
Biodiversity Net Gains Assessment

The Links, Haverhill

For

Mr T Hendrey

22 August 2024

Client

Mr T Hendrey

Planning authority

West Suffolk District Council

Time limit of reliance

Please note that the reported surveys were conducted on the date(s) stated in the report and that it represents site conditions at the time of the visit. The findings and recommended mitigation are based on these conditions. If site conditions change materially after the site survey, the original report cannot be relied upon and will need to be updated. Ecological reports and surveys can typically be relied on for 18 to 24 months from the date of survey.

Surveys supporting European Protected Species Mitigation Licence applications must be within the current or most recent survey season for bats (May to September), or within two survey seasons for great crested newts (March to June).


Document	Biodiversity Net Gains Assessment
Version	1.0
Date	22 August 2024
Author	Daniel Howes B.Sc (Hons), Natural England licences (Bat level 1 2024-12245-CL17-BAT, Great crested newt level 1 2023-11530-CL08-GCN)
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<i>Signed disclosure</i>	
<i>The information, data, advice and opinions provided in this report which I have provided is true and has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. I confirm that the opinions expressed are my true and professional bona fide opinions.</i>	
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1. INTRODUCTION

- 1.1. Greenlight Environmental Consultancy Ltd. has been commissioned to carry out a Biodiversity Net Gains Assessment (BNGA). The proposed development is located at The Links, Withersfield Road, Haverhill, Suffolk, CB9 7RN (grid reference: TL 66235 46498).

2. BIODIVERSITY IMPACT ASSESSMENT

- 2.1. The BNGA was undertaken using habitats recorded during the Preliminary Ecological Appraisal (Greenlight Environmental Consultancy Ltd., 2023) and using the DEFRA Statutory Biodiversity Metric (Natural England, 2024) which:

“is the way of measuring biodiversity value for the purposes of BNG. It measures all types of habitat, including:

- *grassland*
- *hedgerows*
- *lakes*
- *woodland*
- *watercourses such as rivers and streams*

The metric must be used in order to demonstrate that you have calculated the number of biodiversity units for existing habitat or habitat enhancements in accordance with the statutory biodiversity metric.”

Baseline

- 2.2. The site is comprised of modified grassland (UK Hab – g4), hedgerows (UK Hab – h2b) with a river (r2b – Other rivers and streams) adjacent the southern boundary of the site. Figure 1 and Tables 2-4 below provide a map and baseline of the habitats present onsite.
- 2.3. Please note, the UK Habitat Classification system differs subtly from the DEFRA Metric. These differences and a justification where necessary are provided in Table 1 below:

UKHab Habitat	DEFRA Metric Habitat	Justification
u1b5 - Buildings	Developed land, sealed surface	Buildings and hardstanding are combined in the metric under developed land, sealed surface.
u1b6 - Other developed land	Developed land, sealed surface	Buildings and hardstanding are combined in the metric under developed land, sealed surface.
g4 – Modified grassland (828 vegetated garden)	Vegetated garden	Vegetated garden cannot be allocated a primary code within UK Hab and is assessed as a secondary code (828 – vegetated garden).
h2a6 – Other native hedgerow (11 hedgerow with trees)	Native hedgerow with trees	Hedgerows with trees cannot be allocated a primary code within UK Hab and are given a secondary code to reflect this (11 – hedgerow with trees).
h2a6 – Other native hedgerow (50 ditch)	Native hedgerow with trees – associated with bank or ditch	Hedgerows associated with ditch cannot be allocated a primary code within UK Hab and are given a secondary code to reflect this (50 – ditch).
r2b - Other rivers and streams	Other rivers and streams	N/A

Table 1. UK Hab conversion to DEFRA metric habitat classifications.

Broad habitat	Habitat type	Area (ha)	Habitat distinctiveness	Habitat condition	Strategic significance	Habitat units
Urban	Vegetated garden	0.47	Low	N/A	Low	0.94
Urban	Developed land, sealed surface	0.05	N/A	Good	Low	0.00

Table 2. Habitat baseline. Please refer to Appendix A for the condition assessment tables.

Hedgerow number	Habitat type	Length (km)	Habitat distinctiveness	Habitat condition	Strategic significance	Total hedgerow units
1	Native hedgerow	0.03	Low	Moderate	Low	0.12
2	Native hedgerow with trees – associated with bank or ditch	0.10	High	Poor	Low	0.60
3	Native hedgerow with trees	0.08	Medium	Poor	Low	0.32
4	Native hedgerow with trees	0.14	Medium	Moderate	Low	1.12

Table 3, hedgerow baseline. Please refer to Appendix A for the condition assessment tables.

