PROPOSED DEVELOPMENT ON LAND SOUTH OF HORSESHOE ROAD, SPALDING

BIODIVERSITY NET GAIN REPORT

FINAL

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Rev. 1	Draft	Polly Godfrey	Philip Parker	02/03/2025
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1.0 EXECUTIVE SUMMARY

1.1 Biodiversity net gain is the name given to a process of biodiversity offsetting whereby any habitat loss caused by a new development is mitigated to ensure that there is an overall increase in biodiversity post-development. As part of initial development plans, developers are increasingly required to demonstrate that biodiversity net gain can be achieved. To establish the best way to protect the habitats on site, a metric is used. To achieve biodiversity net gain, developers must show evidence that a development will increase the biodiversity value of a site. This statistic is presented in the value of a biodiversity net gain metric called 'biodiversity units'. The 10% net gain requirement in England became compulsory from the 12/02/2024 for larger developments and from the 02/04/2024 for small sites.

1.2 To accompany the planning application for the construction of 76 dwellings on land south of Horseshoe Road, Spalding, a Biodiversity Net Gain (BNG) report has been prepared. The field survey was undertaken at the site by project ecologist Polly Godfrey of Philip Parker Associates Ltd on the 07/01/2025.

1.3 The statutory biodiversity net gain metric was used to calculate the baseline and proposed habitats.

1.4 Table 1 below shows the change of all unit categories on site.

Table 1 Summary table of net unit change

Category	Baseline units	Proposed Units	Change in units
Habitat	6.23	5.59	-10.28%
Hedgerow	0.0	0.0	N/A
Watercourse	1.94	1.86	-4.12%

1.5 As the site did not meet the required 10% uplift in habitat units, a further **1.26** will be required. The site also did not meet the required 10% uplift in watercourse units, a further **0.27** units. The uplift will be achieved by either creating habitat off site or purchasing units from an off site provider.

2.0 INTRODUCTION

2.1 Seagate Homes are preparing a planning application for the construction of 76 dwellings on land south of Horseshoe Road, Spalding, Lincolnshire. The Biodiversity Net Gain Assessment will accompany the application to the local planning authority, South Holland District Council.

2.2 The following report includes the findings of the surveys and has been prepared following guidance in the Biodiversity Net Gain Report and Audit Templates prepared by the Institute of Ecology and Environmental Management (CIEEM) (2021).

2.3 The BNG assessment will estimate the anticipated net gain provided by the development with the information available at the time of this report's production. The biodiversity net gain calculations can only provide an assumption for the future biodiversity change on and off site.

3.0 METHODOLOGY

HABITAT BASELINE

3.1 The field survey was conducted on the 07/01/2025 by project ecologist Polly Godfrey to assess the baseline habitats and habitat conditions on site.

3.2 The habitats present within the red line boundary were recorded on site using the UK Habitat Classification. All habitats and their area of coverage were subsequently mapped using QGIS mapping software.

3.3 Calculations were undertaken using the Statutory Biodiversity Metric Calculation Tool. The habitat plan formulated with QGIS software was used to calculate the habitat baseline and to measure each component area.

HABITAT SCORE

3.4 The following habitat scores and areas are used to calculate the units provided by each habitat area.

- **Distinctiveness**
  The distinctiveness is already assigned by the metric to each habitat and was calculated using national records of occurrence and rarity of each habitat.

- **Condition assessment**
  Whilst on site, a condition assessment was undertaken on the habitats present to determine their quality. The condition sheets list indicators which need to be met before a habitat can reach the threshold for each habitat condition.

- **Strategic significance**
  The strategic significance of the site is determined by the site's connectivity and significance and gives additional value to habitats which are in preferred locations. The strategic significance uses local biodiversity plans and designations to identify priority habitats.

3.5 **Limitations**

The habitat survey was conducted in November which was outside of the optimal period for plant identification. However, it was deemed on this site that a comprehensive identification of habitats could be undertaken as numerous key grasses and herbs were identified.

3.6 **Mapping**

Habitat areas (pre-development) have been measured using QGIS mapping which uses aerial positioning. The positioning is not always completely accurate but any differences in area will be small and will not significantly impact on the overall score.

4.0 BASELINE CONDITIONS

4.1 The habitats listed below were recorded within the application site and as such, have been included within the on site baseline assessment. See Drawing D1 for extent and location of habitat. For condition assessment results, see Appendix B.

