

Habitat Management and Monitoring Plan

Site Name:	Dereham WRC, Rushmeadow Road SEW-11628
Date:	23/05/2024
Version:	1.0



Author: Norfolk Wildlife
Services

Client: Anglian Water
@one Alliance



Contents

1. Project Background	2
Summary of Management Plan	2
Site Boundary Plan PB-F01.1.....	3
Site Boundary Plan PB-F01.2.....	4
Site Context Plan PB-F02.....	5
Phasing strategy.....	6
Roles and Responsibilities	6
Land Use Summary.....	7
Site Context Photos PB-F03.....	7
Site Baseline, Environmental Information and Associated Impacts Checklist PB-T01	8
2. Planned Management Activities	9
Principles Informed by Design Stage	9
Habitat and Condition Targets PM-T01	10
Habitat Retention.....	11
Habitat Retention Plan PM-F01	11
Habitat Creation, Enhancement and Management Plan EM-F01	12
Grassland (Medium, High, and Very High Distinctiveness)	13
Creation, Enhancement and Management Summary (GH-T01).....	13
Grassland (Medium, High, and Very High Distinctiveness)	15
Creation, Enhancement and Management Detailed Methods (GH-T02).....	15
Grassland (Medium, High, and Very High Distinctiveness) Species Lists (GH-T03).....	16
Other Supporting Information	16
What Does Success Look Like? (GH-F01).....	17
Habitat Creation and Management – Risk Register and Remedial Measures PM-T02	18
3. Monitoring Schedule	19
Monitoring Strategy	19
Monitoring Methods and Intervals MS-T01.....	19
Monitoring Reports	20
Adaptive Management	21

Version Control

The version control is used for updates to the content. Record the initial version and further version control details in this table each time the management plan is altered throughout the management and monitoring period.

Version	Issue Status	Prepared by / Date	Approved by / Date
1.0	Issued to client	█ 22/05/2024	BM 23/05/2024

Document Details

Provide ownership, copyright and licensing information within this table.

Authorship Details
<p>The information which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed within this document are our bona fide professional opinions.</p> <p>The information which is being provided is a true representation of the survey methods used and the results assembled, with respect to the stated dates of survey and assessment.</p> <p>Any disclosure of this document to a third party is subject to this disclaimer. The document was prepared by Norfolk Wildlife Services Ltd on behalf of the named client. It does not in any way constitute advice to any third party who is able to access it by any means.</p>

1. Project Background

Summarise the key aspects of your management plan in this section. Table PB-B01 can be extended to suit the specific needs of individual projects.

Site Overview PB-B01	
Project type	On-site
Development Name and Address	Dereham WRC, Rushmeadow Road, Dereham NR19 2NW.
BNG Project Name and Address	N/A
Author Organisation	Norfolk Wildlife Services
Landowner	Anglian Water
Land Manager	Anglian Water
Responsible person/organisation for creating or enhancing the habitat	Anglian Water
Period covered by this management plan	September 2024 – September 2054
Planning authority	Norfolk County Council
Planning reference (if applicable)	FUL/2024/0023
BNG register reference (if applicable)	N/A
Central OS grid reference	Grid reference: TF 97632 13730
Metric revision/title	Statutory biodiversity metric
Are any Irreplaceable Habitats present onsite	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>

Summary of Management Plan

Habitats to be Retained, Created and Enhanced PB-B02

No irreplaceable habitats were identified within the red-line boundary of the proposed scheme.

A small area of 'other neutral grassland' adjacent to the access track will be retained, with no impact from the specified works taking place to this area.

Within the WRC site, it is proposed to enhance 0.39ha of 'modified grassland' of poor condition to 'other neutral grassland' of moderate condition within 10 years of the development being complete. The habitat will complement the surrounding habitats post-construction, providing a refuge area and valuable biodiversity resource.

Timescales for Actions PB-B03

As set out by the Statutory Metric the time to condition for the proposed grassland habitat enhancements is within 10 years. Factored into the calculation is the delay in commencing enhancement works by 1 year post construction.

Monitoring Requirements PB-B04

Habitats will be monitored by a suitably qualified Ecologist annually for years 1-5 and then every 5 years using the Statutory Metric condition criteria, fixed point photography and quadrat sampling. Soil sampling for nutrients and pH levels will be undertaken if required during the monitoring period. A plan for remedial actions is provided.