Water-course type	Length (km)	Habitat distinctiveness	Habitat condition	Strategic significance	Extent of encroachment	Bank encroachment	Total water-course units
Other rivers and streams	0.14	Very high	Moderate	Medium	No encroachment	Minor/no encroachment	1.81

Table 4, watercourse baseline. Please refer to Appendix A for the condition assessment tables.



Figure 1
 Habitats baseline. H1-H4 represent the hedgerow numbers from Table 3.
 Image © Google, date accessed 19/08/24

Intervention

Habitat units

- 2.4. The habitats to be lost as part of the proposed development will be vegetated garden and development land, sealed surface which have low and very low habitat distinctiveness scores respectively (Table 2).
- 2.5. Post-development the site will predominantly be vegetated garden and developed land, sealed surface.

Habitat retention and enhancement

- 2.6. 0.02ha of developed land, sealed surface will be retained onsite.
- 2.7. The proposed scheme will not involve the enhancement of any habitats onsite.

Habitat creation

- 2.8. The proposed scheme will result in the creation of 0.23ha of vegetated garden with a two year delay in creation (0.41 habitat units) and 0.27ha of developed land, sealed surface. The creation of developed land, sealed surface will not result in an increase of habitat units.

Habitat unit change

- 2.9. Overall, the proposed scheme will result in a net loss of habitats (-56.02%), with a warning that the trading rules have not been satisfied. This is a result of the reduction of vegetated garden, as the metric requires low distinctiveness habitats to be replaced with habitats of the same distinctiveness or better.

Broad habitat	Habitat type	Area (ha)	Habitat distinctiveness	Habitat condition	Strategic significance	Habitat units
Urban	Vegetated garden	0.23	Low	N/A	Low	0.41
Urban	Developed land; sealed surface	0.27	Very low	N/A	Low	0.00

Table 5. Onsite habitat creation.

Hedgerow units

2.10. The proposed scheme will not result in the loss of any hedgerows onsite.

Hedgerow retention and enhancement

2.11. The proposed scheme will involve the retention of all the hedgerows onsite. These hedgerows will be situated in private gardens and therefore cannot be enhanced.

Hedgerow creation

2.12. The proposed scheme will not involve the creation of any hedgerows onsite.

Hedgerow unit change

2.13. Overall, the proposed scheme will result in no net loss in hedgerow units ($\pm 0.00\%$). Although the trading rules have been satisfied, the target of +10% net gain has not been achieved.

Watercourse units

2.14. Although the proposed scheme will not result in the loss of any watercourses on/adjacent the site, the proposed development will result in some minor encroachment on the riverbank.

Watercourse retention and enhancement

2.15. The proposed scheme will involve the retention of the watercourse adjacent the site.

Watercourse creation

2.16. The proposed scheme will not involve the creation of any watercourses on/adjacent the site.

Watercourse unit change

2.17. Overall, the proposed scheme will result in no net loss in watercourse units ($\pm 0.00\%$). Although the trading rules have been satisfied, the target of +10% net gain has not been achieved.

On-site change by broad habitat type						
	Baseline		Post-development on-site		On-site change	
Habitat group	On-site existing area	On-site existing value	On-site proposed area	On-site proposed value	On-site area change	On-site unit change
Urban	0.52	0.94	0.52	0.41	0.00	-0.53

Table 6. Onsite change by broad habitat type.

On-site change by hedgerow type						
	Baseline		Post-development on-site		On-site change	
Hedgerow type	On-site existing length	On-site existing value	On-site proposed length	On-site proposed value	On-site length change	On-site unit change
Native hedgerow	0.03	0.12	0.03	0.12	0.00	0.00
Native hedgerow with trees	0.22	1.44	0.22	1.44	0.00	0.00
Native hedgerow with trees – associated with bank or ditch	0.10	0.60	0.10	0.60	0.00	0.00

Table 7. Onsite change by hedgerow type.

On-site change by watercourse type						
	Baseline		Post-development on-site		On-site change	
Watercourse type	On-site existing length	On-site existing value	On-site proposed length	On-site proposed value	On-site length change	On-site unit change
Other rivers and streams	0.1	1.8	0.1	1.8	0.0	0.0

Table 8. Onsite change by hedgerow type.



