



BNG Habitat Management & Monitoring Plan

River Itchen WTW

Ecosupport Ltd
K4 Keppel,
Daedalus Park,
Lee-on-the-Solent
PO13 9FX

info@ecosupport.co.uk

VAT: 228 4314 18



Report	Biodiversity Net Gain Habitat Management and Monitoring Plan
Site Name	River Itchen Water Treatment Works (WTW)
Author(s)	Shannon Dagnell MBiol (Assistant Ecologist)
Checked by	Lyndsey Barratt BSc (Hons) PGCert MCIEEM
Client	Portsmouth Water Stores
Date of Issue	5 th February 2025
Status	<i>Final</i>

Table of Contents

EXECUTIVE SUMMARY	4
1.0 INTRODUCTION	5
1.1 BACKGROUND	5
1.2 SITE LOCATION AND DESCRIPTION	5
1.3 DEVELOPMENT PROPOSALS.....	6
2.0 METHODOLOGY	8
2.1 DESK STUDY	8
2.1.1 Data Request.....	8
2.2 HABITAT ASSESSMENT	8
2.3 HABITAT DISTINCTIVENESS.....	8
2.4 HABITAT CONDITION	8
2.5 STRATEGIC SIGNIFICANCE.....	8
2.6 MITIGATION HIERARCHY	9
2.7 LIMITATIONS.....	9
3.0 EXISTING HABITATS AND DEVELOPMENT PROPOSALS.....	10
3.1 DESIGNATED SITES	10
3.1.1 Non-statutory Sites	10
3.1.2 Priority Habitats	10
3.2 HABITAT SURVEY RESULTS	10
3.2.1 Other Neutral Grassland (g3c)	10
3.2.2 Developed Land; sealed surface (u1b)	11
3.2.3 Building (u1b5).....	13
3.3 BASELINE CONDITION ASSESSMENT	13
4.0 PROPOSED CREATED HABITATS & NET GAIN ASSESSMENT	16
4.1 ON-SITE PROPOSALS	16
4.1.1 Non-Linear Habitats	16
4.2 METRIC CALCULATION	20
4.3 MITIGATION HIERARCHY	20
5.0 HABITAT MANAGEMENT	21
5.1 PROTECTION OF RETAINED HABITATS	21
5.2 OTHER NEUTRAL GRASSLAND	21
5.2.1 Retained Parcel	21
5.2.2 Management	21
5.2.3 Enhanced Parcel.....	22
5.2.4 Proposed Planting	22
5.2.5 Management	22
5.3 COMPLIANCE CHECK	23
5.4 SAFEGUARDING	23
5.5 POST-CONSTRUCTION HABITAT CREATION	23
5.6 MANAGEMENT RESPONSIBILITIES	23
5.7 YEARS 2 – 30 MANAGEMENT / MONITORING TABLE.....	26
6.0 CONCLUSION	28
7.0 REFERENCES	29

8.0 APPENDIX 30

EXECUTIVE SUMMARY

Ecosupport Ltd. were commissioned by Portsmouth Water Stores to undertake a Biodiversity Net Gain Assessment at 'River Itchen Water Treatment Works (WTW), Southampton' and detail the results of this assessment within a Habitat Management and Monitoring Plan. This is to satisfy the statutory requirements for developers to deliver a Biodiversity Net Gain (BNG) of at least 10% and ensure that habitats for wildlife are left in a measurably better state than they were before the development.

The purpose of this BNG assessment is to quantify the biodiversity value of the site prior to its development and the predicted value post development. This is measured in biodiversity units, calculated according to the habitats present based on their size, distinctiveness and condition. This enables the quantitative calculation of the predicted change in biodiversity value as a result of the proposed development, with the objective of achieving a net gain in biodiversity.

The on-site condition assessment was undertaken by SLR Consulting Limited on the 21st May 2024, following the UK Habitat Survey (UKHab) Methodology and the Statutory Biodiversity Metric calculation tool (DEFRA, 2024) was used to calculate biodiversity losses and gains.

Following the incorporation of the above measures into the DEFRA Statutory Biodiversity Metric, ***on site there is a net gain of 14.98% in area habitats (or +0.18 habitat units) and the trading rules are satisfied (Fig 9)***. As the targeted 10% net gain has been achieved on site, no further compensation will be required.

1.0 INTRODUCTION

1.1 Background

Ecosupport Ltd. were commissioned by Portsmouth Water Stores to undertake a Biodiversity Net Gain Assessment at 'River Itchen Water Treatment Works (WTW), Southampton' and detail the results of this assessment within a Habitat Management and Monitoring Plan.

The purpose of the Biodiversity Net Gain (BNG) assessment is to quantify the biodiversity value of the site prior to its development, and the predicted value post development and produce a report in order to discharge condition 1 of the decision notice and align with the Environment Act 2021, Schedule 14.

'Environment Act 2021 - The development hereby approved shall not be brought into use until details of how the development will achieve a biodiversity net-gain of at least 10%. The base date for measuring this improvement shall be from the date of submission of the planning application and details shall include a timescale for the implementation of the proposed measures and their future management. The development shall be carried out in accordance with the approved details.'

This is measured in biodiversity units, calculated according to the habitats present based on their size, distinctiveness and condition. This enables the quantitative calculation of the predicted change in biodiversity value as a result of the proposed development, with the objective of achieving a net gain in biodiversity.

This report will also address how habitats will be enhanced and created to achieve a net gain in biodiversity units and how these habitats will be managed and monitored for at least 30 years. The following points will be covered (DEFRA, 2023a):

- How off-site gains and / or significant on-site enhancements will be managed, taking into account any legal restrictions and requirements,
- When and how habitats will be monitored,
- When and how monitoring results will be reported,
- When and how management proposals will be reviewed,
- How habitats will be restored if the management plan is not working.