Required Consents and Licences PB-B05

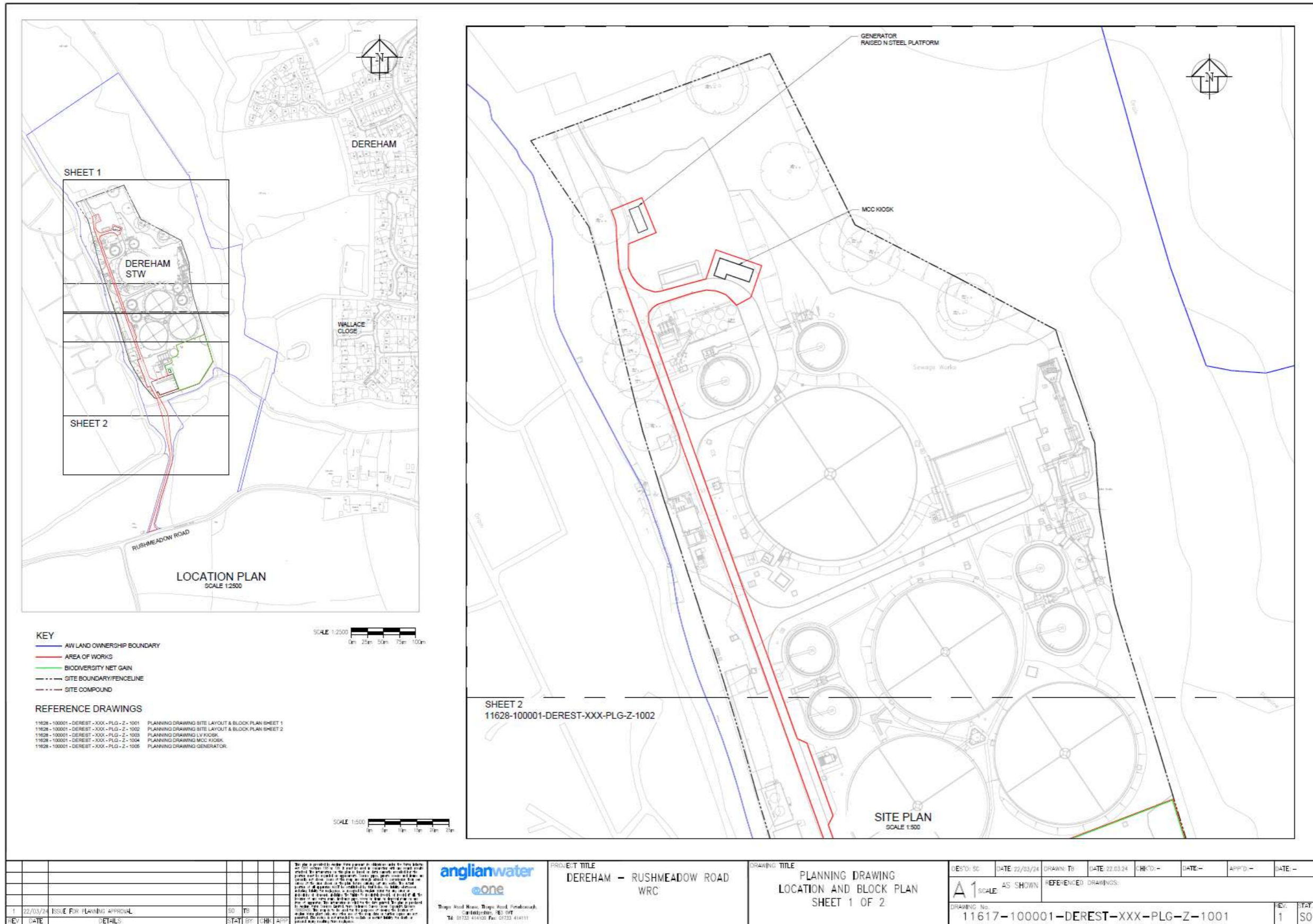
No additional consents or licences are required for management of the BNG area.

