

Great Ayton North Yorkshire TS9 6BJ T 01642 724800 F 01642 722005 M 07498 316764 E Enquiries@ecosurv.co.uk





# Biodiversity Management and Monitoring Plan

## Game Engineering

## Witham St Hughes

**LN6 9TW** 

Prepared by

Kay Richardson BA (Hons)



#### **Document Control Sheet**

Project Title	Game Engineering, Witham St Hughes
Report Title	Biodiversity Monitoring and Maintenance Plan
Author	Kay Richardson
Reference Number	
Control Date	

#### **Record of Issue**

Issue No.	Status	Reviewer	Date		
1	Final	HC & SJ	21 <sup>st</sup> March 2024		

#### Disclaimer

This report is presented to LHL Group in respect of the proposed development at Game Engineering, Witham St Hughes and may not be used or relied on by any other person or by the client in relation to any other matters not covered specifically by the scope of this report. Notwithstanding anything to the contrary contained in the report, Ecosurv Ltd is obliged to exercise reasonable skill, care, and diligence in the performance of the services required by LHL Group and Ecosurv Ltd shall not be liable except to the extent that it has failed to exercise reasonable skill, care and diligence, and this report shall be read and construed accordingly.

This report has been prepared by Ecosurv Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

#### **Quality Assurance**

All ecologists employed on this project by Ecosurv Ltd are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's code of practice when undertaking ecological surveys and associated work, or were supervised by such a member.

All assessment is based upon, and accurate to, the information made available to Ecosurv Ltd prior to the completion of this report. Any alterations to this information at a later date will reduce the accuracy of this report, to which Ecosurv Ltd cannot be held accountable.



### Table of Contents

1	Introduction	4
	1.1 Summary	4
	1.2 Location	4
	1.3 Scheme Objectives	5
	1.4 Responsibilities	6
2	Proposed Landscaping Plans	7
1	Trends and Constraints	8
	1.1 Natural Trends	8
	1.2 Human-Induced Trends	8
	1.3 Constraints	8
2	Roles & Responsibilities	9
	2.1 Management and Maintenance	9
	Responsibility for Site Management	9
	Biosecurity	9
	Preservation of Existing and Newly Planted Trees	9
3	Habitat Creation	. 10
4	Habitat Management Prescriptions	12
5	Works Schedule	16
6	MONITORING SCHEDULE	22
	6.1 Monitoring Strategy	22
	6.2 Monitoring Methods and Intervals	. 23
	6.3 Monitoring Reports	23
7	Proposed Species / Seed Mixes	26
	7.1 Tree Planting	26
	7.2 Grass Seed Mix	26



### **1** INTRODUCTION

#### 1.1 Summary

Ecosurv Ltd were instructed by LHL Group to provide a Biodiversity Management and Monitoring Plan, for the proposed development at Game Engineering, Witham St Hughes.

The site is centred on Grid Reference SK89536271 and can be accessed by Camp Road (Figure 1). The proposals are for a new industrial unit with associated hard and soft landscaping to be constructed to the north of the existing facility. The new development will be constructed within an area of existing bare/derelict ground. The landscaping proposals incorporate new trees and amenity and species-rich grassland areas including 21no new trees to be planted within an area of scrub outside of the red line boundary, but within the client's ownership. The existing hedgerow to the north of the site will be retained and improved.

The preparation of this document has been undertaken by Kay Richardson BA (Hons). The report has been written in accordance with the CIEEM Guidelines on Ecological report writing (CIEEM, 2017) and BS 42020:2013 (BSI, 2013).

#### 1.2 Location



Figure 1. Site location plan. Red line shows the area proposed for development.

(© Crown Copyright and MAGIC database rights 2024. Ordnance Survey 100022861).





Figure 2. Satellite Image of the surveyed area. Application site boundary is shown by the red line. (Image taken from Google Earth Pro: ©2024 Map Data Google 2023).

#### 1.3 Scheme Objectives

The proposals are for a new industrial unit with associated hard and soft landscaping to be constructed to the east of the existing facility. The new development will be constructed within an area of existing bare/derelict ground.