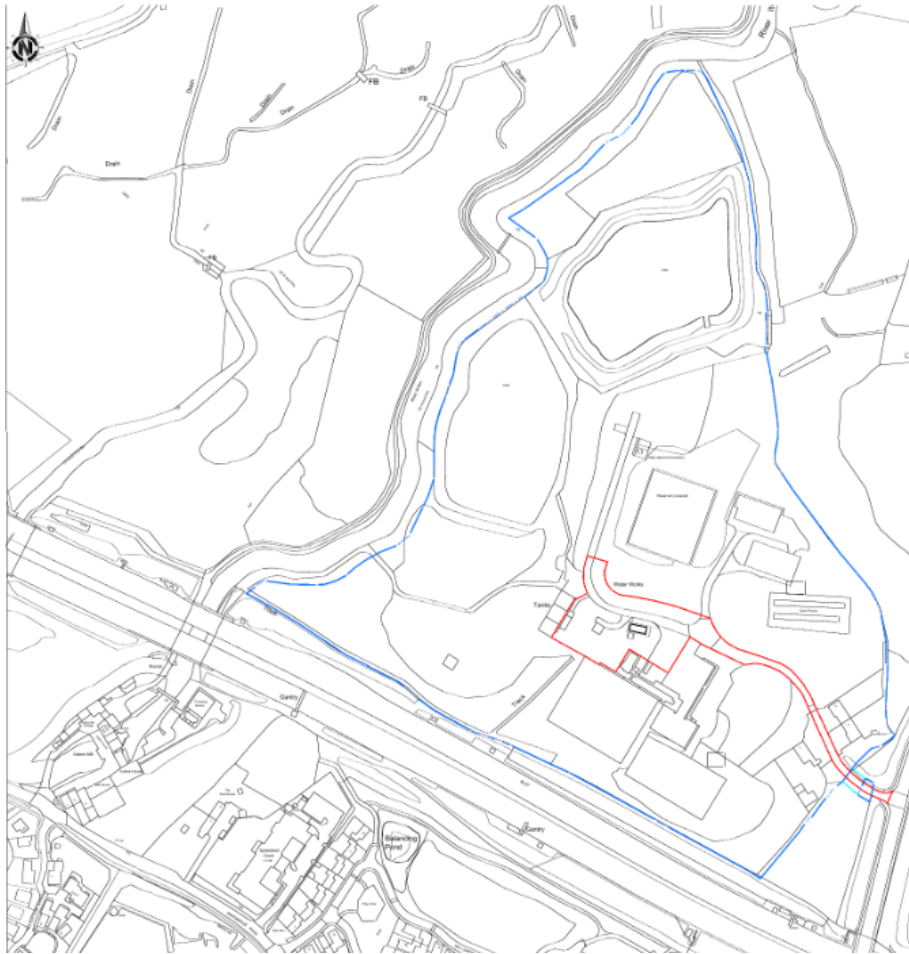
This report should be read in conjunction with the associated Statutory Biodiversity Metric (Ecosupport Ltd./SLR Consulting., 2025) and the associated Preliminary Ecological Assessment (PEA) report (SLR Consulting Ltd., 2024).

1.2 Site Location and Description

The site comprises grassland, treatment buildings, hardstanding roads and car parking located at River Itchen Water Treatment Works (WTW), Allington Lane, Southampton, SO30 3HQ (centered on OS grid reference SU 45786 15668) (**Fig 1**). Vehicles access this car park from Allington Lane. The site operates as a WTW. Mature and immature trees are present within the grassland area. The north, east and west of the site is bound by grassland, equestrian fields, woodland and Itchen Valley Country Park. Directly to the south of the site runs the M27 and further south is largely residential. The wider

environment is quite rural, although the urban residential area of Southampton is also present within this area.

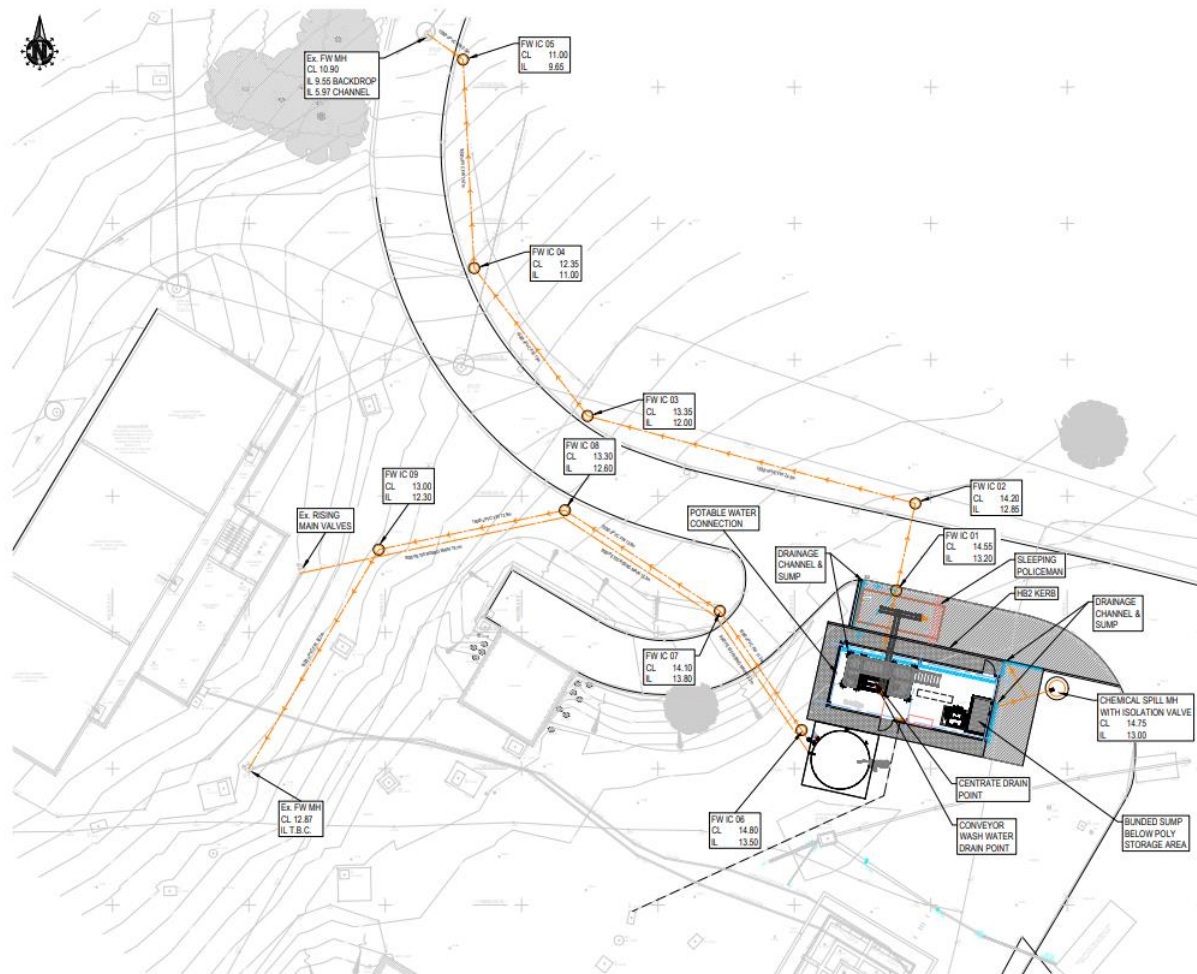
Figure 1. Redline boundary of the site (Godsell Arnold Partnership Ltd, 2024).