Figure 2
 Habitats post-development. H1-H4 represent the hedgerow numbers from Table 3.
 Image © Google, date accessed 19/08/24

3. CONCLUSIONS

- 3.1. The results of the metric indicate a biodiversity net loss of -28.34% in habitats (-0.29 habitat units) with trading rules not satisfied, and no net loss in hedgerows and watercourses ($\pm 0.00\%$) (Figure 3). Although the trading rules have been satisfied for hedgerows and watercourses, the target of +10% net gain has not been achieved.
- 3.2. As a biodiversity net gain has not been achieved on site, due to the reduction of vegetated garden, there is a unit shortfall of 1.24, 0.43 and 0.36 for A1, H and W tier habitats respectively (Figure 4). The metric requires low distinctiveness habitats to be replaced with the same distinctiveness or better. With the current proposed plans, other provisions must be provided by offsite habitat creation or purchasing statutory biodiversity credits from Natural England to offset the shortfall in units.
- 3.3. Other enhancements that will add to the biodiversity of the site which are not considered in the metric include bird and bat boxes as recommended in the Preliminary Ecological Appraisal (Greenlight Environmental Consultancy, 2023).
- 3.4. Upon planning permission being granted, a habitat management and monitoring plan and biodiversity net gain plan will be prepared and submitted to West Suffolk District Council as part of a condition application.

On-site baseline	Habitat units	0.94		
	Hedgerow units	2.16		
	Watercourse units	1.81		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.41		
	Hedgerow units	2.16		
	Watercourse units	1.81		
On-site net change (units & percentage)	Habitat units	-0.53	-56.02%	On-site net gain is less than target set A
	Hedgerow units	0.00	0.00%	On-site net gain is less than target set A
	Watercourse units	0.00	0.00%	On-site net gain is less than target set A
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	-0.53		
	Hedgerow units	0.00		
	Watercourse units	0.00		
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	-0.53		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-56.02%		Total net gain achieved is less than target set A
	Hedgerow units	0.00%		Total net gain achieved is less than target set A
	Watercourse units	0.00%		Total net gain achieved is less than target set A
Trading rules satisfied?	No - Check Trading Summaries ▲			

Figure 3, headline results from the DEFRA Metric indicating a net loss of habitats (-56.02%) and no net loss in hedgerows and watercourses (±0.00%).

Unit Shortfall by Tier/Module	
Tier	Unit Shortfall
A1	1.24 ▲
A2	0.00
A3	0.00
A4	0.00
A5	0.00
H	0.43 ▲
W	0.36 ▲

Figure 4, unit shortfall by tier/module indicating a unit shortfall in tiers A1, H and W.

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Appendix A
Statutory Biodiversity Metric Habitat Condition Assessment
Sheet for Existing Habitats

Condition sheet: HEDGEROW Habitat Types					
UKHab Habitat Type					
Native hedgerow Native hedgerow - associated with bank or ditch Native hedgerow with trees Native hedgerow with trees - associated with bank or ditch Native species rich hedgerow Native species rich hedgerow - associated with bank or ditch Native species rich hedgerow with trees Native species rich hedgerow with trees - associated with bank or ditch					
Site name/Location	The Links, Haverhill		Onsite/offsite	Onsite	
Habitat's central grid reference	H1 - TL 66188 46520 H2 - TL 66295 46475 H3 - TL 66263 46448 H4 - TL 66188 46520		Unique polygon reference(s)		
Limitations (if applicable)			Metric survey reference (if condition assessment of this polygon relates to a wider habitat survey)		
Habitat Description					
The site features hedgerows with trees on the north, east, south and west boundaries. The hedgerows along the north and east boundaries feature blackthorn <i>Prunus spinosa</i> , bramble <i>Rubus fruticosus</i> , dogwood <i>Cornus sanguinea</i> , elder <i>Sambucus nigra</i> and hawthorn <i>Crataegus monogyna</i> , with the eastern hedgerow featuring an associated dry ditch. Tree species include: English oak <i>Quercus robur</i> and hazel <i>Corylus avellana</i> . The south and west hedgerows feature apple, blackthorn, elder, hawthorn, and rowan <i>Sorbus aucuparia</i> . Tree species include: Italian alder <i>Alnus cordata</i> , Leyland cypress <i>Cupressus x leylandii</i> and willow <i>Salix sp.</i>					
Condition Assessment Criteria					
A series of ten attributes, representing key physical characteristics, are used for this assessment. The attributes, and the minimum criteria for achieving a favourable condition in each, are defined. The attributes use similar favourable condition criteria to the Hedgerow Survey Handbook and the handbook is the recommended source of reference for assessing individual hedgerow attributes.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D & E)	Criteria (the minimum requirements for 'favourable condition')	Description	Condition Achieved (Y/N)	Notes/Justification	
Core groups - applicable to all hedgerow types					
A1	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).	H1 – Y H2 – Y H3 – Y H4 – Y	
A2	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice ⁴).	H1 – Y H2 – Y H3 – N H4 – Y	
B1	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	H1 – Y H2 – N H3 – N H4 – Y	
B2	Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).	H1 – Y H2 – Y H3 – N H4 – Y	
C1	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of	H1 – N H2 – N H3 – N H4 – N	All hedgerows disturbed from mowing of adjacent grassland.