ON SITE HABITAT

Modified grassland

4.2 The modified grassland was located around the boundaries of the site and along either side of the track located centrally.

Figure 1 – Eastern grassland margin

Figure 2 – Grassland either side of central track

4.3 ***Condition score:*** The modified grassland was in a **poor** condition.

4.4 ***Strategic significance:*** The modified grassland (G1 to G4) was deemed **not to occur in a local strategy area or in an ecological significant location** due to its unlikeness in supporting protected species. However modified grassland section G5 **was deemed not to occur in a local strategy but would occur in an ecologically significant location**, due to the potential use of the habitat by reptiles and amphibians.

Cereal crop

4.5 Two large areas of arable field were present and located either side of the central track.

Figure 3 – Eastern arable field

Figure 4 – Western arable field

4.6 ***Condition score:*** N/A

4.7 ***Strategic significance:*** The arable crop land did not occur in a **local strategy area and was deemed not to be in an ecological significant location** due to it being unlikely to support protected species.

Willow scrub

4.8 The willow scrub was present within the northern ditch.

Figure 5 – Willow scrub within northern ditch

4.9 ***Condition score:*** The willow scrub was in a **moderate** condition.

4.10 ***Strategic significance:*** The willow scrub did not occur in a **local strategy area and was deemed not to be in an ecological significant location** due to it being unlikely to support protected species.

Individual tree

4.11 Three medium ash trees (T1, T2, T3) and one small ash tree (T4) was present on site.

Figure 6 – Small cherry tree

4.12 ***Condition score:*** The trees were all in **moderate** condition

4.13 ***Strategic significance:*** The individual trees did not occur in a **local strategy area and was deemed not to be in an ecological significant location** due to it being unlikely to support protected species.

Artificially unvegetated, unsealed surface

4.14 A gravel track a mixture of hardcore and ballast (albeit at the time of the survey some mud was present on top) was present centrally through the site.

Figure 7 – Gravel track with some soil deposition on top

4.15 ***Condition score:*** N/A

4.16 ***Strategic significance:*** The artificially unvegetated, unsealed surface did not occur in a **local strategy or in an ecologically desirable location** due to the habitats unlikeliness to support protected species.

Ditch

4.17 Two ditches were present on site or within 5m of the red line boundary. The northern ditch was present along the roadside and was separated into two sections by an infill to allow vehicular access on site. The ditch did not have an encroached water channel however both riparian zones were majorly encroached. The eastern ditch water course was not encroached, the western riparian zone was majorly encroached but the eastern zone had no encroachment,

Figure 8 – Eastern ditch showing levels of encroachment

Figure 9 – Northern ditch showing levels of encroachment

4.18 ***Condition score:*** Both sections of the northern ditch (D1a and D1b) were in **poor** condition. The eastern ditch was in **moderate** condition.

4.19 ***Strategic significance:*** The ditches did not occur in a **local strategy or in an ecologically desirable location** due to the lack of connectivity.

BASELINE HABITATS ON SITE

4.20 Tables 2 to 3 below show the baseline habitats.

Table 2 The baseline habitat units on site

Habitat type	Description	Area (ha)	Distinctiveness	Habitat units	Area to be lost/enhanced or retained
On site					
Grassland	Modified grassland	0.25	Low	0.52	All lost
Cropland	Cereal crop	2.62	Low	5.24	All lost
Heathland and scrub	Willow scrub	0.009	Medium	0.07	All lost
Urban	Artificially unvegetated, unsealed surface	0.037	Very low	0.0	All lost
Individual tree	Rural tree (three medium and one small)	0.0530	Medium	0.42	All lost
Total		**2.92ha (excluding trees)**		**6.26 units**	

Table 3 The baseline watercourse units on site

Watercourse type	Description	Length (km)	Distinctiveness	Watercourse units	Length to be lost/enhanced or retained
On site					
Ditch	Three ditches (D1a to D1b and D2)	0.4	Medium	0.194	0.14km retained, 0.189km enhanced and 0.07km culverted
Total		**0.4km**		**1.94 units**	

5.0 PROPOSED BIODIVERSITY NET GAIN

5.1 The habitats and areas noted in Section 5 below are based on the current development plan provided by Peter Humphrey Associates, with edits undertaken using CorelDRAW by PPA to show the incorporation of the proposed habitat and other biodiversity measures. See Drawing D2 for proposed locations of habitat.