1.3 Development Proposals

The proposals entail the construction of a centrifugal processing plant. This will include the development of a novel permanent building, a balancing tank, a sludge cake skip and hard standing to allow for temporary pallet storage (**Fig 2**). The purpose of this proposal is to for it to be responsible for the sludge produced from the water treatment process.

Figure 2. Proposed Development Plan (Godsell Arnold Partnership Ltd, 2024).



2.0 METHODOLOGY

The methodology for the assessment follows the Natural England Statutory Biodiversity Metric habitat condition assessment protocols and uses the Statutory Biodiversity Metric calculation tool to calculate biodiversity losses and gains (DEFRA, 2024).

2.1 Desk Study

2.1.1 Data Request

Records of protected and notable species, statutory and non-statutory sites present within 1km of the site were requested from Hampshire Biodiversity Information Centre (HBIC) by SLR Consulting Ltd. Records produced within 10 years were utilised. The Multi-Agency Geographic Information for the Countryside (MAGIC) was also used to check for European Protected Species Licences received within 2km (4km for bats) of the site by SLR Consulting Ltd.

2.2 Habitat Assessment

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey using Habitat Definitions Version 2.01 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation. A condition assessment was carried out on site by Giselle Hynes ACIEEM, Senior Ecologist at SLR Consulting Limited, on the 21st May 2024. This followed the UK Habitat Survey methodology. SLR Consulting Ltd mapped these habitats using the fine scale minimum mapping unit MMU, in accordance with the UK Habitat Classification User Manual. The dominant habitat type was selected, according to those defined by UKHab Ltd (2023). Where there was disparity between the UK classification for habitat type and those present within the Statutory Biodiversity Metric calculator tool, this was noted within the condition assessment tables.

2.3 Habitat Distinctiveness

Each habitat was assigned a score for distinctiveness, according to the Statutory Biodiversity Metric calculator tool (DEFRA, 2024). This ranged from Poor - High for most habitats, or Not Applicable (e.g. Developed Land – Sealed Surface). Using the tool, habitats were assigned a score based on their distinctiveness.

2.4 Habitat Condition

The condition of each habitat was assessed following criteria set out in the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024), which includes detailed assessment criteria for different habitats. Full results of the condition assessments can be found within **Section 3.0**. The condition of each habitat was assessed individually on site but, where the condition was found to be the same across several parcels, these were grouped together.

2.5 Strategic Significance

Each habitat was assigned a strategic significance in line with the Statutory Biodiversity Metric User Guide (DEFRA, 2024). All baseline and post-development habitats on site were listed as 'area not in the local strategy'.

2.6 Mitigation Hierarchy

The proposed development has been designed to follow the biodiversity gain hierarchy as described in paragraph 186 (a) of the National Planning Policy Framework (DLUHC) which sets out a list of priority actions when achieving a net gain on site:

- avoiding adverse effects of the development on onsite habitat with a habitat distinctiveness score, applied in the biodiversity metric, equal to or higher than six;
- so far as those adverse effects cannot be avoided, mitigating those effects;
- so far as those adverse effects cannot be mitigated, habitat enhancement of onsite habitat;
- so far as there cannot be that enhancement, creation of onsite habitat;
- so far as there cannot be that creation, the availability of registered offsite biodiversity gain;
- so far as that offsite habitat enhancement cannot be secured, purchasing biodiversity credits.

2.7 Limitations

SLR Consulting Ltd have stated that all areas of the site were accessible and since the survey was conducted in May, it was carried out within the optimal season for vascular flowering plants. Despite this, the list of species on site was not exhaustive and therefore some species may have been missed. However, this is not considered to have impacted the results of the assessment, since the results include the dominant species and allowed a good representation of the habitats on site to be gained.

3.0 EXISTING HABITATS AND DEVELOPMENT PROPOSALS

3.1 Designated Sites

No designated sites were found to be on site, however, there were two designated sites within 2km of the site; River Itchen, SSSI (1006614) and River Itchen, SAC (UK0012599).

3.1.1 Non-statutory Sites

The site is not a non-statutory ecological site, however there are twelve Sites of Importance for Nature Conservation (SINCs) within 1km of the site; Itchen Valley Country Park, Portsmouth Water Company Lagoons and Woodland, Dummers Copse North, Dummers Copse South, IVCP South Parkland East, Itchen Valley Nature Reserve, Marlhill Copse and Meadow, Itchen Valley Field 27, Mansbridge Reservoir, Hatch Grange Meadows, Withybed Covert/Ridgeway Copse and West End Copse.

3.1.2 Priority Habitats

Deciduous woodland borders the south of the site. Within 500m of the site there is ancient woodland, coastal and floodplain grazing marsh, lowland meadows and deciduous woodland.

3.2 Habitat Survey Results

The habitats on site were categorised according to UK Hab Ltd. Habitat Definitions Version 2.0 (2023) as listed below (please refer to the **baseline habitats map (Appendix 1)** for information on the locations of these habitats on site):

- Other Neutral Grassland (g3c)
- Developed land; sealed surface (u1b)
- Building (u1b5)

3.2.1 Other Neutral Grassland (g3c)

The report written by SLR Consulting Limited noted two areas of other neutral grassland, one section present to the north and the other to the south of the road to the west (**Fig 3 & 4**). It was noted the sward was tussocky and patches of bare ground existed. The species present on site included: False oat-Grass (*Arrhenatherum elatius*), Creeping Buttercup (*Ranunculus repens*), Dandelion (*Taraxacum officinale*), White Clover (*Trifolium repens*), Yorkshire Fog (*Holcus lanatus*), Bristly Ox-tongue (*Helminthotheca echioides*), Bird's-foot Trefoil (*Lotus corniculatus*), Prickly Sow Thistle (*Sonchus asper*), Field Madder (*Sherardia arvensis*), Ragwort (*Senecio jacobaea*), Broad-leaved Dock (*Rumex obtusifolius*), Common Field Speedwell (*Veronica arvensis*) and Herb Robert (*Geranium robertianum*).

Figure 3. Other neutral grassland (taken May 2024).



Figure 4. Other neutral grassland patch (taken May 2024).



3.2.2 Developed Land; sealed surface (u1b)

A treatment pool linked to the existing water treatment was present (**Fig 5**). A tarmac road ran east to west across the majority of the site (**Fig 6**). The species present on the edge of the road included: Starwort (*Stellaria graminea*), Red fescue (*Festuca rubra*) and Yarrow (*Achillea Millefolium*).

Figure 5. Treatment pool (taken May 2024)



Figure 6. Tarmac road present across the site (taken May 2024).



3.2.3 Building (u1b5)

One single storey building was present on site (**Fig 7**). This was a concrete build with a metal roof and it appeared to be well-sealed.

Figure 7. Single-storey building (taken May 2024).



3.3 Baseline Condition Assessment

The following tables provide detail as to the condition assessments undertaken of the non-linear (**Table 1**) habitats present on site with reference to the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024).

