landfill domed landform to the south:
Semi-enclosed by tree belts; former mineral use; Poor degree of management; proximity to M4, Railway, High Voltage Power Lines and Green Park - all major acoustic and visual detractors

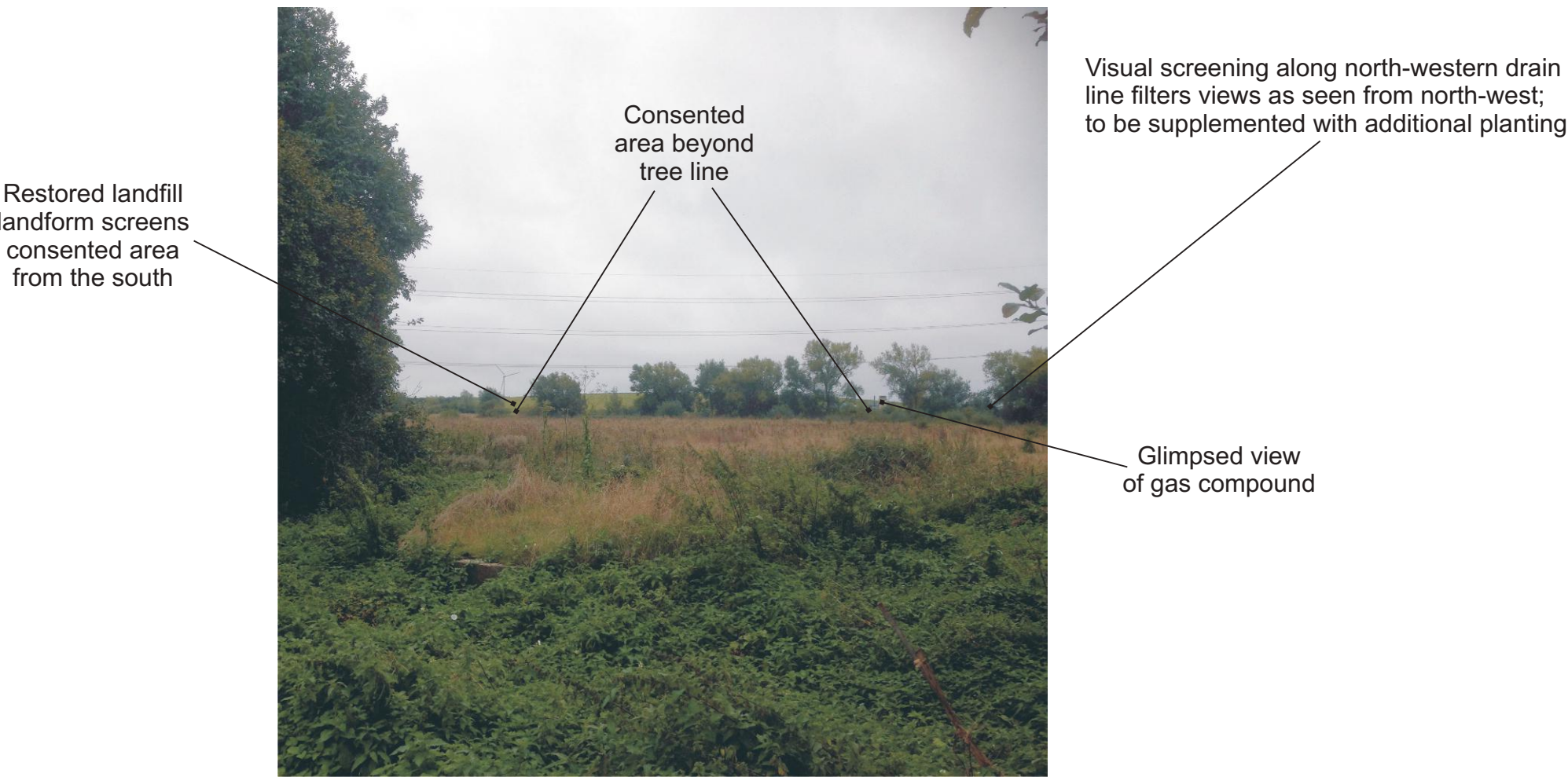
Significance of View:
INTERMEDIATE

MITIGATING FACTORS :