ON SITE

HABITAT CREATION

Developed land, sealed surface

5.2 76 houses are proposed to be constructed on the site with associated roads.

5.3 **Condition assessment: N/A**

5.4 ***Strategic significance:*** The proposed developed land, sealed surface will not be **in a local strategy or in an ecologically desirable location.**

5.5 **Temporal modifier**: The developed land, sealed surface will be created within 2 years of the development commencing therefore it will score a 0 in the metric.

Vegetated garden

5.6 The houses will all have gardens. The ratio of vegetated garden on site has been calculated at a 3:10 ratio of vegetated garden to hardstanding as recommended in the BNG guidance.

5.7 **Condition assessment: N/A**

5.8 ***Strategic significance:*** The proposed vegetated gardens will not be **in a local strategy or in an ecologically desirable location.** They will provide some benefit to wildlife but are unlikely to support protected species.

5.9 **Temporal modifier**: The vegetated gardens will be created within 2 years of the development commencing therefore they will score a 1 in the metric.

Other neutral grassland (habitat parcels G6 to G15)

5.10 Numerous areas of other neutral grassland will occur throughout the site within the public open space.

5.11 **Condition assessment: Moderate**

The proposed grassland to be sown is to achieve a moderate habitat condition by meeting the following criteria;

- Sown with a suitable seed mix to achieve the appearance and composition to match the neutral grassland habitat type (UKHAB definition)
- Any bare patches that develop will be reseeded
- Mowing will reduce the chance of bracken growing
- Mowing will reduce the occurrence of non-native species appearing in grassland.

5.12 ***Strategic significance:*** The proposed grassland parcels (G11 to G15) does **not occur in a local strategy area and was deemed not to be in an ecological significant location** due to isolation from other grassland by paths and roads. The proposed grassland parcels (G6 to G10) does **not occur in a local strategy area but are deemed to be in an ecological significant location** due to connectivity to other large grassland parcels on site. The grassland areas are also relativity connected to grassland off site which links to a large water body, therefore the grassland could be used by a variety of foraging amphibians.

5.13 **Temporal modifier**: The grassland will be sown within 2 years of the development commencing therefore it will score a 1 in the temporal modifier column.

Other neutral grassland (habitat parcel G16)

5.14 Along the eastern boundary of the site and in the south-eastern corner of the site the grassland will be created to reach good condition.

5.15 **Condition assessment: Good**

The proposed grassland to be sown is to achieve a moderate habitat condition by meeting the following criteria;

- Planted with a suitable seed mix to achieve the appearance and composition to match the neutral grassland habitat type (UKHAB definition)
- Any bare patches will be reseeded
- Mowing will reduce the chance of bracken growing
- Mowing will reduce the occurrence of non-native species appearing in grassland.

5.16 ***Strategic significance:*** The proposed grassland does **not occur in a local strategy area but was deemed to be in an ecological significant location** due to connectivity to other grassland on site and to grassland and a pond off site in close proximity.

5.17 **Temporal modifier**: The grassland will be sown within 2 years of the development commencing therefore it will score a 1 in the temporal modifier column.

Mixed scrub

5.18 A small area of mixed scrub will be created within the grassland G8 to provide a variety of habitat types on site.

5.19 **Condition assessment: Moderate**

The proposed mixed scrub to be sown is to achieve a moderate habitat condition by meeting the following criteria;

- Planted with a suitable range of native species to achieve the appearance and composition to match the mixed scrub (UKHAB definition)
- Regeneration will allow a range of ages to occur;

5.20 ***Strategic significance:*** The proposed scrub does **not occur in a local strategy area and was deemed not to be in an ecological significant location** due to limited connection to other scrub in the area.

5.21 **Temporal modifier**: The scrub will be sown within 2 years of the development commencing therefore it will score a 1 in the temporal modifier column.

Individual trees

5.22 80 small trees will be planted on site within the grassland across the site.