Table 1. Existing non-linear habitats present on site including details as to their condition and the condition assessment criteria that have been met / failed as per the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024).

Habitat Type	Area (ha)	Condition	Condition Assessment Notes	Strategic Significance	Parcel Reference
Other neutral grassland (g3c)	0.095	Poor	This section of other neutral grassland was not a good representation of its habitat type. Sward height was somewhat varied and although there were patches of bare ground, this was lower than 5%. Bracken was not noted to be present on site. Specifically, criteria B, C and D were met. Essential criteria A was not met.	Area/compensation not in local strategy/ no local strategy	Present to the north
Other neutral grassland (g3c)	0.209	Poor	This section of other neutral grassland was not a good representation of its habitat type. Sward height was somewhat varied and bracken was not spotted on site. Specifically, criteria B and D were met. Essential criteria A was not met.	Area/compensation not in local strategy/ no local strategy	Present to the south
Built linear features (u1e)	0.206	N/A -Other	-	Area/compensation not in local strategy/ no local strategy	Present across the site, west to east.
Other developed land (u1b6)	0.068	N/A - Other	-	Area/compensation not in local strategy/ no local strategy	North-west, west and south east of the site, respectively.

Building (u1b5)	0.005	N/A - Other	-	Area/compensation not in local strategy/ no local strategy	Among the southern parcel of other neutral grassland.
-----------------	-------	-------------	---	--	---

4.0 PROPOSED CREATED HABITATS & NET GAIN ASSESSMENT

4.1 On-Site Proposals

Following consultation with Portsmouth Water Stores, in order to minimise the loss of biodiversity on site, the following habitats are being enhanced, retained and created. Tables have been provided as appropriate to indicate the targeted condition for each of the habitat types and which criteria will need to be met in order to achieve the desired condition.

Section 5.0 details the proposed planting and ongoing management required to ensure the stated condition criteria are met for each habitat type. This report (including planting and management specifications) has been prepared in conjunction with SLR Consulting Ltd and Godsell Arnold Partnership Ltd, based on their 'Centrifuge Building Area for BNG Enhancement' plan.

4.1.1 Non-Linear Habitats

Table 2 indicates the habitats to be enhanced, retained and created on site with details provided, where appropriate, as to how the necessary condition criteria will be met.

Table 2. Non-linear habitats to be retained, enhanced and created on site including details as to the condition assessment criteria that must be met in order to achieve the targeted condition (the necessary planting and management required to achieve the stated condition criteria is detailed in **Section 5.0**).

Habitat Type	Action	Area (ha)	Target Condition	Condition Assessment Notes	Strategic Significance	Parcel Reference - Location Notes
Other neutral grassland (g3c)	Enhanced	0.095	Moderate	The poor condition other neutral grassland currently on site will be enhanced to moderate condition by planting Emorsgate EM3 Special General Purpose Meadow Mix. Specific management strategies will be implemented to maintain species diversity and reduce the growth of weeds. This management will ensure the cover of bracken, scrub and bare ground is kept to a minimum. Specifically, Criteria A, C, D and E will be met.	Area/compensation not in local strategy/ no local strategy.	Situated to the north of the site.
Developed land; sealed surface	Created	0.014	N/A – Other	No condition assessment is required as per The Statutory Biodiversity Metric calculation tool (DEFRA, 2024).	Area/compensation not in local strategy/ no local strategy.	Hard-standing to be created in a central location on site.
Building (u1b5)	Created	0.007	N/A - Other	No condition assessment is required as per The Statutory Biodiversity Metric calculation tool (DEFRA, 2024).	Area/compensation not in local strategy/ no local strategy.	Present centrally to the site

Other neutral grassland (g3c)	Retained	0.188	Poor	This parcel of other neutral grassland will be retained in poor condition. Therefore, the management strategies currently carried out will be maintained. Specifically, criteria D will continue to be met.	Area/compensation not in local strategy/ no local strategy.	Retained parcel to the south of the site.
Built linear features (u1e)	Retained	0.206	N/A- Other	No condition assessment is required as per The Statutory Biodiversity Metric calculation tool (DEFRA, 2024).	Area/compensation not in local strategy/ no local strategy.	Retained across the site from west to east.
Other developed land (u1b6)	Retained	0.068	N/A -Other	No condition assessment is required as per The Statutory Biodiversity Metric calculation tool (DEFRA, 2024).	Area/compensation not in local strategy/ no local strategy.	One is being retained to the south-west of the site and the other to the south-east of the site.
Building (u1b5)	Retained	0.005	N/A -Other	No condition assessment is required as per The Statutory Biodiversity Metric calculation tool (DEFRA, 2024).	Area/compensation not in local strategy/ no local strategy.	Present among the southern parcel of other neutral grassland.

Approximately 2 years ago Portsmouth Water's Biodiversity Specialist decided to remove the non-native amenity planting around the water quality monitoring building, which is now next to the new centrifuge building (**Fig 8**). This was due to it being non-native, overgrowing into the surrounding grassland areas and overshadowing the operational building. Scrub/hedging was not replanted as the wider site has an abundance of scrub in more suitable areas which are actively managed for conservation. Onsite would be less suitable as a result of reduced connectivity for wildlife and the potential future need to access the building on site.

Figure 8. View of the non-native scrub removed from the site 2 years ago.



4.2 Metric Calculation

Following the incorporation of the above measures into the DEFRA Statutory Biodiversity Metric, **on site there is a net gain of 14.98% in area habitats (or +0.18 habitat units) and the trading rules are satisfied (Fig 9)**. As the targeted 10% net gain has been achieved on site, no further compensation will be required.

Figure 9. Screenshot of the 'headline results' output from the BNG assessment undertaken for the site using the DEFRA Statutory Biodiversity Metric.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	0.18	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	14.98%	
		Hedgerow units	0.00%	
		Watercourse units	0.00%	
Trading rules satisfied?			Yes ✓	
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	1.22	1.34	0.00
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

4.3 Mitigation Hierarchy

The proposed habitat enhancement, retention and creation described in the above sections follows the Biodiversity Gain Hierarchy as detailed within paragraph 186 (a) of the National Planning Policy Framework (DLUHC, 2023). The below sections cover each of the elements of the hierarchy and how we have sought to address them:

- **Avoid:** The entire section of other neutral grassland in the north is being retained and only 0.021 hectares in the southern parcel will be lost, the rest is to be retained. This is beneficial because these are the habitats of the highest value on site.
- **Mitigate:** The northern parcel will be enhanced from poor to moderate condition other neutral grassland. Enhancing the condition will increase the species diversity and thereby augment the ecological value of the parcel, since it provides more opportunity for foraging wildlife.
- **Offset:** It has been possible to achieve a 10% net gain for biodiversity on site and, as outlined above, the Biodiversity Gain Hierarchy has been followed when addressing the BNG requirements for the site.

