



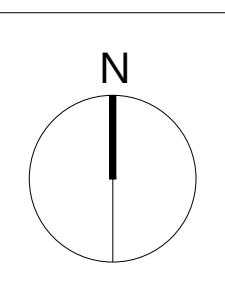
Retford Circular Economy Project Environmental Statement Addendum – Volume 3 Technical Appendices

Technical Appendix 5.4: Site Restoration
Plans

January 2024

Project No.: 0695864

Document details	
Document title	Retford Circular Economy Project Environmental Statement Addendum - Volume 3 Technical Appendices
Document subtitle	Technical Appendix 5.4: Site Restoration Plans
Project No.	0695864
Date	January 2024
Version	1.0
Author	Environmental Resources Management
Client Name	Lound Hive Limited



DRAWING: 4092_DR_LAN_101-2

DRAWING: 4092_DR_LAN_101-1

Landform levels at the boundary will be in excess of 9.8 m AOD to alleviate flood risk

Potential Hide or Viewpoint Location
Proposed Permissive Way Access Gate

Sutton/BOAT7

Proposed NWT Access Gate

NWT Access Road

Sutton/FP1

Sutton/BW4

Sutton/FP5

Sutton/FP5

Realigned Sutton/FP1

Retained woodland within site boundary

Retained neutral grassland within site boundary

Existing Gate to be Retained

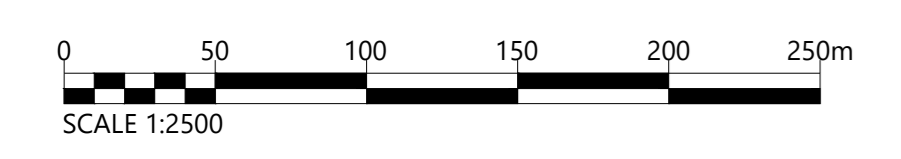
Existing Gate to be Retained

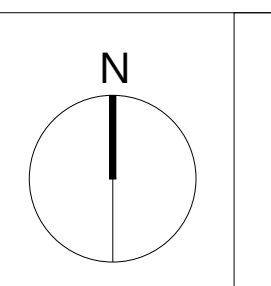
Sutton/FP1

Retained embankments

KEY	Note
	Planning Application Boundary
	Existing Vegetation to be Retained
	Retained Woodland within Site Boundary
	Proposed Native Species Tree
	7 Enhanced Hedgerow with Tree*
	9 Proposed Woodland/Scrub*
	10 Proposed Wet Scrub*
	Proposed Advance Planting
	8 Proposed Pasture*
	6 Proposed Species Rich Grassland*
	4 Proposed wet grassland*
	2 Proposed Reed Beds*
	Existing Waterbody
	1 Proposed Shallow Pool*
	Proposed Standing Water
	Proposed Scrape (indicative location)
	3 Proposed Ditch*
	Proposed Indicative Culvert Location (Where paths cross)
	Existing Track to be Retained
	Existing Public Rights of Way (Footpath)
	Existing Public Rights of Way (Bridleway)
	14 Existing Retained Permissive Way*
	13 Proposed Maintenance Access*
	12 New Permissive Way*
	Existing Realigned Public Right of Way (Sutton/FP1)
	Sutton and Lound Gravel Pits SSSI
	11 Proposed Indicative Interpretation Board Location*
	Proposed Maintenance Access Gate (Metal gate to control the access)
	Proposed NWT/Permissive Way Access Gate (Combination of kissing gate and metal gate)
	5 Indicative Log Piles/Hibernacula Location*
	Potential Hide/Viewpoint Location

* Notes and numbered annotations refer to Drawing 4092_DR_LAN_101a





Landform levels at the boundary will be in excess of 9.8 m AOD to alleviate flood risk