! Mid autumn view; winter views may be more open

LANDSCAPE AND VISUAL MITIGATION MEASURES PROPOSED :

- ! The restoration landform to be undertaken north of the operational area will provide some additional screening
- ! Existing planting and boundary vegetation will be managed to maximise its screening potential
- ! Additional planting proposed along drain lines to north-west and north-east



VIEWPOINT : 7

LOCATION : Public Footpath, Kennet and Avon Canal - north of application area

DATE : 27 September 2016

WEATHER CONDITIONS : Clear, Overcast

DESCRIPTION : Direct, filtered and mid-ground view south-eastwards, 270m from the consented area boundary
Landscape:
Very minor undulating topography - river floodplain, contrasts with landfill domed landform to the south:
Semi-enclosed by tree belts; former mineral use; Poor degree of management; proximity to M4, Railway, High Voltage Power Lines and Green Park - all major acoustic and visual detractors

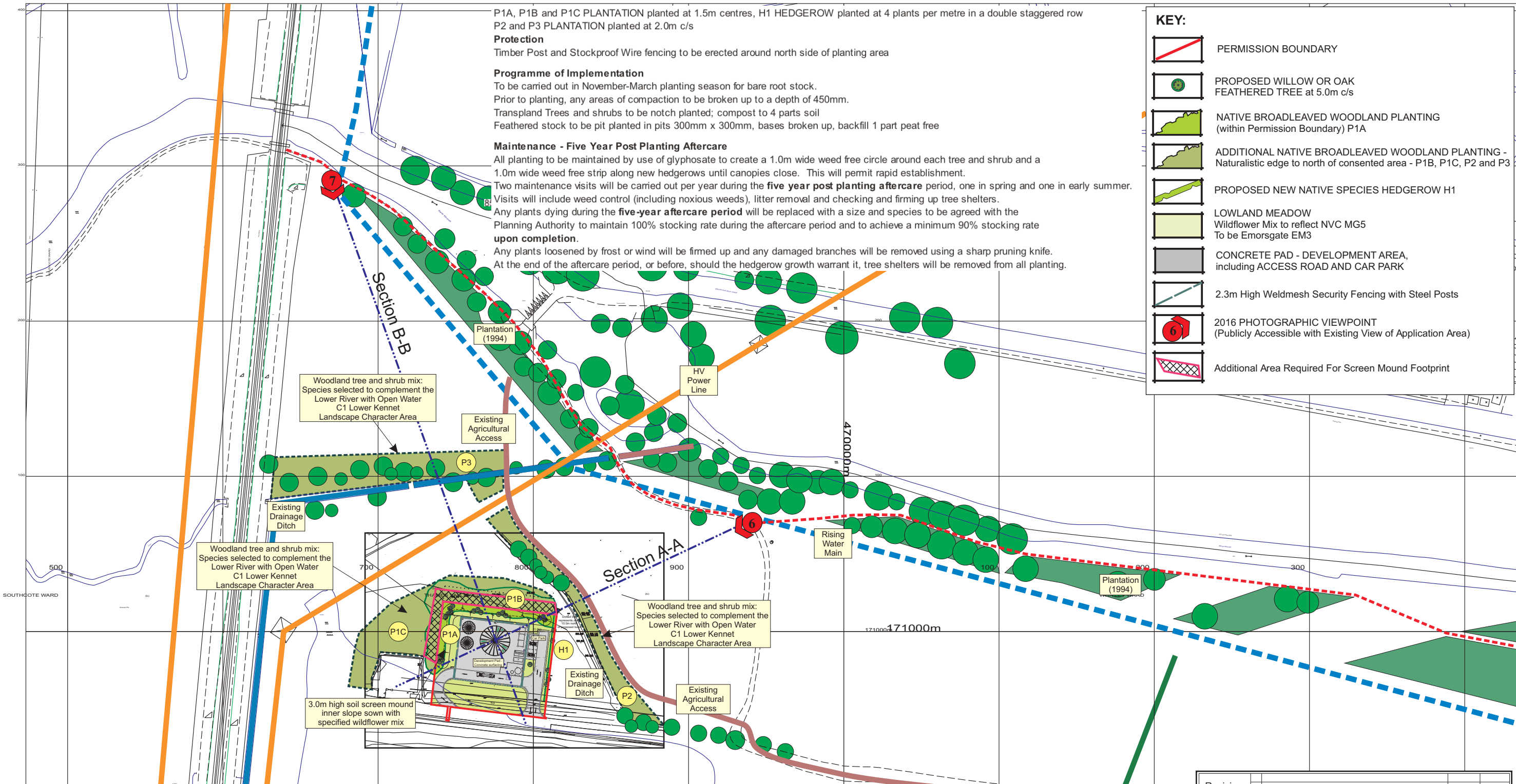
Significance of View:
INTERMEDIATE

MITIGATING FACTORS :