5.0 HABITAT MANAGEMENT

This section provides an outline of the habitat management prescriptions required to retain, enhance and create the proposed habitats within the site and meet the desired condition criteria for the purposes of delivering biodiversity net gain.

5.1 Protection of Retained Habitats

All of the habitats to be retained or enhanced will be protected from damage during the works. The other neutral grassland will be fenced using Heras fencing or similar to prevent access by machinery.

No vehicles will enter the protective ring fencing and no materials will be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on site, before the commencement of any works, and will remain in place until all work is completed. If necessary, protective matting will be installed around the construction area for footpaths in order to prevent damage to the surrounding grassland. These measures will minimise the level of disturbance within the retained / enhanced habitat areas during the works and ensure the habitats and any wildlife species that may be using them are protected.

5.2 Other Neutral Grassland

5.2.1 Retained Parcel

The majority of the southern parcel of poor condition other neutral grassland is set to be retained. The SLR Consulting Ltd report suggests that this parcel is highly managed through regular mowing. Criteria D will continue to be met, which means the cover of Bracken and scrub must be kept minimal through regular management.

5.2.2 Management

Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses, which would otherwise out-compete the wildflowers. Regular mowing can occur as necessary, maintaining the prior management strategy, as outlined by SLR. A 'cut and collect' approach is to be adopted, thereby all arisings will immediately be removed from the site.

First Year Management: Regular mowing should take place to control the growth of weeds and thereby ensure the wildflower species are not outcompeted.

Management Once Established: As regular mowing is necessary within the southern parcel, the sward height must be kept low to ensure it is unsuitable for ground nesting birds and reptiles. Therefore, regular mowing should maintain a sward height of less than 15mm. This is important because reptiles will be commuting within taller grassland during the summer and nestlings will not fledge until late July.

Targeted scrub and bracken removal will also need to be carried out, as necessary, to prevent encroachment into the grassland. This removal should occur when scrub is present on more than 5% of the total grassland area. This management must be undertaken outside of the nesting bird season (this season spanning February – August, inclusive) (Natural England 2015).

5.2.3 Enhanced Parcel

The northern parcel of other neutral grassland will be enhanced from poor to moderate condition. Currently, criteria A, E and F have not been met. In order to enhance the grassland, criteria A and E will be met through the management strategies outlined below. The meadow mix will introduce further indicator species, satisfying Criteria A and all invasives must be removed if they begin to establish to satisfy Criteria E.

5.2.4 Proposed Planting

The northern grassland parcel will be re-seeded with Emorsgate EM3 Special General Purpose Meadow Mix. Following the mixture specifications, prior to sowing, it is important that a good quality seed bed is reached and that the growth of undesirable species is fully controlled and minimal. Undesirable species can include: Broad-leaved dock (*Rumex obtusifolius*), Common nettle (*Urtica dioica*), Creeping buttercup (*Ranunculus repens*) and Creeping thistle (*Cirsium arvense*). Following the removal of such undesirables, mow as short as possible, using a strimmer if it is required to cut shorter. Allow the surface vegetation to be buried as best as is possible and ensure the surface is firm before seeding. The EM3 seed will be sowed in autumn or spring when the weather conditions are suitable (warm and moist). This can be surface sown by hand or using machinery. Optimally, the seed will be divided into two or more parts and sown in overlapping sections and will be firmed by treading. Different sections of the grassland parcel should be mown at different times in order to maintain sward height variation and to encourage species diversity. This management technique also reduces the growth of sub-optimal species.

5.2.5 Management

First Year Management: Weed growth will quickly follow seed sowing, however, these weeds provide shelter to saplings and will naturally die before the end of the year. As a result, these do not need to be cut until late summer. All weeds cut towards the end of the year should be removed from the site. Mowing can then be carried out as required until the end of March.

Management Once Established: The parcel management will be split into two. The curved section of the grassland in closer proximity to the woodland offsite will be cut once every 2-3 years in Autumn. This provides opportunity for the flowers to grow and set seed and for a taller sward to be maintained for commuting wildlife. The remainder of the northern other neutral grassland parcel will undergo one cut per year in late August to September. This is important to ensure all nestlings have fledged, this occurring in July. The first cut should be done with a scythe, petrol strimmer or tractor mower. As mentioned above, a 'cut and collect' approach is to be adopted, thereby all arisings will immediately be removed from the site. Weeds will be removed as needed. A rotational cutting routine should be followed to allow sward height variation. Sward height variation is defined as 20% of the grassland being below 7cm and 20% being above (DEFRA (2024). The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology). The parcel can be split into two and follow rotational cutting. This will mean half is cut to above 7cm in height, the other half is cut below 7cm in height (Lincolnshire Wildlife Trust).

Targeted scrub and bracken removal will also need to be carried out, as necessary, to prevent encroachment into the grassland. This removal should occur when scrub is present on more than 5% of the total grassland area. This management must be undertaken outside of the nesting bird season

(this season spanning February – August, inclusive) (Natural England 2015). If a large quantity of scrub is to be removed, this should be checked immediately prior by a qualified ecologist to check for the presence of hibernating Hazel Dormice.

5.3 Compliance Check

A compliance visit will be completed by a suitably qualified ecologist once the construction phase of the development has been completed. The check will be conducted annually for the first 5 years post-completion, and every 5-years thereafter until year 30. The compliance check will be carried out between April and September and when it is relatively dry, although not within a drought. The ecologist will check the condition of all of the habitats on site to assess if they have been achieved and make an assessment if any recommended changes are required to management.

On completion of the visit, a Biodiversity Net Gain (BNG) monitoring report will be compiled (**see Appendix 3**), including the following:

- Assessment of habitats against the objectives defined in this management plan;
- Any presence of target species noted during the compliance check;
- Date stamped photographic evidence taken from fixed monitoring points, of which will be the central point of each land parcel per habitat type as listed in **Section 4.0**, during the first compliance check after the construction phase;
- Detailed site notes including a condition assessment for each habitat type listed in **Section 4.0** (where appropriate) using the condition criteria within the Technical Annex 1 (DEFRA, 2024);
- Detailed specific recommendations on management actions to promote growth and establishment of target species / habitats including timescales for undertaking actions (if required) and marked site plans to show the actions;
- Management of the above recommended actions must be carried out in the next phase and report of any details;
- Each BNG monitoring report will be written up in accordance with the BNG Habitat Monitoring Report template provided by Natural England (2023) and will be sent to the LPA.