5.23 **Condition assessment: Moderate**

The proposed individual trees are to be planted to achieve a moderate habitat condition by meeting the following criteria;

- Native species – following a planting scheme recommended by PPA
- Canopy continuous (individual trees automatically pass this criteria)
- Little or no evidence of an adverse impact caused by anthropogenic activities (vandalism or herbicide use). There is no current pruning regime so trees will reach over 75% of their expected canopy for age and height. This will be achieved by only pruning where necessary such as tree/limbs dangerous for people's safety.

5.24 ***Strategic significance:*** The proposed tree planting will **not be in a local strategy or in a location which is ecologically desirable** due to the trees being isolated on site with limited direct connectivity to off site habitat.

5.25 **Temporal modifier**: The trees will be planted within 2 years of the development occurring therefore they will score a 1 in the metric.

Modified grassland

5.26 Small sections of modified grassland will be sown along some of the paths on site. These areas will be subject to wear so they are unlikely to achieve a greater habitat type than modified grassland.

5.27 **Condition assessment: Moderate**

The proposed grassland areas to be sown are to achieve a moderate habitat condition by meeting the following criteria;

- A range of herb and grass species (at least 6 species per m^2)
- Less than 20% scrub or in the grassland (this will be achieved by appropriate management)
- Absence of invasive species (appropriate management will remove these if identified).

5.28 ***Strategic significance:*** The proposed grassland will **not be in a local strategy or in a location which is ecologically desirable** due to the sections being isolated on site with limited direct connectivity to off site habitat.

5.29 **Temporal modifier**: The grassland will be created within 2 years of the development occurring therefore it will score a 1 in the metric.

Sustainable Drainage Strategy (SuDS)

5.30 A large SuDS will be created centrally on site to help with the site's drainage.

5.31 **Condition assessment: Good**

The proposed SuDS are to be created to achieve a good habitat condition by meeting the following criteria;

- Native species within the riparian and wetland planting
- Any invasive species will be removed through appropriate management if found to be present.
- A range of flowering and seed producing species will be included within the scheme to benefit wildlife.

- The vegetation structure will be varied to benefit a range of species

5.32 ***Strategic significance:*** The proposed SuDS will **not be in a local strategy or in a location which is ecologically desirable** due to the trees being isolated on site with limited direct connectivity to off site habitat.

5.33 **Temporal modifier**: The SuDS will be created within 1 year of the development occurring therefore they will score a 0 in the metric.

Culvert

5.34 Eight sections of culvert will be created to allow access over the ditches.

5.35 **Condition assessment objective: Poor**

5.36 ***Strategic significance:*** The culvert will be in a location which is **not in a location ecologically desirable and not in a local strategy.**

5.37 **Temporal modifier**: The culverts will be created within 1 year of the development occurring therefore it will score a 0 in the metric.

ENHANCEMENT

Ditch

5.38 The eastern ditch D2 will have the riparian habitat on the western bank enhanced. Currently, the riparian habitat is majorly impacted due to arable within 1m of the ditch. Grassland will be sown so there will be a 3m minimum stand off from the ditches to the houses. Therefore, the riparian encroachment on the western bank will be enhanced from major to moderate.

5.39 **Condition assessment objective:** Will remain in **moderate** condition

5.40 ***Strategic significance:*** The ditch enhancement will be in a location which is **not in a location ecologically desirable and not in a local strategy.**

5.41 **Temporal modifier**: The ditch riparian zone will be enhanced within 1 year of the development occurring therefore it will score a 0 in the metric.

Table 4 Proposed areas of on site habitat creation

Broad habitat category	Proposed habitat	Area (ha)	Distinctiveness	Units gained
On site				
Grassland	Other neutral grassland	0.387	Medium	3.00
Heathland and scrub	Mixed scrub	0.015	Medium	0.1
Individual tree	Urban trees	0.326	Medium	1.00
Grassland	Modified grassland	0.0407	Low	0.14
Urban	SuDS	0.0402	Low	0.15
Urban	Vegetated garden	0.744	Low	1.44
Urban	Developed land, sealed surface	1.69	Very low	0.0
Total		**2.92ha (excluding individual trees)**		**5.81 units**