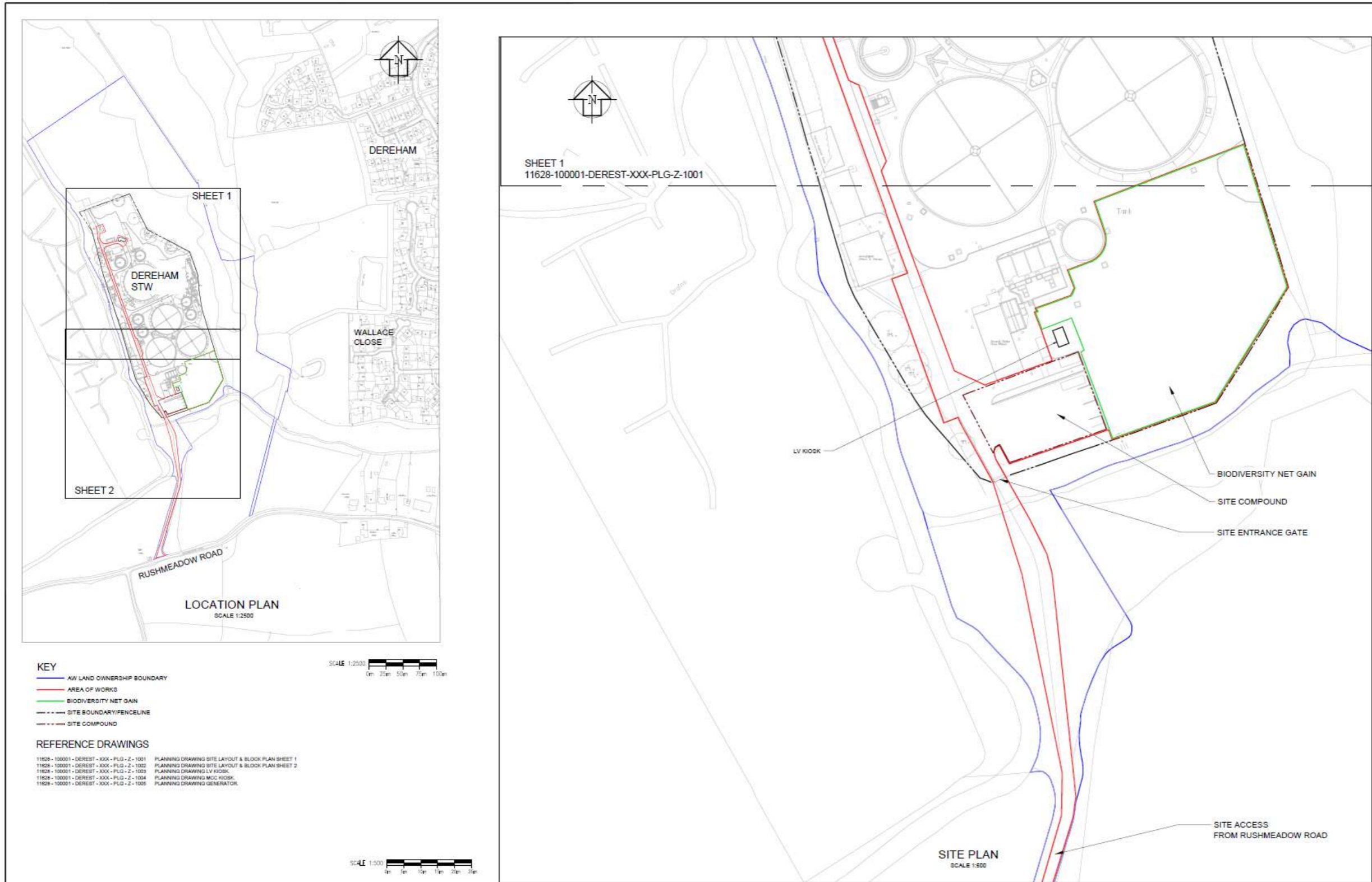
Funding PB-B06

Anglian Water's current plan is for habitat creation/enhancement, management and monitoring be to funded through opex. A review and confirmation of revised operational costs (habitat management and monitoring) will be undertaken on a financial or AMP cycle basis to ensure sufficient funds are allocated for the required 30 year management period.

Legal Agreement PB-B07

The biodiversity net gain enhancements have been included within the red line boundary of the development and therefore on-site net gain can be achieved. The on-site gain is not considered 'significant' and can therefore be secured by condition. A S106 agreement or Conservation Covenant is not required in this instance.





		PROJECT TITLE DEREHAM – RUSHMEADOW ROAD WRC	DRAWING TITLE PLANNING DRAWING LOCATION AND BLOCK PLAN SHEET 2 OF 2	DES'D: SC DATE: 22.03.24 DRAWN: TB DATE: 22.03.24 H'D: DATE: APP'D: DATE:
1 22/03/24 ISSUE FOR PLANNING APPROVAL 50 TB		DRAWING No: 11617-100001-DEREST-XXX-PLG-Z-1002		REV: 1 STAT: 50

Legend

- Site Boundary
- Sites of Special Scientific Interest

Habitats

- g3c other neutral grassland
- g4 modified grassland
- u1b developed land, sealed surface

339 839 track
106 106 mown

Google Satellite



2024/011_SEW-11628

Habitat Map

Surveyed: 10/04/2024

Drawn by: BM Date: April 2024



Reproduced from Google: Inforterra Ltd and Bluesky digital map data © Crown copyright 2024. All rights reserved.

Phasing strategy

Will the proposed work measures be delivered in phases? PB-B08		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
No phasing proposed.			

Roles and Responsibilities

Provide details of the responsible persons and organisation(s) for delivering this management plan.

Ecologist or Other Professional Responsible for HMMP PB-B09			
Name or Initials	[REDACTED]		
Organisation	Norfolk Wildlife Services		
Responsibility	Start Date:		End Date:
The Ecologist is responsible for the production of this HMMP; providing ecological expertise when requested for the establishment of the specified habitats; being the first point of contact for the Land owner and Management Organisation in the event of any ecological issues during the establishment or ongoing management of habitats described.			
Statement of Competency			
Ben Moore, an Associate member of CIEEM, has worked as a professional ecologist for eight years following on from relevant academic study (BSc Ecology). He is experienced in carrying out a wide range of survey types for both habitats and species as well as report writing and use of GIS.			

Landowner or Land Manager PB-B10			
Name or Initials			
Organisation	Anglian Water		
Responsibility	Start Date:		End Date:
As the Landowner, Anglian Water is responsible for the funding and implementation of the HMMP and implementing the 30-year management and monitoring of the specified habitats as described once established.			
Statement of Competency			
Anglian Water provide water supply and water recycling services for their customers across the region. They are a landowner and a competent authority.			
Management Organisation(s) Responsible for Implementing the HMMP PB-B11			
Name or Initials	N/A		
Organisation	Anglian Water		
Responsibility	Start Date:		End Date:
Anglian Water will be responsible for the establishment and operational management and maintenance of the specified habitats. They will ensure that management complies with the measures set out in this HMMP.			
Statement of Competency			
Anglian Water is a significant landowner managing over 7000ha across the Anglian Water region. This includes designated land. They utilise specialist contractors and organisations to deliver habitat creation, restoration and land management activities across the estate. Anglian Water has an in-house biodiversity team of technical experts who provide ecological and land management advice as required.			
LPA or Responsible Body for Reviewing HMMP PB-B12			
Name or Initials			
Organisation	Norfolk County Council		
Responsibility	Start Date:		End Date:
Summarise the agreed relevant responsibilities of the LPA or Responsible Body in the review, auditing and, or, long-term involvement in the implementation of this HMMP (if applicable)			

Land Use Summary

Overview of Baseline Site Use PB-B13

The Dereham Water Recycling Centre (WRC) is an active sewerage treatment site for the local catchment area. The site is comprised of a combination of treatment assets and concrete hardstanding (urban habitats) along with areas of unused mown grassland.