NWT Access Gate

Sutton/BOAT7

Potential Hide or Viewpoint Location
Permissive Way
Access Gate

Sutton/FP1

NWT Access Road

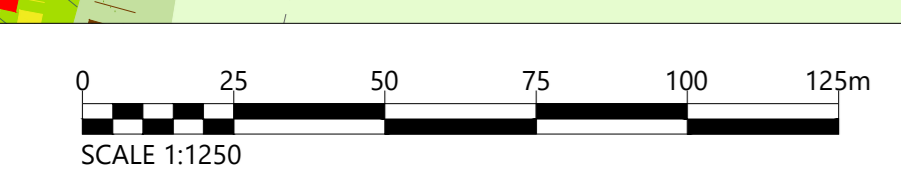
KEY	Note
	Planning Application Boundary
	Existing Vegetation to be Retained
	Retained Woodland within Site Boundary
	Proposed Native Species Tree
	7 Enhanced Hedgerow with Tree*
	9 Proposed Woodland/Scrub*
	10 Proposed Wet Scrub*
	Proposed Advance Planting
	8 Proposed Pasture*
	6 Proposed Species Rich Grassland*
	4 Proposed wet grassland*
	2 Proposed Reed Beds*
	Existing Waterbody
	1 Proposed Shallow Pool*
	Proposed Standing Water
	Proposed Scrape (indicative location)
	3 Proposed Ditch*
	Proposed Indicative Culvert Location (Where paths cross)
	Existing Track to be Retained
	Existing Public Rights of Way (Footpath)
	Existing Public Rights of Way (Bridleway)
	14 Existing Retained Permissive Way*
	13 Proposed Maintenance Access*
	12 New Permissive Way*
	Existing Realigned Public Right of Way (Sutton/FP1)
	Sutton and Lound Gravel Pits SSSI
	11 Proposed Indicative Interpretation Board Location*
	Proposed Maintenance Access Gate (Metal gate to control the access)
	Proposed NWT/Permissive Way Access Gate (Combination of kissing gate and metal gate)
	5 Indicative Log Piles/Hibernacula Location*
	Potential Hide/Viewpoint Location