			species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.		
C2	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	H1 – N H2 – N H3 – N H4 – N	Indicator species >20% cover.
D1	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	H1 – Y H2 – Y H3 – Y H4 – Y	No non-natives.
D2	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	H1 – N H2 – N H3 – N H4 – N	All hedgerows disturbed from mowing of adjacent grassland, with some hedgerow cutting.
Additional group - applicable to hedgerows with trees only					
E1	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.	H2 – N H3 – Y H4 – Y	H3 not enough mature trees.
E2	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	H2 – Y H3 – Y H4 – Y	

Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		H2 – Poor H3 – Poor H4 – Moderate
Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		H1 - Moderate

Condition sheet: Watercourse Habitat Types					
UKHab Habitat Type					
Priority Habitat Other rivers and streams Ditches Canals Culverts					
Site name/Location	The Links, Haverhill				
Module length(s)	10m (river <5m wide)				
Survey bank	Left bank				
River name	Stour Brook				
Reach name	1				
Subreach name	1				
MoRPh surveys	MoRPh1	MoRPh2	MoRPh3	MoRPh4	MoRPh5
Midpoint location	TL 66232 46470	TL 66240 46467	TL 66248 46461	TL 66257 46457	TL 66264 46451
MoRPh River Width	3	3	3	3	3
Left Bank Height	2.5	2.5	2.5	2.5	2.5
Right Bank Height	2.5	2.5	2.5	2.5	2.5
Bankfull Width	5	5	5	5	5
Water Width	2.7	2.7	2.7	2.7	2.7
Water Depth	0.2	0.2	0.2	0.2	0.2
Bank Face Natural Materials	Left bank – Earth Right bank – Earth	Left bank – Earth Right bank – Earth	Left bank – Earth Right bank – Earth	Left bank – Earth Right bank – Earth	Left bank – Earth Right bank – Earth
Dominant bank profile	Left bank – Steep Right bank – Steep	Left bank – Steep Right bank – Steep	Left bank – Steep Right bank – Steep	Left bank – Steep Right bank – Steep	Left bank – Steep Right bank – Steep
Channel bed - natural materials	Cobble – Extensive Gravel/pebble – Present	Cobble – Extensive Gravel/pebble – Present	Cobble – Extensive Gravel/pebble – Present	Cobble – Extensive Gravel/pebble – Present	Cobble – Extensive Gravel/pebble – Present
Channel bed – Surface flow types	Ripped – Trace Smooth – Extensive	Ripped – Trace Smooth – Extensive	Ripped – Trace Smooth – Extensive	Ripped – Trace Smooth – Extensive	Ripped – Trace Smooth – Extensive