Overview of Proposed Site Use PB-B14

The proposed scheme has been initiated to comply with the obligation under the Waste Water Treatment Directive (UWWTR) and the Water Industry National Environment Programme (WINEP), to reduce the operation of storm sewage overflows by increasing the capacity that the WRC can treat. This treatable volume is called Flow to Full Treatment (FFT), Anglian Water need to install additional plant and machinery at Dereham WRC which will increase the FFT by 15 percent, as required by the revised environmental permit.

The scheme will result in a greater volume of flow receiving full treatment and nutrient removal than is presently the case, which has the potential to improve the quality of the River Wensum. The proposed scheme comprises the permanent installation of additional plant and machinery within the operational boundary of Dereham WRC.

An area of unused grassland within the Dereham WRC is proposed to be enhanced to ensure the scheme provides an overall Biodiversity Net Gain.

Site Context Photos PB-F03

Overview photographs taken on 26/04/2024 – Top: Location of new Kiosks; Bottom: Location of grassland on site proposed for enhancement



Site Baseline, Environmental Information and Associated Impacts Checklist PB-T01

Consider the Baseline and Environmental Information listed below. These are likely to be appropriate factors informing your proposals and project design. They can provide the reviewer with important contextual information for the management prescriptions provided later in this document. Use your professional judgement to determine which factors are relevant to your specific project.

Please use the check box to indicate which are included in your plan. For any not included, provide brief reasons why the factor is not relevant to your project using your professional judgement. Where this information is provided elsewhere, you can reference existing reports and, or, plans that have informed your decisions. For the templates for each heading see pages 3-20 of the Companion Document.

Baseline and Environmental Information	Prompts for when these may be relevant. This is not an exhaustive list. Use your professional judgement to determine which are required for your HMMP	Check box if included	Document Reference or Reason if not included
Statutory / Non-statutory Designated Sites	Will your proposals lead to direct or indirect effects on designated sites?	<input type="checkbox"/>	No impacts predicted, consultation with Natural England advised due to proximity of Dereham Rushmeadow SSSI. See document: "NWS EAR_Dereham SEW-11628" for further detail.
Protected and Notable Species	Does the presence or proximity of specific species on or near your site present any constraints or opportunities to project design or management?	<input type="checkbox"/>	No. See document: "NWS EAR_Dereham SEW-11628" for further detail.
Invasive Non-Native Species (INNS)	Are any INNS present onsite that could affect the proposals?	<input type="checkbox"/>	No INNS present onsite.
Biological Records Plan - Sites and Species	Does the presence of designated sites or specific species on or near the site present any constraints or opportunities to proposals?	<input type="checkbox"/>	No impacts predicted, consultation with Natural England advised due to proximity of Dereham Rushmeadow SSSI. See document: "NWS EAR_Dereham SEW-11628" for further detail.
Baseline Habitats Survey	Is this current and important HMMP information located in a separate document? If so, provide details on where it is located.	<input type="checkbox"/>	See document: "NWS EAR_Dereham SEW-11628" for baseline habitat survey details.
Public Access	Has public access, or proposals to allow public access, influenced your management prescriptions? If so, how?	<input type="checkbox"/>	No public access.
Climate	Are local climate conditions and, or, climate change likely to impact the target habitat retention, creation or enhancement?	<input type="checkbox"/>	No. Other neutral grassland is at very low risk from climate changes over the next 30 years.
Geology and Topography	Any geological or topographical constraints or opportunities?	<input type="checkbox"/>	No specific geological or topographical constraints or opportunities.
Agricultural Land Status	Does the site support any land favourable for agricultural management? Could this affect the proposals?	<input type="checkbox"/>	No, this is an active sewerage treatment works site.
Soils and Substrates	Do soils and substrates present any constraints or opportunities?	<input type="checkbox"/>	The soil present is likely to be enriched with phosphorous due to the dominance of dense grass. This is a minor constraint to the proposed grassland enhancement, which will be mitigated by the removal of cuttings during management. Soil testing is prescribed as a method of monitoring should the grassland species richness not meet the target condition.
Contaminated Land	If there is any contaminated land, will this present any constraints?	<input type="checkbox"/>	No contaminated land found – see section 4.5 of the CEMP submitted as part of the screening opinion request.
Hydrology and Drainage	Will the site hydrology present any constraints or opportunities?	<input type="checkbox"/>	No, the area is already established mown grassland and the hydrology will not present any constraints to the proposed enhancements
Flood Risk Zones	Is the site within a flood risk zone? Will that present any site management risks?	<input type="checkbox"/>	The BNG area is located outside any designated flood zone. Ground conditions will be assessed before any monitoring works are undertaken for optimum delivery
Landscape Character and Designations	Does the landscape character of the site present any constraints or opportunities?	<input type="checkbox"/>	No landscape constraints or opportunities identified.
Historic Land Use	Does the historic land use present any constraints or opportunities?	<input type="checkbox"/>	The site has formed part of the WRC for at least 80 years, and presents no constraints.
Historic Environment and Earth Heritage	Are there any historic environment designations? What are the implications for your plan?	<input type="checkbox"/>	There are no historic designations within the BNG area. The plan will have no perceived impact on the adjacent Conservation Area or nearest listed building. There are no excavations in this area, archaeological monitoring not required.