The landscaping proposals incorporate new trees and amenity and modified grassland areas including 21no new trees to be planted within an area of scrub outside of the red line boundary, but within the client's ownership. The existing hedgerow to the north of the site will be retained and improved.



This plan (See proposed landscaping plan in section 2.) outlines the measures to be undertaken from initial habitat creation through 30 years of management to promote successful establishment and management of the habitats within a favourable condition.

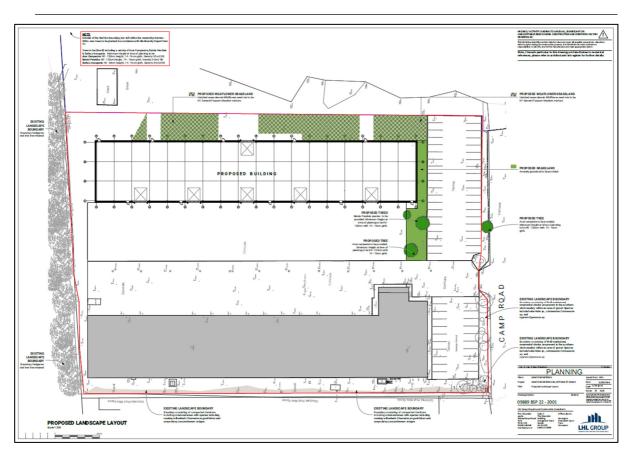
The aim of managing the landscape is to ensure that it successfully establishes and thereafter continues to function in the way it was designed. Landscape management objectives are to:

- ensure the biodiversity value of the landscape is maintained and enhanced;
- ensure the landscape is visually attractive and offers some screening and softening of the new development:
- ensure the new landscape reflects the local landscape character and blends into the surrounding area.

#### 1.4 Responsibilities

The Developer, Game Engineering will take responsibility for the monitoring and management prescriptions outlined within this plan. Such responsibility may be passed on to subsequent 3<sup>rd</sup> party management organisation, at a later stage.





### 2 PROPOSED LANDSCAPING PLANS

Figure 3. Proposed Landscaping Plans



### **1** TRENDS AND CONSTRAINTS

#### 1.1 Natural Trends

**Habitat Succession-** With inappropriate management, habitat succession through scrub and ruderal development would eventually result in the loss of the grassland habitats.

**Climate Change-** Changes in environmental conditions such as temperature and rainfall could affect the habitat range and continued survival of those notable species of flora and fauna present at the Site. Other species may also colonise the Site as a result.

**Seasonality-** Seasonality will affect the timings of when certain management and maintenance operations can be undertaken in order to minimise impacts on floral and faunal species and undertaking any hedgerow works etc. outside of the nesting bird period to ensure legal compliance.

**Water** – The sustainable and responsible use of water is a key consideration in landscape management. A balance must be struck between watering plants to help them establish and conserving water in times of drought. Close liaison between the contract administrator and contractor will ensure a satisfactory outcome is achieved.

**Plant pests and diseases** – An increase in pests and diseases has become apparent in recent years, due in part to greater globalisation of trade and the impact of climate change. Biosecurity measures will be put in place, such as planting a range of different plant genera and species; specifying British provenance stock and requesting full documentation of plant origin, consignment details, impact of pest / disease and/or plant passports.

**Timing of operations** – Hedgerow and tree works will take place outside of the bird nesting season, i.e. from October to February. In order to maximise the opportunity for birds to eat berries, hedgerow trimming will ideally take place in January / February. Removal of aquatic plants will take place during the winter months (October – January) to avoid the amphibian breeding season.

#### 1.2 Human-Induced Trends

**Disturbance**; Due to its nature, there will be increased levels of human disturbance introduced to the Site as part of the Development.

**Artificial Lighting:** The presence of excess light spill upon ecologically sensitive areas within the Site has the potential to affect the behaviors and movement of nocturnal species. The lighting strategy to be designed for the site will therefore look to minimise such impacts as far as practicable.