Table 5 Net habitat area and unit change

Habitat Baseline	Area (ha)	Units	Proposed	Area (ha)	Units
On site					
Modified grassland	0.25	0.52	Created	0.0407	0.14
Cereal crop	2.62	5.24			
Willow scrub	0.009	0.07			
Individual tree	0.053	0.42	Created	0.326	1.00
Artificially unvegetated, unsealed surface	0.037	0.0			
			Other neutral grassland	0.387	3.00
			Sustainable drainage strategy	0.0402	0.15
			Mixed scrub	0.015	0.1
			Vegetated garden	0.744	1.44
			Developed land, sealed surface	1.69	0.0
Total	**On site 2.92ha (excluding individual trees)**	**On site 6.26 Units**	**Total**	**On site 2.92ha (excluding individual trees).**	**On site 5.81 Units**

Table 6 The proposed watercourse creation on site

Watercourse type	Description	Length (km)	Distinctiveness	Watercourse units
Ditch	Culvert	0.07	Low	0.06
Total		**0.07km**		**0.06 units**

Table 7 Net habitat watercourse and unit change

Watercourse Baseline	Length (km)	Units	Proposed	Length (km)	Units
On site					
Ditch	0.4	1.94	Retained Enhanced	0.136 0.189	0.41 1.39
			Culvert	0.07	0.06
Total	**On site 0.4km**	**On site 1.94 units**		**On site 0.4km**	**On site 1.86 units**

6.0 PROPOSED HABITAT DESIGN

6.1 This section includes mitigation and enhancement works which can occur on site but cannot be included within the metric and therefore do not gain any credit within the Biodiversity Net Gain Metric.

6.2 **Bat boxes**

The following will be installed as enhancement;

- An integrated bat box should be installed into a suitable wall elevation in 50% of the dwellings. The boxes should be positioned as high as possible, away from the influence of lighting.

6.3 **Bird boxes**

The following will be installed as enhancements

- Two swift boxes to be integrated as a pair into 25% of the dwellings;
- One house sparrow *Passer domesticus* terraces to be erected on 25% of the dwellings;
- Bird combs to be omitted from the new roofs to allow birds to access.
- Boxes should be installed on an eastern or northern elevations.

7.0 CONCLUSION

7.1 The table below shows the baseline units, the proposed habitat creation units, and the percentage change of units;

Table 8 Summary table of net unit change

Category	Baseline units	Proposed Units	Change in units
Habitat on site	6.23	5.59	-10.28%
Hedgerow	0.0	0.0	N/A
Watercourse	1.94	1.86	-4.12%

7.2 This change in habitat units generates a net loss of habitat units, **1.26 units** will need to be purchased or habitat created off site.

7.3 No hedgerows were present on site, therefore this category could not be uplifted by 10%.

7.4 The change in habitat units generated a net loss in watercourse units, **0.27 units** will need to be purchased or habitat created off site.

7.5 The habitat type, condition and size as set out in this report must be achieved to reach 10% on the site. This will be secured with a habitat management and monitoring report, plus subsequent monitoring visits by ecologists.