2. Planned Management Activities

Provide the site-wide aims and objectives. These should consider the Project Background information section outlined above as well as the outcomes of the Metric.

Management Plan Aims and Objectives PM-B01

This HMMP provides details of mitigation and enhancement requirements during the construction and operational phases of the project to support the BNG requirements set out in the Ecological Appraisal Report. A management framework for the operational phase of the project has been provided. The HMMP will cover the 30-year period of the project. Management prescriptions are proposed to be reviewed every three years as part of the audit and monitoring process, after which management would be adapted based on the site conditions.

The HMMP has been designed to improve the overall biodiversity value of the operational WRC site by increasing habitat and species diversity, improving the condition of existing habitats to complement existing habitats in the local area and enhance the current site. The grassland is proposed to be enhanced from a low distinctiveness modified grassland to a medium distinctiveness neutral grassland. The grassland will provide habitat and foraging opportunities for local wildlife such as birds, bats and numerous invertebrates. It would also provide a source of pollen and nectar for pollinators.

Principles Informed by Design Stage

The project's BNG target(s) should be set and documented early in the design process. Outline how background and baseline information influenced key design principles for the project from an early stage. This can provide useful context for the proposed retention, creation and enhancement measures.

Design Principles Informed by Baseline Information PM-B02

The project proposal is centred on providing new infrastructure within the WRC to meet nutrient discharge targets set by the Environment Agency. The proposal requires a small amount (0.02ha) of grassland within the operational WRC to be utilised for the infrastructure. NWS as the acting ecologist, has been involved with the project from the design stage, and the proposal to enhance grassland within the WRC site is considered to be most appropriate as a like-for-like opportunity that is ecologically desirable for the surrounding habitats (Rushmeadows SSSI and Dereham Sewerage Works Meadow CWS, 1006), achievable, and financially viable based on the project scale and impact.

There is no Local Nature Recovery Strategy in place for Norfolk <https://www.norfolk.gov.uk/article/57573/Progress-updates>.

Modified grassland and urban habitats are not recorded in any known documents as being locally ecologically important. These habitats provide negligible importance in providing ecological linkage to other strategically significant locations such as the Rushmeadows SSSI. Therefore, these habitats have been recorded as low strategic significance.

Habitat and Condition Targets PM-T01

This table presents a summary record of what you have agreed to deliver based on the biodiversity metric. These habitat condition targets form the basis of what the management plan is setting out to achieve. Include the relevant 'Area', 'Hedgerow', and 'Watercourse' types to be implemented and managed throughout the period of 30 years or more.

Baseline Habitat Type	Target Habitat Type	Parcel / Feature Refs	Baseline Condition	Targeted Condition	Years to Targeted Condition	Condition Assessment Targets	Comments
Modified Grassland	Other neutral grassland	1	Poor	Moderate	Standard time to target condition from the statutory biodiversity metric (10 years).	Moderate condition will be targeted by achieving a pass in criteria A, B, D and E.	Criteria A is essential, and will require specific establishment and monitoring targets to ensure it will be met. Use of yellow-rattle <i>Rhinanthus minor</i> to control grass cover, and successful establishment of neutral grassland herbs will be essential.

Habitat and Condition Targets Further Comments

There is a delay of 1 calendar year for the establishment of the habitat in parcel 1, and this has been included in the Metric calculation.

Habitat Retention

Provide a concise description of the habitats that are to be retained in their baseline condition. Habitats being retained may still require ongoing measures to maintain their baseline condition.