! Mid autumn view; winter views may be more open

LANDSCAPE AND VISUAL MITIGATION MEASURES PROPOSED :

- ! The restoration landform to be undertaken north of the operational area will provide some additional screening
- ! Existing planting and boundary vegetation will be managed to maximise its screening potential
- ! Additional planting proposed along drain lines to north-west and north-east



P1A, P1B and P1C PLANTATION planted at 1.5m centres, H1 HEDGEROW planted at 4 plants per metre in a double staggered row
P2 and P3 PLANTATION planted at 2.0m c/s

Protection
Timber Post and Stockproof Wire fencing to be erected around north side of planting area

Programme of Implementation
To be carried out in November-March planting season for bare root stock.
Prior to planting, any areas of compaction to be broken up to a depth of 450mm.
Transplant Trees and shrubs to be notch planted; compost to 4 parts soil
Feathered stock to be pit planted in pits 300mm x 300mm, bases broken up, backfill 1 part peat free

Maintenance - Five Year Post Planting Aftercare
All planting to be maintained by use of glyphosate to create a 1.0m wide weed free circle around each tree and shrub and a 1.0m wide weed free strip along new hedgerows until canopies close. This will permit rapid establishment.
Two maintenance visits will be carried out per year during the **five year post planting aftercare** period, one in spring and one in early summer.
Visits will include weed control (including noxious weeds), litter removal and checking and firming up tree shelters.
Any plants dying during the **five-year aftercare period** will be replaced with a size and species to be agreed with the Planning Authority to maintain 100% stocking rate during the aftercare period and to achieve a minimum 90% stocking rate **upon completion**.
Any plants loosened by frost or wind will be firmed up and any damaged branches will be removed using a sharp pruning knife.
At the end of the aftercare period, or before, should the hedgerow growth warrant it, tree shelters will be removed from all planting.

KEY:

- PERMISSION BOUNDARY
- PROPOSED WILLOW OR OAK FEATHERED TREE at 5.0m c/s
- NATIVE BROADLEAVED WOODLAND PLANTING (within Permission Boundary) P1A
- ADDITIONAL NATIVE BROADLEAVED WOODLAND PLANTING - Naturalistic edge to north of consented area - P1B, P1C, P2 and P3
- PROPOSED NEW NATIVE SPECIES HEDGEROW H1
- LOWLAND MEADOW Wildflower Mix to reflect NVC MG5 To be Emorsgate EM3
- CONCRETE PAD - DEVELOPMENT AREA, including ACCESS ROAD AND CAR PARK
- 2.3m High Weldmesh Security Fencing with Steel Posts
- 2016 PHOTOGRAPHIC VIEWPOINT (Publicly Accessible with Existing View of Application Area)
- Additional Area Required For Screen Mound Footprint

PLANTING SCHEDULE

TREES			SIZE	NOTES	P1A	P1B	P1C	P2	P3	H1	TOTAL
Acer campestre	(Field Maple)	0.45-0.6m t/s	All to be protected with "Tubex" tree shelters	25	80	80				43	228
Alnus glutinosa	(Alder)	0.45-0.6m t/s		15	50	50	40	40			195
Betula pendula	(Silver Birch)	0.45-0.6m t/s		10	20	20	10	10			70
Populus tremula	(Aspen)	0.45-0.6m t/s		5	20	20	10	10			65
Quercus robur	(Oak)	0.9-1.2 fthd		8						5	13
Salix alba	(White Willow)	0.9-1.2 fthd		10			15	15			40
Salix alba	(White Willow)	0.45-0.6m t/s		10	40	40	35	35			160
Salix fragilis	(Crack Willow)	0.45-0.6m t/s		10	20	20	25	25			100
Total Trees and Shrubs					93	230	230	135	135	48	871
SHRUBS											
Corylus avellana	(Hazel)	0.45-0.6m t/s	All to be protected with "Tubex" tree shelters	25	50	50	25	25	24		199
Crataegus monogyna	(Hawthorn)	0.45-0.6m t/s		25	50	50	25	25	142		317
Prunus spinosa	(Blackthorn)	0.35-0.45m t/s		25	50	50	25	25	26		201
Salix caprea	(Goat Willow)	0.45-0.6m t/s		100	100	100	50	50			400
Total Shrubs					175	250	250	125	125	192	1117
TOTAL TREES AND SHRUBS					268	480	480	260	260	240	1988

