

APPENDIX SES5.1

SUPPLEMENTARY LANDSCAPE AND VISUAL IMPACT ASSESSMENT

PINS document reference: 14.6.5.1

EAST NORTANTS RESOURCE MANAGEMENT
FACILITY, STAMFORD ROAD,
NORTHAMPTONSHIRE

PROPOSED DEVELOPMENT CONSENT
ORDER APPLICATION FOR THE
ALTERATION AND CONSTRUCTION OF
HAZARDOUS WASTE AND LOW LEVEL
RADIOACTIVE WASTE FACILITIES

Supplementary Landscape and Visual Impact Assessment

June 2022

Project Reference: WS010005

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Foreword

This Supplementary LVIA report was produced by DB Landscape Consultancy Ltd. (DBLC) for Augean South Ltd. (hereafter referred to as the applicant) for the specific purpose of providing additional information for the requested non-material change to the proposed development consent order application for the alteration and construction of hazardous waste and low level radioactive waste facilities at the East Northants Resource Management Facility (ENRMF), Stamford Road, Northamptonshire.

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Document Control

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Contact Details:

David Brittain CMLI MIQ
DB Landscape Consultancy Ltd.
www.dblc.co.uk
david@dblco.co.uk
tel: 01344 624 709 mob: 07736 083 383

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- **Drawing No. ENORTH037: Alternative Restoration Landform Design Option A: 20m Standoff from Water Pipes; and**
- **Drawing No. ENORTH038: Alternative Restoration Landform Design Option B: 30m Standoff from Water Pipes**
- **Drawing No. ENORTH039: Indicative Restoration Concept Scheme – 30m stand off from water pipes**

1 Introduction

Appointment and Scope of Work

- 1.1 DBLC has been appointed by the applicant to prepare this Supplementary Landscape and Visual Impact Assessment (LVIA). The LVIA included in the DCO application dated September 2021 (APP-088) is referred to as the 'original LVIA' in this report.
- 1.2 This report addresses the potential landscape and visual effects of the changes that would result to the restoration contours associated with an increase in the standoffs from the water pipes that may be necessary in response to concerns raised by Anglian Water relating to the designed standoff distances from their two buried water pipelines.
- 1.3 The pipelines are approximately 5m apart and extend diagonally across land between Phase 18 and Phases 19 and 20 of the Proposed Development, in the proposed western extension area. The submitted Development Consent Order (DCO) application includes provision for the retention of an approximately 20.6m wide corridor of land between the fences on the boundary of these phases, through which the pipelines run, which would remain undisturbed. This, in effect, would provide a 7m standoff either side of each of the pipelines which would be utilised for maintenance access.
- 1.4 This supplementary report assesses the potential landscape and visual effects if the design of the Proposed Development is altered. In order to carry out this assessment, two specific options are considered, as follows:
 - Alternative Design Option A: Restoration contours resulting from the provision of a 20m standoff either side of each of the pipelines. This would result in an undisturbed corridor of land approximately 46.6m wide between Phase 18 and Phases 19 and 20; and
 - Alternative Design Option B: Restoration contours resulting from the provision of a 30m standoff either side of each of the pipelines. This would result in an undisturbed corridor of land approximately 66.6m wide between Phase 18 and Phases 19 and 20.

1.5 It is considered that of the two standoff distances considered, a 30m standoff is the 'worst case' scenario in terms of potential effects on landscape and visual receptors. Therefore, there is no need to assess specifically any other standoff distance between 20m and 30m. For each of the two alternative design options considered, the final restoration landform has been redesigned to take account of the wider pipeline standoff distances (refer to Appendix A). It is noted that this report utilises the same Methodology as included within the original LVIA report.

1.6 Appendix A to this report includes the following drawings:

- Drawing No. ENORTH037: Alternative Restoration Landform Design Option A: 20m Standoff from Water Pipes; and
- Drawing No. ENORTH038: Alternative Restoration Landform Design Option B: 30m Standoff from Water Pipes
- Drawing No. ENORTH039: Indicative Restoration Concept Scheme – 30m stand off from water pipes

2 Assessment of Landscape Effects

Introduction

- 2.1 The original LVIA included a series of tables which considered effects on landscape features and character. Tables 1 and 2 below include a comparison between the original LVIA assessment and Alternative Design Options A and B in terms of Significance of Landscape Effects. The landscape receptors not included in the table are not present within or in close proximity to the water pipe corridor so are not considered relevant to the alternative designs considered in this report.
- 2.2 This assessment considers the potential effects associated with a wider standoff area up to 30m from each pipe and the associated changes to the restoration contours outside the pipeline corridor.