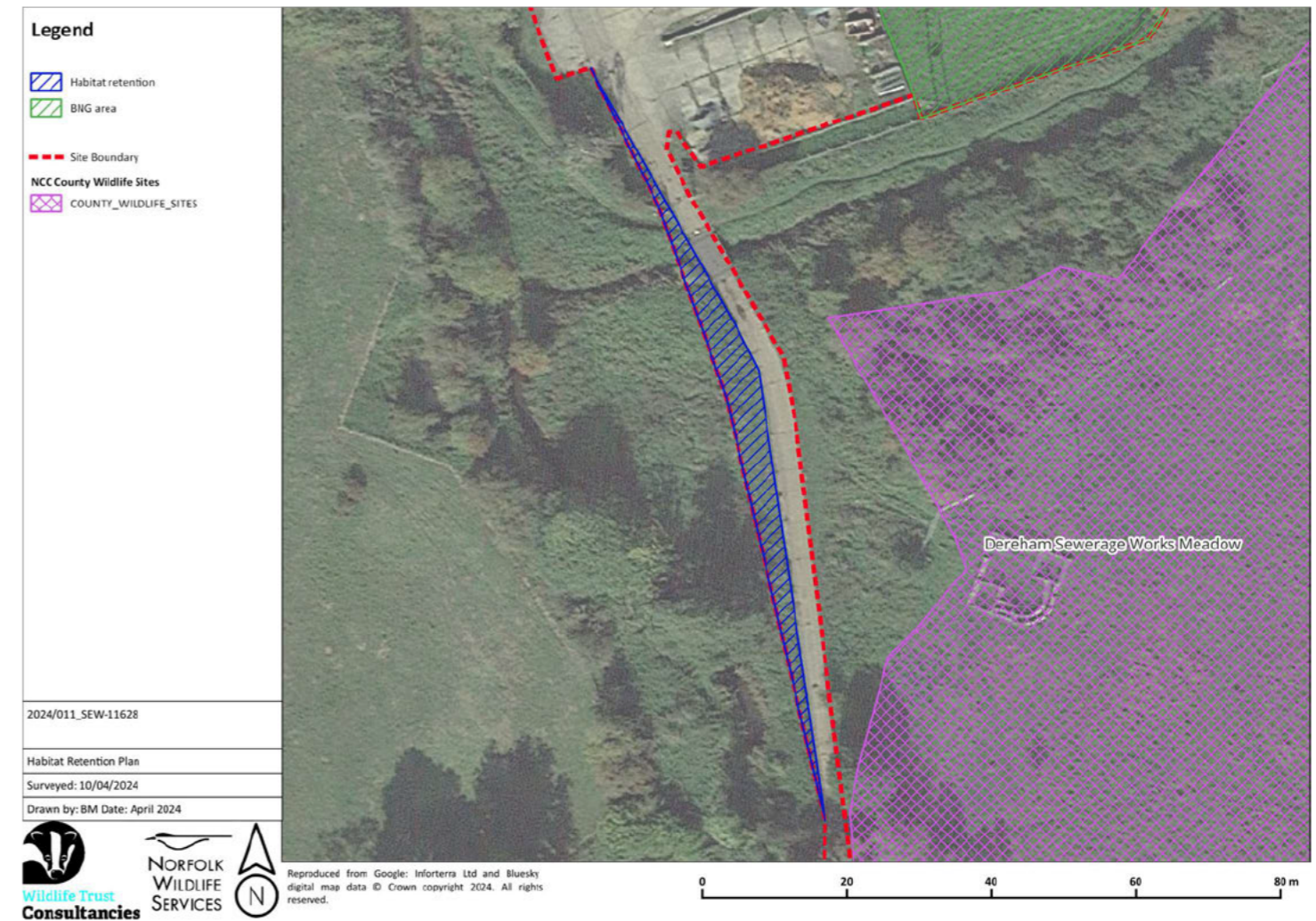
Measures to be Implemented to Protect Retained Habitats PM-03

A narrow parcel (Parcel 2) of neutral grassland in poor condition adjacent to the access track will be retained in its baseline condition. Exclusion fencing will be installed during the site set up process, and used during construction to prevent access to the habitat. The fencing will be removed following completion of the works. Given the habitat is currently in poor condition due to a lack of management, there is very little management measures required to maintain the baseline condition. The recommendation is to continue the current cutting programme, or alternatively follow the management protocol for Parcel 1.

Specification of Protective Measures to be Used PM-04

Heras fencing alongside the access track will be used to prevent damage to the retained neutral grassland alongside the track during construction.

Habitat Retention Plan PM-F01



Legend

- - - Site Boundary
- Post construction habitats**
- g3c other neutral grassland
- u1b developed land. sealed surface

2024/011_SEW-11628

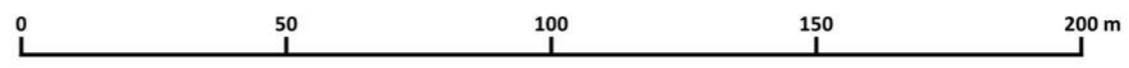
Post-construction Habitat Map

Surveyed: 10/04/2024

Drawn by: BM Date: April 2024



Reproduced from Google: Inforterra Ltd and Bluesky digital map data © Crown copyright 2024. All rights reserved.



Grassland (Medium, High, and Very High Distinctiveness)

Creation, Enhancement and Management Summary (GH-T01)

Target Habitat						
Condition Assessment Criteria	Targeted	Relevant Parcels	Creation Approach	Enhancement Approach	Management Approach	
A The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type. Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes	1	N/A	Supplementary seeding with yellow rattle and suitable neutral grassland wildflower mix in autumn.	Cutting of the grassland will follow a traditional hay meadow management protocol. Selective control of unwanted perennial plant species.	
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Yes	1	N/A	This criteria should develop naturally with the establishment of yellow rattle and the proposed species composition.	A varied cutting regime can be considered during management.	
C Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No	1	N/A	N/A	This criteria should develop naturally with the proposed species composition. No targeted management for this criteria is proposed.	
D Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	1	N/A	N/A	Selective control of <i>Pteridium aquilinum</i> and scrub as required.	
E Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area. If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes	1	N/A	Restrict access to activities for the enhancement of the grassland only. No INNS observed, so no specific measures in place.	Area to be excluded from the general works zone of the WRC by way of site inductions and barrier fencing as required. Selective control of INNS as required.	
F There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type.	No	1	N/A	N/A	N/A	

Note – this criterion is essential for achieving Good condition for non-acid grassland types only.					
---	--	--	--	--	--

Additional Management Prescriptions (GH-B01)

If it is found through monitoring that criteria A is not met, then supplementary seeding (via green hay, if feasible) may be required in future years. Green hay refers to 'donor' grass that has been cut from native wildflower rich grasslands present in the vicinity – Dereham Sewerage Works Meadow CWS would be the idea candidate. To be successful, the enhancement site must be ready to receive the hay when the donor grassland is cut. This includes managing the site to a short sward with 50% bare ground. Once collected the green hay must be immediately transported to and spread on the receptor site. Material cut from 0.1ha of species rich grassland should be sufficient to spread across the enhancement site (Natural England TIN063).