5.4 Safeguarding

The developer and project manager will be responsible for briefing all site personnel of the ecological sensitivities of the site and implementing the habitat enhancement, creation and management measures outlined within **Sections 4.0 & 5.0**. If any protected species are encountered during the construction works, it will be the responsibility of the project manager to cease works and immediately contact an ecologist for advice.

5.5 Post-Construction Habitat Creation

Table 3 below depicts the indicative timings associated with the habitat creation and enhancements to be undertaken after all construction works on site have been completed. This is considered to be year 1 of the management plan.

5.6 Management Responsibilities

Portsmouth Water Stores will assume responsibility for the management and maintenance of the newly created and enhanced habitats. When required, responsibility will include ensuring all

management works are completed and qualified ecologists, arborists or landscape managers are contracted, etc. If the land is to be transferred, the new landlords shall bear responsibility for the management and maintenance of habitats within their curtilage. If not, the responsibility shall remain with Portsmouth Water Stores. All management works as described above will need to be secured by a Section 106 agreement for the site that will legally oblige Portsmouth Water Stores or other agreed party to carry out the works. An annual management timeline of all habitats has been provided in **Table 4** and management works should continue in perpetuity.

A formal review process will be implemented when objectives and management recommendations are not reached / roles and responsibilities are not fulfilled as agreed. The details of this formal review process are as below:

- A suitably qualified ecologist will visit the site to conduct the compliance check (detailed in **Section 5.3**);
- The compliance check will include the write up and submission of a BNG Habitat Monitoring report;
- The ecologist will review the success for BNG that the previous recommendations or management actions have for the target species / habitats;
- The project manager is contacted by the ecologist and is informed of the recommendations or management actions which have not been fulfilled to identify what or who is responsible;
- The BNG Habitat Monitoring report will include a section addressing any raised issues identified during the compliance check;
- The BNG Habitat Monitoring report is submitted to the LPA for review and comment.

Table 3. Schedule of habitat retention, enhancement and creation works to be carried out in first year (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Habitat Protection (Section 5.1)	Installation of Heras fencing and protective matting	Anytime (pre-commencement)	- Heras fencing to be erected around all habitats to be retained / enhanced to prevent these areas from being damaged during works. - Protective matting will be installed as required within the construction area for the footpaths to prevent lasting damage of retained grassland areas.
Habitat Retention Other Neutral Grassland (Section 5.2.1)	Year 1 Management	As required Scrub removal : September – January	- Weeds will be controlled when necessary through mowing or the use of hand-held tools when able. - Mow as necessary, maintaining a height below 15mm. - Scrub and bracken removal in late autumn/winter
Habitat Enhancement Other Neutral Grassland (Section 5.2.3)	Planting	Ideally Autumn or Spring, when the weather is warm and moist.	- Establish the enhanced grassland through the sowing of Emorsgate EM3 – Special General Purpose Meadow Mix. - Firm the seed by treading.
	Year 1 Management	Late Summer	- Weeds should only be cut in late summer and removed from the site. - Mowing as required until late March, cutting to 50mm.

5.7 Years 2 – 30 Management / Monitoring Table

Once the initial works covering the first year of management / monitoring have been completed as outlined in **Table 3**, the longer-term management objectives for the ecological features on site will need to be implemented (which have been outlined in detail in the above sections). **Table 4** below provides an overview of the actions required and the timings of when they should be complete (covering years 2– 30 post construction).

Table 4. Schedule of monitoring and management in Years 2 – 30 for all habitats (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Other Neutral Grassland (Section 5.2.1)	Years 2-30 Management	Twice annually	Mow regularly to maintain a sward height of below 15mm.
	Removal of undesirable species	Late September – October	Targeted scrub, Bracken and invasive species removal will be carried out as necessary.
Other Neutral Grassland (Section 5.2.3)	Years 2-30 Management	Twice annually	- Cornered section: Cut every 2-3 years in late Autumn. - Remaining section: Cut once per year in late August. - Maintain a varied sward height (half above 7cm, half below 7cm).
	Removal of undesirable species	Late September – October	Targeted scrub, Bracken and invasive species removal will be carried out as necessary.
Compliance Check (Section 5.4)	Monitoring report	Annually for the first 5 years, then every 5 years until year 30 Must be conducted during a suitable time of year and when the weather conditions are suitable	- A report will be produced detailing assessment of habitats against criteria stipulated in Section 4.0 and any necessary remedial actions or adjustments to ongoing management. - The report will be submitted to the LPA. - Any necessary actions must then be completed prior to the next compliance check.

6.0 CONCLUSION

In conclusion, a Biodiversity Net Gain Assessment was carried out by SLR Consulting Ltd at the River Itchen WTW site, with regards to the proposal to create a new centrifugal processing plant. This concluded that the proposed development will result in a net gain for habitats through the enhancement of the other neutral grassland from poor to moderate condition and the retention of the southern parcel of other neutral grassland. As a result, no further measures are required. This report outlines the way in which the outlined retention and enhancement have enabled the Biodiversity Gain Hierarchy to be followed. In addition, the report includes the management strategies to be followed between the first and 30th year, to ensure the habitats remain in the condition outlined. This includes how frequently and at what time of year management strategies should be implemented.

7.0 REFERENCES

DEFRA (2023a) *Creating a habitat management and monitoring plan for biodiversity net gain*. Available at: <https://www.gov.uk/guidance/creating-a-habitat-management-and-monitoring-plan-for-biodiversity-net-gain>

DEFRA (2024) *Statutory Biodiversity Metric Tools and Guides*. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

DEFRA (2024). The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.

DLUHC (2023) National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Ecosupport/SLR Consulting (2024) Statutory Biodiversity Metric River Itchen WWTW.

Emorsgate Seeds (2024) *EM3 Special General Purpose Meadow Mixture*. Available at: <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/>

Godsell Arnold Partnership Ltd (2024) River Itchen Works - Centrifuge Building Block Plan

Godsell Arnold Partnership Ltd (2024) River Itchen Works - Centrifuge Building Location Plan

Godsell Arnold Partnership Ltd (2024) River Itchen Works - Centrifuge Building Site Layout Services

Godsell Arnold Partnership Ltd (2024) River Itchen Works - Proposed Location Plan_modified

Lincolnshire Wildlife Trust. Illustrated guide to managing neutral pasture for wildlife. Technical Information Note TIN088. Available at: https://www.lincstrust.org.uk/sites/default/files/2018-03/illustrated_guide_to_managing_neutral_pasture_for_wildlife.pdf

Natural England (2023) *BNG Habitat Monitoring Report Template*. Available at: <https://publications.naturalengland.org.uk/publication/5813530037846016>

Sarah Boyd (2024) Ecology Response River Itchen Water Treatment Works, Allington Lane.

SLR Consulting Limited (2024) Preliminary Ecological Appraisal Report (PEAR) River Itchen Waste Water Treatment Works

UKHab Ltd. (2023). *The UK Habitat Classification – Version 2.0*.