Table 1: Alternative Design Option A (20m Standoff) – Assessment of Landscape Effects When Compared to Original LVIA

Landscape Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option A: 20m Standoff from each pipe – Significance of Effects	Comments/Rationale
Topography – Proposed western extension area	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	The Option A restoration landform would result in increased separation between the Phase 18 and the Phase 19 and 20 areas, although this would not result in any materially new or different likely significant effects.
	10 Years Post Restoration Stage	Minor - Moderate	Minor - Moderate	
ALC Grade 3b soil	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Minor - Moderate	Minor - Moderate	The changes proposed as a result of Option A would have negligible effects on Grade 3b soils, although more of the soil would remain in situ and would be undisturbed as a result of the development.
	10 Years Post Restoration Stage	Negligible/No Change	Negligible/No Change	
Landscape Character – Western extension (southern area, bounded by the dividing hedgerow)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	Effects on local character during the operational activities would not alter to a noticeable degree as a result of the change from a 20.6m retained corridor to a 46.6m retained corridor. Over the long term, there would be a wider corridor of neutral managed grassland (on former agricultural land) created with Option A when compared to the original scheme. However, the character of the landscape in this area would still be notably
	10 Years Post Restoration Stage	Minor - Moderate (Beneficial)	Minor - Moderate (Beneficial)	

Landscape Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option A: 20m Standoff from each pipe – Significance of Effects	Comments/Rationale
				<p>different to existing, due to the raised landform across most of the land in the western extension, proposed neutral/calcareous grassland with woodland/scrub blocks and hedgerows linked by permissive paths, all in relative close proximity to the retained water pipe corridor., The larger area of neutral managed grassland, incorporating changes to restoration contours in close proximity resulting from the increased width in the corridor, would be more evident and may slightly influence local character, but would not result in any materially new or different likely significant effects. There would be no change in the context of the overall restoration scheme and its substantial biodiversity benefits.</p>
Landscape Character – LCA 11a: Kings Cliffe Hills and Valleys (From Northamptonshire Current Landscape Character Strategy)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	For this wider local character area, Design Option A would not result in any materially new or different likely significant effects during operational activities.
	10 Years Post Restoration Stage	Minor - Moderate (Beneficial)	Minor - Moderate (Beneficial)	Over the long term, the area of neutral/calcareous grassland will not change and the intended woodland, scrub and hedge planting areas would be

Landscape Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option A: 20m Standoff from each pipe – Significance of Effects	Comments/Rationale
and Guidelines, Published 2006)				identical to the previously submitted scheme.
Tranquillity – Western extension (southern area, bounded by the dividing hedgerow)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	The effects of Option A on tranquillity, at both the operational stage and the post restoration stage, would be identical to the Proposed Development assessed in the original LVIA.
	10 Years Post Restoration Stage	Negligible	Negligible	
Public Rights of Way (PRoW)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	No change	No change	No change during the operational stage. The Restoration Concept Scheme drawing (2.8) (APP-011) shows a permissive path extending along the route of the pipelines, linking other permissive routes across the site in this area. This would remain as part of the Option A layout, although the route would move slightly to the north, along the boundary of the northern pipe standoff. (ENORTH039 presented at Appendix A)
	10 Years Post Restoration Stage	Minor (beneficial)	Minor (beneficial)	

Table 2: Alternative Design Option B (30m Standoff) – Assessment of Landscape Effects When Compared to Original LVIA