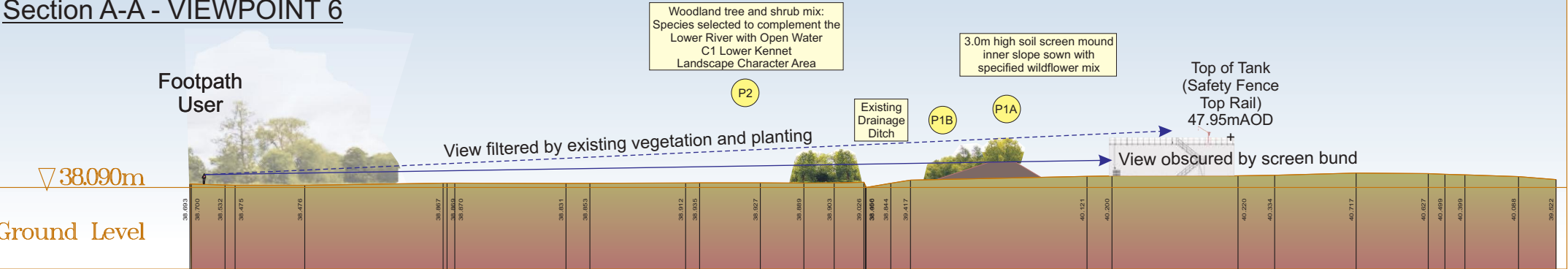
Revisions

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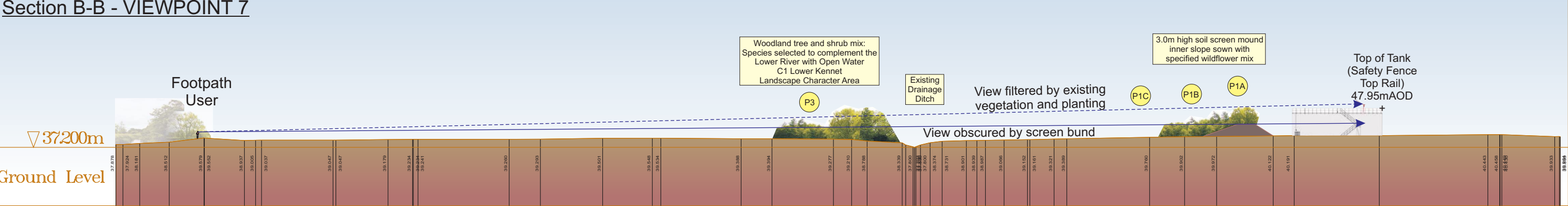
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Drawn By	AW	Company	CEMEX UK Operations Ltd
Date	Issued May 2017	Site	BURGHFIELD LANDFILL
Scale(s)	1 : 2,500@ A3	Project	LEACHATE TREATMENT PLANT
Chkd		Title	ENHANCED SITE LANDSCAPING
Site Ref.		Drawing No.	L4 / 369 / 46

Section A-A - VIEWPOINT 6



Section B-B - VIEWPOINT 7



Note: Planting Heights shown after 5 years

Revisions			
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Drawn By	AW	Company	CEMEX UK Operations Ltd
Date	Issued May 2017	Site	BURGHFIELD LANDFILL
Scale(s)	1 : 2,500@ A3	Project	LEACHATE TREATMENT PLANT
Chkd		Title	VISUAL ANALYSIS SECTIONS
Site Ref.		Drawing No.	L4 / 369 / 47