**Littering:** Littering and the dumping/tipping of rubbish has the potential to influence the frequency of maintenance operations on Site. However regular litter picking will be undertaken within the retail aspect of the Development. Regular inspections will also ensure the removal of any such litter and fly tipping at the earliest opportunity.

#### 1.3 Constraints

#### Landownership and Future Development

The Site is currently under the ownership of Game Engineering. Should the Site be sold, appropriate arrangements would be made to ensure that this area is also safe guarded from future development and that appropriate management continues at least for the duration of this BMMP.



### 2 ROLES & RESPONSIBILITIES

#### 2.1 Management and Maintenance

The overall responsibility for the management and maintenance operations to be undertaken at the Site will be that of the developer, Game Engineering. The habitat creation and initial implementation are to be undertaken by an appointed landscape contractor. Subsequent management and monitoring operations detailed within this BMMP will be undertaken by Game Engineering or their nominated management organisation.

#### **Responsibility for Site Management**

During the defects liability period (the 52 weeks post Practical Completion), landscape maintenance and replacement of failed planting will be completed by the appointed landscape contractor who has implemented the scheme.

Following the defects liability period Game Engineering (or their managing organisation) will be responsible for operational management and maintenance of the landscape within the Site.

Game Engineering (or their managing organisation) will require the necessary experience and certificates of competence to undertake landscape management operations on Site. Where practical, contractors with experience in biodiversity management will be sought. Game Engineering will ensure that management complies with the guidelines set out in this BMMP.

#### **Biosecurity**

Game Engineering (or their managing organisation) should have a sufficient awareness of new and ongoing biosecurity threats, and the necessary precautions to avoid their spread should be undertaken on sites where they are known or suspected.

New findings of suspected non-indigenous plant pests and diseases should be reported to the Plant Heath and Seeds Inspectorate or Forestry Commission - Forest Research Tree Health Diagnostic and Advisory Service or both.

#### Preservation of Existing and Newly Planted Trees

A restrictive covenant should be written into the deeds of the property. The covenant should restrict property owners being able to cut down, damage or remove any existing tree or hedge on the property or any other plant planted pursuant to the requirements of the public authority.



### **3 HABITAT CREATION**

Habitat Type	Description	Evaluation	Creation
Habitat Type Individual Trees	Description4no small trees to be planted within the site of which at least 80% will be native species.21no small trees to be planted within the area of scrub vegetation to the east of the development site of which at least 80% will be native species.Species mix as specified within section 7.1.	Evaluation Medium difficulty of creation. Proposed works readily achievable providing they are planted correctly and managed appropriately over the initial years of establishment.	CreationPlanting undertaken in accordance with BS8545:2014 Trees From nursery to independence in the landscape Recommendations:Container-grown trees can be planted all year round. In all cases, avoid days when the ground is frozen. In dry areas, late autumn planting is best for most species as this gives trees a chance to become established before spring droughts. In wet areas, early spring planting is best.Pit planting is the best method for large trees because it ensures plenty of room for the roots.Dig a hole big enough for all the roots to spread out. In poorer soils, dig a hole wider and deeper than needed for the roots, and partly refill. Consider adding a soil improver.Break up compacted soil to improve drainage and aerate the roots.Keep the top of the root ball level with the soil surface.
			Keep the top of the root ball level with the soil surface. Backfill and ensure a good contact between root and soil. Once the roots are covered continue treading more firmly until the hole is over-filled, leaving the soil slightly above the surrounding ground. Water the tree immediately and drench the soil with at least five litres of water. The amount will depend on the size of the tree being planted.