Landscape Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option B: 30m Standoff from each pipe – Significance of Effects	Comments/Rationale
Topography – Proposed western extension area	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	The Option B restoration landform would result in more separation between the Phase 18 and the Phase 19 and 20 areas, when compared with Option A and the Original LVIA. However, this would not result in any materially new or different likely significant effects on topography.
	10 Years Post Restoration Stage	Minor - Moderate	Minor - Moderate	
ALC Grade 3b soil	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Minor - Moderate	Minor - Moderate	The changes proposed as a result of Option B would have limited effects on Grade 3b soils, although again, more of the soil would remain in situ and would be undisturbed as a result of the development.
	10 Years Post Restoration Stage	Negligible/No Change	Negligible/No Change	
Landscape Character – Western extension (southern area, bounded by the dividing hedgerow)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	Effects on the character of the southern part of the Western extension area during the operational activities would not alter to a noticeable degree as a result of the change from a 20.6m retained corridor to a 66.6m retained corridor. The works to the north and south of the retained water pipe corridor would still be in close enough proximity to influence the character of the landscape in this part of the Site.
	10 Years Post Restoration Stage	Minor - Moderate (Beneficial)	Minor - Moderate (Beneficial)	

				Over the long term, there would be a wider corridor of neutral managed grassland (on former agricultural land) created with Option B compared to the original scheme. As with Option A, the character of the landscape in this part of the Site would be noticeably different to existing due to the raised landform across most of the land in the western extension, proposed neutral/calcareous grassland with woodland/scrub blocks and hedgerows linked by permissive paths, all in relative close proximity to the retained water pipe corridor., The larger area of neutral managed grassland, incorporating changes to restoration contours in close proximity resulting from the increased width in the corridor, would be more evident and may slightly influence local character but would not result in any materially new or different likely significant effects. There would be no change in the context of the overall restoration scheme and its substantial biodiversity benefits.
Landscape Character – LCA 11a: Kings Cliffe Hills and Valleys (From Northamptonshire Current Landscape Character Strategy	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	For this wider local character area, Option B would not result in any materially new or different likely significant effects during operational activities. As with Option A, over the long term, the area of neutral/calcareous grassland will
	10 Years Post Restoration Stage	Minor - Moderate (Beneficial)	Minor (Beneficial)	

and Guidelines, Published 2006)				not change and the intended woodland, scrub and hedge planting areas, which would be identical to the previously submitted scheme.
Tranquillity – Western extension (southern area, bounded by the dividing hedgerow)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate	Moderate	The effects of Option B on tranquillity, at both the operational stage and the post restoration stage, would be identical to the Proposed Development assessed in the original LVIA.
	10 Years Post Restoration Stage	Negligible	Negligible	
Public Rights of Way (PRoW)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	No change	No change	No change during the operational stage. The Restoration Concept Scheme drawing (2.8) (APP-011) shows a permissive path extending along the route of the pipelines, linking other permissive routes across the Site in this area. This would remain as part of the Option B layout, albeit with the path slightly further to the north, along the boundary of the northern standoff, adjacent to the proposed hedgerow.(ENORTH039 presented at Appendix A)
	10 Years Post Restoration Stage	Minor (beneficial)	Minor (beneficial)	

3 Assessment of Visual Effects

Introduction

- 3.1 The original LVIA included a series of tables which considered effects on visual amenity for a range of visual receptors, including those at thirteen representative viewpoints. Tables 3 and 4 below include a comparison between the original LVIA assessment and Alternative Design Options A and B in terms of Significance of Visual Effects.
- 3.2 Only viewpoints 3 and 13 have been included in the tables as the rest of the viewpoint locations are not considered relevant to any changes that would occur as a result of Alternative Design Options A and B, as the changes to the water pipeline standoffs would not be visible from the other viewpoints.
- 3.3 This assessment considers the potential effects associated with a wider standoff area up to 30m from each pipe and the associated changes to the restoration contours outside the pipeline corridor.

Table 3: Alternative Design Option A (20m Standoff) – Assessment of Visual Effects When Compared to Original LVIA

Visual Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option A: 20m Standoff from each pipe – Significance of Effects	Comments/Rationale
Viewpoint 3: Footpath MX15 to west of site (c. 120m from Site) <i>Type of Visual Receptor:</i> PRow users <i>Receptor Sensitivity:</i> PRow users: Medium	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	Views of the evolving Option A development during the extended operational works compared to the original LVIA development would still be of a notable level, but only during works within Phases 19 – 21. As with the original LVIA, significance at other times would be reduced. For long term views, once the proposed vegetation has matured, the difference between the Option A restored landform and the restored landform assessed in the original LVIA would be very limited.
	10 Years Post Restoration Stage	Moderate	Moderate	
Viewpoint 13: The Barn residential property (and Bed and Breakfast business) approximately 80m to the northwest of Westhay Lodge, approximately 725m to the south southeast	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	The Option A development, both at the operational stage and the post restoration stage, would not affect views from VP13 to any noticeable extent when compared with the development assessed in the original LVIA. Therefore, the Significance of Effects ratings are considered to be identical for both development scenarios.
	10 Years Post Restoration Stage	Minor - Moderate	Minor - Moderate	