Grassland (Medium, High, and Very High Distinctiveness)

Creation, Enhancement and Management Detailed Methods (GH-T02)

Action	Relevant Parcels	Timing	Prescriptions
Soil sampling	1	Year 0 Year 3, 5, 10, 15, 20	Soil sampling to be undertaken if required should criteria A not be met. Ideal nutrient levels include: nitrogen at 0.2 to 0.7% solid dry weight, potassium at <120mg l ⁻¹ , phosphorus at <15mg l ⁻¹ . Ideal pH is between 5 and 6.5. Intervention methods such as topsoil stripping to alter soil nutrient or using pH altering chemicals (e.g. lime) is only recommended in severe cases.
Prepare location for seeding	1	Year 0	Cut grass to c.40mm and removing arisings, followed by harrowing to create c. 50% bare ground.
Sow wildflower seed	1	Year 0 (autumn sowing)	Broadcast seed as per suppliers recommendations either by machine or by hand. Emorsgate Seeds EM1F 'Basic General Purpose Wild Flowers' or alternative supplier providing equivalent mix at a rate of 1.5g/m ² + yellow rattle at a rate of 0.5g/m ²
Cutting regime for establishment	1	Year 0 autumn, winter - Year 1 early spring	After sowing, establish a cutting regime to keep the grass short (<50mm). Continue cutting as required through winter and early spring. Stop cutting in April and leave until July/August of Year 1 for the first main cut.
Management cutting once established	1	Year 1 - 30	After flowering in July or August cut the grassland to c.50mm. Leave the cuttings to dry and shed seed for 1-7 days then remove from site. Cut the re-growth through to late autumn/winter to c.50mm.
Subsequent yellow rattle sowing	1	Year 2	Following monitoring checks, should yellow rattle fail to be at least occasional in the sward, or if the species composition does not meet the criteria A, additional sowing of yellow rattle is recommended. This should follow preparation and sowing actions above, with an increased sowing rate of 1g/m ² .
Supplementary seeding	1	Year 3, 5	Following monitoring checks, if the species composition does not meet the criteria A, additional sowing of seed is recommended. Method for sowing should follow green hay methods as described above in (GH-B01) and using the Natural England TIN063.

Grassland (Medium, High, and Very High Distinctiveness) Species Lists (GH-T03)

Common Name	Scientific Name	%	Comments
Yarrow	<i>Achillea millefolium</i>	3	
Common Knapweed	<i>Centaurea nigra</i>	16	
Oxeye Daisy	<i>Leucanthemum vulgare</i>	16	
Musk Mallow	<i>Malva moschata</i>	16	
Ribwort Plantain	<i>Plantago lanceolata</i>	16	
Salad Burnet	<i>Poterium sanguisorba ssp sanguisorba</i>	16	
Meadow Buttercup	<i>Ranunculus acris</i>	7	
Yellow Rattle	<i>Rhinanthus minor</i>	5	Supplementary seeding is intended to increase this composition % within the sward once established
Wild Carrot	<i>Daucus carota</i>	5	

Other Supporting Information

Supporting Information (GH-B02)

The species list provided above is the Emorsgate Seeds EM1F 'Basic General Purpose Wild Flowers' composition. It is expected the sward of the grassland habitat will be a combination of these species, grasses and other herbs that are already present in the seedbank. The cutting regime and use of yellow rattle prescription is intended to encourage a naturally diverse grassland that meets the definition of other neutral grassland (UKHab 2.01):

1. >20% cover of broadleaved herbs and sedges;
2. >8 species per m² (including forbs, grasses, sedges and rushes);
3. > 1 grass species (at least abundant) that is not generally sown for intensive agricultural production (i.e. rye-grasses, Timothy, Cock's-foot, Meadow fescue);
4. Cover of rye-grasses and white clover is less than 30%.

What Does Success Look Like? (GH-F01)



Habitat Creation and Management – Risk Register and Remedial Measures PM-T02

Provide a site-wide risk register associated with creating, enhancing and, or, managing each habitat type. Consider your approach to delivering the BNG targets in case the management prescriptions do not deliver as expected.

Risk Identification Date	Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
22/05/2024	Other neutral grassland	Sward not meeting criteria A through species composition by Year 2	<20% cover of broadleaved herbs and sedges; <1 grass species (at least abundant) that is not generally sown for intensive agricultural production (i.e. rye-grasses, Timothy, Cock's-foot, Meadow fescue)	Prepare soil and supplementary sow yellow rattle as per management actions
22/05/2024	Other neutral grassland	Sward not meeting criteria A through species insufficient richness by Year 3 - 5	<8 species per m2 (including forbs, grasses, sedges and rushes)	Check soil nutrient and pH levels. Prepare soil and supplementary sow a species rich wildflower mix such as EM3F Special General Purpose Wild Flowers
22/05/2024	Other neutral grassland	INNS becoming established in sward in any monitoring year (failing Criteria E)	Any presence of INNS within sward	Immediate control of INNS through appropriate method for the species
22/05/2024	Other neutral grassland	Sward not meeting criteria D in any monitoring year	Cover of bracken <i>Pteridium aquilinum</i> >20% and cover of scrub (including bramble) >5%.	Mechanical removal of bracken and scrub below the trigger threshold
22/05/2024	Other neutral grassland	Sward not meeting criteria B by Year 5	Sward height is not varied <20% of the sward is less than 7 cm and < 20% is more than 7 cm	Potential remedial actions include: varying the cutting regime; supplementary yellow rattle as per management actions; supplementary wildflower mix sowing
22/05/2024	Other neutral grassland	Sward not meeting criteria E due to combined cover of species indicative of suboptimal condition in any monitoring year	Combined cover of species indicative of suboptimal condition and physical damage accounts for >5% of total area.	Potential remedial actions include: selective mechanical/chemical treatment of suboptimal plant species; exclusion fencing to prevent unauthorised vehicular access; change in machinery used for cutting