Grassland	Wildflower grassland to the western site	Medium difficulty of creation.	Ground preparation to include weed removal using repeated cultivation.					
	perimeter and Wildflower grassland to the		Then plough or dig to bury any surface vegetation, harrow or rake to					
	eastern perimeter of the new building.	Initial ground preparation,	produce a medium tilth, and roll, or tread, to produce a firm surface.					
	Species mix as specified within section 7.2.	sowing, initial and ongoing management of particular importance.	<ul> <li>Areas of species rich grassland seed sowing to be profiled using exiting stockpiled subsoil from elsewhere on Site (preferably from beneath areas of existing sparse vegetation, which is likely to contain a minimal existing seedbank). If subsoil is to be imported, this should be low nutrient and in accordance with BS8601:2013: (Multipurpose Grade) Specification for Subsoil.</li> <li>Following this, a minimum depth of 150mm of low nutrient topsoil would be placed on top of the subsoil in accordance with BS 3882:2015: (General Purpose Grade) Specifications for Topsoil and seeded with the proposed seed mix in two transverse directions at a sowing rate of</li> </ul>					
			4g/m2 and lightly raked. Seed to be applied by machine or broadcast by hand, then rolled or trod in to improve seed-soil contact.					
Hedgerows	Existing hedgerows currently gappy/defunct in	Low difficulty of creation.	Planting undertaken in accordance with BS8545:2014 Trees From					
Existing	some sections. Proposals comprise the enhancement of this habitat via infilling of gaps	Proposed works readily	nursery to independence in the landscape <i>Recommendations</i> .					
	with species and hedgerow trees of local provenance to produce a moderate condition native hedgerow.	achievable providing they are planted correctly and managed appropriately over the initial	Plant whips or feathered size trees with tree guards between November and March.					
		years of establishment.	Once planted cover the area around the guards with mulch to help suppress weed growth.					



### 4 HABITAT MANAGEMENT PRESCRIPTIONS

Habitat Type	Description	Initial Management (First 5 years)	Subsequent Management	Remediation
Individual Trees	<ul> <li>4no small trees to be planted within the site of which at least 80% will be native species.</li> <li>21no small trees to be planted within the area of scrub vegetation to the east of the development site of which at least 80% will be native species.</li> </ul>	Clear grass and weeds for an area of approximately 1 m in diameter around the tree and apply a layer of mulch. Bark mulch will be maintained around the base of all young plants to suppress weed growth and will be maintained to a depth of 50mm, with the finished level flush with any adjacent hard landscape. If planting is in late spring or summer, container-grown trees should be watered during dry spells for the first growing season Annual checks will be made for the first 5 years of new planting to; - Identify diseased or dead plants, which will be removed and replaced accordingly - Inspect and adjust tree guards and support system	Tree Pruning and care as required. Weed control as required. Pruning will be undertaken to clear deadwood, promote healthy growth and produce desired growth of flowers, fruit, foliage or winter colour as appropriate. Pruning will also include for clearing out crossing and damaged branches. Branches to be removed should be taken back to an outward facing node and cut cleanly approximately one inch above on a diagonal angle. Pruning will be undertaken carefully by manual means with appropriate hand tools such as secateurs or loppers; which should be regularly sharpened and cleaned after use to prevent the potential spread of disease.	Dead or diseased plants identified during annual checks to be replaced. Annual checks to look out for signs of drought stress and determine requirement for supplementary watering. Failed planting will be removed and replaced with the same species in the first five years following implementation. If there is a continuous failure of a certain species, this will be reviewed and, if appropriate, an alternate appropriate species will be planted instead.



		Weed control will be undertaken between April and September and where feasible should be undertaken by hand pulling and should remove all noxious weeds such as docks, thistles, nettles, ragwort and willowherb.		
Modified Grassland	Wildflower grassland to the western site perimeter and Wildflower grassland to the eastern perimeter of the new building.	<ul> <li><u>1st Year</u></li> <li>Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year. Carefully dig out any residual perennial weeds such as docks.</li> <li>During the 12 months following initial</li> </ul>	cutting of grass in case of extreme drought. To provide over-wintering opportunities for invertebrates, leave approx. 1/3 of each grassed areas	If a significant number of seeds fail to establish these would be replaced following consultation and review of the suitability of the seed mix Control scrub and pernicious/competitive weeds as required following the first year of management to maintain the diversity of the grassland. Should excessive weed growth continue then spot treatment with selective herbicide may be required Fertiliser application is to be avoided