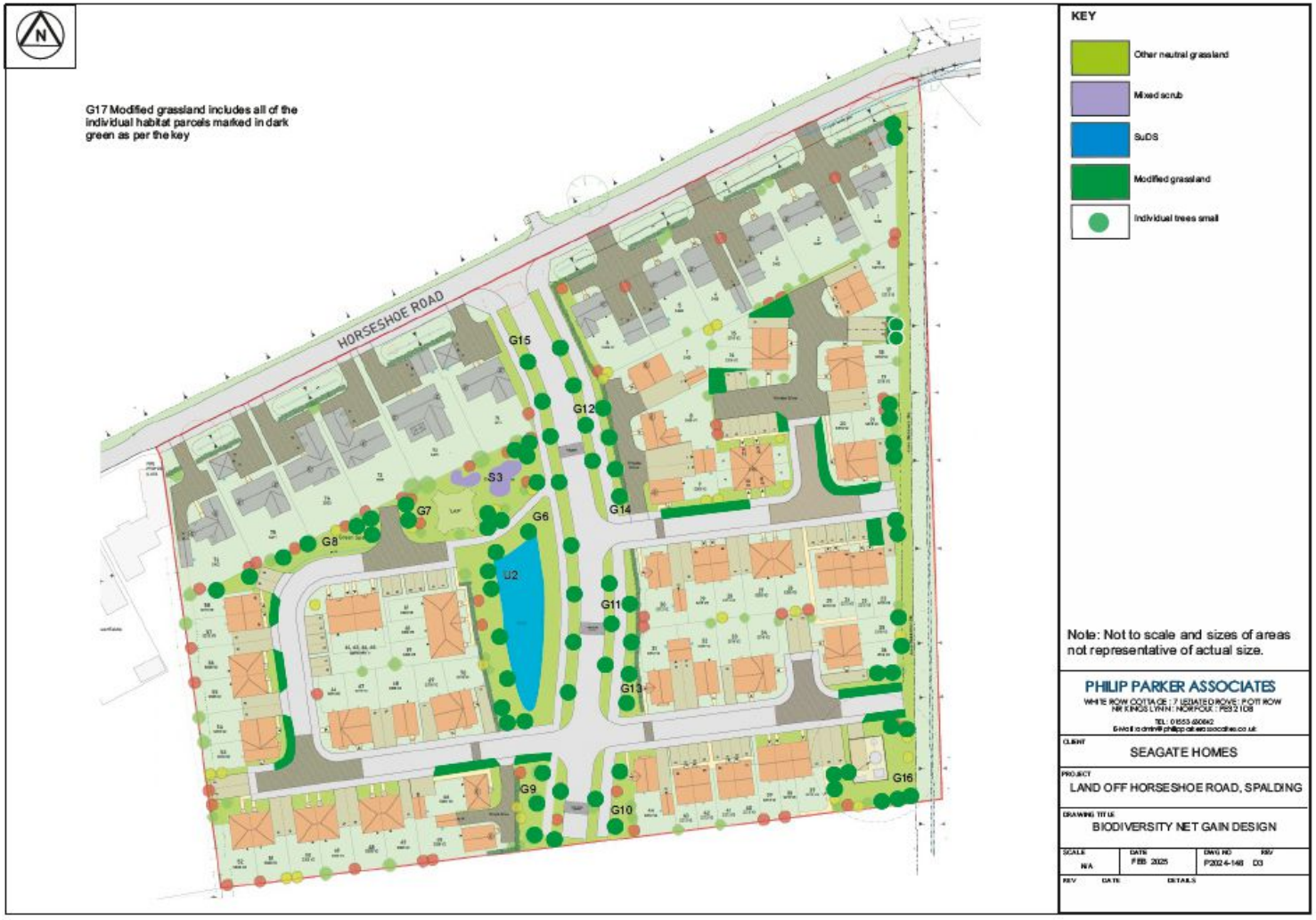
7.6 This report is based on the site visit undertaken on the 13/01/2025. This report presents a true reflection of habitats present and wildlife usage on the site at the time of the survey and remains valid for a period of 12 months from the date of this report.