<p>of the existing ENRMF landfill</p> <p><i>Type of Visual Receptor:</i> Residents and B&B guests</p> <p><i>Receptor Sensitivity:</i> Medium - High</p>				
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Table 4: Alternative Design Option B (30m Standoff) – Assessment of Visual Effects When Compared to Original LVIA

Visual Receptor	Proposed Development Stage	Original LVIA: 7m standoff from each pipe - Significance of Effects	Alternative Design Option B: 30m Standoff from each pipe – Significance of Effects	Comments/Rationale
Viewpoint 3: Footpath MX15 to west of site (c. 120m from Site) <i>Type of Visual Receptor:</i> PRow users <i>Receptor Sensitivity:</i> PRow users: Medium	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	Views of the evolving Option B development during the extended operational works compared to the original LVIA development would still be of a notable level, but only during works within Phases 19 – 21. As with the original LVIA, significance at other times would be reduced. For long term views, once the proposed vegetation has matured, the difference between the Option B restored landform and the restored landform assessed in the original LVIA would be limited. In addition, the restored Phase 8 & 9 landform would still be visible to the rear of the restored Phase 19 and 20 areas.
	10 Years Post Restoration Stage	Moderate	Moderate	
Viewpoint 13: The Barn residential property (and Bed and Breakfast business)	Mineral Extraction and Landfilling Stage (c. up to 20 years)	Moderate – Major (Significant)	Moderate – Major (Significant)	The Option B development, both at the operational stage and the post restoration stage, would not affect views from VP13 to

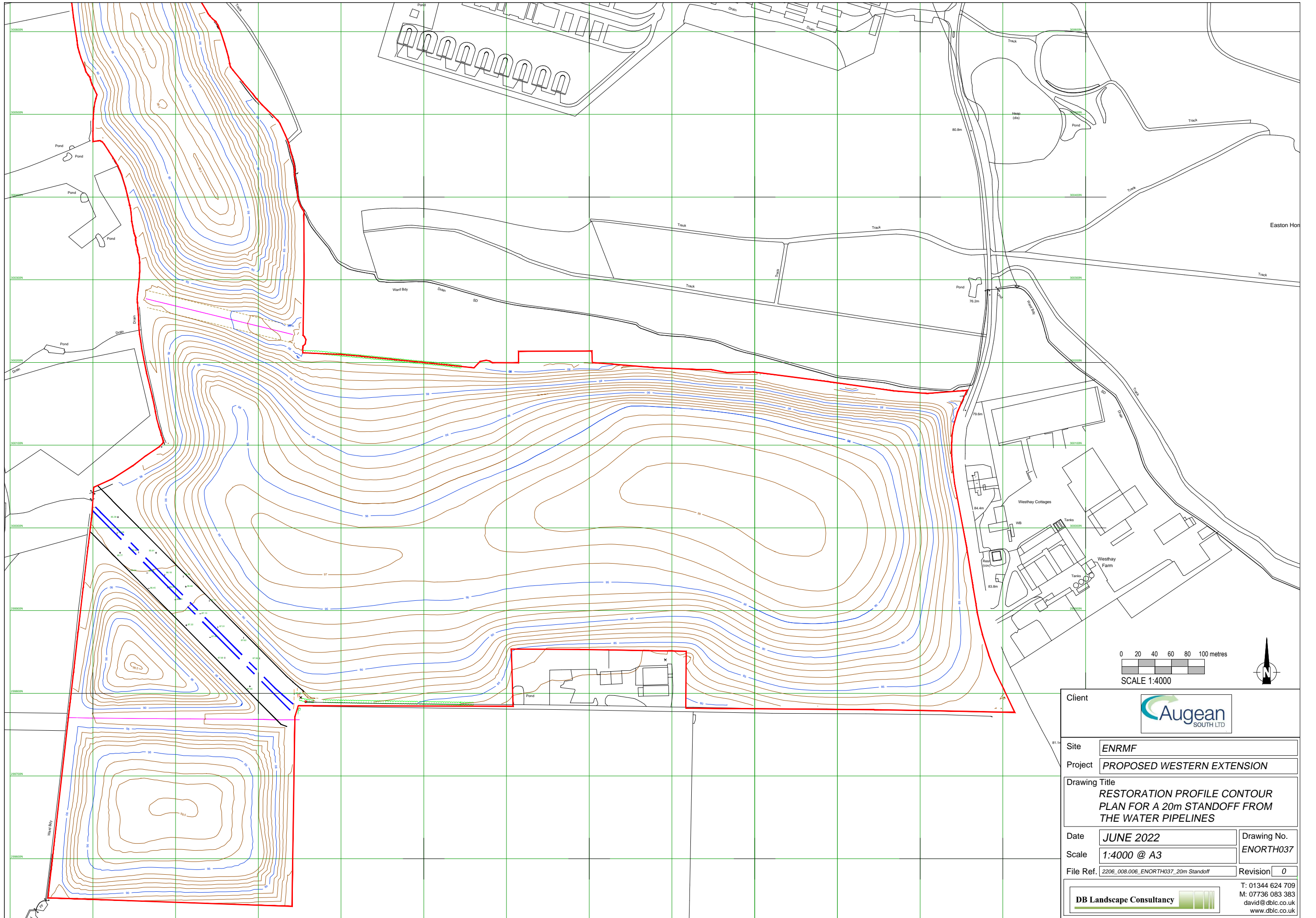
<p>approximately 80m to the northwest of Westhay Lodge, approximately 725m to the south southeast of the existing ENRMF landfill</p> <p><i>Type of Visual Receptor:</i> Residents and B&B guests</p> <p><i>Receptor Sensitivity:</i> Medium - High</p>	<p>10 Years Post Restoration Stage</p>	<p>Minor - Moderate</p>	<p>Minor - Moderate</p>	<p>any noticeable extent when compared with the development assessed in the original LVIA. Therefore, the Significance of Effects ratings are considered to be identical for both development scenarios.</p>
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4 Conclusion