I			
	seeding, water wildflower grass areas	February. For wildlife this cutting is	
	during periods of extreme drought (4 or	best done on a rotational basis so that	
	more weeks without substantial rainfall)	no more than a third of the area is cut	
	to a maximum of 15 occasions. To aid the	in any one year leaving part as an	
	natural establishment of grass areas,	undisturbed refuge.	
	only water where unavoidable, where the		
	grass is going brown and appears to be		
	suffering from severe drought stress.		
	When watering, water to field capacity		
	(minimum 20L/m2) in the morning or in		
	the evening to reduce water evaporation,		
	when the water is more likely to reach the		
	roots.		
	Veero 2 4		
	<u>Years 2 - 4</u>		
	Cut once a year in late summer/early		
	autumn (August September) once		
	flowers have set seed. Cut to a height of		
	100mm and remove arisings. Delay		
	cutting of grass in cases of extreme		
	drought. To provide over-wintering		
	opportunities for invertebrates, leave		
	approx. 1/3 of each grassed areas		
	unmown, altering the location each year.		
	Remove any noxious weeds by hand.		
	Do not apply any herbicides, pesticides,		
	or fertilisers to the grassland.		



		These areas will be subject to annual checks to ensure that the species sown are present within these areas. Invasive species i.e., Indian balsam <i>Impatiens glandulifera</i> or species indicative of sub-		
		optimal condition will be removed where found.		
Hedgerows Existing	Existing hedgerows currently gappy/defunct in some sections. Proposals comprise the enhancement of this habitat via infilling of gaps with species and hedgerow trees of local provenance to produce a moderate condition native hedgerow.	<ul> <li>Annual checks will be made for the first 5 years of new planting to;</li> <li>Identify diseased or dead plants, which will be removed and replaced accordingly</li> <li>Inspect and adjust tree guards and support system</li> <li>Spray around the tree guard with an approved herbicide or manually removed weed growth, in early spring and midsummer to suppress any weed growth.</li> </ul>	initially for a period of years. Subsequently the hedgerows will be	Dead or diseased plants identified during annual checks to be replaced.



### 5 WORKS SCHEDULE

	Management/	Timescale (years)										
Habitat	Monitoring Prescription	1	2	3	4	5	6-10	11-15	16-20	21-25	25-30	Responsibility
General	Keep planting areas	~	✓	~	✓	✓	~	~	✓	~	✓	Developer /
Requirements	neat, weed and litter											appointed
	free to aid initial and											contractor
	ongoing establishment											
	Preventative and	✓	~	~	~	✓	~	~	✓	✓	✓	Developer /
	protective measures											appointed
	i.e., buffer zones, post											contractor
	and rail fencing to be											
	established around											
	newly created habitat											
	during construction											
	Seed, tree and shrub	✓	~	~	~	✓	~	~	✓	✓	✓	Developer /
	stock to be sourced											appointed
	locally where possible											contractor
Planted Trees	Annual inspection for	✓	~	✓	✓	✓	-	-	-	-	-	Developer /
	dead, diseased or											appointed
	damaged specimens											contractor
	undertaken during											
	summer months											
	Repair damaged or	✓	~	<ul> <li>✓</li> </ul>	✓	✓	-	-	-	-	-	Developer /



defective stakes,											appointed
guards and ties											contractor
Maintain 1000mm	✓	~	✓	~	✓	-	-	-	-	-	Developer /
diameter area of mulch											appointed
											contractor
Weed removal to base	✓	✓	✓	~	✓	-	-	-	-	-	Developer /
of trees by hand or											appointed
suitable treatment											contractor
Water during	~	~	✓	~	~	-	-	-	-	-	Developer /
establishment period											appointed
and/ or during											contractor
prolonged periods of											
dry weather											
Stakes, ties and	-	-	-	-	✓	-	-	-	-	-	Developer /
guards will be removed	I										appointed
at the end of the 5-yea	r										contractor
establishment											
maintenance period.											
Planting of	✓	✓	✓	$\checkmark$	✓	-	-	-	-	-	Developer /
replacement bare root											appointed
tree stock to be											contractor
undertaken October -											
February											
Any works to be	~	~	✓	~	~	~	~	~	✓	✓	Developer /
undertaken outside of											appointed
nesting bird season or											contractor
following check for											