8.0 REFERENCES

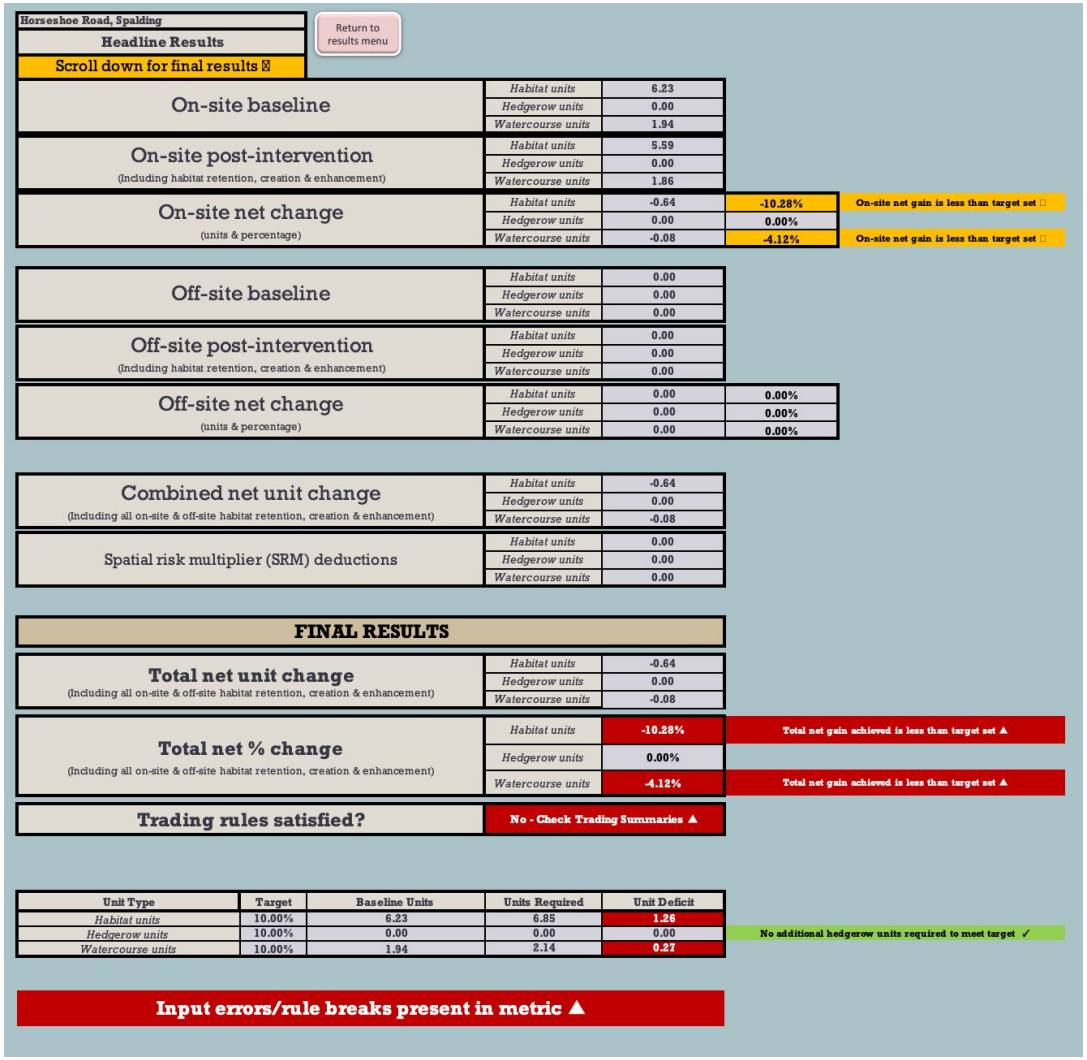
- **Butcher,B., Carey, P., Edmonds, R., Norton, L., Treweek, J., 2020**. *UK habitat classification – Habitat Definitions V1.1*
- **CIEEM (2018).** Guidelines for ecological impact assessment in the UK and Ireland – Terrestrial, freshwater, coastal and marine.
- **CIEEM (2021).** Biodiversity Net Gain Report and Audit Templates Chartered Institute of Ecology and Environmental Management, Winchester, UK.
- **Gurnell, A., Shuker, L., (2022)**. The MORPH survey: Techinical reference manual 2022.
- **Natural England, (2023)**. The Biodiversity Statutory Metric – Calculation too
- **Natural England, (2023b)**. The Biodiversity Statutory Metric – Users guide

DRAWING D1 BASELINE HABITAT PLAN

DRAWING D2 BIODIVERSITY NET GAIN DESIGN



APPENDIX A CALCULATIONS – HEADLINE RESULTS



Horseshoe Road, Spalding

Headline Results

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On-site baseline	*Habitat units*	6.23		
	Hedgerow units	0.00		
	Watercourse units	1.94		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	5.59		
	Hedgerow units	0.00		
	Watercourse units	1.86		
On-site net change (units & percentage)	*Habitat units*	-0.64	-10.28%	On-site net gain is less than target set
	Hedgerow units	0.00	0.00%	
	Watercourse units	-0.08	-4.12%	On-site net gain is less than target set
Off-site baseline	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-0.64		
	Hedgerow units	0.00		
	Watercourse units	-0.08		
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-0.64	
	Hedgerow units	0.00	
	Watercourse units	-0.08	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-10.28%	Total net gain achieved is less than target set
	Hedgerow units	0.00%	
	Watercourse units	-4.12%	Total net gain achieved is less than target set
Trading rules satisfied?	No - Check Trading Summaries		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	6.23	6.85	1.26	
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target
Watercourse units	10.00%	1.94	2.14	0.27	

Input errors/rule breaks present in metric

APPENDIX B CONDITION ASSESSMENTS

Individual tree – on site habitat

Table 9 Condition assessment for individual trees

Criteria for individual trees		Criteria achieved (Y/N)			
		T1	T2	T3	T4
A	The tree is a native species (or at least 70% within the block are native species).	Y	Y	Y	Y
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y	Y	Y	Y
C	The tree is mature (or more than 50% within the block are mature).	N	N	N	N
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Y	Y	Y
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	N	N	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Y	Y	Y