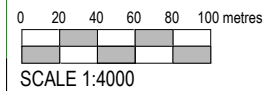
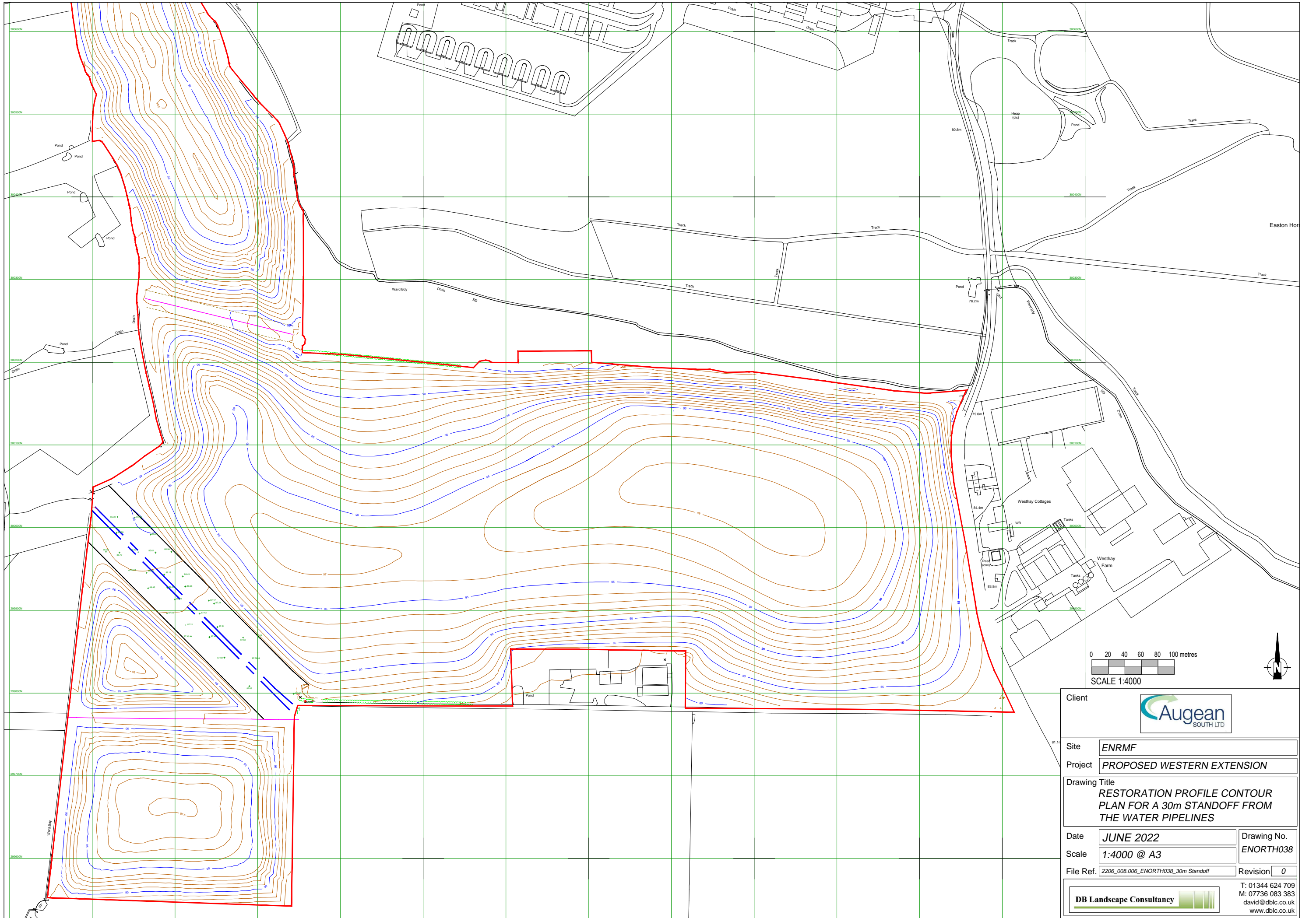
- 4.1 It is considered that whether Alternative Design Option A (20m standoff) or Option B (30m standoff distance) for the Proposed Development were to be adopted, or any other standoff distance in between, any such change would not result in any new or different likely significant effects on landscape or visual receptors compared to those identified in the original LVIA. Effects identified within the original LVIA would generally still occur to receptors, although some minor differences would be evident due to the increased separation of the proposed restoration landform between Phases 19 and 20 (to the north of the water pipelines) and Phase 18 (to the south of the pipelines and the associated changes in the wider contours, as a result of the alternative restoration landforms created by Options A and B. However, these differences are not considered notable enough to alter the overall significance ratings.