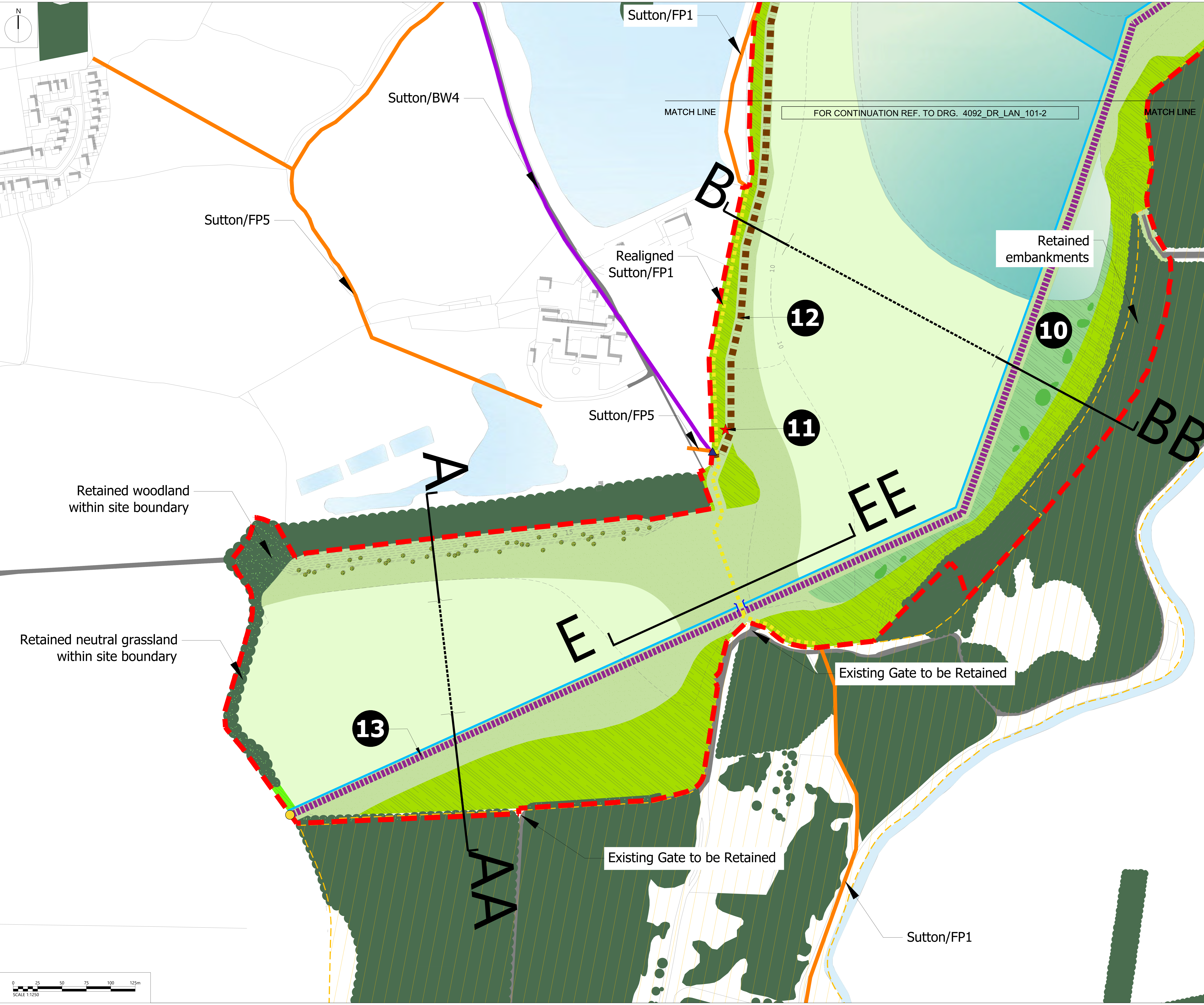
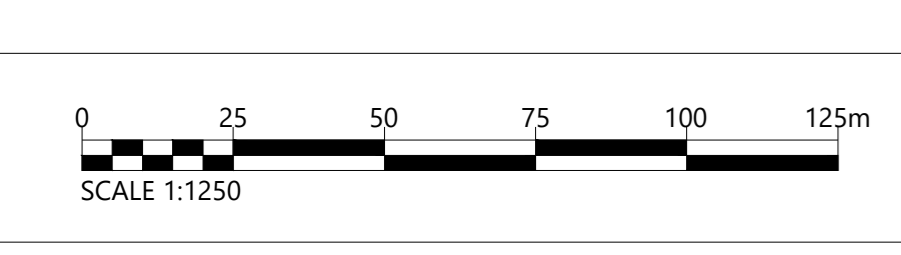
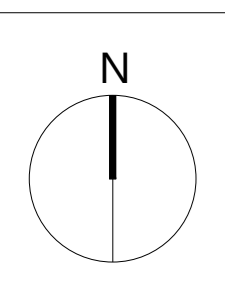
* Notes and numbered annotations refer to Drawing 4092_DR_LAN_101a