3. Monitoring Schedule

To deliver BNG, a robust strategy is critical to monitor successes and challenges. Routine monitoring informs progress and facilitates the required management plan updates at set intervals.

Monitoring Strategy

Provide details of the monitoring strategy to encourage successful implementation of the management plan (MS-B01)

A suitably qualified ecologist will undertake monitoring of habitat parcel 1 annually from years 1-5, then every 5 years. The habitat will be assessed using the Statutory Metric condition criteria, and a species list will be collected. Quadrat sampling will be used to determine number of species per m². Photos will be taken from a minimum of two fixed points. Soil sampling to be undertaken to measure nutrient and pH levels if required should criteria A not be met. Monitoring data to be kept in management file on site, and will be communicated to the management organisation annually, as well as being used for monitoring reports.

Monitoring Methods and Intervals MS-T01

Provide details of the methods you will use to adequately monitor the progress towards the targets stated in the management plan and as agreed with the Local Planning Authority.

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
Other neutral grassland	<p>To be undertaken on parcel 1.</p> <p>Undertake quadrat sampling to identify the habitat type that is establishing and then number of species per m². Collect a botanical species list across grassland to check against sown species list. Assess habitat using the condition criteria. Take photos from fixed points: TF 97656 13643 looking east; TF 97709 13679 looking southwest; any additional photos of specific areas that require remedial action to be grid referenced. Data to be kept in management file on site for interpretation by the management organisation, and used for monitoring reports.</p> <p>Soil sampling to be undertaken to measure nutrient and pH levels at Year 0, and during monitoring intervals if required should criteria A not be met. Ideal nutrient levels include: nitrogen at 0.2 to 0.7% solid dry weight, potassium at <120mg l⁻¹, phosphorus at <15mg l⁻¹. Ideal pH is between 5 and 6.5. Intervention methods such as topsoil stripping to alter soil nutrient or using pH altering chemicals (e.g. lime) is only recommended in severe cases. Data to be kept in management file on site, and used for monitoring reports.</p>	<p>Vegetation monitoring: Annually from years 1-5, then every 5 years. Surveys to be completed between May and August.</p> <p>Soil sampling: Year 0, then as required in Years 3, 5, 10, 15, 20</p>

Monitoring Reports

Following completion of habitat creation and initial enhancement works, prepare for your monitoring report for the Local Planning Authority or Responsible Body. You should monitor each habitat type comprising the BNG project. Provide sufficient detail for the reviewing authority to assess the progress. The 'Monitoring Report Template' can help you do this. The requirements and regularity with which the monitoring reports are required are at the discretion of the LPA or Responsible Body. Prepare the monitoring requirements below.

Monitoring Report Schedule MS-T02

Provide details of the person or organisation that will be responsible for submitting the monitoring reports. Also state the responsible organisation for receiving and reviewing the reports.

Organisation Responsible for Submitting the Monitoring Reports	Organisation Receiving and Responsible for Reviewing Reports
Anglian Water	Norfolk County Council

Provide details of when the monitoring surveys and reports will be undertaken and submitted. You can extend the table and adjust according to your required schedule.

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
Y1	November	By February	Report on results of initial grassland enhancement measures.
Y3	November	By February	Report on results of neutral grassland establishment, progress towards target criteria and remedial actions required.
Y5	November	By February	Report on results of neutral grassland management, progress towards target criteria and remedial actions required.
Y6-10	November (if required)	By February	Report on results of interventions in management only if remedial actions are required following monitoring visits.
Y10-29	November (if required)	By February	Report on results of ongoing management of established

			other neutral grassland only if remedial actions are required following monitoring visits during this period.
Y30	November	By February	Final report on results of neutral grassland management.

Adaptive Management

Summary of Adaptive Management Approaches (MS-B02)

Monitoring results will inform necessary management changes to promote achieving BNG targets stated in the statutory biodiversity metric and HMMP. The monitoring can pick up any unexpected, external influences. Some examples are dealing with a new plant disease, an invasive species that is thriving due to climate change, or changes to site access due to site flooding.

Regular robust monitoring, and reporting to the responsible authority, should identify issues early on. Then you can make conscious decisions to implement effective actions. If the BNG objectives are affected by external factors, it is important to agree decisions on changes to the management prescriptions and targets with the responsible authority. Following the review, record any changes in this management plan and schedule.

The effectiveness of management actions will be assessed during monitoring, and reported at the agreed intervals to inform any necessary adjustments to ensure parcel 1 is meeting the target condition. Additionally, the monitoring data will be kept in a management file on site, and will be available to the management organisation to make minor adjustments annually as required, or to enable discussions on the requirement for immediate adaptations outside of the monitoring reporting period.