Appendix A: Drawings

- Drawing No. ENORTH037: Alternative Restoration Landform Design Option A: 20m Standoff from Water Pipes; and
- Drawing No. ENORTH038: Alternative Restoration Landform Design Option B: 30m Standoff from Water Pipes
- Drawing No. ENORTH039: Indicative Restoration Concept Scheme – 30m stand off from water pipes



Client		
Site	ENRMF	
Project	PROPOSED WESTERN EXTENSION	
Drawing Title	RESTORATION PROFILE CONTOUR PLAN FOR A 20m STANDOFF FROM THE WATER PIPELINES	
Date	JUNE 2022	Drawing No. ENORTH037
Scale	1:4000 @ A3	Revision 0
File Ref.	2206_008.008_ENORTH037_20m Standoff	
		T: 01344 624 709 M: 07736 083 383 david@dblc.co.uk www.dblc.co.uk



Client		
Site	ENRMF	
Project	PROPOSED WESTERN EXTENSION	
Drawing Title	RESTORATION PROFILE CONTOUR PLAN FOR A 30m STANDOFF FROM THE WATER PIPELINES	
Date	JUNE 2022	Drawing No. ENORTH038
Scale	1:4000 @ A3	
File Ref.	2206_008.006_ENORTH038_30m Standoff	Revision 0
		T: 01344 624 709 M: 07736 083 383 david@dblc.co.uk www.dblc.co.uk