MATCH LINE

FOR CONTINUATION REF. TO DRG. 4092_DR_LAN_101-1

MATCH LINE





KEY	Note
	Planning Application Boundary
	Existing Vegetation to be Retained
	Retained Woodland within Site Boundary
	Proposed Native Species Tree
	7 Enhanced Hedgerow with Tree*
	9 Proposed Woodland/Scrub*
	10 Proposed Wet Scrub*
	Proposed Advance Planting
	8 Proposed Pasture*
	6 Proposed Species Rich Grassland*
	4 Proposed wet grassland*
	2 Proposed Reed Beds*
	Existing Waterbody
	1 Proposed Shallow Pool*
	Proposed Standing Water
	Proposed Scrape (indicative location)
	3 Proposed Ditch*
	Proposed Indicative Culvert Location (Where paths cross)
	Existing Track to be Retained
	Existing Public Rights of Way (Footpath)
	Existing Public Rights of Way (Bridleway)
	14 Existing Retained Permissive Way*
	13 Proposed Maintenance Access*
	12 New Permissive Way*
	Existing Realigned Public Right of Way (Sutton/FP1)
	Sutton and Lound Gravel Pits SSSI
	11 Proposed Indicative Interpretation Board Location*
	Proposed Maintenance Access Gate (Metal gate to control the access)
	Proposed NWT/Permissive Way Access Gate (Combination of kissing gate and metal gate)
	5 Indicative Log Piles/Hibernacula Location*
	Potential Hide/Viewpoint Location

* Notes and numbered annotations refer to Drawing 4092_DR_LAN_101a

*Key

Existing Vegetation to be Retained

To be thinned and coppiced as appropriate to improve tree health and the range of habitats provided.

Retained Woodland within Site Boundary

To be thinned and coppiced as appropriate to improve tree health and the range of habitats provided.

Proposed Native Species Tree

Species include: Common Oak, Sessile Oak, Hawthorn, Hazel, Holly and Alder

Enhanced Hedgerow with Tree

Species include: Field Maple, Hawthorn, Hazel, Spindle, Holly, Honeysuckle, Wild Cherry, Dog Rose

To be scattered or group planted within species rich grassland areas.

Proposed Woodland/Scrub

Species include: Field Maple, Alder, Birch, Hazel, Crab Apple, Wild Cherry, Oak, Goat Willow, Small-leaved Lime, Common Oak, Sessile Oak, Hazel and Hawthorn.

Proposed Wet Scrub

Wet scrub transitioning to drier scrub and grassland regeneration on the re-profiled bank. Includes some small clusters of ponds in the lower/flat area. To be established adjacent to the retained bank in the south of the Site.

Proposed Pasture

Bespoke mix of native grasses and red and white clover.

Proposed Species Rich Grassland

Strip or inoculation seeding of typical hedgerow verge species. Using local provenance seed or 'Green Hay' transfers in either linear swathes or large scrapes (approximately 3 to 5 m²).

Proposed Reed Beds

Reed beds would either be sown with locally sourced reed seed in saturated soil or directly planted into submerged soil with cut reed stalks from an approved donor site.

Proposed Scrape (indicative location)

Up to three scrapes per hectare to be established .

Permissive Footpath/ Bridleway

Bridleway = pedestrian, pedal cycle and horseriding only
Permissive = access to specified user types only and may be closed for short periods from time to time without notice, typically for maintenance or agricultural reasons