8.0 APPENDIX

Appendix 1 – BNG Pre-Development Map



- Legend
-  Site Boundary
 -  Other neutral grassland (g3c)
 -  Buildings (u1b5)
 -  Other developed land (u1b6)
 -  Built linear features (u1e)



K4 Keppel, Daedalus Park
Daedalus Drive
Lee on the Solent, PO13 9FX
E: info@ecosupport.co.uk
T: 01329 832 841

Map	Pre-development Map
Site	River Itchen WTW, Southampton
Client	Rivar Ltd
Date	05/02/2025

© This map is the copyright of Ecosupport Ltd.
Any unauthorised reproduction or usage by any person is prohibited.

Appendix 2 – BNG Post-Development Layout



- Legend
-  Site Boundary
 -  Other neutral grassland (g3c)
 -  Buildings (u1b5)
 -  Other developed land (u1b6)
 -  Built linear features (u1e)
 -  Developed land. sealed surface (u1b)



K4 Keppel, Daedalus Park
Daedalus Drive
Lee on the Solent, PO13 9FX
E: info@ecosupport.co.uk
T: 01329 832 841

Map	Post-development Map
Site	River Itchen WTW, Southampton
Client	Rivar Ltd
Date	05/02/2025

© This map is the copyright of Ecosupport Ltd.
Any unauthorised reproduction or usage by any person is prohibited.

Appendix 3 – BNG Habitat Monitoring Report



Department
for Environment
Food & Rural Affairs

BNG Habitat Monitoring Report

Site Name	
Planning Reference	N/A if an off-site habitat bank
Register Reference	N/A if part of a consented planning proposal
Consent or Licence Reference	N/A if not required for your site. If required, are these permissions up to date?
Site Owner	
Author	
Date of Report	
Monitoring Year	

Consultant:

Client:

Contents

1. Introduction 1

 Survey Details..... 1

 Progress Summary 1

 Site Wide Successes and Challenges 2

 General Site Photographs MR-F01..... 2

2. Progress Towards Habitat Condition Targets..... 3

 Habitats..... 3

 Hedgerows..... 3

 Watercourses..... 3

3. Monitoring Report Conclusions 4

 Adaptive Management..... 4

4. Activity Register..... 5

Template User Guide

The biodiversity net gain habitat Monitoring Report Template (MRT) is an appendix of the Habitat Management and Monitoring Plan Template. Use it to report progress to the relevant authority, on the habitat management and monitoring, for on-site or off-site biodiversity net gain delivery.

The MRT has been produced in two parts: this Word document template and a separate Excel template. The Word template allows you to present details to evidence the progress of the monitoring. The Excel template allows you to provide the key quantitative data in a concise format, that can be efficiently collated by the relevant authority to contribute to their own reporting requirements.

To tailor the plan for your site, insert (copy and paste) the relevant standardised forms from the associated Companion Document into your MRT. The Companion Document contains templates for each broad habitat type used in the statutory biodiversity metric, assisting authors in completing the ‘Monitoring report tables’ with progress towards habitat and condition targets. (See section 3, p.127-193 of the Companion Document).

Once the report is complete, you can delete blue guidance text and write over and delete grey prompt text in this template.

Document Details

Provide ownership, copyright and licensing information within this table.

Authorship Details MR-B01

Use this box to provide any details of document ownership by the author such as company address, any relevant copyright information or map licence information.

Version Control MR-T01

Provide version control details within the table. This table should be updated for each Monitoring Report throughout the 30-year management and monitoring period.

Version	Issue Status	Prepared by / Date	Approved by / Date

1. Introduction

Survey Details

Organisation Responsible for Monitoring Surveys MR-T02	
Name or Initials	
Organisation	
Survey date(s)	
Statement of competency	
Provide a statement of competency for the person or organisation responsible for overseeing the completion of relevant surveys. See Statutory Biodiversity Metric User Guide for details of competency requirements.	
Surveys completed	
State which surveys have been completed to inform this monitoring report, referencing relevant guidance as appropriate.	
Survey conditions and limitations	
State the conditions relevant to each survey. Where limitations were encountered, discuss how they have affected the survey results and, if relevant, how these have been overcome.	

Progress Summary

Summary of Progress Made Since Implementation Period MR-B02
Provide a brief overview of habitat creation, enhancement and management measures completed to date, referring back to the Habitat Management and Monitoring Plan. Use the Activity Register in Section 4 of this template to list actions completed. If any prescriptions have not been completed as planned, state why.