Table 10 Condition assessment results

Score criteria	Score
Passes 5 or 6 criteria	Good
Passes 3 or 4 of 6 criteria	Moderate
Passes 0, 1 or 2 of 6 criteria	Poor

Modified grassland – on site habitat

Table 11 Condition assessment for modified grassland

Criteria for modified grassland		Criteria achieved (Y/N)
		G1, G2, G3, G4, G5
1	There are 6-8 vascular plant species per m2 present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.	N
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y

Criteria for modified grassland		Criteria achieved (Y/N)
		G1, G2, G3, G4, G5
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y
6	Cover of bracken less than 20%.	Y
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y

Table 12 Condition assessment result

Score criteria	Score
Passes 6 or 7 of 7 criteria including passing essential criterion 1	Good
Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1	Poor

Willow scrub

Table 13 Condition assessment for willow scrub

Criteria for willow scrub		Criteria achieved (Y/N)
		S1, S2
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover)	Y
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	N
3	There is an absence of invasive non-native species (as listed on schedule 9 of WCA, 1981) and species indicative of sub-optimal conditions make up less that 5% ground cover	Y
4	The scrub has a well-developed edge with scattered scrub and tall grasses or herbs present between the scrub and adjacent habitat.	N
5	There are clearings, glades or rides present within the scrub, providing sheltered edges	N

Table 14 Condition assessment results

Score criteria	Score
Passes 5 of 5 criteria	Good
Passes 3 or 4 of 5 criteria	Moderate
Passes 0, 1, 2 of 5 criteria	Poor

Ditches

Table 15 Condition assessment of the ditches

Criteria for ditches		Criteria achieved (Y/N)		
		D1	D2	D3
A	The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	N	Y	Y
B	A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.	N	N	N
C	There is less than 10% cover of filamentous algae and or duckweed Lemna spp. (these are signs of eutrophication).	Y	Y	Y
D	A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.	N	N	Y
E	Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	Y	Y	Y
F	Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	N	N	N
G	Less than 10% of the ditch is heavily shaded.	Y	N	Y
H	There is an absence of non-native plant and animal species1.	Y	Y	Y

Table 16 Condition assessment result

Score criteria	Score
Passes 8 criteria	Good
"Passes 6 or 7 criteria	Moderate
Passes 5 or fewer criteria	Poor

APPENDIX C SPECIES LIST FOR EACH HABITAT GROUP

Modified grassland

The following grass species included annual meadow grass Poa annua, cocks foot Dactylis glomerata, perennial rye Lolium perenne, wall barley Hordeum murinum and barren brome Bromus sterilis. Dominant herb species included nettle Urtica dioica, willowherb sp Epilobium sp, ivy Hedera helix, hogweed Heracleum sphondylium, cow parsley Anthriscus sylvestris, cleavers Galium aparine, horseweed Erigeron canadensis. Additional species found along the track included dandelion Taraxacum sp, ribwort plantain Plantago lanceolata, groundsel Senecio vulgaris, ragwort Jacobaea vulgaris and scentless mayweed Tripleurospermum inodorum.

APPENDIX D SURVEYOR/COMPANY EXPERIENCE AND QUALIFICATIONS

We, Philip Parker Associates, are ecological consultants suitability qualified with fifty years of combined experience in this sector. We have been undertaking habitat assessments under the new UK habitat classification since it was released in September 2022 (now using version 2) and have been completing and submitting biodiversity net gain assessments successfully since the release of the metric version 3.1 in April 2022.

In, particular Polly Godfrey has a BSc in Ecology and Conservation and has been working at Philip Parker Associates for three years. During this time she has undertaken and submitted a number of Preliminary Ecological Appraisals and Biodiversity Net Gain assessments (under metrics 3.1, 4 and statutory). Polly is also certified to undertake MORPH river condition assessments.

All surveyors have a university degree at BSc level or above in a relevant field of this sector. Our surveyors regularly train with a FISC level 4 Botanist Julia Masson, and any plants which cannot be identified are passed over to ensure that they are identified correctly.

Our surveyors have attended a number of conferences and virtual symposiums (many organised by CIEEM) to ensure that our knowledge of biodiversity net gain remains up to date.

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