Notes

1. Naturalistic slopes and gradients would be created throughout. Backfilling of the lake voids would enable a 50mm to 1 m deep edge with a gentle slope profile of 1:10 to 1:40 for wetland vegetation to establish. Subtly varied land levels and channels where lake edge backfilling is to occur would produce variations in water depth and create micro habitats and increase biodiversity potential. Water depths in excess of 1.5 m in the centre of the water body would prevent reed bed dominance and maintain open water.
2. New reed bed fringes would be planted where conditions are suitable at the restored lakeside fringes and along ditches. Reed beds would either be sown with locally sourced reed seed in saturated soil or directly planted into submerged soil with cut reed stalks from an approved donor site. Reed bed areas would vary in depth and include deeper channels and pools, to ensure patches of open water remains within the habitat. Reed beds would be managed through an annual rotational cut with at least one quarter or one seventh of the reeds cut each year and removal of saplings to minimise succession.
3. Gravity outfall will provide a mechanism for water level management, such as seasonal flooding of wet grassland or for the annual rotational cutting of reeds.
4. All wet grassland applied in the drawing to include parcels restored at a lower level than surrounding land, bounded by ditches and waterbodies, and created with an undulating profile to provide varying degrees of saturation. Other measures to encourage seasonal inundation will include scrapes and foot drains to provide some standing water and muddy edges to enhance foraging opportunities for bird species into spring. Ongoing groundwater monitoring and modelling would be carried out to inform the detailed design of landform features and management of the habitat.
5. Log piles and hibernacula would be provided along the woodland and hedgerow planting and adjoining the wetland areas for reptiles and invertebrates. Suitable retained trees would be selected for a number of bat and bird boxes.
6. Graded edges to be established adjacent to woodland areas and along hedgerows. Strip or inoculation seeding or the use of local provenance 'Green Hay' transfers in either linear swathes or large scrapes (approximately 3 to 5 m²) would be used. This would enable floristically diverse areas to be established and spread out naturally.
7. Existing hedgerow retained, enhanced and supplemented with tree planting.
8. Grassland habitats would be subject to specific management measures, including a suitable grazing regime.
9. Significant area of woodland planting provided along the north western boundary to replace trees currently situated on the lagoon embankments. This would include UK grown and certified plant stock comprised of, for example, locally appropriate species such as common and sessile oak, hawthorn, hazel, holly, alder, and wild roses. With a preference for plants with nectar, nuts, and berries for foraging by wildlife.
10. Wet scrub transitioning to drier scrub and grassland regeneration on the re-profiled bank. Includes some small clusters of ponds in the lower/flat area.
11. An interpretation board with information on the habitats on site and the wildlife to be seen would be provided to the side of the footpath here. It is envisaged that the content, style, and location of the interpretation board would be agreed upon with the local planning authority and the local community.
12. Permissive way to be used by horseriders and bicycle users. Near to and parallel with existing Footpath 1 PRoW. Combined with the existing formal bridleway west of the angling lake (terminating south of Bellmoor Farm) and the PRoW along Lound Low Road, this would create a series of circular and direct routes for these user groups. Surfacing to be chippings.
13. Proposed maintenance access (along the former operational haul route) controlled with metal gates at either end.
14. Existing permissive way including NWT vehicular access. Controlled at either end with both kissing gate to keep livestock in but allow people to pass through; and a metal gate with a step-over section for horse riders to allow NWT/landowner access in four-wheeled vehicles and enable cyclists to lift their bikes and halt unauthorised motorised two/four wheel access.

REVISION SCHEDULE

Revision No.	Description
231203 RevA	Remove the reference to the soil storage area (14) to accommodate the design. (YC)
231211 RevB	Access track and gates have been updated in accordance with the markup plan. (YC)

THIS DRAWING HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ERM'S APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ERM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. ALL DIMENSIONS, CHANGES, LEVELS AND COORDINATES ARE IN METERS UNLESS DEFINED OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.
4. THE DRAWING IS THE COPYRIGHT OF ERM AND CANNOT BE REPRODUCED IN ANY FORM WITHOUT THE EXPRESS CONSENT OF THE COMPANY. WRITTEN AND SCALED DIMENSIONS TO BE CHECKED ON SITE, AND ANY DISCREPANCIES SHOULD BE REPORTED TO ERM PRIOR TO WORK COMMENCING ON SITE.

BASE: Reproduced from Ordnance Survey digital map data © Crown copyright 2022. All rights reserved. Licence number 100048606
GRID REFERENCE: SK 692 847

PROJECT: Retford Circular Economy

TITLE: Notes of Revised Indicative Landscape Restoration Plan

CLIENT: Lound Hive Limited

DATE: 18.08.23 SCALE: -

DRAWN: WM DRAWING NO.: 4092-DR-LAN-101a

CHECKED: SK REVISION: 0



ERM

Environmental Resources Management

1C Swinegate Court East
3 Swinegate
York, YO1 8AJ
tel: +44 (0)1904 715 470
https://www.erm.com