	nesting birds											
Hedgerows	Annual inspection for dead, diseased or damaged specimens undertaken during summer months	1	¥	~	¥	<b>~</b>	-	-	-	-	-	Developer / appointed contractor
	Repair damaged or defective stakes, guards and ties	✓	V	<b>v</b>	~	•	-	-	-	-	-	Developer / appointed contractor
	Weed removal to base of trees by hand or suitable treatment	✓	<b>~</b>	✓	~	<b>v</b>	-	-	-	-	-	Developer / appointed contractor
	Water during establishment period and/ or during prolonged periods of dry weather	1	¥	V	1	×	-	-	-	-	-	Developer / appointed contractor
	Any works to be undertaken outside of nesting bird season or following check for nesting birds	×	×	~	×	<b>v</b>	<b>v</b>	~	<b>v</b>		×	Developer / appointed contractor
	Planting of replacement bare root tree stock to be undertaken October -	*	*	<b>v</b>	*	×	-	-	-	-	-	Developer / appointed contractor



	February											
	Hedgerow allowed to achieve height of 4m before layering	-	-	-	-	-	V	~	-	-	-	Developer / appointed contractor
	Subsequent management to maintain hedge in good condition as necessary	-	-	-	-	-	4	4	4	4	Ý	Developer / appointed contractor
Modified Grassland	Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand.	~	-	-	-	-	-	-	-	-	-	Developer / appointed contractor
	Allow perennial species to establish under the shelter of any initial annual weed growth from the residual seed bank within the soil.	V	-	-	-	-	-	-	-	-	-	Developer / appointed contractor
	Clearance of weed	~	~	-	-	-	-	-	-	-	-	Developer /



growth late summer											appointed
(august) and removal											contractor
of compost. Maintain											
low sward height											
through to late march											
following year and											
remove residual weed											
species											
Rotational cutting of	-	-	✓	-	✓	✓	✓	~	~	✓	Developer /
sward length every 2-3											appointed
years ensuring no											contractor
more than a third of the											
overall area is cut at											
any one time.											
Avoid cutting between	✓	-	-	-	-	-	-	-	-	-	Developer /
late April and mid-July											appointed
if seed mix contains											contractor
yellow rattle and sown											
in autumn.											
Bi-annual cuts in	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	Developer /
subsequent years to											appointed
50mm in March / April											contractor
and late July/August											
Selective removal of	✓	✓	✓	✓	~	✓	✓	~	~	~	Developer /
any encroaching scrub											appointed
and species indicative											contractor
of sub-optimal											
condition where											



necessary											
All grassed areas shall	✓	As	Developer /								
be watered during dry		required	appointed								
weather until											contractor
established (12 months											
from seeding) with											
subsequent watering											
as required.											



## 6 MONITORING SCHEDULE

#### 6.1 Monitoring Strategy

#### **Monitoring and Review**

The BMMP will be reviewed on an annual basis by Game Engineering (or their managing organisation) and other key partners (including an appointed qualified ecologist) to ensure that the plan is meeting the original management objectives and responding to the developing needs of the Site.

The annual review will identify the need for additional maintenance operations and inform future management decisions. This can be achieved by:

- Quarterly formal site inspections by Game Engineering (or their managing organisation) to assess the appointed landscaper's contractor's quality standards and deliverables in line with this management plan;
- An annual site meeting with Game Engineering (or their managing organisation) and stakeholders and the appointed contractor to assess quality standards and deliverables in line with this management plan; and
- Ad hoc unannounced inspections by Game Engineering (or their managing organisation) to review quality of maintenance work and any potential Health and Safety issues.

It is also recommended Game Engineering (or their managing organisation) produce a cash-flow forecast for the next 3-5 years but that can be flexible enough to respond to changing circumstances. This will ensure sufficient funds are in place to deliver long term management of the Site.

#### Reporting

Game Engineering (or their managing organisation) will produce an annual report, summarising the management of the Site over the last year. The report will include the key measures achieved, actions going forward and any updates to the maintenance operations if required, and how this information will be communicated to stakeholders and resident/friends groups.