- KEY**
- APPLICATION BOUNDARY
 - PROPOSED RESTORATION CONTOURS (At 1m AOD intervals)
 - EXISTING FOOTPATH
 - PROPOSED FOOTPATH
 - POSSIBLE NEW PATH ROUTE TO LINK WITH EXISTING PUBLIC RIGHT OF WAY SUBJECT TO DISCUSSION & AGREEMENT
 - PROPOSED 4m WIDE TRACK FOR SITE AFTER CARE/MAINTENANCE
 - PROPOSED LOCALLY NATIVE BROADLEAVED WOODLAND
 - PROPOSED SCRUB/NATURAL REGENERATION BROADLEAVED WOODLAND WITHIN GRASSLAND AREAS
 - PROPOSED INDIVIDUAL TREE OR SMALL TREE GROUP
 - EXISTING HEDGEROW (TO BE REINFORCED WITH TREES/SCRUBS WHERE NECESSARY/DESIRABLE)
 - PROPOSED NATIVE HEDGEROW
 - PROPOSED NATIVE HEDGEROW WITH OCCASIONAL TREES
 - FORMER AGRICULTURAL LAND DEVELOPED AS MANAGED GRASSLAND AREA
 - EXISTING SPECIES-RICH NEUTRAL/CALCAREOUS GRASSLAND TO BE RETAINED
 - PROPOSED NEUTRAL/CALCAREOUS GRASSLAND (Depending on soil type)
 - EXISTING POND OUTSIDE THE APPLICATION BOUNDARY
 - PROPOSED POND FOR THE PURPOSE OF ENHANCING BIODIVERSITY AND ATTRACTING NEWTS. EXACT LOCATIONS TO BE DETERMINED DURING RESTORATION WORKS
 - HIBERNACULA TO BE CONSTRUCTED IN CLOSE PROXIMITY TO PROPOSED PONDS
 - PROPOSED ATTENUATION FEATURE
 - APPROX. 0.5m HIGH BUND AROUND ATTENUATION BASIN C1 TO CONTAIN 1 IN 100 YEAR EVENT. BUND TO BE PLANTED WITH SCRUBBY SPECIES
 - PUBLIC CAR PARK AREA ACCESSED FROM EXISTING MAIN SITE ENTRANCE
 - INDICATIVE CROSS SECTIONS (Refer to Drawing No. ENOR174022)

- Proposed Tree and Shrub Planting Palette**
 The proposed planting blocks across the restored site landscape would be planted with a selection of the following tree and shrub species which are characteristic of the surrounding landscape:
- Trees:**
 Ash - *Fraxinus excelsior*
 Field Maple - *Acer campestre*
 Pedunculate Oak - *Quercus robur*
 Silver Birch - *Betula pendula*
 Small leaved lime - *Tilia cordata*
 Wild Service Tree - *Sorbus torminalis*
 Wych elm - *Ulmus glabra*
- Shrubs/Scrub/Climbers:**
 Black bryony - *Tamus communis*
 Blackthorn - *Prunus spinosa*
 Bramble - *Rubus fruticosus*
 Buckthorn - *Rhamnus cathartica*
 Dewberry - *Rubus caesius*
 Dog rose - *Rosa canina*
 Dogwood - *Cornus sanguinea*
 Elder - *Sambucus nigra*
 Goat willow - *Salix caprea*
 Gorse - *Ulex europaeus*
 Grey willow - *Salix cinerea*
 Hawthorn - *Crataegus monogyna*
 Hazel - *Corylus avellana*
 Ivy - *Hedera helix*
 Spindle - *Euonymus europaeus*
 Spurge laurel - *Daphne laureola*
 Traveller's joy - *Clematis vitalba*
 Wayfaring tree - *Viburnum lantana*
 White bryony - *Bryonia dioica*
 Wild privet - *Ligustrum vulgare*

0 10 20 30 40 50 60 70 80 90 100 METRES
 SCALE 1:2500

Client **Augean SOUTH LTD**

Site EAST NORTHANTS RESOURCE MANAGEMENT FACILITY

Project **PROPOSED WESTERN EXTENSION**

Drawing Title **INDICATIVE RESTORATION CONCEPT SCHEME FOR A 30M STANDOFF FROM THE WATER PIPELINES**

Date **JUNE 2022** Drawing No. **ENOR174039**

Scale **1:2,500 @ A1**

File Ref **2206_006_006_ENOR174039_Steel Connect_30m** Revision **0**

DB Landscape Consultancy