Site Wide Successes and Challenges

Successes MR-B03

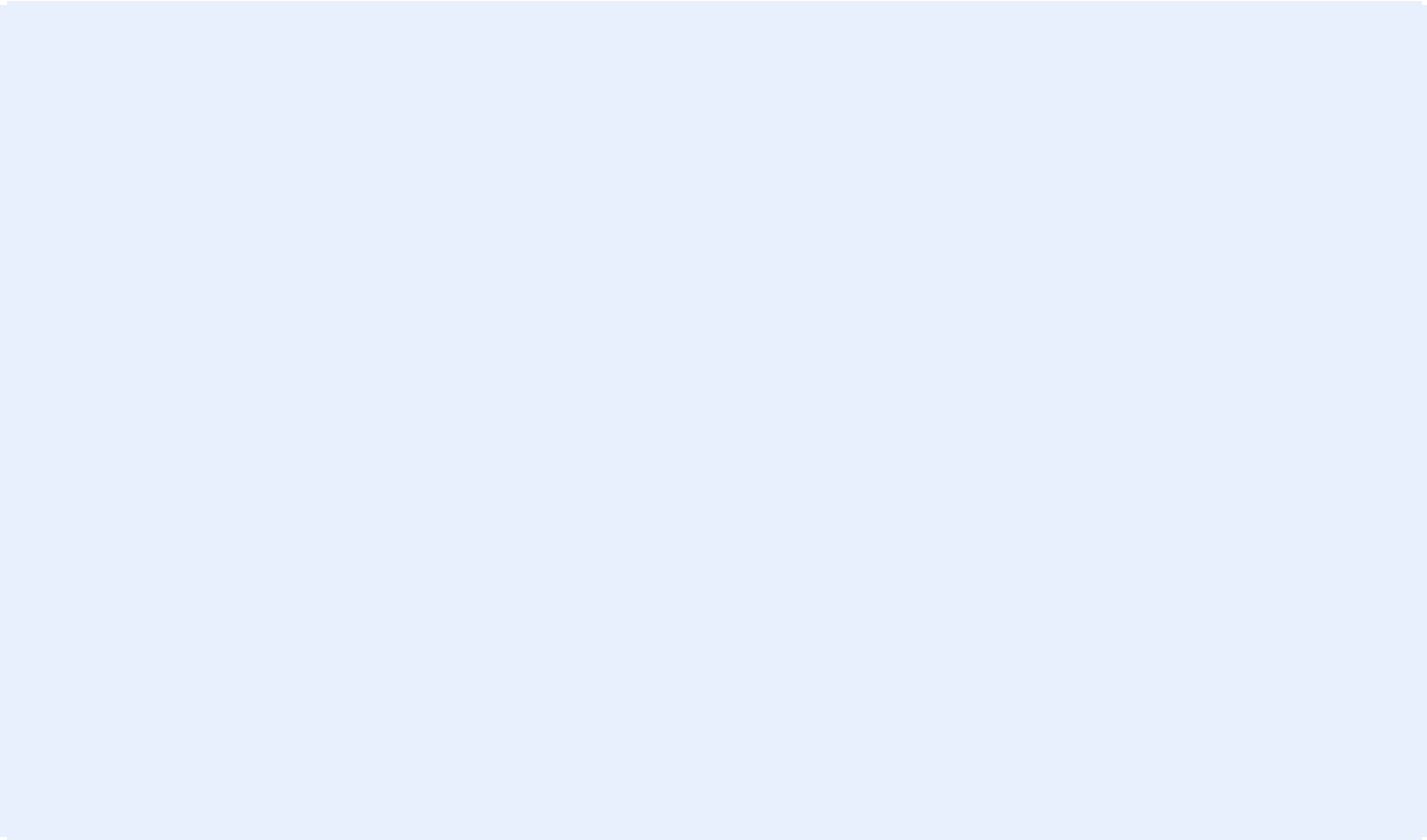
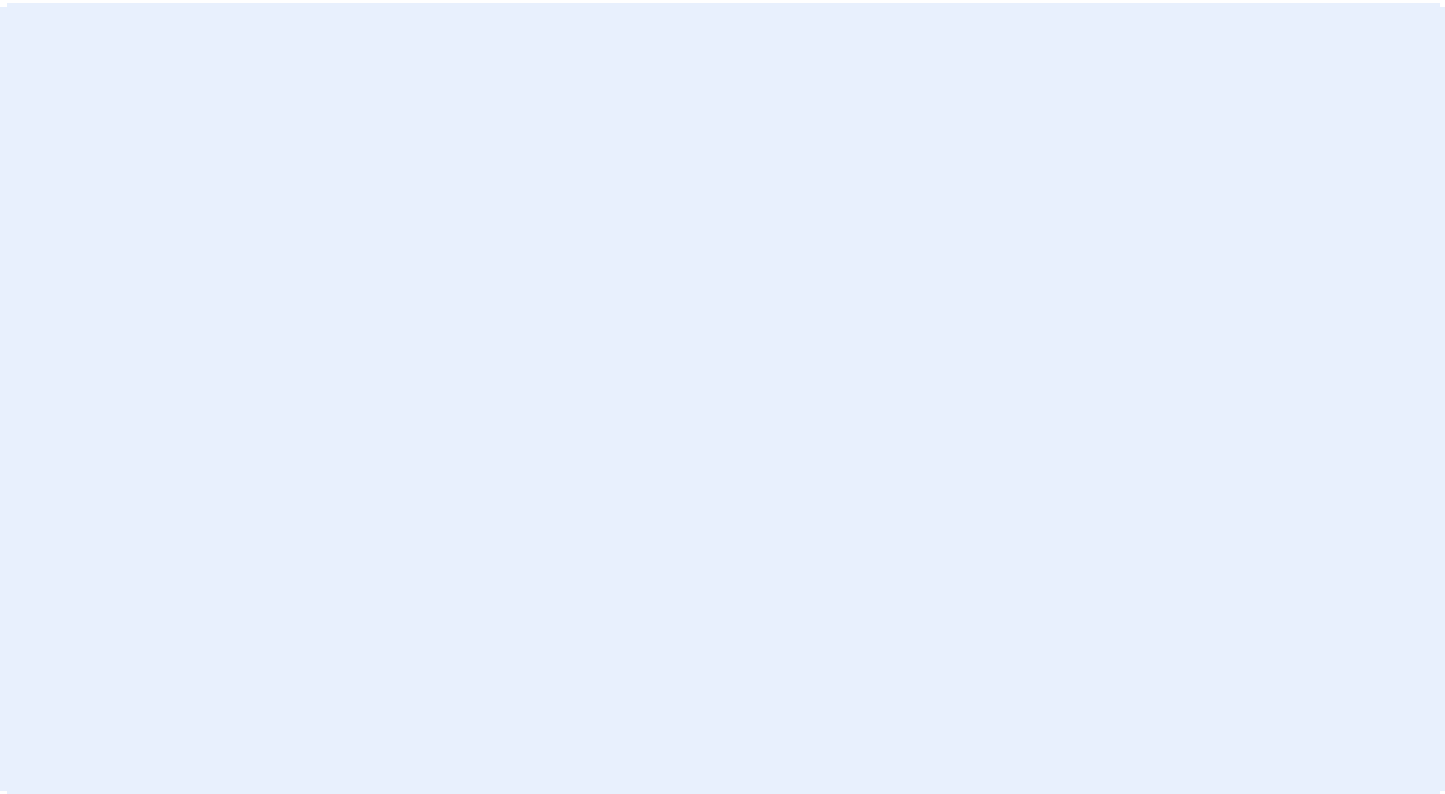
Provide a summary of the elements of the project that are progressing as intended.

Challenges MR-B04

Provide a summary of the elements of the project that are not progressing as intended and why, if known. Highlight if any adaptive management is planned and or has been implemented to overcome challenges.

State here if urgent action is required to remediate the issues, and how this will be implemented.

General Site Photographs MR-F01



2. Progress Towards Habitat Condition Targets

Provide relevant details for all habitat types covered by management plan.

Find the template tables in pages 127-189 of the **Companion Document**. Copy across and complete a table for each habitat type present within each of the following categories, as appropriate to your project.

Habitats

Hedgerows

Watercourses

3. Monitoring Report Conclusions

Provide details of actions required for the next monitoring period to continue successfully.

Key Future Actions MR-B05

Provide a list of key actions and or management prescriptions required to continue progressing towards targets or to adapt management to deliver targets. This box should provide detailed actions for the person responsible for delivering management to follow.

Adaptive Management

Are any Adaptations to the Management Plans Targets and, or, Prescriptions Required? MR-B06

Provide an overview of how any adaptive management practices have been, or are to be, implemented to continue managing the site to deliver the targets.

Provide an overview that is detailed enough for those implementing the work to understand and carry out the on-the-ground management practices.

4. Activity Register

Creation MR-T03

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Enhancement MR-T04

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Management MR-T05

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Monitoring MR-T06

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments