



Ecological Mitigation, Enhancement and Management Plan

Land north of Whitehouse Road, Ruskington, Sleaford, Lincolnshire, NG34 9TP

Rippon Homes

Status	Issue	Name	Date
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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity –Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

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1.0 Introduction

Arbtech Consulting Limited was instructed by Rippon Homes to produce an Ecological Mitigation, Enhancement and Management Plan for Land north of Whitehouse Road, Ruskington, Sleaford, Lincolnshire, NG34 9TP (hereafter referred to as “the site”). A planning application for a new residential development totalling 77 new dwellings (hereafter referred to as “the proposed development”) was granted approval, with conditions, by North Kesteven District Council in February 2019. This plan has been produced to inform the discharge of nine, which states:

A Biodiversity Enhancement and Management Plan (BEMP) shall be submitted to, and be approved in writing, by the District Planning Authority prior to first occupation of any dwelling on the site. The content of the BEMP shall include the following:

- a) Description and evaluation of features to be created and managed (including but not restricted to species-rich grassland, hedgerows and SUDS).*
- b) Aims and objectives of management.*
- c) Prescriptions for habitat creation and ongoing management actions to meet aims and objectives.*
- d) Detailed design(s) and/or working method(s) to achieve stated objectives, including timings.*
- e) Description, extent and location of proposed works on appropriate scale plans.*
- f) Type and source of materials to be used where appropriate, e.g. native species of local origin.*
- g) A scheme for the provision of not less than 10 bird and bat boxes to be integral to the construction of the dwellings,, including location.*
- h) Details of initial aftercare and long-term maintenance for the life-time of the development (including an annual work plan capable of being rolled forward over a fifteen-year period).*
- i) Details of the body or organization responsible for implementation of the plan. The approved plan will be implemented in accordance with the approved details unless otherwise agreed in writing with the District Planning Authority.*

Reason: To enhance the biodiversity of the site in accordance with policy LP21 of the Central Lincolnshire Local Plan (2017).

A plan showing the proposed development is provided in Appendix 1.

The aim of this plan is to outline mitigation measures required to minimise impacts on biodiversity as well as to outline habitat creation and enhancement opportunities and long-term management which will ensure that a net gain in biodiversity is achieved and maintained on the site, in accordance with the National Planning Policy Framework (NPPF).

This plan has been informed by a Preliminary Ecological Appraisal which was completed by Ecological Services Ltd in September 2016 (Ecological Services Ltd, 2016).

2.0 Site Context and Survey Information

2.1 Site Location and Landscape Context

The site is located at National Grid Reference TF 0851 6852 and has an area of approximately 3.2ha comprising mostly arable land with boundary ditches, hedgerows and scattered trees. The surrounding landscape is arable to the north and amenity playing fields to the west. An active railway line bounds the site to the east with further arable land beyond and residential properties adjoin the site's southern edge. A site location plan is provided in Appendix 2.

2.2 Ecological Information

A summary of the survey findings for the site and outlines any potential impacts as a result of the proposed development along with recommendations and biodiversity enhancement opportunities, as detailed in the Preliminary Ecological Appraisal (Ecological Services Ltd, 2017).

'All habitats and plant communities recorded on the site are common and widespread in a local and national context. No nationally rare, nationally scarce or Red Data plant species, defined by Wigginton (1999), Stewart, Pearman and Preston (1994) and Stroh et al (2014) respectively and no S41 Principal Species or Lincolnshire BAP Priority Species of plant were recorded from the site. None of the hedgerows in the survey area meets the criteria for importance for wildlife or landscape under the Hedgerow Regulations although all native hedgerows now qualify as S41 Habitats of Principal Importance to reflect their importance to biodiversity. Hedgerows are also covered by Habitat Action Plans (HAP) in the Lincolnshire BAP.'

Recommendations:

The nests and eggs of all native British birds are protected by law. To avoid an offence, should any clearance of trees or scrub be required, this should not be undertaken during the breeding bird season which runs from the beginning of March to the end of August. If this is not possible, the impacted vegetation must be carefully searched by an experienced ecologist before any clearance and any active nests found must be cordoned off and the nest left undisturbed until the young have fledged.

Whilst no evidence of badgers was found during the survey, they are widespread and common in the county and are highly mobile creatures that can easily excavate a new sett overnight. Any holes greater than 250mm diameter and especially when accompanied by large amounts of spoil should be investigated by an ecologist before any work within 30m of the hole is carried out.

Hedgerows are acknowledged as providing sheltered connectivity between bat roost sites and foraging areas as well as offering foraging opportunities in their own right (English Nature, 2004). The hedgerows around the site provide excellent connectivity to the wider landscape for bats, birds and other wildlife in the local area and as such should be retained and protected throughout the proposed works wherever possible.

As nocturnal mammals, most species of bats are adversely affected by high levels of artificial lighting and so light levels adjacent to the boundary hedgerows and trees should be kept to a minimum and lighting should be focussed downwards to prevent unnecessary light spill.

3.0 Provision of New Landscaping and Species-Specific Enhancements

Table 3: Provision of New Landscaping and Species-Specific Enhancements

Works	Specification
Persons Responsible	The Biodiversity Champion will be responsible for the provision of the new landscaping and species-specific enhancements. The occupier of the proposed development (i.e. the landowner or managing agent) will be responsible for the management of these features post development.
Management Term	The management prescriptions outlined within this table must be implemented over a period of at least 30 years.
Site Visit and Reporting	The ECoW will make a final site check and sign off once the landscaping and installation of species-specific enhancements are complete.
SUDS Pond creation	<p>Overview:</p> <p>A pond will be created on site, as shown in Appendix 1 & 3.</p> <p>Objectives:</p> <p>To develop habitat suitable to support a range of protected and/ or notable species including; aquatic and terrestrial invertebrates; amphibians; and reptiles.</p> <p>To create a pond in accordance with current guidance provided by the Freshwater Habitat Trust as detailed within the following documents: <i>Pond Creation Tool Kit Sheet 4: Pond Design</i>¹ and <i>Creating Ponds for Amphibian and Reptiles</i>². To achieve this, the following core structural principals will be adhered to for pond creation. Figures 3, 4, and 5 below exemplify the benefits of these key structural principles.</p> <ol style="list-style-type: none"> Ensure that almost all pond slopes are shallow, less than 1:5 (12°) and preferably less than 1:20 (3°); Create underwater bars and shoals to benefit aquatic plants; Ensure a clean water supply; Create variable pond depths; Plant submerged and emergent vegetation; Ensure an absence of fish; and

¹ <https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/pond-design.pdf>

² <https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/Amphibians-Common-Toad-Great-Crested-Newt-and-Grass-Snake-new-logo.pdf>

g. Attempt to deter water fowl from utilising ponds.

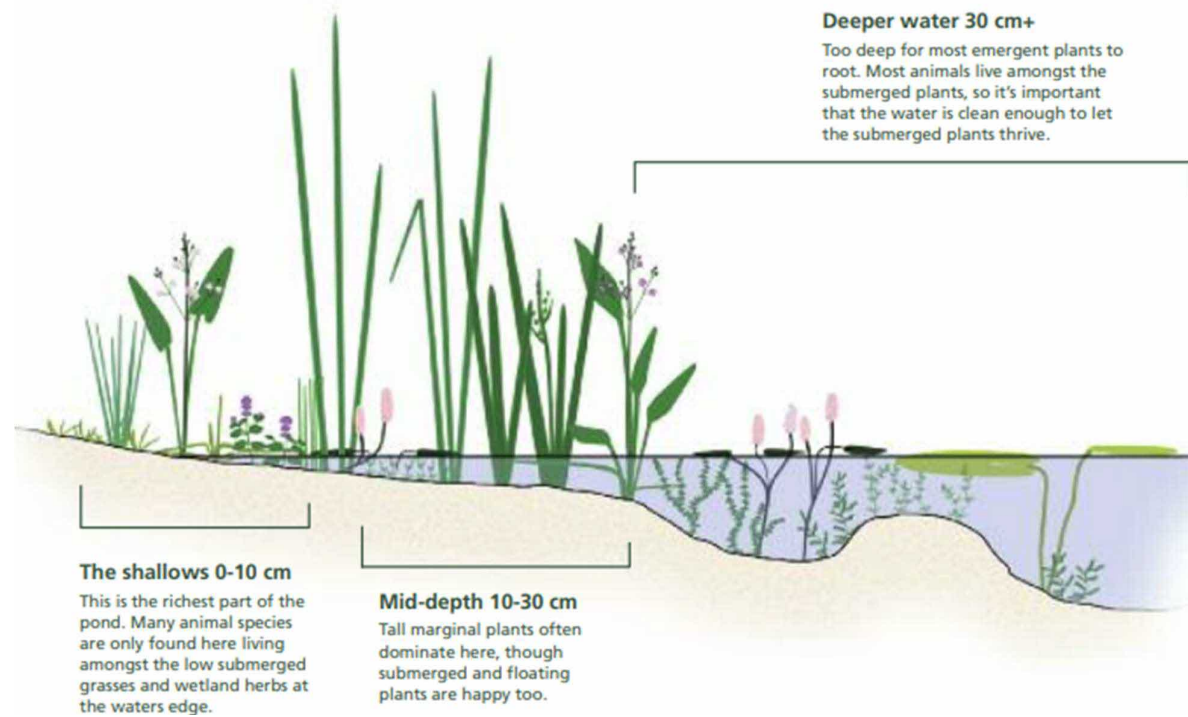


Figure 3: A schematic representation of pond characteristics that provide the best opportunities for biodiversity. Reproduced from the *Pond Creation Tool*

Kit Sheet 4: Pond Design guidance document.

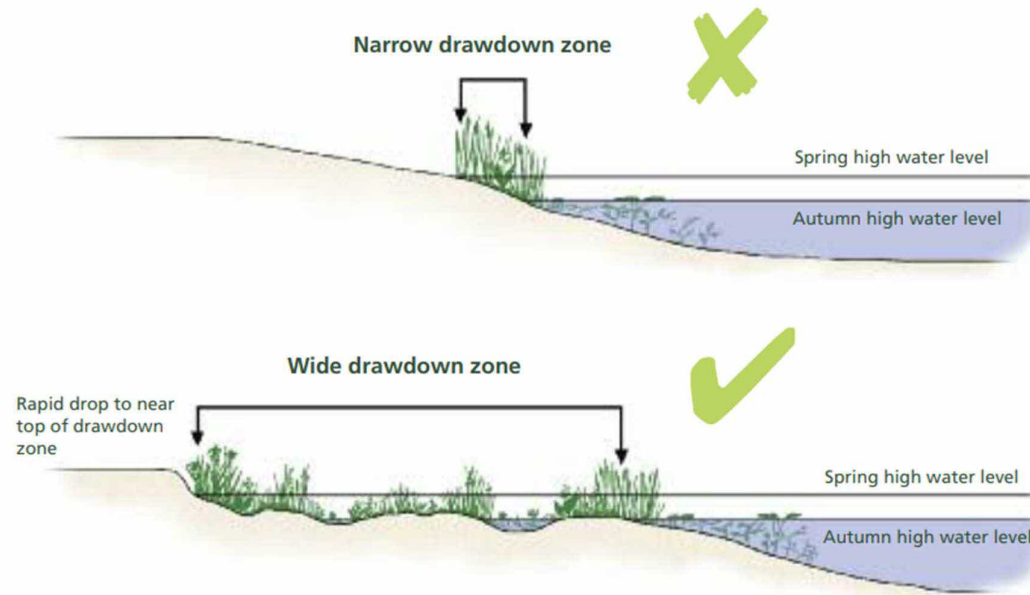


Figure 4: A schematic representation of an optimal pond drawdown zone. Reproduced from the *Pond Creation Tool Kit Sheet 4: Pond Design* guidance document.

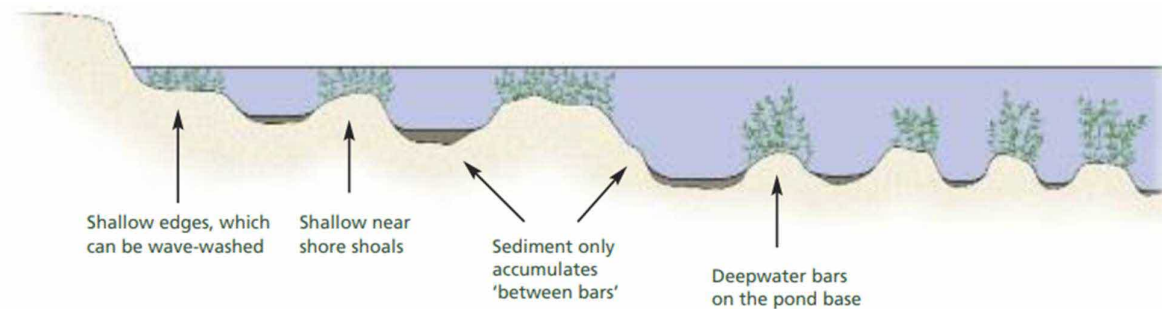


Figure 5: A schematic representation of the value of internal shoals/ islands that prevent domination of sediment accumulation. Reproduced from the *Pond Creation Tool Kit Sheet 4: Pond Design* guidance document.

Creation Method:

Should the underlying ground be loamy and subsequently free draining, a pond liner permeable to vegetation growth should be used to ensure effective water retention.

The initial shape of the pond should be dug out using suitable machinery for the size of the pond, such as a small digger.

More refined alterations to the pond structure should then be created using more refined tools; this is best done using hand tools.

Once the shape and structural diversity of the pond has been established the pond should be planted with emergent vegetation and subsequently filled with water using a clean water source.

Management Prescriptions:

Table 3.1: Pond management prescriptions

Management	Detail	Rationale
Weed growth should be cut back regularly upon the banks and amongst emergence vegetation.	Twice annually in early March/ and in Autumn	Encourages establishment of good perennial ground cover and prevents colonisation of non-native species.
When removing vegetation, do not focus on one plant community but evenly remove from all to maintain a suitable habitat and species diversity.	Twice annually in early March/ and in Autumn	Ensure not just one habitat within the pond is removed at the same time
Keep approximately 90% of the water surface free of dense	Check annually in Autumn	To prevent significant duckweed and other filamentous algae coverage;

	<p>macrophyte coverage. amphibians use open water for breeding display.</p> <hr/> <p>Remove plant detritus and litter. Check annually in Autumn Prevents organic matter and litter building up and preventing exposure to sunlight.</p> <hr/> <p>Remove non-native or other unwanted plants and dispose. Check annually in Autumn Prevents organic matter building up Where possible rinse the removed plants and replace water in the pond. Puts back wildlife in pond living within the removed plants</p> <hr/> <p>Should the pond freeze over a hole in the ice should be created. Check annually in Winter Allows air breathing wildlife to gain oxygen</p> <hr/> <p>Never artificially stock with fish. At all times Fish predate amphibians and their young.</p>
<p>Wildflower grassland creation</p>	<p><i>Overview:</i> Areas of wildflower grassland will be created on site around the proposed SUDS pond, as shown in Appendix 1 & 3.</p> <p><i>Objectives:</i></p> <ul style="list-style-type: none"> • To create a successful and species rich wildflower grassland that will provide habitat for pollinating invertebrate species, that will in turn, provide foraging opportunities for notable species groups including bats, birds, badgers, and hedgehogs. • Ensure a healthy species diverse sward is maintained; • Ensure that a natural appearance is retained by utilising a seed mix alongside allowing native species of local provenance to recolonise from the seedbank; • Employ techniques that use organic fertilizers and minimise the use of chemicals wherever possible.

Creation Method:

- **Ground preparation**

The location of the proposed wildflower meadow creation currently comprises areas of dense vegetation and areas of hardstanding. For areas of ground currently covered by vegetation, any existing weeds should be removed through repeated cultivation and the land subsequently ploughed/ turned to bury all remaining vegetation. For areas of ground currently covered by hardstanding, the hard surface will need to be broken up and removed leaving exposed bare earth suitable for seeding. Once the land has been ploughed/ turned or cleared to bare earth, the soil should be rolled or stamped to produce a firm surface ready for seeding. It is noted that the underlying soil substrate is expected to contain a high clay content in places. Clay is generally unworkable when very wet or very dry and autumn sowings may therefore not be possible. It is often better to dig or plough the soil in the autumn, allow winter frosts to break down the clods, and prepare a seedbed in the spring.

- **Seeding**

To be undertaken in the spring between April and May. The following seed rates are recommended:

40 kg/ha of a wildflower and grass seed mix.

Inclusion of yellow rattle *Rhinanthus minor* in the seed mix will help suppress vigorous grass growth that may suppress the success of wildflowers within the sward.

- **Bedding in of seed:**

After sowing, seeds will be 'bedded' in by trampling or light rolling.

- **Seed mix:**

A combination of two seed mixes is proposed. Specifically, a 50/50 mix of Emorsgate General Purpose Seed Mix EM2 and Emorsgate Mixture for Clay Soils EM4 are proposed to be utilised. This combination of seed mixes will help create a minimum of 9 species per m² of grassland and retain a species composition consistent with the UKHabs definition of other neutral grassland. The proposed seed mix combination includes numerous grassland and wildflower species suitable for neutral and clay dominated soils. Notably, the species mix includes yellow rattle which is known to suppress dominant grass species which will allow existing grasses within the seed bank to colonise whilst preventing dominance and thus increasing species diversity per m². For exact specifications, please refer to: <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/standard-general-purpose-meadow-mixture/> and <https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/meadow-mixture-for-clay-soils/>

Management Prescriptions:

Table 3.2: Wildflower meadow management prescriptions.

Management	When	Rationale
Cut meadow twice annually	Late March / early April and– late August/ early Sept	This ensures the meadow does not grow excessively long and become rank but allows wildflowers to set seed and invertebrates to breed. This will also allow a diverse sward of varying lengths to naturally occur in accordance with growth characteristics of each species. Cutting twice annually will also prevent encroachment of scrub and bracken.
Cut grass as to provide a heterogeneous habitat structure aiming to maintain at least 20% of grass <7cm and 20% >7cm. As such, each cutting phase must cut 20% of the area to ground level, 60% of the area to 15cm, and the remainder to 30cm. These areas must be rotated each year to maintain a diverse	Late March / early April and– late August/ early Sept	To retain a diverse sward whilst limiting impacts to protected species potentially present at ground level and ensuring the natural germination of seeds.

	<p>sward.</p> <hr/> <table border="0"> <tr> <td data-bbox="646 248 919 370">Turn and dry the cut grass over 3-5 days before removing arisings off Site</td> <td data-bbox="984 248 1073 277">Post cut</td> <td data-bbox="1318 248 1665 415">This allows the seeds to drop encouraging species diversity and invertebrates to relocate unharmed.</td> </tr> </table> <hr/> <table border="0"> <tr> <td data-bbox="646 440 877 513">Do not apply chemical fertilisers</td> <td data-bbox="984 440 1108 469">At all times.</td> <td data-bbox="1318 440 1682 651">The use of chemical fertilisers will encourage vigorous grasses and weeds to grow or cause large areas of bare ground due to inhospitable growing conditions,</td> </tr> </table>	Turn and dry the cut grass over 3-5 days before removing arisings off Site	Post cut	This allows the seeds to drop encouraging species diversity and invertebrates to relocate unharmed.	Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow or cause large areas of bare ground due to inhospitable growing conditions,
Turn and dry the cut grass over 3-5 days before removing arisings off Site	Post cut	This allows the seeds to drop encouraging species diversity and invertebrates to relocate unharmed.					
Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow or cause large areas of bare ground due to inhospitable growing conditions,					
<p>Tree and Shrub Planting</p>	<p>Overview:</p> <p>Multiple areas of proposed landscaping will be created through new tree and shrub planting including:</p> <ul style="list-style-type: none"> • The planting of introduced shrubs on site, as shown in Appendix 1 & 3. • The planting of new trees on site, as shown in Appendix 1 & 3. <p>Objectives:</p> <ul style="list-style-type: none"> • To plant native trees and shrubs that will provide pollinating, foraging, and refuge opportunities for protected and/ or notable species groups including amphibians, bats, birds, hedgehogs, invertebrates, and reptiles. • Ensure that good horticultural practice is employed to encourage long-term health and vitality of all trees and shrubs. • Ensure well-balanced crowns and/ or natural shape by preventing over competition. <p>Creation Method:</p> <ul style="list-style-type: none"> • Ground preparation and planting <p>Each tree and shrub should be planted within a hole three times as wide of the supplied pot and of a similar depth. Root balls should be soaked thoroughly in water before planting and root balls should be loosened to expose restricted roots before planting. The planted trees and shrubs should then be backfilled ensuring there are no air pockets around roots or any roots protruding out of the ground.</p>						

- **Timing**

It is best to prepare the land during the summer ready for planting between November and March. Planting trees and shrubs before the new year helps ensure better rooting and subsequent establishment including faster growth during the first growing season.

Management Prescriptions:

Table 3.3: New tree and shrub planting.

Management	When	Rationale
At the end of each growing season all plant failures are to be 100% replaced	When required; checked annually in Autumn.	To maintain amenity and wildlife value.
If required, provision of stakes and guards. Guards to be left on for a minimum of 5 years	N/A	Protect from damage
Stakes should be checked and any broken or damaged stakes during this time would be removed (as above) and replaced with ties re-fixed	When required; checked annually in Autumn.	Maintain protection
Remove weeds	When required; checked twice annually in early spring and in Autumn.	Reduce competition for resources nutrients etc.by weeds
Application of bark mulch at a depth of 50 mm	Immediately after planting and then when required;	Reduce competition for resources nutrients etc.by

		checked annually in Autumn.	weeds
	Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow
	Apply a light dressing of well-rotted manure	Annually in the winter	Note the overuse of manure fertilisers will encourage vigorous grasses and weeds to grow.
	Removal of spent flowers from perennial plants should be removed through 'deadheading'	Twice annually, late spring and in the Autumn.	Allows plants to place more energy into re-growth.
	Watering should be undertaken before and after planting out and as necessary for the continued thriving of all planting.	When required; provide more water during periods of draught and less water during times of prolonged rain.	Ensures plants do not dry out and subsequently fail.
	Check and replace any plant failures once a year	For the first 5 years	To ensure no gaps form.
Native Planting	Hedgerow	<p><i>Overview:</i> New native hedgerow planting is proposed on site, as shown in Appendix 1 & 3.</p> <p><i>Objectives:</i></p> <ul style="list-style-type: none"> To create dense hedgerows that will provide foraging, commuting, and refugia opportunities for notable species groups including bats, birds, 	

badgers, and hedgehogs.

- To ensure native species only are planted.
- Ensure cultural techniques are employed which use a variety of mulches and organic fertilisers and which minimise the use of chemicals and peat wherever possible.

Creation Method:

- **Ground preparation**

Prepare the ground by digging over a strip approximately 60-90cm (2-3ft) wide and one spit (or spade blade) deep. Soils that become waterlogged in winter may require a permanent drainage system. Alternatively, form the soil into a ridge about 15-20cm (6-8in) high and 50-70cm (20-28in) across to plant into.

- **Planting**

Plants should be positioned set back from hardscaped boundaries to allow space for the hedgerow to develop and mature prior to requiring any significant management/ cutting back. Plant density should focus on achieving a hedgerow width >1m; as such, plants should be planted in a staggered double row approximately 45-60cm apart, where individual plants are planted 90cm apart within each row.

- **Timing**

It is best to prepare the land during the summer ready for planting between November and March. Planting before the new year helps ensure better rooting and subsequent establishment including faster growth.

Management Prescriptions:

Table 3.4: New hedgerow planting hedgerow.

Management	When	Rationale
At the end of each growing season all plant failures are to be 100% replaced	When required; checked annually in Autumn.	To maintain amenity and wildlife value.

	<p>If required, provision of stakes and guards. Guards to be left on for a minimum of 5 years</p>	<p>N/A</p>	<p>Protect from damage</p>
	<p>Stakes should be checked and any broken or damaged stakes during this time would be removed (as above) and replaced with ties re-fixed</p>	<p>When required; checked annually in Autumn.</p>	<p>Maintain protection</p>
	<p>Remove weeds</p>	<p>When required; checked twice annually in early spring and in Autumn.</p>	<p>Reduce competition for resources nutrients etc.by weeds</p>
	<p>Application of bark mulch at a depth of 50 mm</p>	<p>Immediately after planting and then when required; checked annually in Autumn.</p>	<p>Reduce competition for resources nutrients etc.by weeds</p>
	<p>Apply a light dressing of well-rotted manure</p>	<p>Annually in the winter</p>	<p>Note the overuse of manure fertilisers will encourage vigorous grasses and weeds to grow.</p>
	<p>Watering should be undertaken before and after planting out and as necessary for the continued thriving of all planting.</p>	<p>When required; provide more water during periods of draught and less water during times of prolonged rain.</p>	<p>Ensures plants do not dry out and subsequently fail.</p>
	<p>Check and replace any plant failures once a year</p>	<p>For the first 5 years</p>	<p>To ensure no gaps form.</p>
	<p>Once the hedgerow reaches an</p>	<p>To be checked annually once</p>	<p>To ensure the hedgerow is not</p>

	<p>average height of 1.5m or above along the hedgerow length, this height or above must be retained.</p> <p>Once the hedgerow reaches an average width of 1.5m or above along the hedgerow length, this width or above must be retained.</p>	<p>hedgerow reaches 1.5m in height.</p> <p>To be checked annually once hedgerow reaches 1.5m in width.</p>	<p>maintained at a low level of worse value to biodiversity.</p> <p>To ensure the hedgerow is not maintained at a thin density of worse value to biodiversity.</p>
<p>Bat Boxes</p>	<p>Five bat boxes are recommended to be installed on the retained trees along the boundaries of the site.</p> <p><i>Bat boxes specification:</i></p> <ul style="list-style-type: none"> • The recommended bat boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require no maintenance and have a lifespan of 25 years plus. • 5x General Purpose Bat Boxes (or similar alternative brand) are recommended on the trees, as shown in Figure 7. • Bat boxes should be positioned 3-5m above ground level facing in a south, southeast, or southwest aspect with a clear flight path to and from the entrance, away from artificial light. 		



Figure 7: General Purpose Bat Box (image credit <https://www.nhbs.com/convex-wood-concrete-bat-box>)

Recommended Management:

The proposed bat boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bat boxes will increase the chances of occupation by roosting bats. However, it is recommended that the bat boxes are inspected annually for the first five years outside of the typical active season for bats (May to September inclusive) following installation. Bat boxes must be replaced if they are damaged, removed, or have fallen from their recommended location.

Bird Boxes

Five bird boxes are recommended to be installed on site, upon the retained mature trees present around the boundaries of the site.

Bird box specification:

- The recommended bird boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require no maintenance and a lifespan of 25 years plus.
- 5x Woodstone Nest Boxes (or a similar alternative brand) with 28mm entrance holes are proposed on the trees, as shown in **Figure 8**.
- Woodstone Nest Boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.



Figure 8: Woodstone Nest Box (image credit arkwildlife.co.uk)

Recommended Management:

The proposed bird boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bird boxes will increase the chances of occupation by nesting birds. However, it is recommended that the bird boxes are inspected annually for the first five years outside of the typical nesting bird season (March to September inclusive) following installation. Bird boxes must be replaced if they are damaged, removed, or have fallen from their recommended location.

Insect Box

An insect box will be installed on the southern boundary fencing, beyond the newly installed SUDS pond (Figure 9). An insect box suitable for the site (or a similar alternative brand) can be found here: <https://www.nhbs.com/national-trust-apex-insect-house>



Figure 9: Insect box (image credit <https://www.nhbs.com/national-trust-apex-insect-house>)

Hedgehog House

A hedgehog house will be installed within the new species rich grassland around the SUDS pond. A hedgehog house suitable for the site (or a similar alternative brand) can be found here: <https://www.nhbs.com/hedgehog-house>

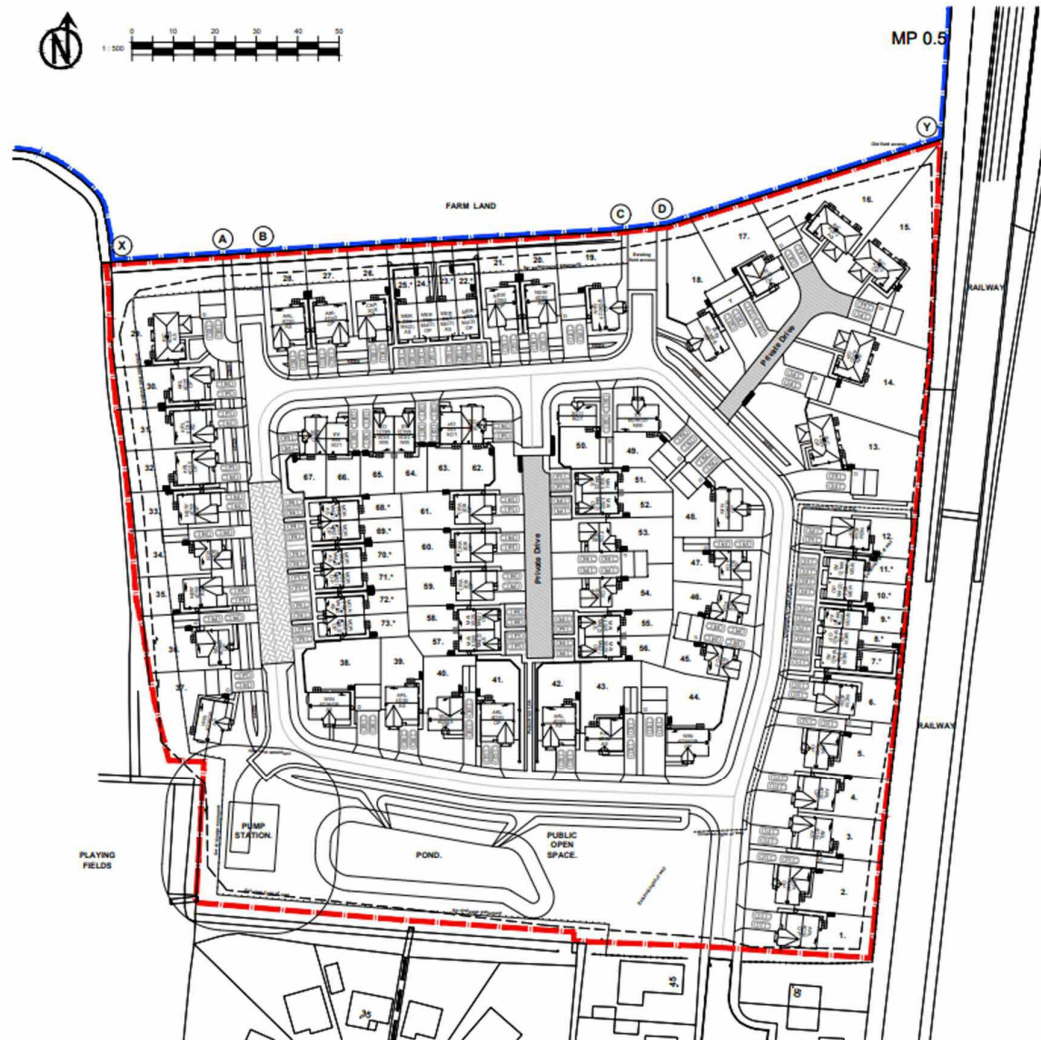


Figure 10: Hedgehog house (image credit <https://www.nhbs.com/hedgehog-house>)

**Post Development
Monitoring Visit**

A post development monitoring visit should be undertaken once the development has been completed to ensure all recommended ecological enhancements have been installed on site.

Appendix 1: Proposed Development Plan



HEDGING TYPE - PLOTS

H - Feature hedging to plot frontages is to consist of the following mix.
100% Buxus Sempervirens (Native Box hedge)

SHURB TYPES -

Shrub Planting - mixture of the following species followed by spacing in metres

S Cotoneaster Conspicuous Decorous 0.9m
Cytisus Kewensis 0.6m
Hypericum Calycinum 0.75m
Cotoneaster Dammeri 0.9m

TURFING -

- turfing to all front gardens

NOTES - LANDSCAPING SPECIFICATION -

TREES -
All trees are to be supplied bare rooted, 2m - 3m in height with a 12 - 14cm containerised heavy standard stock and to be planted between November and March in a pit 600 x 600 x 600mm with suitable compost. Newly Planted trees are to be double staked and tied to provide stability.
Any dead or unhealthy trees found during the maintenance period are to be replaced.
Trees located within POS to be supplied with welded mesh tree guard. Where trees are to be planted within 5m of traditional constructed footways or highways a root barrier is required between the tree root system and the highway structure. A proprietary, high strength, photo and bio degradation resistant root barrier 2mm thick with a minimum width of 1.0m should be used. Where individual trees are to be planted in tree pits with highway or footways adjacent, the use of preformed root directors may be more appropriate.