Following the undertaking of monitoring visits and annual management reports, subsequent reporting would be undertaken by an appointed ecologist with input from the monitoring findings of Game Engineering (or their managing organisation), a copy of which would be provided to North Kesteven District Council. Such report should comprise the following:

- Habitat and detailed botanical monitoring of the Site would be undertaken by an appointed qualified ecologist at an appropriate time of year (May August). A habitat assessment and monitoring report should be produced annually during the first five years of operation in order to document the establishment of the planting. The assessment should highlight the need for further management, for example, the trimming of hedgerows after four years, or changes to the frequency of current management regimes of the meadow to maximise the conservation value of the habitats. The report should also include any further recommendations that need to be implemented to achieve the aims of this BMMP.
  - New planting should be assessed twice a year (once in the summer to assess foliage condition and once in the Winter to assess structural condition).



After the first five years, the habitats on site should be monitored every 5 years, with the last visit being 30 years after the development has been completed. The results from the monitoring should be presented in a Long-Term Monitoring Report to inform future management at the site.

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
Modified Grassland	Undertake quadrat sampling to identify the habitat type that is establishing and then number of species per m <sup>2</sup> . Estimate percentage of bare ground, bramble and bracken cover.	Annually from years 1-5, then every 5 years. Surveys to be completed between May and August
	Collect a botanical species list and abundance data using (DAFOR or DOMIN) across grassland to check against relevant UK HABS definition.	
Individual Trees	Undertake visual assessment of tree. Check form and vigour at appropriate times of year.	Bi-annually from years 1-5, then every 5 years.
	Identify dead/diseased specimens and mark for replacement.	New planting should be assessed twice a year (once in the summer to assess foliage
	Recommend appropriate remedial measures to failing trees.	condition and once in the Winter to assess structural condition).

#### 6.2 Monitoring Methods and Intervals

#### 6.3 Monitoring Reports

Organisation Responsible for Submitting the	Organisation Receiving and Responsible for
Monitoring Reports	Reviewing Reports
Game Engineering (or their managing organisation)	North Kesteven District Council

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
Y1	October	November/ December	Report on results of initial grassland and individual tree creation, and hedgerow improvement measures.
Y2	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures.
Y3	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures.



Y4	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures.
Y5	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures. Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required.
Y10	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures. Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required
Y15	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures. Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required
Y20	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures. Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required
Y25	October	November/ December	Report on management actions undertaken, alongside any remedial measures. Document results of initial grassland and individual tree creation, and hedgerow improvement measures.



			Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required
Y30	October	November/ December	Report on management actions undertaken, alongside any remedial measures.
			Document results of initial grassland and individual tree creation, and hedgerow improvement measures.
			Critical review of BMMP and habitat establishment prior to subsequent monitoring. Identification of any remedial measures required



### 7 PROPOSED SPECIES / SEED MIXES

#### 7.1 Tree Planting

#### **Tree Species:**

Field maple	Acer campestre
Rowan	Sorbus aucuparia
Silver birch	Betulus pendula

#### 7.2 Grass Seed Mix

#### Wild flowers 10%

0.30% Achillea millefolium - Yarrow

- 1.60% Centaurea nigra Common Knapweed
- 1.60% Leucanthemum vulgare Oxeye Daisy
- 1.60% Malva moschata Musk Mallow
- 1.60% Plantago lanceolata Ribwort Plantain
- 1.60% Poterium sanguisorba ssp sanguisorba Salad Burnet
- 0.70% Ranunculus acris Meadow Buttercup
- 0.50% Rhinanthus minor Yellow Rattle
- 0.50% Daucus carota Wild Carrot

#### Grasses 90%

- 9.00% Agrostis capillaris Common Bent
- 31.50% Cynosurus cristatus Crested Dogstail
- 27.00% Festuca rubra Red Fescue
- 4.50% Phleum bertolonii Smaller Cat's-tail
- 18.00% Poa pratensis Smooth-stalked Meadow-grass