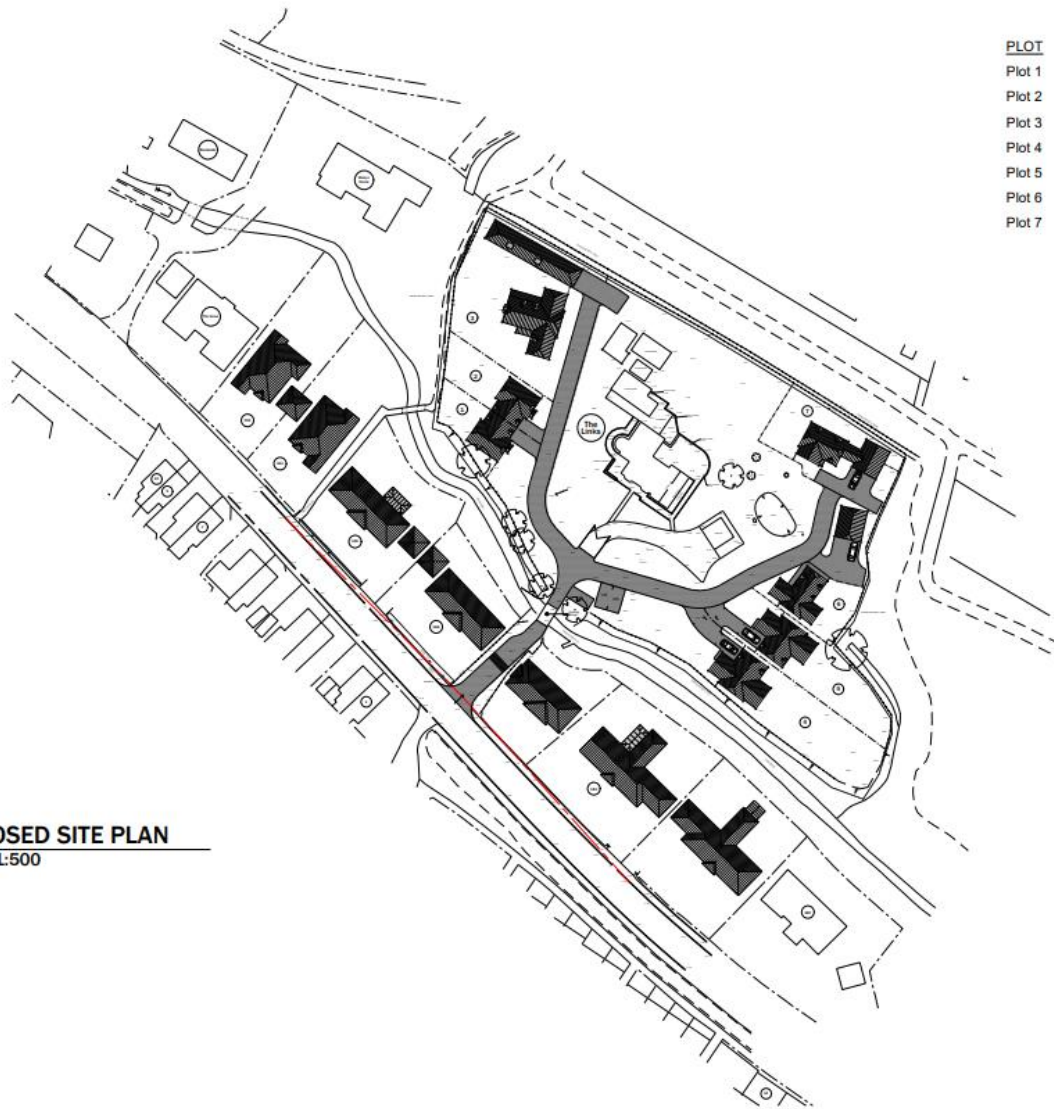
River Type Survey	
River category	Other river
Reach river length	1.6m
Reach valley length	1.5m
Sinuosity	1.067
Level of confinement	Unconfined
Reach valley gradient	0.00533 m/m
Coarsest Bed Material Size Class	Cobble
Average Bed Material Size Class	Gravel/pebble
Final River Type	F - Straight/sinuuous, coarsest CO, average GP

Condition Assessment Score	Result Achieved
1.105	Moderate

Appendix B

Post development plan

PROPOSED SITE PLAN
SCALE: 1:500



PLOT	DWELLING TYPE	NUMBER OF BEDROOMS
Plot 1	1.5 Storey Chalet Bungalow	3 Bedrooms
Plot 2	1.5 Storey Chalet Bungalow	3 Bedrooms
Plot 3	1.5 Storey Chalet Bungalow	4 Bedrooms
Plot 4	1.5 Storey Chalet Bungalow	4 Bedrooms
Plot 5	1.5 Storey Chalet Bungalow	4 Bedrooms
Plot 6	1.5 Storey Chalet Bungalow	3 Bedrooms
Plot 7	1.5 Storey Chalet Bungalow	3 Bedrooms



Rev. A - 15/09/2023 - Amended to Clients comments.
Rev. B - 10/01/2024 - Amended to Clients comments.

Project Status PLANNING		
THESE DRAWINGS ARE NOT TO BE SCALED. <small>The contractor shall check and verify all dimensions and levels and report any apparent discrepancies to the architect prior to commencing work.</small>		
 King Architecture Design & Planning 0 2025 222222 0 2025 222222 0 2025 222222 0 2025 222222		
Project Title The Links, Withersfield Road, Haverhill, Suffolk, CB9 7RW.		
Drawing Title Proposed 7 No. Dwellings with associated Road, Parking and Alterations to existing Vehicular Access.		
Drawn By AJK	Checked By	
Scale See Plan	Date Drawn Jun-23	
Project Number 22025	Drawing Number 3	Revision 