GROUND COVER -

All ground cover plants are to be pot grown and supplied in 2 - 3 litre containers (in growing season) or bare rooted out of season, they are to be planted at a rate to cover 3 plants per meter squared and are to be planted in 300mm of topsoil, with a weed control layer of 50mm bark mulch which is to be levelled to achieve and adequate spread.
Any dead or unhealthy plants found during the maintenance period are to be replaced.

HEDGE PLANTING -

All hedges are to be supplied bare rooted or pot grown dependant on the season and supplied in 2 - 3 litre, they are to be planted at a rate of approximately 5 plants per meter (dependant on the species), and are to be planted in 300mm of friable topsoil, with a weed control layer of 50mm bark mulch which is to be levelled to achieve and adequate spread.
Any dead or unhealthy plants found during the maintenance period are to be replaced.

TURF -

All turf to be premium grade machine cultivated turf and all turf is to be laid, levelled and rolled.

SEEDING -

All seeded areas to be machine cultivated, levelled and rolled ready to have amenity seed, which is to be sown in March / April or September / October at a rate of 50g per metre squared with fertilizer spread at the same rate.

SCHEDULE

4-Bed Detached			
4020	1475 sq ft	5	7375 sq ft
4036	1261 sq ft	7	8827 sq ft
4030	1204 sq ft	11	13244 sq ft
4032	1178 sq ft	4	4712 sq ft
4044	1109 sq ft	2	2218 sq ft
4050	1059 sq ft	6	6354 sq ft
		36	42676 sq ft

3-Bed Detached			
3D6	976 sq ft	4	3904 sq ft
3D6	928 sq ft	6	5568 sq ft
3D11	888 sq ft	1	888 sq ft
		11	10360 sq ft

3-Bed Semi Detached			
3S27	888 sq ft	2	1776 sq ft
3S25 M4(2)	821 sq ft	8	6568 sq ft
3S6	749 sq ft	2	1498 sq ft
		12	9842 sq ft

2 & 3 Bed Affordable (*) @ 20%			
2S3 M4(2)	791 sq ft	8	6328 sq ft
2S2 M4(2)	758 sq ft	7	5306 sq ft
		15	11634 sq ft
Total		73	74432 sq ft

LANDSCAPING AND FENCING

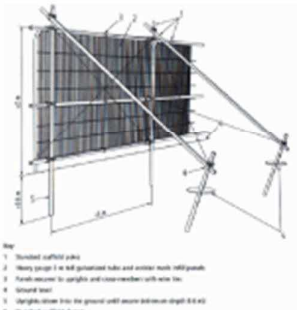
- W** 2m high brick wall
- FW** 1.8m fence over low brick wall, 2m piers.
- P** 1.2m wooden palisade fencing
- F1** 1.8m vertical closed boarded fencing
- F2** 1.8m post & panel fencing between plots

Note: Rear access to be provided to all plots, all to be fitted with 1.8m high and 850mm minimum clear opening width timber gates
All plots to have paved area for bin storage and 900mm minimum width footpath bin routes.

- Acoustic Fence (to boundary where hedge allows)
- Existing extent of hedge (to be trimmed back & lowered)
- Existing tree retained
- Proposed tree

NEW TREE TYPES -

- A** Betula Pendula (Silver Birch)
- B** Prunus Sargentii (Flowering Cherry)
- C** Frans Fontaine (Hornbeam)
- D** Sorbus Aucuparia (Rowan)
- E** Syringa Reticulata (Japanese tree lilac)
- F** Acer Campestre Nanum (Field Maple)
- G** Pinus Sylvestris (Scots pine)
- H** Aledtsia triacanthos (Honey Locust)
- I** Tilia Tomentosa (Silver Lime)
- J** Liriodendron Tulipifera (Tulip Tree)
- K** Pinus Nigra (Black Tree)



RIPPON HOMES

The Willows, Sleaford Road, Sleaford, Lincolnshire, NG34 9TP

RUSHBY MEADOWS,
WHITEHOUSE ROAD,
RUSKINGTON, NG34 9TP

LANDSCAPE LAYOUT PLAN

Scale: 1:500 @ A1 Date: 04/2018
Drawn by: 18/23/02 Revision: 0

Appendix 2: Site Location Plan



Appendix 3: New Landscaping and Species-Specific Enhancements Plan

